# A REVIEW AND ASSESSMENT OF THE ECONOMIC UTILISATION AND POTENTIAL OF COUNTRY FOOD IN THE NORTHERN ECONOMY

A Paper Prepared For The Royal Commission on Aboriginal People

by

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# **INTRODUCTION**

# PURPOSE AND SCOPE OF THE STUDY

The purpose of this study on the economic utilisation and potential of country food in the economy of northern Canada is to provide a review and analysis of information currently available on country food as a key sector of the northern economy.

The first section of the paper begins with a review of information of the history and nature of the utilisation of country food by Aboriginal people in the North, and discusses the special features of the country food sector which differentiates it from other sectors of the northern economy. It then examines the extent and significance of Aboriginal participation in this sector, and the contribution of country food to the development of the economy of the North, and the relationship of this development to the broader Canadian and international economies.

Section two of the study contains an assessment of the key issues which arise out of the discussions in section one, and an examination of critical barriers to development of the country food sector. This is followed by conclusions which result from the study and a summary of prospects for the continued utilisation of country food and for development based on country food in the North.

Under the terms of reference and following the terminology of the Royal Commission, the study includes in the review information available on the utilisation of country food by Inuit, First Nations and Metis in the Yukon, Northwest Territories, Northern Quebec, and Labrador. Information was obtained from published studies, and from unpublished reports prepared by Aboriginal organizations, other non-governmental organizations, and by government departments. These included the record of proceedings of a conference, entitled *Renewable Resources Conference: Planning for the Future - Challenges and Changes in the 90s* which was held in Cambridge Bay at the end of March 1993 and which brought together representatives of Inuit harvester organizations from across the Northwest Territories. These sources were supplemented by interviews conducted by telephone. Throughout the data collection, the effort was made to obtain detailed empirical data, and concrete examples and case studies which provide insights into the nature of the country food sector.

Since the time allotted for completion of the study was just under one month, it was impossible to obtain comprehensive information of the utilisation of country food within each of the regions of the North. Indeed, information proved to be much more accessible within some of the regions and extremely difficult to obtain in others within the time available. It has been necessary to use the information available from some regions to illustrate certain aspects of the utilisation of country food and from other regions to illustrate other aspects. As a result of the settlement of land claims and the role of government in the Northwest Territories and northern Quebec, more information was available within the given time frame from these regions. However, lack of current, accessible data on native harvesting is a significant problem across all regions of the North. In conclusion, we believe the information, while by no means comprehensive for all regions, does illustrate the key aspects of the utilisation of country food in the northern economy. A detailed bibliography of sources, and a list of people interviewed is provided at the end of the paper.

SECTION ONE: THE COUNTRY FOOD SECTOR

# HISTORY AND NATURE OF THE COUNTRY FOOD SECTOR

### **Country Food in the Domestic Economy**

As long as Aboriginal people have occupied lands across the North of Canada, they have supplied themselves with the essentials of life by utilising the resources of the lands and waters. Along with necessities such as building materials, clothing, and fuel, food was obtained from the harvesting of wildlife and plants. While all of these needs are still met today to some extent directly from the natural resources around them, food obtained through the harvesting of wildlife B through hunting, fishing, trapping B has become for most Aboriginal people of the North the key item of household income and wealth derived from the lands and waters. This food is referred to by various names in English B "country food", "bush food", or "wild food". In this report we shall adopt the usage of referring to this food as country food.

Country food is food produced through the wildlife harvesting activities B through the hunting, fishing and trapping activities B of Aboriginal people. It is tempting therefore to view the country food sector, like other sectors, simply as the sum total of country food production activities within the economies of the northern regions.

However, such a definition would be misleading because the country food sector is not a sector like other sectors of the northern economy. Other sectors of the economy, for example the mining or retail sectors, are characterised by the predominance of market mechanisms, the organization of production within firms or corporate bodies, and a separate organization for consumption within the household, all elements which are characteristic of an industrial, market economy. Country food is in fact the key element of what must be viewed as a distinct type of economy in the North, the domestic economy of Aboriginal people based on the harvesting of wildlife [69][2].

This domestic economy has a number of key characteristics which differentiate it from the wider industrial, market economy of Canada:

- Both production and consumption activities are organized within the household and through wider kinship relations. Household and kinship are the principles by which labour is organised, resources are allocated, and products are distributed and consumed. The products from the hunting, fishing and trapping of members of the household B today largely country food B are processed within the household primarily for the direct consumption of members of the household and extended family to meet their needs. The majority of products from domestic production do not enter a commercial market [69][81].
- The economic activities of Aboriginal households are not however confined to subsistence production for consumption by the household. Households are economic

enterprises which organize and allocate wildlife resources, capital in the form of harvesting equipment, and the labour of the household and of the extended family. Food and other products are distributed among other households in the extended family, and well before contact with Europeans societies and the advent of the fur trade, extensive networks for exchange existed [69].

- The domestic economy is a socio-economic system, that is a system of social and economic relationships and of cultural values. Key among these are systems for the distribution of food through mutual responsibilities and obligations based on values of sharing [70].
- The harvesting of wildlife is based on a system of communal property rights, by which specific Aboriginal groups have ownership of their traditional lands. This ownership confers a right to utilise the resources of the land, and a responsibility to manage these resources for the benefit of the group and others who may be granted access [69].
- The primary objective of the economic activities, which today may include both domestic consumption and commercial activities, is not the accumulation of wealth within the domestic unit. Rather they are first, the provision of food within the domestic network, and secondly the maintenance of the systems of social relationships and values through future generations [26][81].

Therefore, country food may be defined as the food produced within the domestic economy of Aboriginal people, the basic features of which are common to Aboriginal people across the North. It is a system for production and distribution based on the harvesting of wildlife which relies on a distinct set of social relations and which has at its base the Aboriginal household.

This Aboriginal domestic economy may be differentiated not only from the market-based economy in the North, but, as Peter Usher and Lindsay Staples have pointed out in their work on subsistence in the Yukon, also from the subsistence activities carried out by non-Aboriginal people in the North. In the Yukon, non-Indian subsistence, that is harvesting of wildlife by non-Indians for their own consumption, is strictly an economic activity rather than the key element of an enduring socio-economic system. For non-Indians, the industrial economy remains the central reality of life, with subsistence a peripheral alternative. By contrast, according to Usher and Staples, subsistence is central to the Indian economy, with the industrial economy at the periphery [69].

### Mixed Nature of the Domestic Economy

Before contact with European societies, Aboriginal people in the North were semi-nomadic and supplied their food needs from systems of harvesting that relied on the natural resources available within their own harvesting area, or through systems of trade or barter with other Aboriginal groups to obtain foods not available locally. The fur trade, and in some areas the whaling industry, introduced new resources into the system, including both foods such as flour, tea and sugar, and new types of harvesting equipment such as guns, metal traps and nets. As Aboriginal people became dependant on these trade goods, their harvesting and migration patterns were altered and permanent campsites were often created on the location of trading posts. After the Second World War this process, along with other factors such as the displacement of Indian communities by large-scale dam projects, culminated in the relocation of virtually all Aboriginal groups in the North into permanent settlements. This facilitated not only trade but also the provision of health and education services and social transfer payments by governments. [81][77].

The effects of this resettlement on the Inuit harvesting economy has been studied by George Wenzel. The abandonment of a semi-nomadic way of life required Inuit to adopt new, expensive forms of transportation B snowmobiles and powered boats B in order to continue to reach the best harvesting areas which now lay at a considerable distance. In turn, this dependence on new types of harvesting equipment made money an essential resource for the functioning of the harvesting economy [81]. In 1989, Wenzel and Usher estimated the amount of money required by an Aboriginal household in the Northwest Territories to participate in wildlife harvesting to be \$10,000, which covers the capital costs and the operating and maintenance costs for harvesting equipment [72, p. 36].

The problem facing harvesting households is that very little of the income from harvesting is realised in the form of cash. Rather, it is income in kind primarily in the form of food that is consumed by the household rather than sold. Therefore the need for cash for investment in harvesting had to be met in a number of ways. The most efficient means from the point of view of harvesters has been through the sale of wildlife products generated from the same harvesting activities that produce foods for domestic consumption by the household.

In the Northwest Territories, the skins from ringed seal provided Inuit hunters with a basic year round source of cash from a species which for many communities is also the primary source of food. The sale of furs from terrestrial mammals such as the Arctic fox were also critical, as they have been in other regions of the North. There were also some attempts to market the meat obtained from harvesting, but the returns from these were extremely small in comparison to the returns from the sale of skins and furs [81].

The income from the sale of furs and skins was supplemented by income from the production of art B Inuit sculpture and prints B which is a substantial industry in the Northwest Territories, and through seasonal or full-time work for wages. Rotational

employment in the oil and gas and mining industries provided opportunities for good monetary income and time off to pursue harvesting activities. In other cases full-time employment created a role within the harvesting household for supporters whose wage work provided the household and extended family with cash for investment in harvesting. Finally, social transfer programs, particularly social assistance and Child Tax Credits provided supplementary cash income to the households [77].

The domestic economy or Inuit in the Northwest Territories had clearly become a mixed economy in which subsistence and commercial elements were inextricably mixed. Harvesting provided country food for the household, the extended family and ultimately for the community, while most of the furs obtained were sold for cash. This cash income was supplemented by seasonal or full-time work and through social transfer payments. This mixed economy functioned effectively, providing households with the food and other necessities they required right up until the end of the 1970s [81].

In the early 1980s, the domestic harvesting economy of the Northwest Territories was hit by an economic crisis brought on initially by anti-sealing and anti-trapping campaigns. Between 1980 and 1983, as a result of the anti-sealing campaign and the closure of the European Community market to seal skins, the number of skins sold in Nunavut dropped 83% and the average price per skin fell 58%. The market for white fox followed a similar trend: between 1981 and 1984 there was a 47% drop in the number sold in Nunavut and a 37% drop in price. This had devastating effects on the incomes of harvesters and their households. In Pangnirtung, one of the primary sealing communities in the Northwest Territories, between 1980 and 1985 the average yearly cash income for harvesters from the sale of skins and furs fell from \$2,195 to \$306, yielding almost \$1,900 less for reinvestment in harvesting activities to obtain food to the household [77]. Accompanying this was a drastic reduction in the sales of Inuit art as a result of the 1981 recession. Increasingly cash was becoming a scarce and therefore limiting resource in the domestic economy of Inuit [81]. The result was greatly increased reliance on social assistance and other government transfer programs.

However, social transfer programs are not easily adapted to the needs of wildlife harvesters. In some areas until recently social assistance was not paid in cash. It could be used to purchase expensive, store-bought food, but the cash equivalent was not available for investment in harvesting equipment which might return two or three times its value in highly nutritious country food. Recognising, this, the government of the Northwest Territories introduced a number of subsidy programs for harvesters. Most of these programs depend however on the ability of the harvester to sell furs or skins, which is very difficult or impossible in light of the continuing activities of animal rights groups. There is evidence that within Inuit communities, non-wage supported harvesters suffer severe constraints on their overall level of harvesting activities. At the same time, harvesters who have full-time employment find that the time available for harvesting is greatly reduced. Both of these factors are tending to reduce the overall supply of country food available in the communities [79]. Within the Northwest Territories, this situation has produced an increased interest

among Inuit in the commercial sales of country food, which is discussed later in this section.

Similar factors are at work in all of the regions of the North. For example, according to the study done by Usher and Staples, Yukon Indians face similar problems which result from the scarcity of cash as a resource for harvesting activities. The influx of the large non-Aboriginal population into the Yukon originally created opportunities for Indians to sell country food and to find part-time and seasonal wage employment. However, while trapping, commercial fishing and craft production do provide cash, in general the opportunities to earn cash have always been fewer those in the Northwest Territories and Northern Quebec. The prices received for fur pelts from trapping are low; few Indians are involved in commercial fishing; and the mining sector in the Yukon has a poor record of employing Indians. Transfer payments provide income to households, but as in the Northwest Territories these are designed to support consumption, not the production of food through harvesting. Thus there is evidence that the production of country food through harvesting activities is constrained by a lack of sources of cash, and that this production is well below a level which most households would desire [69].

In the Cree communities of James Bay in northern Quebec, harvesting of wildlife for food is carried out by groups of up to five families operating from isolated bush camps, who remain on the land for periods up to nine months at a time. By the 1960s, technological changes in the nature of harvesting similar to those in the Northwest Territories had resulted in a domestic economy that was clearly a mixture of subsistence and commercial elements. Cree were increasingly dependent on sources of cash income B fur sales and part-time work B which were relatively scarce. In addition, advance credit was being curtailed by the Hudson Bay Company, and the system of social assistance, which had originally allowed for lump-sum payments covering several months to be given before families set off for bush camps was replaced by a more standard system of monthly welfare cheques which required recipients to be present in the settlement every month. As a result of the increasing difficulty in obtaining cash, a significant number of Cree were driven out of harvesting, and among those who remained, there was an increasing trend for just men to go out rather than families, and for shorter periods of time. The result was a reduced supply of country food in the communities [28].

These problems in obtaining country food were addressed through a unique program, the Income Security Program (ISP) for Cree Hunters Trappers and Fishermen, negotiated by the Cree in 1975 as part of the James Bay and Northern Quebec Agreement. The objective of the ISP is to ensure that hunting, trapping and fishing remains a viable way for life for Cree, and that those who pursue it are guaranteed a measure of economic security. Payments are made to harvesters, and eligibility for payments under the program are based on need and on the level of commitment to hunting fishing and trapping measured by time spent out on the land. Lump-sum payments under the program enable households to buy equipment and supplies required to spend extended periods harvesting in the bush. Approximately 40% of the Cree population receive benefits from the program, and these beneficiaries represent households that have very little other cash income. The overall effect of the program has

been to stabilise the number of people engaged in hunting trapping and fishing, which has in turn ensured that a secure supply of country food is available within the Cree communities [77][70].

It is sometimes assumed by outside observers because of the shortage of cash within the domestic economy that Aboriginal people in the North are "trapped" in the domestic economy, and continue to pursue "unproductive" harvesting activities as a means of obtaining food simply because there is insufficient wage employment available in northern communities. This notion is disproved by a study by George Wenzel which estimates the rate of return on harvesting in Clyde River, Baffin Island in 1984. When the food consumed domestically is considered, as it should be, as income for the household, after all capital and operating costs are taken into account Wenzel calculated the rate of profit on harvesting in Clyde River to be over \$37 per hour [82]. It is difficult to know how generally this figure may be applied across the North; however a second profit calculation of this type was carried out by Wenzel in Holman in the same year. In the case of Holman, even though the study took place during a period of the year of "ecologically and environmentally reduced mobility of the Inuit population", the resulting estimate of the rate of profit on harvesting was close to \$10.00 per hour [81].

Even more significant is the testimony by Aboriginal people concerning their attitudes to the role and importance of country food and wildlife harvesting in native culture. A submission on renewable resources management presented by the Council for Yukon Indians at a 1984 workshop on National and Regional Interests in the North stated that:

Recently, it has become necessary repeatedly to refute government, industry, or non-native arguments that Yukon Indians no longer depend upon renewable resources the way they did traditionally. Often at issue, as well, is whether wage labour will provide an appropriate alternative for hunting, fishing, and trapping activities. Another popular argument is that as soon as Indian harvesters acquire modern technology, they must, for the sake of wildlife conservation, be regulated in their endeavours.

To native peoples, however, since time immemorial, these resources have not been just commodities with little meaning beyond their nutritional or cash value. They formed, and still form, the basis of a way of life. Thus, the Indian environment never once was considered as one to be exploited at all costs. Rather, renewable resources were the means to ensure everyone's livelihood...

Needless to say, subsistence use of resources continues to play a strong central role in the lives of large numbers of Indian people B even today, under the enormous pressures brought to bear, on the one hand, by commercial and sport hunting and fishing, and, on the other hand, by parks and sanctuaries set aside to protect the "wilderness quality" of the Yukon.

When Yukon game laws have not been imposed on Indian providers, they have at

least existed in an uneasy equilibrium with Indians' traditional harvesting rights. Although the Indian approach to the biosphere too frequently contradicts government policies, renewable resources themselves become mere pawns in a game of dispute over plans for land-use management...

Concerning the ongoing subsistence harvest, CYI takes the position that the land base should remain as productive as possible, and that the total resource base should be integrated satisfactorily with social, cultural, and economic aspects of the Indian way of life...[20, 427-33].

Jim Bourque, a Metis from the Northwest Territories who is currently Deputy Minister of the Department of Renewable Resources in the Government of the Northwest Territories say that his perspective is that of "...a native person raised on the land, a trapper, a resource manager in the field, a northern native politician and now a senior civil servant with the Territorial Government [8, p. 61]. Mr. Bourque describes his concept of an ideal northern community of the future as follows:

An informal economy will operate within the community. People will be expected to hunt and fish for food and to build and repair their homes. Harvesting of furs and timber will continue. There will be some small scale art, handicraft and other manufacturing activities using appropriate technology. And there will be some carefully controlled tourist activity.

...The formal economy, measured in the usual ways, will not be as rich as the formal economy of a southern industrial community. But, if the informal economy and other values are considered, it will be very rich indeed.

...Let's explore this a bit further: we know that northerners' lifestyles are centred around the land and renewable resources. We also know that economic development will be necessary to provide the opportunities and benefits that northerners will demand.

The concern of non-renewable resource development, primarily in the national interest, is one of balance: balancing this need against the northern social and cultural preferences and dependence of some northerners on renewable resources.

...For most small communities and almost all native people, renewable resources represent a culturally acceptable source of wealth and economic development opportunities. Any success in developing these resources will strengthen the territorial economy, stabilise it and lessen its dependence on the skills and resources of the south.

When I talk of balanced resource development and the maintenance of the renewable resource option, what I am saying is that northerners, particularly native people, do not wish to become totally dependent on the North American industrial

economy for their survival.

Quality of life in the North revolves around people's opportunity to live close to the natural environment and harvest renewable resources. Unique social and economic circumstances exist in the Northwest Territories. Hunting, fishing and trapping activities dominate the economic base of most small communities [8, p. 62].

There are a number of reasons for the deep commitment of Aboriginal people in the North to country food and to the domestic system which underlies its production and consumption which extend beyond traditional eating habits and taste preference. The first has to do the nutritional value of country food.

In general, country food is much richer is protein than the meats imported from southern Canada, while having much less harmful fat content . For example, seal meat consists of 32% protein and 2% fat and caribou is 27% protein and 1% fat. Caribou meat is 30% protein and 4% fat; moose meat is 29% protein and 1% fat. In contrast to these, beef is only 17% protein and as much as 23% fat. Also, fats in country food are less saturated than beef and other southern meats. This applies not only to sea mammals and fish, but also to beaver, muskrat polar bear, and caribou. Country foods are much higher in iron and calcium, as well as other essential nutrients such as Vitamin A, Vitamin C, Thiamine and Riboflavin [18, pp. 241-4]. Changes in the diets of northern Inuit and Indians to include more southern foods have significantly increased the incidence to dental caries, obesity, iron deficiency, Vitamin A deficiency, and diabetes in northern natives. Many native elders report that sustained consumption of store-bought foods has made them sick [10].

Second, there is a very clear cost benefit to consuming country food from harvesting rather than store-bought imported foods. Comparative indices of retail price levels continually show that retail price differentials between northern communities and southern urban centres range from 15% higher in the case of northern communities with access by road to over 100% higher for remote communities relying on access by sealift and air [13]. In general, country food offers northern Aboriginal people a more economical and efficient investment of scarce cash resources. It has been clearly demonstrated that production of food through harvesting provides a higher yield of food per dollar invested than can be obtained per dollar earned through wage employment [79, p. 120].

Third, there is a cultural value placed on country food which clearly contradicts any notion that country food is a source of nutrition for those who cannot afford the more expensive store-bought food. The social relations underlying the production of food in the domestic economy are critical to the functioning of that economy, and the sharing of food within the household and through the extended family and community are the primary means of reinforcing those relations. The work of Harvey Feit with the Waswanipi Cree in James Bay illustrates this point clearly:

The introduction of food commodities produced in an industrial society into Cree households has become essential to support the rapidly growing Cree population.

Nevertheless, complete dependence on purchased foods, and self-sufficiency in food procurement at the expense of food exchanges with other commensal groups have not developed...

All sectors of Cree society maintain a high value and a strong preference for locally produced bush foods. The value of bush foods reflects, in part, the practices of the people in bush oriented households. Those bush households which have sufficient bush foods for their own needs, continue to undertake additional work to produce a net quantity of bush foods to give away. On occasions when their supplies of bush foods do not significantly exceed their own needs, they will typically use additional purchased foods, or less valued small game bush foods to supplement their diet, and thereby produce a modest surplus of valued bush foods for exchanges...The gifting of bush foods is both a sign of the value of those foods, and of the value of the social bonds which motivate the distribution. The fact that such exchange is less of a material necessity today highlights its social dimensions....

Gift exchange in foods thus flourishes, and reproduces the predominant value of bush over purchased foods, an evaluation which cannot be explained simply by reference to biological need or by individual consumer preference. Rather food exchanges continue to express the primary commitment to sociality, and to recreating an active practice of mutual aid and responsibility in daily lives in which generosity is expected....

With respect to the intensity of production, it has been shown that hunting effort continues at levels necessary to produce substantial food for social exchange, despite the potential for commensal group autonomy in food production, and for reductions in hunting effort and bush food production... [26, pp. 260-2].

This assessment of the social value of country food is confirmed by the research of Kristen Borré in Baffin Island. Borré found that the production and the sharing of country food among kin remains a central organizing concept for Inuit society, despite the extensive cultural changes which have occurred. However, access to country food is constrained both by lack of money on the part of those who are not employed and by time available for harvesting on the part of those employed full-time. Thus the diet of Inuit in Clyde River was made up of 55% store-bought foods and 45% locally produced country food. The store-bought food consisted primarily of refined carbohydrates, starches and sugars, which are a significant source of calories for energy, while the country food consisted primarily of seal and caribou which are significant sources of protein, vitamins and minerals.

According to Borré, country foods provide the essential protein and other nutrients in their diet, which are too expensive to purchase in the form of store-bought foods. Inuit purchase less expensive carbohydrates and fats as an effective way to meet their caloric energy requirements at low cost. In addition the purchase of store-bought food creates a surplus in the stock of country food which can then be shared to reinforce hunting and kinship

relations. The purchase of store-bought foods is a mechanism for creating a surplus of country food by which the extended family can maintain its role in hunting and in distributing country food, thus reinforcing the essential social relations underlying the domestic economy. The role of store-bought food is to help to assure the ability of Inuit to hunt and to share country food. [6].

### Access to Country Food: Supply and Management

Access to country food is determined by a number of factors. Its dependence on the ability of Aboriginal people to pursue harvesting within the domestic economy and the effects in this regard of lack of cash income for investment in harvesting were discussed above.

The overall supply of country food the North is limited by the carrying capacity of the land and waters. In the North generally, productivity of the land and waters is low, and therefore although there is some possibility that the resource supply might be increased through various enhancement or management techniques, it is reasonable to assume the current estimates of wildlife stocks and sustainable yields represent the supply available for the foreseeable future. Information presently available on the level of wildlife populations indicates that these will more that adequately meet the needs of Aboriginal population across the North for country food at present and some time into the future [12].

The stock of wildlife species available to harvesters can fluctuate significantly as a result of many factors, including long-term cycles in population levels or changes in migration routes. Degradation of wildlife habitats through development can diminish the stocks available, either by reductions in populations levels or by the displacement of populations. The most destructive effects on wildlife habitats and populations has been observed as a result of hydro-electric development in the case of James Bay and Northern Quebec. This is a problem which is shared by Native people in the sub-Arctic regions of other provinces, particularly Ontario and Manitoba. Construction of highways and roads has displaced game populations in the Yukon, Mackenzie Valley, Cree areas of Northern Quebec, and southern Labrador, both through direct effects and through the increased competition resulting from easier access by larger urban populations [69][91][95].

Pollution may also pose a serious threat to the population levels and to the quality of the wildlife stock. Although research into pollution in Arctic wildlife is scattered, there are reports of heavy metal contamination in fish, heavy metal contamination of marine mammals, and of PCB contamination in country food and in the breast-milk of Inuit in the eastern Northwest Territories and Northern Quebec [5][48]. As with hydro development in the north of other provinces, the critical role of hydro development in mercury contamination of fish has been documented in James Bay.

The case of PCB pollution in Broughton Island demonstrates the dilemma posed by pollution of country food sources. In Broughton Island, a small Inuit community on the east coast of Baffin Island, country food is consumed by nearly all residents on a regular basis. A study done by Harriet Kuhnlein for the Department of Health, Government of the Northwest Territories, found that on average each Inuk in Broughton Island consumes .33 kg (approximately 3/4 lb.) of country food each day. All of these foods appear to contain some PCBs. The primary PCB contributors in the diet are fatty foods from seal, narwhal, walrus and caribou. In terms of the effects on Inuit, about 10% of females and 15% of males consumed more than the "tolerable" amounts of PCBs; however the percentages were higher in Inuit over 45 years of age, with 40% of men 45-60 years of ages exceeding the intake guidelines for PCBs.

On the other hand, the study also recognises the nutritional superiority of country foods over store-bought foods:

...Blubber, which has the highest levels of PCBs, is rich in at least one essential vitamin (retinol), and may be its major source in the diet. Blubber also contains high levels of omega-3 fatty acids, which are believed to provide protection against heart disease and other diseases, and to support other metabolic processes, such as the development of nerve tissues (particularly important *in utero* and during infancy).

...Inuit food meats B from marine mammals, caribou and char B provide large quantities of high quality protein, and the essential minerals iron and zinc, among other nutrients.

...The use of Inuit foods provides a uniquely healthful, nutritionally sound diet, breast feeding and breast milk convey enormous benefits to developing infants... [48, p. 101].

The study determined that the level of PCB intake does represent "an erosion of the safety factor for a PCB intake". However, the overall conclusion of the study is that while there must be continued monitoring of PCBs and other contaminants in food species in the Arctic, the nutritional value of country foods is high and substitution of country foods with marketed foods currently available and consumed in the community will result in a poorer diet which also brings with it the risk of damage to health. Therefore, "the benefits of Inuit foods, and of breast feeding to Broughton Island residents are greater than the risk from the PCBs in Inuit food or in breast milk' and "The use of Inuit foods, and breast feeding should be encouraged" [48, pp. 102-3].

The other major determinant of access to country food by Aboriginal people is the competing demands which exist for wildlife resources. These include subsistence and commercial utilisation of wildlife resources by non-Aboriginal people, recreational uses that are consumptive (sports fishing, big game hunting) or non-consumptive (wildlife observation tours).

Conflict between users is illustrated by current problems of Cree hunters in northern Quebec with sports hunters from the south. A decline in moose available to sports hunters in southern Quebec has placed great pressure on the caribou population in the Cree area. Each year, approximately 1,000 to 1,500 non-Cree caribou hunters are using the network of reservoir roads built for the James Bay project to drive in and shoot caribou. Given that the Cree population of the region is in 1986 was under 10,000, this influx of southern hunters is akin to a short-term invasion. While there is apparently no immediate danger to the caribou population, the Cree are very concerned. They are very aware of the fact that the caribou population moves in cycles and that the longer-term effects on this significantly increased demand on the resource are not clear [96].

Similar problems were created by the construction of the Alaska highway through the Yukon [69], and by the construction of a road connecting Goose Bay, Labrador with a southern highway system. Estimates of caribou shot illegally near the road from Goose Bay run as high as 7,000 animals in a season, more than the total amount taken by Inuit in Labrador for both domestic consumption and commercial sale [91].

These competing uses reinforce the need for effective systems of managing wildlife resources. Each of the Aboriginal societies in the North has its own traditional system for managing land and resource utilisation that is integral with the values and ethics of the particular Aboriginal group. According to studies done by Peter Usher, these traditional systems are based on a concept of communal property, in which a local harvesting group has rights to harvest a specific area of land and also the responsibility to manage the land and its resources. All members of the Aboriginal group are involved in management, and it is the shared knowledge which comes from harvesting that forms the basis for management. Therefore in these traditional systems, management and harvesting are conceptually and practically inseparable [65].

For example Harvey Feit has documented the system of management used by the Cree in Waswanipi in Northern Quebec. In the Cree view, all people have a right to land and resources to sustain themselves; however, this is a communal right tied to specific areas of land. The land in the Cree region of James Bay is divided into approximately three hundred territories, each one under the control or "ownership" of a particular hunter. This steward is the temporary custodian of the portion of the community and kin-group inheritance, and is obligated to ensure that the land is used in ways that protect it for use by future generations.

The steward has the right to decide whether the hunting territory is to be used for intensive harvesting or allowed to rest. The steward can decide which species can be hunted, where, and when and how many can be harvested. The steward also has considerable authority over who can use a particular territory [26]. The result is that Cree harvesters carefully observe population trends and adjust their harvest accordingly by harvesting within sustainable yields to avoid depletion, choosing hunting strategies that will stabilise wildlife populations. Within the limits defined by this management system, Cree hunters produce as much country food as possible [27].

Traditional Aboriginal systems of land and resource management continue to exist and to function to some extent among all the Aboriginal groups across the North. However, their effectiveness has been greatly eroded through the influx of non-Aboriginal populations and resource users, and through the establishment of governmental systems of land and resource management.

The effect of government systems of land and resource management on the production of country food by Aboriginal people in the North has varied greatly. In each of the political jurisdictions across the North, government systems for managing lands and resources have differed in their response to the needs of Aboriginal harvesters, and have therefore varied in their overall effects on Aboriginal harvesting systems. In the Northwest Territories, for example, the establishment of the General Hunting Licence which is virtually restricted to native people, the large number of socio-economic programs in support of Aboriginal harvesting, and the fact that most of the N.W.T. remains undedicated Crown land have all contributed to maintaining relatively free access to wildlife resources for Inuit, Dene and Metis. In addition, the limited application of the concept of individually registered traplines left relatively undisturbed the traditional system of land tenure [65][69].

In Labrador, by contrast, the hunting rights of the Innu have generally been ignored by the Government of Newfoundland. Innu are subject to the same regulations which govern the general population of the province, and no consideration is given to the special nature of needs of the Innu domestic economy. Newfoundland hunting regulations have been rigidly applied, and the result has been a continual stream of arrests of Innu hunters and confiscation of their hunting equipment [2]. In the Yukon, lack of management policies similar to those in the Northwest Territories, including the extensive application in the Yukon of individually registered traplines, have resulted in much more restricted access by Indians to the wildlife resources, and a significant reduction of the production of country food [65][69].

In general, state systems of wildlife management operate in opposition to the principles underlying traditional Aboriginal resource management systems. Most state systems of management operate on a fairly strict division between users of natural resources and the managers of natural resources. Aboriginal people were thus excluded from management of their resources, although in the case of Hunters and Trappers Associations in the Northwest Territories they were extensively involved in the administration of management decisions. Courts have in a number of instances recognised an Aboriginal right to harvest wildlife; however this right does not extend to outright ownership of wildlife resources. This means that Aboriginal people were not in a position to claim compensation for damage to wildlife resources by other users of the lands and waters, giving them an inferior status to that of other users of the land such as mining companies who are entitled to compensation for damage caused by others on the basis of legally defined and enforceable interests [65][69].

Under government systems of land tenure, land and resources were viewed as the common property of all, offering equal and universal access for all citizens, rather than as the communal property of specific groups as viewed by Aboriginal people under their traditional systems of management. The objective of state management systems has been to strike a balance between the great number of conflicting demands for land and resource use. While they have generally been sympathetic to native demands for harvesting for domestic food consumption, they have treated native commercial harvests as no different than non-native commercial harvests, and in this way diminished the role of commercial harvesting as an essential support for the domestic consumption of country food [65][69].

Finally, state management systems operate generally on a centralised, bureaucratic basis, with policies and decisions firmly based on a work of professional resource managers and scientists. On the one hand this has led to a relatively narrow and fragmented approach to resource management, with different government agencies and indeed different levels of government responsible for the management of various wildlife species, and often with limited co-ordination among these management agencies. On the other hand, it has frequently led to a dismissal of Aboriginal approaches to resource management, which tend to be more holistic and based on self-management by the users of the resources through their direct experience and knowledge of the wildlife. This had led to the development of a fairly deep level of distrust on the part of both parties B scientific resource managers and Aboriginal users B which has seriously constrained the effectiveness of land and resource management regimes and policies [65].

The desire of Aboriginal people to have more influence on government land and resource management policies, together with the increasing recognition by government resource managers that effective wildlife management could only be achieved with the co-operation of Aboriginal harvesters through their direct involvement in wildlife management, has resulted in initiatives for establishing management systems based on co-management of wildlife resources by government and Aboriginal groups.

One approach to co-management arrangements is illustrated by the Porcupine Caribou Management Board and the Beverly-Kaminuriak Caribou Management Board. The Beverly-Kaminuriak Board for example is composed of both government representatives and representatives of resource users from communities in the N.W.T., Saskatchewan and Manitoba, and has been able to address specific resource management concerns. However, the most significant impact in the area of co-management has been achieved through the settlement of Aboriginal land claims in the North. Not only have these claims established constitutional protection for Aboriginal harvesting rights in the land claim settlement areas, they have introduced co-management regimes for participation by Aboriginal people in the land and resource management process with equal representation to that of government.

For example, the central objective of the Inuvialuit Final Agreement is the protection and preservation of the region's wildlife, environment, and biological productivity, and this objective is pursued by a strategy of co-management, which integrates Inuvialuit into all agencies pertaining to wildlife and land management in the region. Under the agreement, Inuvialuit have equal representation with government on:

- \_ Wildlife Management Advisory Councils which are responsible for advising governments on all matters relating to terrestrial wildlife policy and management;
- \_ a Fisheries Joint Management Committee which provides assistance to the Minister of Fisheries and Oceans on the management of fisheries and of marine mammals in the region;
- an Environmental Impact Screening Committee and Environmental Impact Review Board which review development proposals to determine whether they will have a negative impact on either the environment or wildlife harvesting, and recommend whether specific development projects should proceed [7].

Under the James Bay and Northern Quebec Agreement, a Hunting, Fishing and Trapping Regime was established to protect the rights of Inuit and Cree in the harvesting of wildlife. This regime includes a Hunting, Fishing and Trapping Co-ordinating Committee, comprised of an equal number of representatives of the Inuit, Cree, Quebec government and federal government, which operates as a consultative body for the management and regulation of hunting fishing and trapping. The Hunting, Fishing and Trapping Regime is complemented by an Environmental and Social Protection Regime which promotes co-operation and co-management in the adoption of environmental, social and land use regulations, in the development of environmental and social impact assessment and review procedures, and in the protection of wildlife resources [7].

Although the legal powers of these agencies are advisory or consultative in nature, they have established a strong role for themselves in the land and resource management regimes of their respective jurisdictions. Most of the research on wildlife which is done in the Northern Quebec now is channelled through one or other of the joint Aboriginal-government bodies. This allows Aboriginal people greater input and control over the way management of land and resources is conducted, and provides government departments with very useful input on scientific issues of management.

Similar objectives are being pursued in land claim negotiations in the other areas of the Northwest Territories, in the Yukon and in Labrador. Still, significant problems still remain. Aboriginal people feel that they still do not obtain sufficient influence at the government policy-making levels. The most significant initiative in this direction, according to Lorraine Brooke, former head of the Renewable Resources Development Department of Makivik Corporation, was the proposed federal Arctic Marine Conservation Strategy, which would have redefined the relationship between aboriginal people and government. However, this strategy has not to date produced any concrete results [87][7].

# EXTENT AND SIGNIFICANCE OF ABORIGINAL PARTICIPATION IN THE COUNTRY FOOD SECTOR

It is now necessary to inquire more closely into the extent of Aboriginal participation in the harvesting, processing, consumption and exchange of country food, and the significance of this for Aboriginal communities across the North. This will involve reviewing available statistics to determine as much as possible for each of the regions in turn the level of the harvest and consumption of country food, the value of this food in relation to the overall income of Aboriginal people, and the extent of Aboriginal participation in comparison to that of non-Aboriginal people in the North.

# **Production of Country Food**

In order to examine the volume of production of country food by Aboriginal people across the North, it is necessary first to obtain the most recent data available on the levels of harvesting of wildlife by each of the Aboriginal groups. Most of the harvest information which is available provides estimates of the number of animals killed and retrieved by hunters, and is therefore concerned with the level of food production. These harvest figures may also be taken as relatively reliable indicators of the levels of consumption of country food, although there is inevitably be some meat wasted through spoilage or for other reasons [68].

It is possible to produce from the harvest data an estimate of the actual volume of meat produced in kilograms by multiplying the number of animals harvested within each species by the average edible weight for the species. The edible weight is the amount of edible meat and other edible products obtained from animals. Determination of edible yield is a fairly complex calculation which depends not only on the population profile of a wildlife species in a certain region, but also on the cultural eating preferences of the people in that region. Data on harvests levels and on edible weights which were available for this study have been reviewed in order to provide for each of the regions of the North the most recent estimate available of the volume of country food production.

#### Labrador

#### Inuit/Settlers

According to William Barbour of the Labrador Inuit Association, there is a general lack of solid data on both animal populations and harvesting levels of the Inuit and Settler population in Labrador [86]. The most recent comprehensive information on production and consumption of country food was a 1980 study by Peter Usher on renewable resources in northern Labrador prepared for the Labrador Inuit Association [66].

In his report, Usher developed an estimate for the overall harvest of wildlife by Labrador Inuit and Settlers for domestic consumption in the five northern communities of Nain, Hopedale, Makkovik, Postville, and Rigolet. At the time however he encountered serious problems with the availability of primary data. For example, estimates were available from the government for caribou and seal harvests, but these were estimates based on information provided by local game officers, not on detailed harvest surveys. There were no records for the domestic consumption of fish, a major part of the country food diet of Labrador Inuit and Settlers, nor for that of birds and small game.

Based on the published data which was available for the year 1979, on supplementary interviews, and on his own estimates of edible weight for wildlife species in the region, Usher was able to develop what he considered to be a conservative estimate for the total volume of the domestic harvest, which was 270,816 kg. The original estimates, in pounds, for each of the communities in northern Labrador are reproduced in Table 1.

Based on interviews conducted at the time, Usher concluded that almost all of the country food harvested went to human consumption, and that waste was an insignificant factor. Therefore for the population of 2,068 Inuit and Settlers in Labrador at the time, this harvest represented a level of consumption of country food of 131 kg per capita per year [66, p. 48].

William Barbour estimates the current average annual per capita edible harvest in northern Labrador to be roughly as follows:

_	caribo	u	45 kg
_	seal	23 - 45	5 kg
_	char	45 kg	
_	birds	23 kg.	
-	Unus	25 Kg.	

This would give a total per capital country food harvest of between 136 and 158 kg per year [86]. Considering that Usher's estimate was conservative, these levels are in keeping with the results of his study.

#### Innu

The Innu, also known as the Montagnais-Naskapi Indians, are the original inhabitants of Nitassinan in the Quebec-Labrador peninsula. In 1989 the overall Innu population numbered approximately 10,000, occupying eight settlements in the Quebec part of Nitassinan, and the two communities of Sheshatshit and Utshimassit in the Labrador portion [2].

Innu wildlife harvesting and consumption of country food was documented by Peter Armitage in a 1989 submission by the Naskapi Montagnais Innu Association to the Federal Environmental Assessment Panel reviewing military flying activities in Labrador. This submission includes data on the number of animals harvested (that is killed and retrieved) and edible meat produced for the year 1987 in the two Labrador Innu communities of Sheshatshit and Utshimassit. The edible weights used in the report are taken from figures calculated by the James Bay and Northern Quebec Native Harvesting Research Committee (see below) and from a harvesting study on the Innu of Quebec. The figures for the two communities are reproduced in Table 2 and Table 3 [2, pp. 73-79].

In Sheshatshit, the resulting estimate of country food produced in 1987 by a population of 740 Innu is 25,426 kg. This results in an estimated annual per capita production of country food of 34.4 kg per person per year. According to Armitage, this figure for Sheshatshit is lower than normal as a result of specific circumstances prevailing in 1987, and may therefore be unrepresentative of the generally higher levels of harvesting for Innu in that community. In addition, Sheshatshit Innu experienced severe harvest disruption as a result of the relocation after the Second World War into permanent settlements distant from their hunting areas. In the mid-1970s they began a program of chartering bush planes to fly men, women and children out to hunting camps in the fall and spring from the community of Sheshatshit. An analysis by Armitage of country-based harvesting from the bush camps in 1987 shows that this country-based portion of harvesting produced 70.6 kg per person per year for the approximately 250 people who lived at bush camps during 1987.

In Utshimassit, the resulting estimate of country food produced in 1987 by a population of 391 Innu is 39,600 kg. This results in an estimated annual per capita production of country food of 101.3 kg per capita per year [2, pp. 73-74].

#### Nunavik and James Bay

#### Inuit

Under the James Bay and Northern Quebec Agreement of 1975, the Cree of James Bay and Inuit of Nunavik (Northern Quebec) were to be guaranteed the right to harvest wildlife for their own consumption at the existing levels of harvesting. Guaranteed harvesting levels were established through two separate harvesting studies, one for each of the two Aboriginal groups, conducted between 1975 and 1980. These research projects were overseen by a joint committee of government and Aboriginal representatives, the James Bay and Northern Quebec Native Harvesting Research Committee, which reported to the Hunting, Fishing and Trapping Co-ordinating Committee established under the land claim settlement. In Phase 1 of the research, a retrospective survey was conducted based on data recalled by harvesters. In Phase 2, all harvesters recorded their current harvests of all species on an ongoing basis in diaries for a period of up to five years.

The co-operative approach between government and Aboriginal people, the phased implementation of the project, and strict technical standards established by the Research Committee and produced estimates of current harvests that are considered to be extremely reliable [69]. However, it should be noted that these guaranteed harvesting levels represent minimum subsistence harvesting levels for the wildlife species in James Bay and Nunavik. Inuit are guaranteed access to these levels of harvesting, and current levels of harvesting may in fact exceed these, although there are no current figures available to verify this [93]. The levels of harvesting by species estimated for each of the Inuit communities of Nunavik were published in a 1988 report by the committee [43], and these are reproduced in Table 4.

Although edible weights of species harvested by Inuit were determined by the committee, edible weights were not included in the 1988 report. Therefore, edible weights have been obtained from an earlier report of the committee [44], and the calculation of total edible weight in kilograms has be carried out in Table 5. According to this calculation, the total edible weight of country food harvested in Nunavik, based on the guaranteed harvest levels established by the committee, is 1,163,869 kilograms. In 1979-80, at the end of the harvest survey period, the Inuit population was just under 4,000. Therefore the annual per capita harvest of country food was approximately 284 kg per capita per year.

#### Cree

For the purposes of this study, the guaranteed harvest levels estimated for the Cree in the final report of the James Bay and Northern Quebec Native Harvesting Research Committee, entitled *Wealth of the Land*, were supplied by the Cree Trappers Association and are reproduced in Table 6. Edible weights in pounds for the species harvested in James Bay were also supplied, and these have been used to calculate the total edible weight of the country food harvest, in pounds, for the eight Cree communities.

The total edible weight of country food produced in the Cree region, based on the guaranteed harvest levels established by the Native Harvesting Research Committee, is 2,007,082 pounds, or 910,241 kilograms. In 1979-80 the Cree population was 7390, and thus the annual per capita country food harvest was 123 kilograms per capita per year.

#### **Northwest Territories**

In the Northwest Territories, the Aboriginal population is comprised of the Inuit of Nunavut (eastern and central Arctic), the Inuvialuit of the Mackenzie Delta Region, and Dene and Metis of the Mackenzie Valley. Altogether, Aboriginal people make up close to 60% of the population of the N.W.T. However, up-to-date harvest statistics are not available due to a current lack of reporting structures [88].

#### Eastern Arctic: Inuit of Nunavut

The most recent comprehensive set of harvesting statistics come from three harvest studies conducted in the Baffin, Keewatin and Kitikmeot regions of the N.W.T., which together comprise the territory of Nunavut. These surveys were originally modelled on the Quebec harvest surveys, and were implemented by organizations representing Inuit harvesters B Baffin Region Inuit Association, Keewatin Wildlife Federation, and Kitikmeot Hunters and Trappers Association. Each of the surveys followed its own methodology, but in most cases the harvest figures in these surveys represent estimates of the number of animals somewhere between the number of animals struck and retrieved and the number consumed [68]. The results of these harvest surveys were summarised by Peter Usher and George Wenzel as part of a study on the feasibility of wildlife harvest figures were adjusted by Usher and Wenzel to correct for an overestimation of ringed seal edible weight in the original survey reports [72, p. 28].

According to these harvest survey results, in the Keewatin region, 927,652 kg of country food were produced for an Inuit population of 4,325, resulting in an annual production of 214 kg per capita. In the Kitikmeot region, 870,309 kg were produced for an Inuit population of 3,220, resulting in an annual production of 270 kg per capita. In the Baffin region, 2,096,147 kg were produced for an Inuit population of 7,610, resulting in an annual production of 275 kg per capita. The average annual per capita production of country food for all three regions is 257 kg per capita.

#### Western Arctic: Inuvialuit, Dene and Metis

In the Inuvialuit and Dene/Metis regions of the N.W.T., harvest estimates were produced in the early 1970s for the Mackenzie Valley pipeline inquiry by Peter Usher. He estimated that at that time the volume of country food production for human consumption for the two regions taken together averaged about 1,500,000 kg annually. This represented an average annual production for the two regions of 158 kg per capita [72, p. 29].

Thomas Wright, the President of the Hunters and Trappers Association in Inuvik, says that more current data on harvesting by the Dene and Metis is not available [97]. More recent harvest data is available for the Inuvialuit region through a recent report published in November 1991 by the Inuvialuit Harvest Study [25]. However, this report only gives raw harvest figures for two years up to the end of 1988. The harvest levels from this report for the year 1988 are reproduced in the first seven columns of Table 8. It cannot be surmised from the data presented how representative the harvest for this year is. To determine the overall edible weight of the harvest in the region, it was necessary first to total the harvests for the individual communities. These totals are given in the last column of Table 8. Then in Table 9, edible weights for the species listed in Table 8 have been obtained from the research of Peter Usher published in the report of the Mackenzie Valley pipeline inquiry. These have been supplemented by values from the James Bay and Northern Quebec Native Harvesting Research Committee figures as indicated in the Table. Since the list of species in the Inuvialuit Harvest Study is much more detailed than those in the Berger inquiry report and in the Northern Quebec information, averages have been used in the cases such as fish and birds which give only approximate estimates of edible weights. In some cases, the edible weights were not available. Thus Table 9 gives only an approximation of the total edible harvest, and very likely understates the real level. However it is useful as a comparison to the earlier figure from the research findings of the inquiry. The total edible weight of the harvest calculated in Table 9 is 438,408 kg. Based on the 1986 census, the Bureau of Statistics of the Government of the Northwest Territories has estimated the Inuvialuit population in 1986 to be 2,673. This gives an annual production level for the year 1988 of 164 kg/capita. This figure is similar to that calculated by the earlier study.

### Yukon

In their study on subsistence in the Yukon, Peter Usher and Lindsay Staples note that until recently there was no reliable data collection on Indian subsistence activities in the Yukon. However, based on information available to them, they authors were able to develop a reasonable estimate of the edible yield of country food from the harvest by Yukon Indians. This is reproduced in Table 10.

Usher and Staples estimated that the total harvest in 1987 was approximately 400,000 kg, or for an Aboriginal population of approximately 4,600, an annual per capita production of

country food of 87 kg per capita.

However, if the harvest by Indians living in Whitehorse and the Yukon mining communities are subtracted from the total harvest, the authors estimate the annual per capita harvest of country food by Indians in the smaller rural communities to be approximately 150 kg. This represents a significant volume, particularly considering that the authors believe that due to the impact of "increasing competition from other users of the resource base and its habitat, and especially the lack of remedy in law or policy with which to meet this competition on anything like an equal footing,...the combined effect of all of these impacts has been to reduce subsistence activity and production in the Yukon to levels well below their historic levels and their potential in many areas..." [69, pp. viii, xii].

#### Summary of Data on Production of Country Food

The data on the overall annual levels of production of country food and on annual per capita production levels which were presented in the previous parts of this section are summarised in the chart on the following page.

This table provides an overview of country food production across the regions of the North. When we review the figures for the annual per capita harvest of country food, we realise how significant this production is. According to the report *Apparent Food Consumption in Canada* published by Statistics Canada, the average per capita consumption of red meat, fish and shellfish in Canada in 1988 was 75.9 kilograms. With the exception of Sheshatshit, whose lower per capita production was due to exceptional circumstances prevailing in 1987 as well as the severe problems caused by harvest disruption and the associated problems resulting from relocation, all the other per capita values lie above this national figure. They range from 87 kilograms in the Yukon to close to 300 kilograms in Nunavik, indicating that to a greater or lesser degree almost all Aboriginal people in the North are self-sufficient in protein as a result of their production and consumption of country food [12, p. 7]. This range of per capita production levels for country food are similar to those estimated for the sub-Arctic regions in the north of other provinces in Canada.

#### Chart I

## SUMMARY OF DATA COLLECTED ON LEVELS OF PRODUCTION OF COUNTRY FOOD BY REGION

Region	Date of Data Collection	Total Annual Harvest (kg)	Annual Per Capita Harvest (kg)	
Labrador		. 8/		
Inuit/Settlers				
Usher study	1979	270,816	131	
Barbour estimate	1993		136-158	
Innu				
Sheshatshit	1987	25,426	34	
Utshimassit	1987	39,600	101	
Nunavik and James Bay				
Inuit	1980	1,137,569	284	
Cree	1980	910,241	123	
Northwest Territories				
Inuit (Nunavut)	1985	3,894,108	257	
Inuvialuit, Dene, Metis	1975	1,500,000	158	
Inuvialuit	1988	438,408	164	
Yukon				
First Nations	1988	400,000	87	

### **Value of Country Food Production**

Now that estimates of the volume of country food production have been considered for each of the regions in the North, it is possible to examine calculations of the value of this production for each of these regions.

The problem in determining a value for country food is that most of the food produced does not enter a market and therefore does not have a price established for it through the market mechanism. It is important to determine a value for country food consumed domestically because it represents a significant portion of the income of Aboriginal households, and only by placing a value on it can we compare the level of income from country food with that from other sources.

There has been a considerable academic debate on how best to value food produced and consumed within the domestic economy [67]. However, the most useful and most widely accepted method of valuing domestic production is to impute a monetary value based on the replacement cost to the consumer for the nearest appropriate substitute. Thus for country food, the imputed value would be the cost of purchasing equivalent imported meats sold in local retail grocery outlets. A further problem must be recognised however. Imported meats are in fact not directly equivalent to country food, and any imputed value based on imported meats may not adequately take into account the higher nutritional value and cultural value of country foods [81][67]. Since nutritional differences can be dealt with quantitatively, researchers have attempted to take into account differing nutritional value through various mechanisms. However, the cultural value of country food compared to imported foods has generally been ignored in estimates of imputed value since the difference is a qualitative one not easily captured in monetary measures.

#### Labrador

#### Inuit/Settlers

In his study of renewable resource utilisation in northern Labrador, Usher assigned values to country food based on an analysis of store prices in 1979 for frozen meat, fish and fowl. In the case of seal and caribou, meat prices were adjusted upward by one third to take into account the higher protein content of seal and caribou. This produced values per pound of \$4.00 for caribou and seal, \$2.50 for birds and small game, and \$2.00 for fish. When these values are applied to the total edible weights of meat and fish from Table 1, they result in a total value of country food production in northern Labrador of \$1.75 million, as calculated in Table 11 [66, p. 49]. This represents an annual per capita production of country food in 1979 of \$850.

The gross income for the region from all major sources, both cash and in kind, were estimated by Usher, and the gross income from these sources have been reproduced in Table 12. Significantly, the total imputed value of country food represents almost one-quarter of the regional gross income estimated by Usher. The contribution of country food to total income is higher than the contribution of full-time employment, and is two and a half times the value of commercial sales of fish within the region [66, p. 55].

#### Innu

In determining the monetary value of country food harvested by the Innu communities of Sheshatshit and Utshimassit, Peter Armitage has taken account of the higher nutritional value of country food by using high quality lean beef as a substitute for country food. He applies an imputed value of \$11.44 per kg, the retail price of sirloin steak in the Innu communities, to the volume of country food produced recorded in Tables 2 and 3. This calculation results in an estimated monetary value for country food of \$290,873 in Sheshatshit, and \$453,029 in Utshimassit. This figures represent annual per capita production levels in 1987 of \$393 and \$1,159 respectively. Armitage notes that these value underestimate the total value of country food production since they includes only country food meats harvested, and do not include the value of wild fruits and eggs [2, p. 82].

In drawing his conclusions on the monetary value of country food for the Innu, Armitage provides a cautionary note, returning to the theme that the value of country food goes beyond its imputed monetary value or even its nutritional value. He states:

Elsewhere in this report...I argue that bush food production for the Innu is a holy occupation: it is an integral part of a wider realm of cosmological relations with animal masters and other forest spirits. Bush food is the key ingredient, moreover, in a system of "generalised exchange" or sharing among community members along kinship lines. Bush food production and exchange is also an important element in the Innu political system, as leadership and prestige continue to depend on a hunter's ability to obtain a following through the sharing of bush foods....

The danger in assigning cash equivalent values to Innu bush food production, then, is that one runs the risk of concluding that the Innu can simply be compensated financially for the loss of their domestic economy; for the erosion of hunting, fishing and trapping through resource development, settlement, or some other intrusion by the industrial society. No one can compensate for the loss of a people's culture B a religion, identity and way of life which are intrinsically linked to the land and wildlife harvesting [2, p. 83].

#### Nunavik and James Bay

#### Inuit

The prices for equivalent substitutes for the country food harvested by Inuit in Northern Quebec were not included in the 1988 publication on Inuit harvesting by the James Bay and Northern Quebec Native Harvesting Research Committee. Therefore, in order to provide a rough estimate of the value of country food production in Northern Quebec, the substitution prices used by Usher in his study of northern Labrador have been used. These represent 1979 price levels of substitutes for country food, and therefore come from the same period as the harvest surveys in Quebec.

Following Usher, a value of \$8.82 per kilogram (\$4.00 per pound) was applied to seal, whale, walrus, polar bear and caribou; a value of \$5.51 per kilogram (\$2.50 per pound) to birds and small game; and a value of \$4.41 per kilogram (\$2.00 per pound) to fish. When applied to the harvest figures in Table 5, these values produce a total imputed value for country food production by Inuit around 1979 of \$8,455,806. This represents an annual per capita value of production in 1979 of \$2,114.

Cree

Substitution prices were likewise not available for country food produced in James Bay by the Cree at the time of the harvest study. Usher's values from his Labrador study may be applied to the country food production in Table 6 on the following basis: \$4.00 per pound for seal, beluga, moose, caribou, black bear and polar bear; \$2.50 per pound for birds and small game; and \$2.00 per pound for fish. These values produce a total imputed value for country food production by Cree in James Bay of \$ 5,671,209. This represents an annual per capita value of production in 1979 of \$767.

#### **Northwest Territories**

#### Eastern Arctic: Inuit of Nunavut

In a 1984 Economic Base Study conducted by the Department of Economic Development and Tourism in the Baffin region, Northwest Territories, the imputed value of country food, based on the cost of imported meat substitutes, was calculated to be \$11 per kilogram. The method by which this figure was calculated is not indicated in the study. If this substitution price is applied to the volume of production reported in the three harvest surveys summarised in Table 7, the imputed value of country food production in 1985 for the three regions in Nunavut was as follows:

	HARVEST (KG)	IMPUTED VALUE (\$)
Keewatin	927,652	10,204,172
Kitikmeot	870,309	9,573,399
Baffin	2,096,147	23,057,617
Total		42,835,188

For the Nunavut region, an overall imputed value of \$42,835,188 represents an annual per capita value of production of country food in 1985 of \$2,826.

#### Western Arctic: Inuvialuit, Dene and Metis

In the Inuvialuit region and the Mackenzie Valley, research for the Berger inquiry calculated the substitution price of the 1.5 million kilograms of country food produced for human consumption to be \$6.80 per kilogram. This results in a total imputed value for annual production of country food in the period around 1975 of \$10,200,000 [72, p. 29], and an annual per capita value of country food production of \$1,074.

If the total imputed value for the western Arctic is taken together with the imputed value for the central and eastern N.W.T. regions, the total imputed value of country food for the whole Northwest Territories in the early 1980s, would clearly have been considerably more than \$50 million. Usher and Wenzel have calculated that in the early 1980s Aboriginal monetary household income in the N.W.T., that is excluding

the value of domestic production, amounted to approximately \$100,000,000. Therefore the imputed value of country food increased the household income of Aboriginal people in the N.W.T. in this period by about 50% [72, p. 30].

The significance of country food production in confirmed by other estimates of household income done at the time. Using harvest figures from 1981, the Baffin Economic Base Study found that, for the Inuit communities of the Baffin region (leaving out the government centre of Iqaluit and the mining community of Nanisivik), on average the imputed value of country food increased household income by a factor of 46%. If the two other communities with their substantial non-Inuit population are taken into account, total community income for the region is still increased by a factor of 23% [35, pp. 40-68]. A study of the economy of the community of Sanikiluaq in the Baffin region done in 1987 found that over 50% of gross household income (cash income plus income in kind) resulted from production of country food [58].

The value of country food production in the Northwest Territories in the early 1980s B over \$50 million B can also be compared to the contribution to Gross Domestic Product made by other sectors of the N.W.T. economy. A breakdown for the Gross Domestic Product of the N.W.T. for 1984 is given in Table 13. A comparison of these figures with the estimated value of country food production reveals that the value of country food production was over twice that of the manufacturing sector, more than the accommodation and food service sector, and more than the wholesale and retail sectors combined.

#### Yukon

In their study on subsistence in the Yukon, Usher and Staples used a substitution price for country food of \$9 per kilogram. Thus, for the 400,000 kilograms of country food produced, the total annual value of country food production would be \$3.6 million. This represents an annual per capita value of country food production in 1988 of \$892.

Usher and Staples estimate that the value of this country food production would add at least \$3,000, or between 10% and 20%, to the household income of Indians living in communities outside of Whitehorse [69].

#### Summary of Data on the Value of Country Food Production

The data presented in this section on the value of total and per capita country food production in the various regions of the North are summarised below in Chart II.

The calculations of imputed value range in time from the early 1970s to 1988. With the changing value of the dollar as a result of inflation, these figures do not give us a proper basis for comparison among the regions. It is not possible to update the figures on imputed value to reflect the real value of current country food production, since neither current harvest levels nor current substitution prices for country foods are known. What can be done however is to convert each of the figures on imputed value into 1993 dollars, so at least the monetary unit of measure is constant. This provides us not only with a basis for comparison but also with a better understanding of the figures presented since they are in terms of the value of a dollar at the present time.

The original annual figures for total and per capita imputed value are therefore recalculated in the chart below to convert them to 1993 dollars, based on the consumer price index for Canada listed in Table 14.

### Chart II

# SUMMARY OF DATA COLLECTED ON THE IMPUTED VALUE OF ANNUAL COUNTRY FOOD PRODUCTION BY REGION

(\$)

REGION	DATE OF	ORIGINAL DOLLAR ESTIMATE		1993 DC	OLLARS
	DATA	Total Imputed Value	Per Capita Imputed Value	Total Imputed Value	Per Capita Imputed Value
Labrador					
Inuit/Settlers	1979	1,750,000	850	3,732,377	1,813
Innu					
Sheshatshit	1987	290,873	393	362,476	490
Utshimassit	1987	453,029	1,159	564,550	1,444
James Bay and Nunavik					
Inuit	1980	8,577,367	2,144	16,605,884	4,151
Cree	1980	5,671,209	767	10,979,528	1,485
Northwest Territories					
Inuit (Nunavut)	1985	42,835,188	2,826	58,050,603	3,830
Inuvialuit, Dene, Metis	1975	10,200,000	1,074	30,023,076	3,161
Yukon					
First Nations	1988	3,600,000	892	4,324,653	1,072

The annual imputed value per capita in 1993 dollars provides us with a basis for comparing the data from the various regions and periods. Although the figure for Sheshatshit remains exceptionally low, the remaining figures range from just over one thousand dollars in the Yukon to more than four thousand dollars in Nunavik. These are indeed significant production figures, and they reinforce again the point made in the previous discussions that country food makes a sizeable contribution to overall incomes of Aboriginal people in the North.
# **Participation Rates in Country Food Production**

It is very difficult to obtain quantitative estimates of the rate of participation of Aboriginal people in harvesting within the mixed subsistence-based economy. Statistics on participation rates in hunting, fishing and trapping are simply not kept in most regions, despite the significance, as we have seen, of wildlife harvesting and the production of country food to Aboriginal people and within the overall economies of the regions of the North. In the Yukon, where along with Aboriginal subsistence harvesting there is also a significant level of non-Aboriginal subsistence harvesting as well, there are no reliable statistics available on the participation rates in harvesting of either group [69].

One region where information on participation in domestic harvesting is available is the Northwest Territories. Information on the number of hunters active in communities was collected as part of the harvest surveys conducted in the three regions of Nunavut in the 1980s. Within Nunavut, about 20% of the population on average were classified as hunters in the harvest studies. It must be remembered however, that within harvesting households other individuals are involved with processing meat obtained from harvesting, so that the percentage of the population directly involved in the production of country food is higher [72].

The 1984 N.W.T. Labour Force Survey recorded the number of Aboriginal people in the Northwest Territories who participated in on-the-land productive activities, not including recreational activities. The overall participation rate for natives in the N.W.T. was 46% of the population between ages 15 and 65. Percentages were higher in the eastern Arctic, where in the Kitikmeot and Baffin regions they were 60% and 61% of the population respectively.

It does appear however that in a number of areas of the North there is increasing specialisation among households, and that some households are much more involved with harvesting than others which are primarily oriented to wage employment or other productive activities. At the same time, households specialising more in harvesting appear to be harvesting sufficient surplus to distribute country food to other households who are harvesting less. Thus most households have access to country food and income in the form of country food remains the most widely distributed form of income within Aboriginal communities. There is evidence not only that traditional sharing systems continue to function, but also that these are being modified in response to greater specialisation, to the availability of cash for harvesting, as well as to other factors. Contemporary arrangements are developing for the sharing and distribution of country food, including the increasing interest in and utilisation of increasing commercial trade. These changes demonstrate that the domestic harvesting economy is not some

outmoded form of economic organization, but a living system which continues to adapt to changing social and economic circumstances, just as it previously adapted to the introduction of cash as a key resource for harvesting and for the system of production of country food [79][12][66].

# CONTRIBUTION OF COUNTRY FOOD TO DEVELOPMENT OF THE NORTHERN ECONOMY

# The Commercial Development of Country Food

There is a great deal of interest across the North in the development of renewable resources as a means for promoting development of the northern economy. Part of this interest has focused on the possibility for increased commercial development of country food products.

Commercial sales of country food do indeed offer opportunities for creating employment and businesses in the North. However, the potential for development of the northern economy based on country foods must be kept in perspective for a number of reasons. First, country food, as we saw earlier in this section, is the food which is produced and consumed within the domestic economy of Aboriginal people in the North. The commercial development of country food must generally rely on the same stocks of wildlife from which domestic consumption is obtained. This means that there will be limits on the overall size of commercial country food projects, which will, with some exceptions, be relatively small. Larger scale commercial projects based on wildlife will more likely exploit species which are not utilised within the domestic economy for the production of country food. Some current examples of this are the development of the shrimp fisheries in Labrador, Nunavik and the Baffin region of the Northwest Territories, and the turbot fishery in Pangnirtung, Northwest Territories. Commercial projects which reduce the amount of country food available for domestic consumption cannot be viewed as economic development, since they would reduce income in kind in the form of food, a major component of household income for Aboriginal people in the North.

Intersettlement trade in country food does not present any real conflict with domestic consumption, since the primary target group or market for intersettlement trade is Aboriginal people within the communities. As noted above, attempts to commercialise intersettlement trade represent adaptation of traditional sharing and trading arrangements which do not reduce the stock of country food available for consumption by community residents. It is only in the case of the development of food exports from the North utilising the wildlife species also used for domestic consumption that a possible conflict arises.

Second, the primary objective of developing increased commercial sales of country foods should be to benefit the harvesters for whom cash is a scarce resource. Country food offers harvesters an additional source of cash income. However, in order to be accessible to harvesters, most commercial country food developments will have to be community-based, and offer opportunities to harvesters not only for selling country food but also for flexible employment in processing and other jobs. Small-scale commercial projects of this type can provide very significant benefits within the domestic harvesting economy: a dollar of earned income which is reinvested in harvesting will produce many times its value in country food consumed domestically.

Third, some of the initiatives for intersettlement trade have as their goal not the maximisation of production and profits, although there is no intention to lose money, but rather the selling of country foods as a supplement to the type of exchanges within the domestic economy which already occur between communities through kinship networks. Once again the primary benefits are to be realised within the domestic economy, rather than necessarily through the establishment of major business enterprises in the communities.

Finally, in some of the regions of the North, there is strong resistance by Aboriginal people to the commercialisation of country food. In these regions, other renewable resources must provide the opportunities for business development and for employment, and for increasing the cash income available to wildlife harvesters.

The status of commercial development of country food is reviewed below for each of the regions of the North. Short case studies, which we have termed "mini-case studies", are used to provide insights into the nature, problems and successes of specific commercial country food development projects. It is clear from the review of commercial country food projects that ownership is almost entirely by Aboriginal organizations and that Aboriginal people have been the major recipients of the employment opportunities created.

# Labrador

According to Peter Armitage, the Innu of Labrador have shown little interest in the commercial development of country food, and as a result commercial projects have not been pursued. Participation in commercial ventures is confined to a few Innu in Utshimassit who fish commercially for salmon and char which is sold to a government fish plant in the community [85][2].

The Inuit of Labrador on the other hand have actively pursued a program of commercial production of country food. This has been co-ordinated by the Labrador Inuit Development Corporation (LIDC), which was formed in 1981 and is responsible to the Labrador Inuit Association. Since 1988, LIDC has held a joint shrimp-fishing licence with National Sea Products, which has provided employment and training benefits for Inuit. Commercial production involving country food is confined at present to caribou and char. Together these two projects generate on average revenues of around three-quarters of a million dollars. While this is relatively small in comparison to the value of domestic production, it does provide significant income and employment benefits to harvesters and their families.

Mini Case Study

# Labrador Inuit Development Corporation: The Commercial Development of Char and Caribou

Section Commercial Caribou harvest. This commercial harvest utilises caribou from the George River herd which migrate each spring into Labrador from Quebec. The George River herd is one of the largest caribou herds in North America and is at present under-utilised.

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The commercial harvest is organised separately from the harvesting of caribou for domestic consumption. It is conducted in the early spring to allow for transport of carcasses by snowmobile, and so that the cold weather will reduce the possibility of bacterial contamination. The hunt lasts approximately three weeks and involves hunters from all five coastal communities in northern Labrador. The animals are shot in proximity to a base camp, and transported to the base camp for preliminary butchering. Federal and provincial veterinarians and inspectors are present to ensure that the caribou meets all health standards and regulations. The carcasses are loaded onto sleds and taken to a caribou processing plant in Nain, where they are inspected again, cut and packed.

The hunt and subsequent transportation and processing provide employment for about 75 Inuit from the region. Hunters can earn between \$7,000 and \$10,000 in a season, a significant amount in a region suffering from the collapse of the sealing industry and from chronic lack of employment opportunities. When the project was first proposed, however, hunters were concerned that a large-scale hunt might disrupt the caribou herd on which they also depend for their domestic harvest. However, the hunt is conducted with full respect for the land and for preservation of the wildlife resources, and it now has the full support of the hunters.

The primary market for caribou meat is in Quebec. Meat exported beyond Labrador's borders requires federal inspection, and animals not shot in the head or neck cannot receive approval. Hunters have adapted to the butchering requirements of federal inspection, but due to a good working relationship with inspectors they have also been successful in incorporating some traditional butchering techniques which improve storage of the meat.

Over the past five years, an average of 600 animals have been harvested. However, the harvests have been as high as 1,500 and as low as 22: in some years the caribou arrive too late from Quebec for an adequate harvest. Although the caribou is sold for \$6 per pound, the harvest has sustained an average annual loss of \$150,000, primarily due to a large mortgage on the processing building.

No problems have occurred to date with animal rights groups, and LIDC consciously keeps a very low profile for the caribou harvest. There is concern that attention by animal rights groups focused on the commercial harvest could bring an abrupt end to the commercial harvest, as occurred in the past with commercial sealing.

Inuit are the only ones legally licensed to conduct a commercial harvest of caribou. However, the opening of a road connecting Goose Bay to a provincial highway has significantly increased the number of caribou taken illegally near the road. There are reports that the illegal kill may be greater than both the domestic and commercial harvest of caribou by Labrador Inuit combined.

LIDC also has plans to take possession of a new fish plant currently owned and operated by the Newfoundland government. Char is harvested by Inuit using fishing weirs, which give them more control over the selection of fish and promotes maintenance of a healthy fish stock. Approximately 125,000 pounds of char are harvested and processed at a production cost of about \$4 per pound. However, the char is marketed by the government through a Montreal distributor, and currently brings a sale price of only \$2 per pound, partly as a result of recent competition from fish farms, and partly as a result of quality deterioration from the lengthy storage period before product is sold.

LIDC believes it could at least break even with the fish plant by developing markets for darker coloured char and for fresh char along with frozen product. 8,000 pounds of smoked char were successfully marketed locally last year. However, Department of Fisheries and Oceans regulations require at least 9% salt be added to the smoked product and that it be frozen before shipping outside the region. This makes the fish too salty for most consumers, who also prefer fresh fish products rather than frozen.

LIDC has investigated the potential for harvesting char roe for sale as caviar. However, some Inuit fishermen are resisting such a venture from concern that this may cause too great a disruption of a resource stock that is essential to their domestic economy and lifestyle.

[Based on an interview with Fred Hall, General Manager, LIDC, and on D. Boult, "The Inuit, Nain, Labrador" in Boult, D., R. Pokiak and F. H. Weihs, *Science and Technology in the Development of Northern Communities*]

# **Quebec: James Bay and Nunavik**

According to Rick Cuciurean of the Cree Trappers Association in Val d'Or, there is very little commercial trade in country food among the James Bay Cree. Most food is consumed domestically or shared through traditional kinship ties. He says that the general belief among Cree trappers is that there is never a surplus of animals available for commercial harvesting, even in the case of fish. The Cree are currently experiencing a rapidly increasing population, and most Cree feel that conservation of resources for the future must be the paramount consideration [89].

Cuciurean says that this attitude is illustrated very well by the opposition of the Cree to a proposal by the Inuit of Quebec for a commercial caribou harvest. Under the James Bay and Northern Quebec Agreement, commercial sales of wildlife to non-Inuit, except for fish, are not permitted. Since the mid-1980s, Inuit in Quebec have been attempting to establish a commercial caribou harvest, and a feasibility study was carried out. However, the Cree, through their representation on the Hunting, Trapping and Fishing Co-ordinating Committee, refused to permit a commercial harvest. Although since then the Inuit feel they have produced an amendment to the James Bay and Northern Quebec Agreement that Cree can support, the process has become stalled in the Quebec cabinet [89][87].

Mini Case Study

#### The Development of Commercial Fishing Among the Cree in Quebec

Despite the prevailing attitude to commercialisation of country food on the part of the Cree in Quebec, a small-scale, commercial fish processing plant was established in Waswanipi. This plant is designed to process 6-7 tons of fish per week. Lake whitefish is the primary product of the plant, which also processes sturgeon, walleye, pike and sucker. Although the commercial fish harvest last year was close to 75,000 pounds, the plant needs to sell between 100,000 and 150,000 pounds of fish to break even. The plant is Cree-owned and all of the employees working in the plant are Cree.

The fish is marketed through Montreal, but high transportation costs, inadequate storage facilities, and lack of other basic infrastructure make it difficult to reach the market. The plant is currently trying to develop a market among restaurants and non-native residents in the region.

Mercury pollution in fish in the region has presented a problem. The Department of Health and Welfare has recommended that people restrict the number of freshwater fish they eat. The mercury contamination originates with the pulp and paper industry and with the flooding of land for hydro reservoirs. By focusing on harvesting species that have low absorption rates of mercury, the plant has attempted to mitigate the effects of pollution.

Originally there were plans developed to build additional fish plants in other Cree communities, but support for the commercial fishery varies among communities. The commercial fishery has had difficulties in meshing with the values and systems of the domestic economy. Within the traditional system of land and resource management, there is no mechanism for allocating rights to fishing areas, since there are no precedents for this and no defined tenure rights. Questions of who controls fish resources and of the right of an individual against that of the collective have not been settled.

In addition, the fishery has not meshed easily with the Income Support Program, since under the rules of the ISP time spent on commercial fishing is not included in the determination of eligibility for the program. The plant has had to target as suppliers those Cree who have already reached their maximum benefits under the program and can then afford to fish commercially.

As a result of these problems, there has been resistance to the establishment of processing plants in other Cree communities.

[Based on interviews with Rick Cuciurean, Cree Trappers Association; Allan Penn, Cree Regional Authority; Lorraine Brooke, Makivik Corporation; and information from René Dionne, Cree Regional Authority]

Within the Inuit communities of Nunavik, there is general support for commercialisation of country food. However, it appears that in reality many of the species currently harvested, with the exception of the George River caribou herd, are approaching their sustainable yield. Inuit support strongly the protections for subsistence harvesting built into the James Bay and Northern Quebec Agreement. Inuit are guaranteed minimum harvest levels for domestic consumption, and the subsistence harvest receives priority. Any quotas for sport hunting and fishing or for commercial harvesting are allocated only above and beyond those for subsistence harvesting [87].

Pursuing the development of commercial harvesting has been complicated by the

necessity and costs of negotiating amendments to the James Bay and Northern Quebec Agreement in order to allow for the increased commercial harvest of wildlife. While fish can be sold to non-Inuit, other country food can only be sold to other Inuit at present. Makivik Corporation has supported small scale entrepreneurs in establishing commercial country food ventures focused on the northern market. There is a country food store in Kuujjuaq, and small commercial fisheries have been established for char in the George River area, and for salmon in the Koksoak River and the Whale River [93].

- Makivik Corporation is now initiating a program of inter-community trade. This program is designed to build on traditional practices for the exchange of country food among different regional groupings of Inuit within Nunavik. The current program would function on a commercial basis, with the double objective of:
- \_ providing income for Inuit hunters, fishermen and trappers in the age group 45-65 years old through activities within their traditional occupations; and
- \_ ensuring an equitable distribution of traditional foods throughout the Nunavik region to promote food self-reliance and to improve the nutritional dietary balance of Inuit [52].

The inter-community trade program will provide inspected and packaged country food products to be sold to residents in Nunavik communities, on the premise that Inuit will be willing to pay for country food which is presently available free by providing sufficient value added to the products. The added value would be in the inspection, packaging, and processing of the foods. Ultimately, depending on stock availability and modifications to current restrictions on sales to non-Inuit, country food products would be sold to southern or international markets. Each community will be asked to designate zones where commercial hunting is acceptable, and to establish commercial quotas that would be reviewed by the regulatory agencies established under the James Bay and Northern Quebec Agreement. These commercial quotas are intended to promote resource utilisation toward the maximum sustainable yields [93][52].

Along with market research and product development, the main focus of this initiative will be to set up the infrastructure required in the communities. This will involve collection and storage facilities in each community, three sub-regional processing facilities, and a marketing and distribution network. Inspection will be available at both the community level and at the processing plants, and will meet all regulations necessary to permit products to be exported to southern or international markets. Emphasis in processing will be on maximum utilisation of the animals through the processing of by-products of meat production, such as the skins and blubber of seals and through the development of markets for these by-products [52].

The Inuit have developed food products which do not come from wildlife stocks utilised for the production of country food. Like the Inuit in Labrador, the Inuit of Nunavik hold shrimp-fishing licences, one on their own and one jointly with the Inuit of Baffin region, Northwest Territories. Currently they are allowed to harvest about 1,550 metric tons of shrimp in large factory freezer trawlers, which are marketed in Japan and Europe. The primary objective of the fishery is to create employment, and to promote training of Inuit for technical and mid-level positions on the trawlers. A portion of the profits are used for research and development projects in the communities related to country food [84].

#### Mini Case Study

#### Kangiqsualujjuaq Commercial Char Fishery

Makivik Corporation established the Kuujjuaq Research Centre to serve as a centre of scientific activity and influence among Inuit in the region, and to provide training and employment for Inuit in biological research. The Centre works closely with Makivik's Community and Economic Development Department on research promoting the commercial development of wildlife resources. When an application was made to establish a commercial char fishery in Kangiqsualujjuaq, the Centre was given the task of monitoring a test fishery and carrying out a population sampling program.

The staff of the Centre worked closely with Inuit in the community on the project. Using their knowledge of the ecology of the char in the area, local Inuit selected the best sites for the study program. A winter fishery was set up using gill nets to harvest the char, and then a fall fishery and population survey using fish weirs was established. Inuit traditionally used a stone weir for harvesting fish, and the introduction of a new type of weir caused considerable excitement among those involved in the project. Weirs made it easier to count the fish, and also resulted in a much higher quality of fish to market than those trapped in gill nets.

Inuit from the community operated a large portion of the population sampling project, working as both field workers and as technicians. The char from the test fishery was marketed through a wholesaler and retailer in Kuujjuaq. Currently the quota allowed for the fall weir fishery is 635 char, and for the winter fill net fishery is 3,710 char.

The success of the project was in large part due to the successful co-operation between Inuit in the community and Makivik scientists, which resulted in a more effective scientific research program, and also in greater understanding by Inuit in the community of how science can assist them in their development objectives.

[Based on F. H. Weihs, "The Inuit, Nunavik, Quebec" in Boult, D., R. Pokiak and F. H. Weihs, Science and Technology in the Development of Northern Communities]

# **Northwest Territories**

In 1981 the Science Advisory Board of the N.W.T. developed an estimate of the supply of meat and fish available from the harvesting of wildlife in the Northwest Territories. They concluded that under intensive management about 10 million kilograms of meat and fish could be harvested annually in the N.W.T. on a sustainable basis. This represented at least two times the estimates at the time for the total harvest, and thus it appeared that the supply of wildlife substantially exceeded the current harvest levels. They concluded that there was no overall problem of conservation of wildlife stocks in the Northwest Territories, although specific problems in local areas did exist [30].

In a 1989 report, Usher and Wenzel stated that recent estimates placed current total Aboriginal harvest levels in the Northwest Territories at about 5 million kilograms, to which must be added the commercial fish catch of approximately 1.5 million kilograms, for a total of 6.5 million kilograms [72]. Once again this suggests that there is still a significant surplus of country food in the N.W.T. available for commercial development.

Fish has been the main food product sold both within the Northwest Territories and exported to southern markets. There are long-standing commercial fisheries, for example in Cambridge Bay and around Great Slave Lake. In addition virtually every community has some mechanism for the sale of at least a small quantity of fish.

The attitude toward the commercial sales of country food, however, varies among the regions. In the Mackenzie Valley, there is a major commercial fishing industry, but this is perceived by Dene and Metis as a separate industry, not directly related to the commercial sale of country food. Although in the time available for this study it was possible to obtain information from only a few representatives of the Dene in the Mackenzie Valley, it appears that there is little pursuit of commercial sales in country food within that region. Thomas Wright, the President of the Hunters and Trappers Association in Inuvik, stated that there was very little commercial activity in country food among the Dene in the Mackenzie Valley. There is some very small scale, localised selling of caribou and fish which does not really fit the concept of "commercial harvesting of wildlife species. This has led to some tension in the area since Inuvialuit have had a commercial caribou harvesting operation for several years, and Inuvialuit obtain country food from the same caribou herd as the Dene [97].

Among the Inuit and Inuvialuit in the Northwest Territories there is a long history of initiatives to sell country food. As early as 1960 a Specialty Foods Program was

developing commercial products from beluga whale, seal and walrus, which were canned and sold. However, overall commercial sales of country food in the N.W.T. remain extremely limited in both absolute terms and in relation to the domestic consumption of country food. Aside from the commercial sales of fish, which in 1990-91 amounted to \$2 million, commercial harvesting is limited to approximately 2,000 musk-ox and 400 caribou harvested annually [88].

At a recent planning conference on renewable resources, entitled *Renewable Resources Conference: Planning for the Future - Challenges and Changes in the 90s*, representatives of the Hunters and Trappers Associations from all the Inuit and Inuvialuit regions of the Northwest Territories assembled to discuss ways to "develop a renewable resources economy that would provide employment and income in a sustainable and manageable manner for the Inuit of the N.W.T." [47]. A key element of these discussions was the potential for increasing the commercial sales of country food.

Mini Case Study

#### Intersettlement Trade and Arctic Foods Development in the Baffin Region

In the late 1970s, the Amarok Country Food Store was established by the Hunters and Trappers Association
SectionIQabiiThe OrdertycFace(Septish two objectives. First, it would provide country food to Inuit in Iqaluit who
were not in a position to obtain country food themselves. In this way, it would promote intersettlement trade
in country food as an extension of the traditional sharing and exchange patterns, encompassing however
exchange between a greater number of communities. Second, as a commercial operation, it would provide
an additional source of cash income to hunters within the Baffin region.

By 1980 the store had clearly established that there was a market for country food in a regional centre like Iqaluit. The store was selling caribou, char, muktuk, musk-ox, seal and some liver and other organ meats to Inuit, and char and packaged caribou to non-Inuit residents. It was also selling hunting supplies and hardware, primarily to hunters. Although the store enjoyed a small profit in 1980, it was plagued by management problems. In the first four months, there were four different managers, and in 1982 it became clear there had been significant mismanagement and there was over a \$40,000 loss on sales of \$116,000.

From a financial point of view it appeared that the store should be closed down; however, it was providing significant benefits to hunters in the region. In 1981-82 it had purchased almost \$22,000 of country food from hunters in other communities, a significant amount for the time. Therefore it was decided that the store would remain open with support from the government. From 1983 to 1986, the store was able to rebuild its business based on more stable and professional management. In 1985 the store purchased the entire commercial quota of caribou in the region, about 8,200 pounds, as well as 23,875 pounds of char, 7,000 pounds of muktuk, and 1,000 pounds of seal, which produced sales of \$135,000. The store was still the only source of country food in Iqaluit, and sold products to tourists as well as to residents. The store showed net profits for the years from 1983 to 1985.

In 1986 a change of management resulted in a lack of control over the operation of the store, ending in a loss of over \$45,000 for the year. The Board of Directors of the HTA were determined that the store remain open, and despite the adverse situation, managed to maintain the operation of the store on a reduced and marginally profitable basis until the last few years when financial problems forced closure of the store.

The primary problem the store faced was management. It appears that the store had a well-established market prepared to purchase good quality country food. With good management it was possible to make a reasonable profit while still maintaining control over the level of prices in order to meet their goal of providing country food to those in Iqaluit unable to obtain it themselves through harvesting. The second key problem was a lack of proper facilities for storage and processing. The store was forced to use facilities lent to it by the government, and was never in a position to obtain the required financing to establish the necessary infrastructure for an efficient operation.

In 1986 an Inter-Settlement Trade Committee was formed (later renamed the Baffin Arctic Foods Committee) to co-ordinate efforts among different levels of government and hunters' organizations in the region, and to oversee strategic planning for the region's Arctic food industry. As a result of initiatives on the part of various agencies, resource assessments were made of wildlife species with commercial potential, and marketing surveys and producer training programs were undertaken. Of great significance was the construction of freezer/processing facilities in every Baffin community outside of Iqaluit which were owned by the Hunters and Trappers Associations.

As part of the resource assessments, test fishing projects were undertaken in Pangnirtung to determine the potential for commercial inshore fisheries in Cumberland Sound. In 1986 two Inuit fishermen from Greenland were brought to the community to demonstrate a technique used in Greenland for fishing for turbot using long-lines through the ice in winter. Although there was a major turbot fishery in Newfoundland and the Gulf of St. Lawrence, the quota for the area bordering on Baffin Island was not being utilised.

The technology used in the Arctic turbot fishery was relatively simple. Fishermen travelled out on the ice in winter with snowmobiles and sleds, and set up camp. They chopped a hole through the ice and set up a hand winder for hauling in a long-line. A long-line with baited hooks was let out with a metal kite on the end, so that the kite would be carried by the current and settle on the bottom at a distance from the hole. After a couple of hours the line was hauled in, and the turbot were brought up through the ice and removed.

In order to maintain a fresh product, it was necessary to keep the fish from freezing at winter temperatures down to minus forty degrees. This was achieved by loading the fish into large insulated containers which were filled with sea water. The salt water kept them in a super-chilled state, at the same time preventing them from freezing. The containers were then towed back to town by snowmobile to the freezer/processing plant. This plant was built as part of the Arctic Food development initiative and was used by the fishery to fillet and pack the fish. The fish was shipped out to Montreal as fresh fillets, never having been frozen,

[Based on Kitikmeot Inuit Association, *Renewable Resources Conference: Planning for the Future - Challenges and Changes in the 90s*, and F. H. Weihs. *Cumberland Sound Fisheries Limited and the Development of Commercial Fisheries in Pangnirtung*, N.W.T.]

# Yukon

In the Yukon, commercial sales of food obtained from wildlife harvesting are restricted almost exclusively to salmon. The commercial salmon fishery in the Yukon is based in Dawson, and chinook and chum salmon are fished commercially during a season which lasts only a couple of months. The salmon are harvested primarily with gill nets and are sold fresh, frozen, and dried [92].

According to the study on Yukon subsistence by Usher and Staples, there is in reality little room for further commercialisation of fish and wildlife beyond this commercial salmon fishery, since it appears that further commercialisation could only come at the direct expense of current harvesting for domestic consumption [69].

Mini Case Study

#### The Han Fishery

In the early 1980s the Han fishery was established in Dawson with government assistance to provide a means to increase Indian involvement in commercial salmon fishing at a time when the commercial fishery was dominated by non-Indians. Although Indians were allowed to harvest fish for subsistence use, they required a commercial licence in order to sell fish. The establishment of an Indian-owned fish processing company was intended to provide support for Indians able to obtain commercial licences. At the time the company was established, only 3 out of 21 commercial licences were owned by Indians.

During its first years of operation, the Dawson processing plant was able to employ around 25 Indian employees for an eight-week season, each earning an average of \$2,300 for the season. This provided a major boost to the local economy and in particular to the domestic subsistence economy. The commercial fishing crews were organized based on membership in households, and in this way the income served as a direct supplement to household income and as a support to subsistence harvesting.

Currently, the quota for the chinook salmon fishery allows for a catch of between 16,800 and 19,800 at an average weight of 20 pounds. The chum quota allows a catch of between 24,000 and 32,000 at the same average weight. The yearly quotas vary according to the population estimates made by fisheries department personnel. Indian subsistence fishing has priority over commercial fishing, and at present between 7,000 and 9,000 pounds of chinook are harvested for Indian subsistence. This leaves between 9,000 and 12,000 pounds available for the commercial fishery. Half of the commercial catch is sold directly to the public or in various other regional markets, and the rest is sold to the Han fish plant. Chum salmon are considered of less value for both subsistence and commercial purposes. Approximately 10,000 pounds are harvested for Indian subsistence, and the balance, up to 22,000 pounds, is available for commercial harvesting. Again about 50% is sold directly by the fishermen, and the rest purchased by the fish plant. The plant also purchases salmon roe. The fishery sells its product largely within the region, although some is exported to the N.W.T. and to southern markets.

Despite the operations of the fish plant, the participation rate of Indians in the commercial fishery has actually declined. Five of the 30 current commercial licences are owned by Indians. Under the provisions of the land claims agreement, however, 26% of new commercial licences will have to be made available to Indians, and may result in an additional eight licences for Indians.

[Based on an interview with G. Geberding, Secretary-Treasurer of the Yukon River Commercial Fishermen's Association, Dawson, and on Buckles, D. *The Development of Commercial Fishing: An Example from the Yukon*]

# SECTION TWO: KEY ISSUES AND BARRIERS IN THE COUNTRY FOOD SECTOR

# ISSUES IN THE ECONOMIC UTILISATION OF COUNTRY FOOD

The discussion in the previous section has indicated clearly that what is required for the maintenance and expansion of the country food sector of the northern economy in the present and in the future is a healthy and productive domestic economy within Aboriginal communities of the North. The primary function of the domestic economy of Aboriginal communities is to provide the communities with a sufficient supply of country food to meet their needs.

Based on this discussion, it would appear that maintaining a healthy and productive domestic economy, or mixed subsistence-based economy as it was described above, is dependent on addressing the needs of Aboriginal harvesting households for a number of critical elements:

- external recognition of the domestic economy as a separate type of economy with its own organizing principles and objectives;
- security of supply and security of access to wildlife resources, which in turn is related to systems of land tenure;
- land and resource management systems that address the needs of wildlife harvesters;
- sufficient cash income beyond essential household needs for reinvestment in wildlife harvesting.

Difficulties on the part of harvesting households with any of these elements can have the effect of crippling the whole system of production, distribution and utilisation of country food by Aboriginal people in the North [23].

In this section we will examine the key issues which have arisen in the previous section in relation to these critical elements required for a healthy domestic harvesting economy.

# **Social Issues**

# **Recognition in Public Policy**

In most jurisdictions across the North, Aboriginal harvesters have encountered at one time or another an attitude which did not give due recognition or has discriminated against the domestic economy in the design and implementation of government policies and programs. This attitude is manifested in a number of areas.

Despite the significance of the domestic economy within the economies of northern regions, there exists, with only a few exceptions, a general lack of current data on even the most basic aspects of the domestic economy B harvest levels, the number of active harvesters, the economic situation of harvesters and harvesting households, and the effect of government policies on harvesting households. Lack of recognition by government agencies of the importance of collecting up-to date, standardised data is compounded by lack of trust and confidence on the part of harvesters concerning control over the information and utilisation of the data. These latter concerns require resolution of contested issues such as participation of harvesters in wildlife management within the land claims forum.

In the resource management area, Aboriginal harvesting is frequently regarded as a kind of nuisance by some professional resource managers, as an activity that gets in the way of the application of a universal policy of equal access to wildlife resources for all groups in the population [66].

In the area of economic development, there is a tendency to regard harvesting for domestic consumption not as "real work" but rather as something that fills the time of people who are officially labelled as "unemployed" rather than as "harvesters", and who are occupying their time while waiting for a real job [2].

In the area of hunting rights, there are still attempts by government agencies in some regions B for example in the case of the Innu B to get away from what they consider to be an unfair advantage enjoyed by Aboriginal people over others in the population by bringing Aboriginal hunting rights into line with those of the general population. In addition there has been a lack of compensation programs for Aboriginal people whose livelihood is disrupted through damage to wildlife populations on which they depend.

These examples should suffice to illustrate the nature of this attitude and its manifestation in public policy. To a large extent this problem is being dealt with through land claims settlements, which entrench constitutionally guaranteed rights in the areas of hunting rights, aboriginal involvement in resource management, and wildlife compensation regimes. It will no longer be possible for legislatures in areas where land claim settlements of this type have been reached to reduce the rights of Aboriginal harvesters.

This indicates the necessity for and the urgency of reaching land claim settlements in the jurisdictions where none has yet been completed, as they represent the only secure way of dealing with harvesters rights and ensuring that they will not be undermined in the future. Therefore, land claims settlements must be negotiated and concluded in the Inuit and Innu regions of Labrador, in the Yukon, and in the remaining Dene and Metis regions of the Mackenzie Valley where settlements have not yet been negotiated.

However, while constitutional entrenchment of the rights of harvesters is essential, this in itself will not change attitudes toward the domestic economy of Aboriginal communities. There must also be increased recognition of the size and significance of the domestic economy. In 1984 domestic production of food in the Northwest Territories by Aboriginal people, that is the country food sector, represented approximately 5% of the Gross Domestic Product of the N.W.T., more than many other sectors of the economy including agriculture, logging and forestry, manufacturing, wholesale and retail trade, health services, and accommodation and food services.

In order to obtain recognition of the significance of domestic production of food, it may be necessary to include this production in the economic accounts of the various government jurisdictions, even though these food products do not generally enter the market and therefore cannot easily be priced [23]. While some attempt has been made to deal with this suggestion from a technical point of view, much more research is required on the appropriate methods for imputing value to country food production and on the effects of including a qualitatively different measure in the economic accounts of a political jurisdiction. There are precedents being developed for this type of accounting in developing countries, and these should be explored further.

# Social Assistance and Producer Support Programs

Since the collapse of the seal skin markets and the decline in fur prices, social assistance and other social transfer payments provide one of the few sources of cash available to harvesting households. These programs however are poorly suited to the needs of wildlife harvesting. The work of George Wenzel on the rate of return in harvesting has shown that harvesting can be a highly profitable undertaking, which suffers from a very specific problem B a shortage of cash for productive reinvestment. Social transfer programs are designed not as a support for investment in production, by rather as a support for consumption.

The effectiveness of a support program designed specifically for harvesting households has been demonstrated by the experience of the Cree in James Bay with the Income Security Program for Hunters, Trappers and Fishermen. This program has provided the basis for a healthy domestic economy, which ensures an adequate supply of country food for the Cree communities and maintenance of a healthier overall economic and social life for the communities. Influenced by this example, Inuit are considering implementing a Wildlife Harvesters Income Support Program in the Nunavut Area through their land claims organizations in co-operation with the Government of the Northwest Territories. Within the draft Yukon land claim agreement there is provision for assessing the feasibility of a support program for Yukon First Nations.

In spite of the name "income support" program, these programs are in fact production support programs, which provide a safety net for harvesters and which address in an efficient way the need for cash resources in the harvesting economy. Every dollar distributed in such programs has a multiplier effect on the incomes of Aboriginal households through resulting production and distribution of country food.

Programs of this type should be considered carefully in each of the regions of the North. They provide a much better solution to the shortage of cash in the domestic economy than social assistance programs which are destructive not only of individual self-esteem but of the domestic economy itself. They provide a strong income multiplier through the production of food, and they are a spur to economic development of communities by placing money directly in the hands of those in the community who are in need and are in turn most likely to spend it in the community [77].

In addition these programs may offer a less expensive alternative to programs currently in place. For example, along with reducing social assistance, hunter support programs would very likely improve the general health of Aboriginal populations, according to the Borré thesis cited above. Borré argues that access to country food is constrained by a lack of cash, and that Inuit make up a shortfall in country food with low cost imported foods B sugars and other carbohydrates that provide large amounts of energy but which have serious cumulative health effects. Hunter support programs would help to remove the constraint on the supply of country food, improving nutrition and general health, and very likely reducing health care costs in the North [6].

However, in spite the documented success of the Cree Income Security Program and studies which show that a substantial portion of the costs of a hunter support program can be funded from the re-direction of existing government programs [73][77], the federal government has resisted negotiation or implementation of similar programs elsewhere in the North. In the Northwest Territories, after being unsuccessful in negotiating a Wildlife Harvesters Income Support Program through land claim negotiations, the Inuit of Nunavut are developing a very modest support program for hunters in co-operation with the Government of the Northwest Territories.

## **Animal Rights**

The animal rights movement has, as a result of anti-sealing and the anti-trapping campaigns, significantly reduced the cash incomes of northern wildlife harvesters. This reduction in cash income has affected the ability of Aboriginal households to harvest wildlife and reduced the amount of country food available in many Aboriginal communities in the North. These effects have been noted by researchers in all the regions across the North.

In addition to the direct effects of the animal rights campaigns, a more subtle effect was noted by the General Manager of the Labrador Inuit Development Corporation. Fred Hall says that LIDC must proceed very cautiously in the development of their commercial caribou processing operation, because of fear of attracting the attention of animal rights groups. This means that they must refrain from a proper marketing campaign to promote their product, which limits sales and reduces income to Inuit harvesters in Labrador [91].

The influence of animal rights organizations has also been felt within international bodies such as the International Whaling Commission and the Convention on International Trade in Endangered Species (CITES). Attempts have been made through these bodies to label as endangered, to curtail trade in, or to ban the harvesting of many northern species such as narwhal, walrus, and seals, even though current population estimates indicate that northern populations of the these animals are not endangered. If animals rights groups are successful in the future in obtaining a ban on the harvesting of or trade in these species, the effect on the availability of country food would be profound [23].

In the past, arguments by Aboriginal people about the economic effects of animal rights campaigns have had little practical effect on the overall activities of these groups or on the public that support them. One model for a successful counter campaign against harvesting bans imposed by external agencies is provided by the Alaska Eskimo Whaling Commission. In response to limits on the harvesting of bowhead whales by Inupiat in Alaska, the Inupiat organized their own whaling commission, and, working with their home rule government, the North Slope Borough, undertook their own intensive management regime for the bowhead. This included hiring their own scientists who were able to disprove population estimates of scientists working for external organizations; establishing their own sustainable harvesting techniques. The Inupiat were able to demonstrate, in terms of the standards used by the external agencies themselves, that they were capable of managing the resource. The result was a re-establishment of the right of Inupiat to harvest bowhead and harvest levels which have gradually increased toward the sustainable levels estimated by the Inupiat.

It would appear that a similar strategy would be useful for Aboriginal people in the Canadian North. Land claim settlements are providing the opportunity to demonstrate competent self-management of wildlife resources. By participating directly in the conduct of scientific research on wildlife stocks, Aboriginal people can demonstrate that they can co-operate with and meet the standards of outside agencies, while providing a more

effective system of management, since Aboriginal people are in a position to know the resources better and to apply more intensive research and management programs. Such an approach may be able to forestall increasing intervention from external bodies under the influence of environmental and animal rights organizations.

The Kuujjuaq Research Centre established by Makivik Corporation has established for itself a solid reputation in the conduct of biological research and sampling programs, as illustrated by the case of the Kangiqsualujjuaq fishery outlined above, and biological research required by Quebec government departments is regularly contracted through the Centre [7]. The Centre provides a model which Aboriginal organizations in other regions might consider.

# Access to Country Food: Conservation and Resource Management Issues

One of the points that has repeatedly emerged from the discussions in the previous section of this paper is related to the causes of reduced harvests of country food by Aboriginal people in the North. All of the literature reviewed indicates that in cases where reduced harvests by Aboriginal people are evident, the causes are not to be found in the increasing availability of wage labour which supplants traditional harvesting activities, nor in the spread of a cash-based market economy which provides the convenience of store bought food. In fact, the research demonstrates that rather than being displaced by these elements of "modernisation", the mixed subsistence-based economy of wildlife harvesting has incorporated into its systems as resources and as supports to the production of country food wage labour and the cash which this provides as well as store-bought food imported from southern Canada.

The real causes of low harvest volumes lie in problems of access by Aboriginal people to wildlife resources. Increased competition for wildlife stocks through wider penetration of road networks and degradation of wildlife habitats through development or pollution on the one hand; and disruption of Aboriginal harvesting through relocation away from traditional hunting, fishing and trapping areas, legal restrictions on Aboriginal harvesting rights, and lack of cash for investment in harvesting are the main contributing factors which reduce the supply of country food in northern communities.

# **Conservation of Wildlife Resources and Aboriginal Harvesting Rights**

The production of country food by Aboriginal people on a sustainable basis clearly requires conservation of the wildlife resources. However, in the application of conservation measures, governments have frequently regarded Aboriginal users as no different in status or rights than other users of wildlife resources. Aboriginal users are in a different position, not only because of Aboriginal rights to land and resources, but also because wildlife represents their primary source of food and a central, defining element of their culture. The application of conservation measures must take this reality into consideration.

There is evidence of increasing acceptance within some areas of government policy in Canada of the unique status of Aboriginal people in relation to the utilisation of wildlife resources. For example, the Arctic Environment Strategy, developed by the Government of Canada as part of its Green Plan for addressing environmental issues in Canada, includes as one of its objectives Athat indigenous peoples' perspectives, values and practices are fully accommodated in the planning, development, conservation and protection of the Arctic region" [11, p. 2]. Acceptance of this principle by all governments in the North is essential to ensuring that conservation measures do not unnecessarily threaten the supply of country food to Aboriginal people.

However, acceptance in policy is not sufficient. Policies can change, and Aboriginal people must be able to enjoy long-term security of access to the sources of country food. This security of access to wildlife resources is being provided to Aboriginal people in the North through land claim settlements.

The Nunavut land claim settlement establishes, subject only to a few specific exceptions, that Inuit have "the free and unrestricted right of access for the purpose of harvesting to all lands, water and marine areas within the Nunavut Settlement Area...[including]...Parks and Conservation Areas... [64, p. 44]. The protections provided by the guaranteed harvesting levels included in the Hunting, Fishing and Trapping Regime of the James Bay and Northern Quebec Agreement were noted above. Similarly, in the Nunavut land claim settlement, the system of wildlife management is designed to establish harvesting rights and priorities that, "subject to availability, as determined by the application of the principles of conservation, and taking into account the likely and actual increase in the population of Inuit, confers on Inuit rights to harvest wildlife sufficient to meet their basic needs, as adjusted as circumstances warrant..." [64, p. 26]. Under the management regime implemented through the claim, the basic needs level for Inuit will constitute the first priority and allocation of the total allowable harvest for any species. Any restrictions on Inuit harvesting for the purposes of conservation will be determined by the Nunavut Wildlife Management Board, on which Inuit have equal representation with government. The draft agreement for the Yukon claim gives priority to subsistence over other uses of country food, governed by the application of principles of conservation.

The importance of these guarantees of Aboriginal harvesting rights to the production of

country food on a sustainable basis indicates once again the necessity of concluding land claims agreements in the regions of the North where no agreements are yet in place.

Land claims agreements can also provide a framework for dealing with competing uses of wildlife resources. The Nunavut land claim settlement recognises the significance for Inuit of wildlife resources and their dependence on them by assigning the first allocation of any total allowable harvest to meet their basic needs. Any surplus available above the basic needs level of Inuit is to be allocated to other users of wildlife in the following order of priority:

- personal consumption by non-Inuit residents;
- continuation of existing sports and other commercial operations;
- economic ventures sponsored by Inuit harvesters' organizations;
- other commercial, sports, or recreational uses [64, p. 40].

# **Co-Management**

In their study of subsistence in the Yukon, Usher and Staples conclude that

The individual and cumulative effect of state resource management and regulations on subsistence has historically been the single greatest constraint subsistence has faced. Government policy and legislation have directly and indirectly undermined many of the conditions that subsistence requires if it is to be healthy... [69, p. 200]

They also note, on the other hand, that there is increasing acceptance by both Aboriginal people and by government that the differences between state and indigenous management systems can only be resolved through increased co-operation in the management of land and of wildlife resources, that is through participation of Aboriginal people in government resource management decision-making [69, p. 193]. As discussed in the previous section, co-management principles have been incorporated both to address specific management issues and in the broader context of the management regimes established through land claim settlements.

However, there are many challenges to make co-management work in practice. In particular, the gap in knowledge systems and in communication between scientists and professional resource managers on the one hand and Aboriginal people on the other must be bridged if co-management regimes are to be successful. The Kuujjuaq Research Centre has shown through its work that accommodation between the knowledge and methodology of scientists and the knowledge and experience of Aboriginal people is not only possible, but essential if an adequate body of knowledge regarding the land and resources is to be built up for the benefit of all.

Bridging this gap is not an easy task, and mechanisms to promote communication and mutual respect must be developed. One such mechanism was employed by the Fisheries Joint Management Committee as part of the implementation of the Inuvialuit claim. The committee decided that co-management of fisheries resources could only work if the divisive elements between members of the scientific community and local users of fishery resources could be overcome. One divisive element identified by the committee was a lack of understanding by Aboriginal people in the communities of scientific concepts and methodologies contained in most studies and reports, and how these related to the concepts and methodologies in their own knowledge system.

As a result of the committee's initiatives, a one-year training program was established to provide an Inuvialuk from each community with instruction in basic scientific concepts and procedures. The role of these people on completion of the training was to assist Inuvialuit harvesters' organizations in the communities to understand the needs and practices of scientific research work, and to help government personnel in turn understand the needs and practices of harvesters in the communities. The Committee also encouraged harvesters' organizations to carry out their own research and evaluation of fish and marine mammal stocks, with the assistance of the people trained in the course. Early results from this program suggested that harvesters in the communities were more likely to understand and therefore to use research information which they had generated themselves [7].

This example illustrates a useful direction for the development of co-management regimes. More and more, co-management should result in increased information gathering and analysis by Aboriginal harvester groups themselves, using both scientific research and management methods and their indigenous knowledge and indigenous systems of land and resource management, and in self-regulation by Aboriginal people within the broader framework of co-management.

# Pollution

Pollution presents one of the most serious threats to the utilisation of country food by Aboriginal people in the North. The dilemma facing Aboriginal people was illustrated by the case of PCB pollution in Broughton Island described in the previous section. While on the one hand consumption of country food containing pollutants entails possible serious risks to health, on the other hand it has been documented that a reduced intake of country foods in the diet entails other equally serious risks to health for Aboriginal people. In the case of PCB pollution in Broughton Island, researchers felt that the nutritional benefits of country food consumption outweigh the risks from pollution, at least for the present. However, serious communication problems arose between researchers and Inuit in the community as a result of the gap in language and culture, which along with limited availability of data created considerable anxiety among many Inuit in the community. The presence of pollution in country food stocks is also a critical factor for the commercial developments involving country food products. The Arctic Specialty Foods project in the Northwest Territories was terminated abruptly in 1970 when information became available on the levels of naturally-occurring mercury in beluga whales and seals. Yet, as was noted above, the effects on humans of naturally-occurring mercury is still undetermined.

There is a great need therefore for more research into the levels and the effects of pollutants in country foods. It is essential however, that Inuit increase their understanding of the issues involved by being directly involved in the monitoring of contaminants and in documenting the use and nutritional benefits of country foods. Scientists must work to overcome the communication gap by presenting their findings in ways that are more readily understandable to Aboriginal people in the communities, since it is they who bear the risks and must in the end make the dietary decisions.

# Lack of Data

The review of data on Aboriginal harvesting across the North in the previous section demonstrates clearly the lack of current, accessible data on native harvesting in the North. The most recent figures which were available on harvesting by Dene and Metis in the Mackenzie Valley were produced in research for the Berger inquiry in the 1970s. The most recent estimates for Labrador were based on data from 1979. In the Nunavut region of the Northwest Territories, there has been no publication of overall harvest statistics since 1985, and in Quebec harvests of Cree and Inuit have not be monitored on a systematic basis since 1980.

There is a corresponding lack of current information on population levels of the various species of wildlife in the North, and information that is available is often sketchy and by no means comprehensive. For example, in the Baffin region ringed seals represent the primary source of food source for Inuit in many of the communities, yet the most recent population estimates for ringed seals were done in 1958 and 1973, and can be considered at best only rough estimates [76, pp. 13-21].

One of the factors which contributes to this situation is lack of appreciation on the part of government agencies of the significance of the domestic economy to Aboriginal people and the need therefore to have precise, up-to-date information on wildlife populations and harvests in the North. A second factor is undoubtedly the high cost of scientific research and harvest surveys. A third factor is distrust on the part of Aboriginal people of the motives underlying the collection of harvest data. For example, one of the reasons apparently that the Cree in Quebec do not push more for up to date harvest studies is the belief that the results of these studies are not used by the Quebec government in ways that are beneficial to them [96].

At least part of the solution to the problem of securing better, more current information on wildlife resources and their utilisation is to promote greater co-operation between government agencies and Aboriginal people. Aboriginal people are more willing to participate in studies and to work towards ensuring that data collected is reliable when they have some control over the design and use of the studies. This is demonstrated by the examples of the harvest studies done in Quebec under the joint Aboriginal/government James Bay and Northern Quebec Native Harvesting Research Committee. Both the Nunavut claim and the Yukon claim include a requirement for the collection of data on harvesting [68].

Increasing the amount and reliability of information available also requires incorporating the indigenous knowledge of Aboriginal people into the accepted body of data available. Aboriginal harvesters have a body of accumulated knowledge of their land and resources which is constantly being increased through their daily experiences in harvesting. The problem of incorporating this knowledge into the body of knowledge assembled by scientific researchers is that many if not most of scientists and professional resource managers consider indigenous knowledge to be subjective and not verifiable since it is not collected gathered through accepted scientific methodology. In turn, Aboriginal people frequently regard the studies and conclusions of scientists with distrust since the conclusions of studies may be at variance with the direct experience of Aboriginal people. This mutual distrust is reinforced by differing objectives in the gathering of information, and in the different means of communication and language employed [65]. What is required in order to utilise all the knowledge available on wildlife resources are concrete mechanisms, such as those outlined above under "Co-Management", for bridging the gap between these two systems of knowledge.

# **Economic Issues**

## The Commercial Development of Country Food

The discussion in the previous section emphasised the significance of cash as a scarce resource within the mixed subsistence-based economy. Evidence was provided from research studies that lack of cash has limited the production of country food at one time or another in all regions of the North. The potential benefits of a hunter support program to address the cash needs of harvesting households was noted above under "Social Issues".

There are differing attitudes among Aboriginal people in the North on the desirability of using commercial sales of country foods as an additional source of income for harvesters. In the Inuit regions of Labrador, Quebec, and the Northwest Territories commercial projects are being actively pursued by organizations representing the harvesters, while among the Cree, Innu and Dene there is greater resistance to the commercial development of country food. Clearly, the decision of whether to pursue commercial sales of country foods must lie with harvesters in each region.

However, in much of the government legislation and regulations governing harvesting, there has been a distinction between harvesting for subsistence and for commercial purposes. Aboriginal people have been granted relatively free access to wildlife for the purposes of subsistence, but have had restrictions placed on harvests for commercial utilisation precisely because of the commercial intent.

This division, as the discussion on the mixed nature of the domestic economy shows, can be an artificial one. Commercial sales of country food function as a direct support for production for domestic consumption, and, based on all accounts cited above, this is the primary intent of them. Reduced harvesting for commercial purposes has the effect of reducing domestic consumption of country food by restricting cash available for investment in harvesting.

Therefore in most instances, quotas or allocations for harvesting by Aboriginal people should recognise the mixed nature of the domestic harvesting economy by doing away with restrictions on the utilisation of the food products, and leave the decision as to the most effective and efficient utilisation for the products to the harvesting households.

An example of this type of more flexible approach is embodied in the Nunavut land claims settlement. Under the terms of the Nunavut wildlife management regime, Inuit are entitled to first demand on the total allowable harvest for a species to meet their basic needs level. This basic needs level is based on historical levels of harvesting. In addition, the Nunavut Wildlife Management Board has the power to review the basic needs level and determine if an additional allocation for Inuit should be included in the basic needs level in order to meet any of the following needs:

- increased consumption or use by Inuit;
- intersettlement trade;
- marketing for consumption or use in the Nunavut Settlement Area [64, pp. 38-39].

Thus, the basic needs of Inuit in the Settlement Area are defined not in terms of subsistence use, but rather in terms of the requirements for a healthy domestic economy. The affirmation within the land claim settlement of the mixed nature of the domestic harvesting economy is reinforced by other provisions in the Nunavut Land Claim Agreement which give Inuit first option to establish new sports and naturalist lodges.

# Compensation

It is clear that damage to wildlife resources used by Aboriginal people can have a significant effect on their income through reduction in the production of food available for domestic consumption or for exchange or sale. When anywhere up to 50% of the income of Aboriginal households in obtained through the production of country food, the question of compensation for damage to country food sources is a very serious one.

In the previous section it was noted that while court rulings have tended to confirm Aboriginal rights to harvest wildlife, they have not recognised Aboriginal ownership of wildlife resources. Thus, it was not possible for Aboriginal people to claim compensation for damage to wildlife resources which they utilised..

Land claim negotiations have again provided a forum for dealing with the issue of compensation. Although compensation provisions for damage were not included in the James Bay and Northern Quebec Agreement, the Inuvialuit Final Agreement contains very clear provisions on compensation. Under the terms of the IFA, "...the Inuvialuit shall be compensated for actual wildlife harvest loss resulting from development in the Inuvialuit Settlement Region", where "...'actual wildlife harvest loss' means provable loss or diminution of wildlife harvesting, or damage to property used in harvesting wildlife, or both" [14, p. 22]. A similar provision is included within the Nunavut Land Claim Agreement, where compensation can be claimed with respect to:

- loss or damage to property or equipment used in harvesting;
- loss of present and future income from harvesting;
- present or future loss of wildlife harvested for personal use [64, p. 54].

It remains to be seen how well these compensation systems will work in practice. Establishing damage is not always an easy matter when other variables such as natural variations in wildlife stock and differing harvesting effort from year to year are also operative. However, these land claim provisions attempt to find a solution to the problem of compensation for damage to wildlife resources. By obtaining legal recognition that there is clearly something of value that can be lost through damage, land claim agreements are placing wildlife harvesters on a more equal plane with other users of lands and resources who receive from government an ownership interest that gives them a legally enforceable claim for damages to the land and resources which they use.

# BARRIERS TO INTERSETTLEMENT TRADE AND COMMERCIAL MARKET DEVELOPMENT

At the end of March 1993, a renewable resources conference entitled *Renewable Resources Conference - Planning for the Future: Challenges and Changes in the 90s* was organized by Keewatin Inuit Association and Sinaaq Enterprises Inc. This conference brought together representatives of Inuit harvesters' organizations from across the Northwest Territories. The objective of the conference was "To develop a renewable resources economy that would provide employment and income in a sustainable and manageable manner for the Inuit of the N.W.T." [47]. Working groups were organized to discuss each of the following areas of renewable resources development:

- fisheries development
- export marketing
- opportunities related to land-based resources
- intersettlement trade.

Two basic points underlay much of the discussion of delegates at the conference. First, in discussing the future of renewable resources, the development of country foods and of other northern foods occupied almost the entire attention of delegates. This is clearly seen as the primary avenue currently available to increasing income to harvesters in the N.W.T. All delegates were strongly in favour of pursuing increased intersettlement trade and commercial market development of country foods in order to increase the income of harvesters. Second, there was general acceptance of the principle that harvesting of wildlife for domestic consumption has priority, and commercial developments based on country food must not interfere with this aspect of the harvest.

After reviewing current projects in intersettlement trade and for commercial market development, much of the conference focused on specific barriers to the development of intersettlement trade in and commercial markets for country food. The key barriers identified during the conference are outlined below, with additional comments based on the experience of other regions of the North.

# **High Transportation Costs**

In each of the working groups for the conference, the issue of the high cost of air transportation was raised as a primary barrier to development. This is a problem experienced particularly by groups in Labrador, Northern Quebec and the Northwest Territories in settlements with no road connections and where much of the transport, particularly of fresh or frozen food products, is by air. In the Northwest Territories, a 50% subsidy by the territorial government on the air freight costs for the transport of fish has provided a significant impetus to the development of fisheries.

Consideration should be given in all regions to a subsidy of this type on the transport of all country food products. Transportation subsidies are not directed at producers, but rather act as a general support for the development of sales of northern food products. A major benefit would be that projects for the development of country food in the more remote communities with significantly higher transportation costs might become economically viable.

There is need for a detailed study that would measure the costs and benefits of a general transportation subsidy of this type.

# Lack of Infrastructure in Communities

The lack of physical infrastructure in many of the communities, primarily storage and processing facilities, was identified as a key barrier to intersettlement trade, to the development of northern fisheries, and to the expansion of export markets. The critical role of physical infrastructure in the communities was demonstrated by the case study on intersettlement trade in the Baffin region and on the establishment of the turbot fishery in Pangnirtung.

Storage and processing facilities are also required at the regional level. By its nature wildlife harvesting produces a supply of food which is intermittent B dependent on both seasons and the vagaries of wildlife population cycles and migrations. Yet successful commercial development requires a consistency and stability of supply for consumers. Thus, regional infrastructure which can provide larger-scale storage to balance out supply from a number of communities is an essential element of production of country food for commercial markets. Both these elements, community facilities and regional facilities, have been identified as part of the development of intersettlement trade by Inuit in Nunavik.

The domestic economy does not, but its nature, generate large surpluses for investment in infrastructure. Therefore, the cost of infrastructure will have to be borne by governments, as was the case of Baffin region, or by Aboriginal organizations using land claims or other moneys as in the case of Nunavik inter-community trade. This investment can be justified as contributing not only directly to the development of increased intersettlement trade and

commercial sales of country food, but also as an important indirect support for domestic consumption of country foods by Aboriginal households.

In addition there is a need for more accessible systems of meat inspection. Arrangements have been developed for inspecting caribou in Labrador and musk-ox in Banks Island at the portable abattoirs, but this has taken considerable time and effort. This remains a major issue each time an initiative is considered for export of country food out of the region.

Training programs are required for Aboriginal people in the north on food inspection standards and the processing and handling of food products, and these are generally not available now. Conference delegates felt that training of this type was essential in the development of sales outside of the Northwest Territories.

# Lack Of Adequate Marketing Systems

Marketing systems can be considered an element of infrastructure for country food production, since they are well beyond the capacity of most individual enterprises or communities to establish and finance. Marketing remains one of the central problems for the remote communities of the North. In the past there has been a gap of information and co-operation between marketing agencies situated in the South and producers in the North. This is particularly true of the Freshwater Fish Marketing Board in Winnipeg, which is responsible for marketing fish exported from the Northwest Territories and which has solicited a great deal of criticism from northern producers over the years for its activities.

Delegates at the conference felt that a successful marketing system must be based in the communities. Regional Aboriginal development organizations will have to take a leading role in developing these marketing systems, working with harvesters' organizations based in the communities. In addition, delegates also felt that there is a need for a co-ordinated marketing strategy among all the regions of the North to promote the overall concept of country food in the most beneficial light and to counteract possible interference by the animal rights lobby. Conference delegates proposed the establishment of a national marketing agency for northern foods.

Assistance from the federal government will be required to deal with international agreements which limit the export of country food products. For example, delegates at the conference identified Alaska as a key export market. However, under the provisions of the U.S. Marine Mammal Protection Act, the import of marine mammal products into the U.S. is prohibited. The Marine Mammal Protection Act has been identified by GATT as a non-tariff barrier, and the Canadian government should work internationally for the removal of this and other related U.S. legislation [23].

#### Lack Of Co-ordination Among Communities

Much of the intersettlement trade that exists today is conducted on a relatively ad hoc or informal basis. Harvesters are aware however, of the need to obtain maximum benefit from any surpluses of country food available for exchange and commercial trade, since wildlife stocks are limited and domestic consumption has first priority. Therefore, delegates at the conference were interested in ways to develop more efficient systems of intersettlement trade that take advantage of any opportunities arising in terms of the supply of or demand for country food.

One suggestion was that up-to-date information on surpluses available in communities must be maintained and made available to other communities and regions. This could be the function of a central organization, and the information could easily be maintained and distributed by computer. It is possible that this idea could be extended to included the type of computerised barter systems now functioning in southern centres, including Toronto and Ottawa. Under these systems, products and services provided earn the producer credits on the barter system which may be claimed later in an equivalent value of products or services. If such a system could be extended to the harvesters to include accessing harvesting equipment through barter credits, it would directly address the problem of obtaining capital and operating equipment for harvesting in a relatively simple manner. Payments from harvester support programs could also be integrated into the system, so that harvesters have available a stock of credits for obtaining equipment and other goods essential for the conduct of harvesting activities.

## **Insufficient Support For Appropriate Research**

Many times during the conference the point was made that there is a lack of basic information available on wildlife resources. There is insufficient data on population levels, harvests, and commercially viable species. Delegates said that often agencies such as the Department of Fisheries and Oceans do not work in a co-operative manner with communities to determine research needs, but more frequently just play a role of explaining why a particular development is not possible.

A need was also identified for research into new, marketable country food products, new methods of food processing, and new storage technologies which are more appropriate and adapted to the circumstances and conditions of the North. Concern was expressed over the lack of research into the utilisation of by-products of food processing, such as seal oil and seal skins. In general delegates felt that little of the ongoing wildlife research that they are aware of is directed to areas of importance to communities. Therefore, they recommended that a portion of research and development money be distributed to communities who could set priorities for research and in this way ensure its relevance to their needs.

# **Need for Small Business Support Programs and Services**

A key barrier to the development of intersettlement trade as an extension of the domestic economy identified by delegates is the lack of government programs to support the non-commercial use and exchange of country food. Most government economic development programs support strictly commercial undertakings. Not since Special ARDA program has there been a program that provides support for non-commercial aspects of wildlife harvesting, even though the existence of a healthy domestic economy is the basis of commercial development in country foods.

Government funding programs for small business are frequently not designed to meet the needs of small businesses in the country food sector. Many of these businesses are at what might be termed a "pre-commercial" level, or are small operations with rates of return that are too low to meet the requirements of government business development programs such as the Aboriginal Business Development Program, the key Aboriginal business development program of the federal government.

The case study on intersettlement trade in the Baffin region in the previous section demonstrated the difficulty many Aboriginal businesses in small communities have in ensuring good management. There is an urgent need for community-based management training programs which is still far from being addressed in most regions of the North. This need for training extends to those involved in micro-businesses B small family-based businesses in commercial fishing, craft production, or tourist outfitting for example B which are a key element of the mixed subsistence-based economy of Aboriginal harvesters.

This study provides a review and analysis of information currently available on country

# SUMMARY AND CONCLUSIONS: PROSPECTS FOR THE COUNTRY FOOD SECTOR

food as a key sector of the northern economy. Under the terms of reference, it examines the economic utilisation of country food by Aboriginal people in the North of Canada as this region is defined by the Royal Commission B Inuit, First Nations and Metis in the Yukon, Northwest Territories, Northern Quebec and Labrador. Given both the short period of time allotted for the review and the availability of information, it was not possible to provide a comprehensive portrait of the utilisation of country food in each of the regions of the North; however information available from each of the regions has been used to illustrate the key aspects of the country food sector.

Country food, bush food or wild food, as it is variously named in English across the North, is the food that is produced from wildlife harvesting B the hunting, fishing and trapping activities B of Aboriginal people. It may be viewed as a sector of the northern economy, but throughout this paper the argument has been made that in reality it is a sector that has unique characteristics not shared by other economic sectors. While other sectors, such as the mining or retail sectors, share the characteristics of an industrial, market economy, country food is the key element of a distinct type of economy in the North. This economy, the domestic economy of Aboriginal people based on the harvesting of wildlife, has been most accurately described as a mixed subsistence-based economy.

This economy is characterised by its own social and economic relationships and cultural values. Households are the primary economic enterprises, and production and consumption are organized within the Aboriginal households and on the basis of wider kinship relations: household and kinship are the principles by which labour is organised, resources are allocated, and country food is distributed and consumed. The primary objective of the economic activities within this economy is the provision of country food for consumption within the domestic network, and most of this food does not enter a commercial market.

Country food is produced from wildlife harvesting based on a system of communal property rights which confer rights to utilise the wildlife and other resources of the land, and also the responsibility to manage these resources for the benefit of the broader group. Food is distributed within the kinship network through systems of mutual responsibilities and obligations based on values of sharing.

As a result of the relocation of Aboriginal people across the North into permanent settlements and the associated adoption of new, expensive harvesting technologies, money became an essential resource in this subsistence-based economy. Recent estimates for the Northwest Territories place the capital and operating costs of wildlife harvesting at approximately \$10,000 per year. The cash required for investment in the harvesting economy was secured from a variety of sources, and the subsistence harvesting economy became a mixed economy in which subsistence and commercial elements were inextricably mixed. Harvesting provided country food for the household, extended family and community, while skins and furs were sold for cash. This cash income was supplemented through seasonal or full-time work by members of the household, through the production of art and crafts, and through social assistance and other government transfer payments. At the same time however, subsistence, the production of country food by Aboriginal people for their own consumption, continued to be the primary objective and a central, defining element of this adaptable and enduring economic system.

Thus, for the purposes of this paper, country food may be defined as the food produced within this mixed subsistence-based economy, an economy which is common to Aboriginal people across the North.

Since the early 1980s, producers of country food have been under pressure as cash became an increasingly scarce resource within this harvesting economy. This was a direct result of the anti-sealing and anti-trapping campaigns conducted by animal rights groups which had devastating effects on the incomes of Aboriginal harvesting households. In the Cree communities of James Bay in Quebec, the Income Security Program for Cree Hunters, Trappers and Fishermen negotiated under the James Bay and Northern Quebec Agreement provided a social safety net which maintained the number of people engaged in harvesting activities and ensured for the communities a secure supply of country food. In other regions, however, there has been a significant increase in reliance on social assistance, although social assistance programs are poorly suited to the needs of wildlife harvesters. Evidence from these regions suggests that a lack of cash may be affecting the supply of country food available in communities. In some regions this has resulted in an increased interest in commercial sales of country food.

This shortage of cash within the harvesting economy has prompted some observers to suggest that harvesting activities are basically unproductive, that Aboriginal people continue to pursue them simply because of insufficient wage employment opportunities, and that the role of country food is to provide a diet for those who cannot afford the expensive store-bought foods imported from southern Canada. However this idea is not borne out by

the testimony of Aboriginal people nor by the results of research.

According to Aboriginal people in the North, wildlife forms the basis of their way of life, and the subsistence harvest and domestic consumption of country food play a central role in their lives. When the value of country food consumed domestically is considered as income for the household, research has found the rate of profit on harvesting to be as high as \$37 per hour. Increased opportunities for wage employment have not generally resulted in reduced harvesting and production of country food, but rather acts as a support for increased country food production by making available the cash to procure equipment necessary for harvesting.

There are a number of reasons for the deep commitment of Aboriginal people in the North to country food. First, country food is nutritionally superior to meat imported from southern Canada. Second, there is a clear cost benefit in the consumption of country food: production of food through harvesting provides a higher yield of food per dollar invested than can be purchased per dollar earned through wage employment. Third, there is a very great cultural value place on country food. Research in both the James Bay and Baffin Island regions of the North demonstrate that part of the role of store-bought foods is to create a surplus in households of the more valued country food. This allows for continuation of the sharing practices and kinship and hunting relations which are essential bases of the harvesting economy; that is, the role of store bought food is to help to assure the ability of Aboriginal people to hunt and to share country food.

Access of Aboriginal people in the North to country food is not only constrained by availability of cash for investment in harvesting. Natural constraints on production include the overall carrying capacity of the land and waters and the fluctuations in animal populations and changes in migration routes. In addition, primary causes of reduced harvesting and production of country food are degradation of habitats and animal stocks through development or pollution, and other causes of harvest disruption such as the increased penetration into northern regions by road networks which increase access to other, competing uses of wildlife resources.

These competing uses reinforce the need for effective systems of managing wildlife resources. Each of the Aboriginal societies in the North has its own traditional system for managing land and resource utilisation, in which wildlife harvesting and wildlife management are conceptually and practically inseparable. The effectiveness of these systems has been eroded by the establishment of centralised government systems of land and resource management which are based on a division between the users and the managers of natural resources, and on the concept of the land and its resources as the common property of all. The effects of this change were, to varying degrees depending upon the particular region, restrictions on Aboriginal hunting rights, as well as inability of Aboriginal harvesters to obtain compensation for damage to wildlife resources. In general, Aboriginal approaches to resource management were not accepted, which produced a fairly deep level of distrust between scientific resource managers and Aboriginal harvesters that
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limited the effectiveness of government land and resource management regimes.

However, the desire of Aboriginal people to have more influence on government resource management and the increasing recognition by government resource managers that effective wildlife management requires the co-operation of Aboriginal harvesters resulted in initiatives for the co-management of wildlife resources by government and Aboriginal groups. Some of these address specific resource management concerns, but the most significant initiatives have been through management regimes established under land claim settlements. These settlements are providing constitutional entrenchment of Aboriginal hunting rights, and of the equal participation of Aboriginal groups with government in agencies concerned with land and resource management, land use planning and development impact assessment. While the legal powers of these agencies are advisory in nature and Aboriginal people still feel that they still require more influence at government policy-making levels, these agencies they have established a strong and effective role for themselves based on the principle of co-management.

The importance attributed to country food by Aboriginal people in the North is confirmed by statistical data available on the volume of country food production and the value this represents as part of the income of Aboriginal households. An estimate of the volume of country food production in each region of the North was obtained through a review of existing estimates of harvest levels. Most of the harvest information available provides estimates of the number of animals killed and retrieved by hunters, and may be taken as a relatively reliable indicator of the level of consumption, although inevitably some meat is wasted through spoilage and for other reasons. An estimate of the actual volume of meat produced can then be obtained by multiplying the number of animals harvested within each species by the average edible weight for the species.

For most of the regions it was not possible to obtain up-to-date harvest information, since harvest levels are not monitored on an ongoing basis. In addition, while some of the harvest data from earlier studies is very reliable, other estimates of harvest levels had to deal with a lack of comprehensive, accurate records on which to base an estimate. In spite of these problems, the resulting figures do indicate clearly the volumes of country food production across the North. The annual per capita harvest of country food for each region is summarised below together with the date of data collection.

Region	Date of Data Collection	Annual Per Capita Harvest (kg)
Labrador		
Inuit/Settlers	1979	131
	1993	136-158
Innu -	1987	34

Sheshatshit	1987	101
-		
Utshimassit		
Nunavik and James Bay		
Inuit	1980	284
Cree	1980	123
Northwest Territories		
Inuit (Nunavut)	1985	257
Inuvialuit, Dene, Metis	1975	158
Inuvialuit	1988	164
Yukon		
First Nations	1988	87

The annual per capita production figures may be compared to the average per capita consumption of red meat, fish and shellfish in Canada, which in 1988 was 75.8 kilograms. With the exception of Sheshatshit, whose lower per capita production was a result of exceptional circumstances prevailing in 1988 as well as general problems associated with relocation and harvest disruption, all the figures in this summary are above this average national figure. Thus, to a greater or lesser degree, almost all Aboriginal people in the North are self-sufficient in their protein requirements as a result of their production and consumption of country food.

Since the majority of this food production does not enter a market, its value must be calculated by imputing a value based on a substitution price, which is the cost of purchasing equivalent imported meats sold in local retail grocery outlets in the region. Generally, this substitution price is adjusted to take into account the higher nutritional value of country food over imported substitutes. Once again, information was not always available on substitution prices. However in each case the most reasonable estimate has been used and the resulting estimates of annual per capita imputed value are summarised below. They are also given in 1993 dollars to allow for comparison among the figures based on a constant monetary unit.

REGION	DATE	PER CAPITA	PER CAPITA
	OF	IMPUTED	IMPUTED
	DATA	VALUE	VALUE
		(\$)	(1993 \$)
Labrador			
Inuit/Settlers	1979	850	1,813
Innu -	987	393	490
Sheshatshit	987	1,159	1,444

-			
Utshimassit			
Bay and Nunavik			
Inuit	980	2,144	4,151
Cree	980	767	1,485
west Territories			
Inuit (Nunavut)	985	2,826	3,830
Inuvialuit, Dene, Metis	975	1,074	3,161
1			
First Nations	988	892	1,072

The significance of these imputed values can be seen by examining statistics on the contribution which consumption of country food makes to the income of Aboriginal people in the North. Data on overall Aboriginal income levels in the relevant years were available for Labrador, Northwest Territories, and Yukon. In Labrador in 1979, the imputed value of country food was estimated to represent almost one-quarter of the gross regional income of Inuit and Settlers. In the Northwest Territories in the early 1980s, it was estimated that the imputed value of country food increased the household income of Aboriginal people by about 50%. In the Yukon in 1988, it was estimated that the value of country food produced added between 10% and 20% to the household income of Indians living in communities outside of Whitehorse.

Very little information is available on participation rates of Aboriginal people in wildlife harvesting and the production of country food for domestic consumption. Within the Nunavut region of the Northwest Territories, about 20% of the population were classified as hunters in the harvest studies conducted in the early 1980s. This figure does not include the other individuals in households involved with the processing of food obtained from harvesting. Overall estimates on participation in productive activities on the land in the eastern parts of the N.W.T. in this period are around 60% of the adult population. There are indications that there is increasing specialisation among Aboriginal households in the North, and that some households are much more involved with harvesting than others. However, it also appears that the traditional system of sharing continues to operate and to adapt to new circumstances, and that country food remains the most widely distributed form of income within Aboriginal communities.

As a result of the financial constraints facing Aboriginal wildlife harvesters across the North, there is a great deal of interest within some of the regions in the increased commercial development of country food products. In the Yukon it appears that there may be little room for further commercialisation beyond the commercial salmon fishery which currently exists in Dawson. Any further commercialisation would likely come at the direct expense of current harvesting for subsistence. Since this would reduce Aboriginal household income, such commercialisation could not be considered a contribution to economic development. Among the Dene and Metis in the Northwest Territories, the Cree in James Bay and the Innu in Labrador, there appears to be little support for commercialisation of country food, and commercial sales from harvesting are confined almost entirely to commercial fishing.

In the Inuit areas of Labrador, northern Quebec and the Northwest Territories, a number of initiatives have been taken for development of intersettlement trade and export market development. At this point in time, these initiatives remain relatively small in scale. For example, the value of commercial production of char and caribou in northern Labrador is about three-quarters of a million dollars, compared to a domestic production valued in 1993 dollars at \$3.7 million. In the Northwest Territories, aside from the commercial sales of fish, commercial sales of country food products is limited to approximately 2,000 musk-ox and 400 caribou.

However, the significance of these developments is much greater than their size might suggest. Because harvesting for commercial country food products utilises the same wildlife stocks as harvesting for domestic consumption, their scale is limited. On the other hand, country food sales in these regions have been designed to produce the maximum possible income to Aboriginal harvesters which, when used for investment in harvesting equipment, returns many times its value in country food for the domestic consumption. In addition there appears to be considerable scope for the expansion of intersettlement trade in country food in Nunavik and the Northwest Territories. Intersettlement trade does not present any real conflict with domestic consumption, since the primary market is Aboriginal people with the communities, and thus attempts to commercialise intersettlement trade do not substantially reduce the stock of country for davailable for consumption by community residents. There also appears to be substantial opportunity for the development of fish and wildlife stocks which are not utilised for domestic consumption, as in the case of shrimp in Nunavik and turbot in the Northwest Territories.

The future economic prospects of the country food sector B its ability to continue as a key element of the income of northern Aboriginal people and as a basis for the development of intersettlement trade and of export markets B depends ultimately on the maintenance of a healthy and productive domestic harvesting economy, the mixed subsistence-based economy of Aboriginal people of the North. The future strength of this economy depends on how adequately the critical needs of Aboriginal harvesting households are addressed in the future. A number of recommendations were discussed in the previous section of this paper, concerning both the protection and development of the mixed subsistence-based harvesting economy and barriers to the development of intersettlement trade in country food and of commercial markets for country food. These are summarised below.

### **Issues in the Economic Utilisation of Country Food**

## **Social Issues**

#### 1. <u>Recognition in Public Policy</u>

Aboriginal wildlife harvesters frequently encounter attitudes in government policy-making bodies which do not give adequate recognition to the needs of the domestic harvesting economy in the design and implementation of government policies and programs. This is manifested in the lack of current data on wildlife harvesting and on the economic situation of harvesters; in the lack of recognition by wildlife resource managers of the special needs of Aboriginal harvesters in relation to other users of lands and wildlife resources; in the lack of economic development programs geared to the domestic economy despite it economic importance to Aboriginal people; and in attempts by governments to curtail Aboriginal hunting rights.

#### **Recommendations:**

That all efforts be made to complete negotiations on land claim settlements in the Inuit and Innu regions of Labrador, and in the remaining Dene and Metis regions of the Mackenzie Valley where settlements have not yet been negotiated as the primary mechanism for securing aboriginal wildlife harvesting rights and aboriginal participation in land and resource management.

That further research be conducted into the possibility of including the production of food for domestic consumption in the economic accounts of the various political jurisdictions, including the benefits and costs of such an initiative and the options for most useful quantitative measure of domestic production that could be included in the accounts.

### 2. <u>Producer Support Programs</u>

With the collapse of the seal skin and fur markets, social assistance and other social transfer payments have become more important as a source of cash for reinvestment in wildlife harvesting. However, these programs are poorly suited to the needs of wildlife harvesters, since they function as a support for consumption rather than for investment in production. The effectiveness of a support program designed specifically for harvesting households has been demonstrated by the experience of the Cree in James Bay, which has provided the basis for a healthy domestic harvesting economy, and which has ensured an adequate supply of country food in the Cree communities. There is evidence that the cost of such programs may be no more than current government programming which is much less effective.

### Recommendation:

That producer support programs based on the model of the Cree Income Support Program or on

other appropriate models be developed for wildlife harvesters in other regions of the North, which can ensure the continuation of harvesting as a viable way of life and livelihood by providing an appropriate social safety net; which can ensure an adequate supply of country food in the communities; and which can act as a support for the overall development of the economies of the communities.

### 3. Animal Rights

The animal rights movement has, as a result of anti-sealing and anti-trapping campaigns, significantly reduced the cash incomes of northern wildlife harvesters. This reduction in cash income has affected the ability of Aboriginal households in the North to harvest wildlife and has reduced the amount of country food available in many Aboriginal communities. They have also constrained the commercial development of country food products. The potential exists for more serious impact in the future through bans on the harvesting of or trade in northern wildlife species by international bodies such as the International Whaling Commission or the Convention on International Trade in Endangered Species.

### Recommendation:

That self-management of wildlife resources by Aboriginal people, including the conduct of scientific research activities, the establishment of estimates of sustainable harvests, and the development of humane harvesting techniques be promoted in all regions of the North through land claim settlements and through other appropriate mechanisms as a means of counteracting increased regulation by international agencies.

### **Conservation and Resource Management Issues**

#### 1. Conservation and Aboriginal Harvesting Rights

The production of country food by Aboriginal people on a sustainable basis requires conservation of wildlife resources. The application of conservation measures must take into account the unique position and requirements of Aboriginal users both because of Aboriginal rights to land and resources, and also because wildlife represents their primary source of food and a central, defining element of Aboriginal culture. Aboriginal people must be able to enjoy long-term security of access to the sources of country food. This security of access is being provided through land claim settlements which guarantee Aboriginal harvesting rights and which establish management regimes which provide to Aboriginal users first priority in the utilisation of wildlife resources for domestic consumption and for commercial development.

#### Recommendation:

That all efforts be made to complete negotiations on land claim settlements in the Inuit and Innu regions of Labrador, and in the remaining Dene and Metis regions of the Mackenzie Valley where settlements have not yet been negotiated as a mechanism for securing priority of access by Aboriginal

people to wildlife resources required for the production of country food and for the maintenance of the domestic harvesting economy.

#### 2. <u>Co-Management</u>

There is increasing acceptance by both Aboriginal people and by governments that the differences between government and Aboriginal management systems can only be resolved through increased co-operation in the management of land and of wildlife resources, that is through the development of co-management regimes. However, in practice the gap in knowledge systems and communication between scientists and professional resource managers on the one side and Aboriginal people on the other must be bridged if co-management is to be successful. Within the framework of co-management, there should be increased data collection and analysis on wildlife resources by Aboriginal harvesters, utilising both scientific research methods and indigenous knowledge systems.

#### Recommendation:

That practical initiatives to promote the effectiveness of co-management regimes be undertaken, including programs to bridge the gap between scientific and indigenous knowledge systems, and to encourage the increased data collection and analysis by Aboriginal harvesters using both scientific research and indigenous knowledge systems.

#### 3. Pollution

Pollution presents a serious threat to the utilisation of country food by Aboriginal people in the North. The dilemma facing Aboriginal people is that while on the one hand consumption of country food containing pollutants entails potentially serious risks to health, on the other hand the reduced intake of country foods entails equally serious risks to the health of Aboriginal people. The presence of contaminants in country food stocks also is a critical factor for the commercial development of country food.

#### Recommendations:

That more research be conducted into the levels and the effects of pollutants in country foods in a manner which assists Aboriginal people in the North to increase their understanding of the issues through their direct participation in monitoring and research programs.

That mechanisms be developed that can overcome the communication gap between scientists working in the area of pollution of country food and community residents.

### 4. Lack of Data

There is a serious lack of current, accessible data on Aboriginal wildlife harvesting in the North. This includes both information of wildlife population and on levels of harvesting. This is the result not only of lack of recognition of the importance of harvesting and the production of country food to Aboriginal people, but also of the high cost of scientific research and harvest surveys, and mistrust on the part of Aboriginal people of the use of harvest data collected by government agencies.

### **Recommendations:**

That greater co-operation be promoted between Aboriginal people and government in the collection of biological data and of harvest information, both by increased participation and control by Aboriginal people in the design and use of harvesting research studies, and in the participation of Aboriginal people in the conduct of the research.

That mechanisms be developed to overcome the current obstacles to the full utilisation of information obtained through the application of indigenous knowledge systems.

### **Economic Issues**

### 1. Commercial Utilisation of Country Food

In much of government legislation and regulations government harvesting, there has been a distinction between harvesting for subsistence and harvesting for commercial purposes. This can be an artificial division, since for Aboriginal people who do wish to pursue commercialisation of country food, the primary intent of increased commercial sales is to provide the income required to support harvesting for domestic purposes.

### Recommendation:

That quotas or allocations for harvesting by Aboriginal people recognise the mixed nature of the harvesting economy by doing away with restrictions on the utilisation of the food products, leaving the decision as to the most effective and efficient utilisation for the products to the harvesting households and to the Aboriginal groups themselves.

### 2. Compensation

While courts rulings have confirmed Aboriginal rights to harvest wildlife, they have not recognised Aboriginal ownership of wildlife resources. As a result, Aboriginal people had no legal basis to claim compensation for damage to wildlife resources which they utilised. Land claim settlements have provided a forum for dealing with the issue of compensation, and have placed wildlife harvesters on a more equal plane with other users of lands and resources who receive from government an ownership interest that gives them an enforceable claims for damages to the land and resources which they use.

#### Recommendation:

That all efforts be made to complete negotiations on land claim settlements in the Inuit and Innu regions of Labrador, and in the remaining Dene and Metis regions of the Mackenzie Valley where settlements have not yet been negotiated as a mechanism for establishing the right to compensation of wildlife harvesters for damage to the wildlife resources which they utilise for the provision of country food.

### **Barriers to Intersettlement Trade and Commercial Market Development**

### Recommendations

#### 1. High Transportation Costs

That research be carried on the costs and benefits of a subsidy on air freight rates for the transportation of country food products.

#### 2. Lack of Infrastructure in Communities

That the critical role of physical infrastructure in the communities and regions in the expansion of intersettlement trade and commercial market development be recognised through investment in the planning and construction of storage and processing facilities for the distribution of country food products to be operated by harvesters' organisations in regions.

That training programs in food inspection standards and in the processing and handling of food products be made more widely available in communities.

### 3. Lack of Marketing Systems

That Aboriginal development organizations consider the establishment of regional marketing systems for country foods, developed in co-operation with harvesters' organizations based in the communities.

That Aboriginal organisations consider the establishment of a national marketing agency for northern foods to co-ordinate marketing strategy among the regions of the North and to promote country food in ways that will counteract potential interference by the animal rights lobby.

That the federal government work with Aboriginal groups for the removal or revision of the U.S. Marine Mammal Protection Act and other related U.S. legislation.

### 4. Lack of Co-ordination Among Communities

That Aboriginal harvesters' organisations and development organizations look into the development of more efficient systems for the management of intersettlement trade in country food, including the potential adaptation of the computerised exchange and barter systems operating in urban centres in southern Canada.

### 5. Insufficient Support for Appropriate Research

That mechanisms be examined for providing research funds under the control of Aboriginal communities to allow them to set priorities for research on wildlife populations, harvesting levels and on commercially viable species, as well as on the development of marketable country food products and new technologies for the storage and processing of country food which are more appropriate to the northern conditions and circumstances.

#### 6. Need for Small Business Support Programs and Services

That government economic programs address the need for greater support of the non-commercial of "pre-commercial" use and exchange of country food in light of the economic importance of these activities to Aboriginal people and as the basis of commercial development of country foods.

That community-based management training programs be expanded, and address the needs of micro-businesses which are a key element of the mixed subsistence-based economy of Aboriginal people.

## TABLE 1

# NORTHERN LABRADOR EDIBLE WEIGHT OF MEAT AND FISH CONSUMED (lbs.) 1979

Species	Edible Weight	Nain	Hopedale	Makkovik	Postville	Rigolet	Total
	Per Animal						
Caribou	125	101,500	18,250	20,625	10,500	750	151,625
Seal	35	37,765	32,865	26,180	5,215	17,500	119,525
Birds and small	n.a.	17,500	9,000	7,000	5,000	5,500	44,000
game							
Fish	n.a.	100,000	50,000	46,000	41,000	45,000	282,000
TOTAL		256,765	110,115	99,805	61,715	68,750	597,150

Source: P. J. Usher, Renewable Resources in the Future of Labrador

## ESTIMATED NUMBER OF ANIMALS HARVESTED AND EDIBLE KILOGRAMS OF MEAT PRODUCED BY SHESHATSHIT INNU JANUARY 1, 1987 TO DECEMBER 31, 1987

Species	Country	Community	Total	Total Edible Food
	Harvest	Harvest	Harvest	Weight (kgs.)
Caribou	104	61	165	10,180.50
Bear	6	-	6	571.80
Moose	8	1	9	1,788.30
Beaver	206	19	225	1,777.50
Otter	49	-	49	232.75
Martin	313	26	339	n/a
Mink	83	-	83	n/a
Weasel	75	-	75	n/a
Red fox	26	2	28	n/a
Cross fox	-	1	1	n/a
Muskrat	170	12	182	116.48
Lynx	1	-	1	3.90
Wolf	5	-	5	n/a
Hare	527	661	1188	997.92
Porcupine	44	23	67	318.92
Owl	5	-	5	n/a
Spruce grouse	1269	539	1808	632.80
Ruffed grouse	-	40	40	14.00
Willow ptarmigan	2604	533	3137	1,097.95
Canada goose	743	37	780	1638.00
Ducks	650	50	700	539.00
American black duck	38	4	42	32.34
Common pintail duck	20	3	23	17.71
Harlequin duck	9	-	9	6.93
Oldsquaw duck	65	75	140	107.80
Merganser	94	30	124	95.46

## TABLE 2 (cont.)

## ESTIMATED NUMBER OF ANIMALS HARVESTED AND EDIBLE KILOGRAMS OF MEAT PRODUCED BY SHESHATSHIT INNU JANUARY 1, 1987 TO DECEMBER 31, 1987

Species	Country	Community	Harvest	<b>Total Edible Food</b>
_	Harvest	Harvest		Weight (kgs.)
Loon	22	2	24	26.40
Eider ducks	5	5	10	7.70
Common eider	17	10	27	20.79
Scoters	38	14	52	40.04
Scaups	22	6	28	21.56
Blue-winged teal	4	-	1	3.08
Seals	1	-	1	23.60
Atlantic salmon	6	137	143	539.10
Quananiche	4	-	4	4.00
Lake trout	766	67	833	999.60
Brook trout	1138	2791	3929	1964.50
Rainbow trout	85	-	85	42.50
Lake Whitefish	252	176	428	256.80
Northern Pike	237	50	287	287.00
Longnose sucker	1130	50	1180	590.00
White sucker	372	50	422	211.00
Burbot	49	40	89	35.60
Smelt	500	4530	5030	100.60
Tomcod	2	50	52	82.68
TOTAL				25,234.22

Source: P. Armitage, Homeland or Wasteland: Contempoary Land Use and Occupancy Among the Innu of Utshimassit and Sheshatshit and the Impact of Military Expansion

## ESTIMATED NUMBER OF ANIMALS HARVESTED AND EDIBLE KILOGRAMS OF MEAT PRODUCED By UTSHIMASSIT INNU JANUARY 1, 1987 TO DECEMBER 31, 1987

Species	Country	Community	Harvest	Total Edible Food
	Harvest	Harvest		Weight (kgs.)
Caribou	405	75	480	29,616.00
Bear	3	2	5	476.50
Moose	-	-	-	-
Beaver	-	1	1	7.90
Otter	3	1	4	19.00
Martin	14	34	48	n/a
Mink	4	8	12	n/a
Weasel	12	50	62	n/a
Fox	1	6	7	n/a
Red fox	10	30	40	n/a
Cross fox	2	1	3	n/a
Silver fox	1	-	1	n/a
Black fox	2	1	3	n/a
Arctic fox	1	-	1	n/a
Lynx	-	13	13	50.70
Muskrat	1	24	25	16.00
Wolf	2	-	2	n/a
Hare	382	400	782	656.88
Arctic hare	36	2	38	31.92
Porcupine	22	12	34	161.84
Snowy owl	1	1	2	-
Grouse	-	223	223	78.05
Spruce grouse	188	205	393	137.55
Willow ptarmigan	567	257	824	288.40
Canada goose	393	19	412	865.20
Ducks	-	27	27	30.80
American black duck	11	-	11	8.47
Common pintail duck	3	-	3	2.31
Harlequin duck	63	23	86	66.22

## TABLE 3 (cont.)

## ESTIMATED NUMBER OF ANIMALS HARVESTED AND EDIBLE KILOGRAMS OF MEAT PRODUCED BY UTSHIMASSIT INNU JANUARY 1, 1987 TO DECEMBER 31, 1987

Species	Country	Community	Harvest	Total Edible Food
	Harvest	Harvest		Weight (kgs.)
Seagull immature	18	1	19	-
Dovkie	2	6	8	6.16
Atlantic puffin	5	3	8	6.16
Merganser	76	7	83	63.91
Loon	52	6	58	62.64
Eider ducks	236	-	236	181.72
Common eider	356	2	358	275.66
Oldsquaw duck	4	-	4	3.08
Scoters	45	4	49	37.73
White winged scoter	69	-	69	53.13
Scaups	82	5	87	66.99
Sandpiper	-	40	40	30.80
Greater yellowlegs	65	2	67	51.59
Lesser yellowlegs	53	50	103	79.31
Seals	116	7	123	2902.80
Atlantic salmon	35	2	37	139.49
Lake trout	4	30	34	40.80
Brook trout	1250	188	1438	719.00
Arctic Char	3777	65	3842	1921.00
Lake whitefish	323	23	346	207.60
Northern Pike	2	-	2	2.00
Longnose sucker	160	100	260	130.00
Burbot	-	2	2	0.80
Capelin	200	-	200	4.00
Smelt	-	10	10	0.20
Tomcod	60	3	63	100.17
Flatfish	110	100	210	-
TOTAL				39,600.48

Source: P. Armitage, Homeland or Wasteland: Contemporary Land Use and Occupancy Among the Innu of Utshimassit and Sheshatshit and the Impact of Military Expansion

# INUIT OF NORTHERN QUEBEC BEST ESTIMATES OF HARVESTING (NUMBER HARVESTED) AS ESTABLISHED BY THE NATIVE HARVESTING RESEARCH COMMITTEE

SPECIES	K	Ι	Α	S	K	Q	K	Α	Т	K	K	K	С	TOTAL
	U	Ν	K	Α	Α	U	Α	U	Α	U	Α	Ι	Н	
	U	U	U	L	Ν	Α	Ν	Р	S	U	Ν	L	Ι	
	J	K	L	L	G	Q	G	Α	Ι	J	G	L	S	
	J	J	Ι	U	Ι	Т	Ι	L	U	U	Ι	Ι	Α	
	U	U	V	Ι	Q	Α	R	U	J	Α	Q	Ν	S	
	Α	Α	Ι	Т	S	Q	S	K	Α	Q	S	Ι	Ι	
	R	K	K		U		U		Q		U	Q	В	
	Α				J		K		-		Α	-	Ι	
	Р				U						L			
	Ι				Α						U			
	K				Q						J			
											J			
											U			
											Α			
											Q			
Ringed Seal	1898	2081	675	1749	2665	617	401	175	219	492	691	591	14	13,302
Bearded Seal	84	190	94	128	112	40	100	25	29	86	82	55	1	1,026
Harp Seal	3	7	4	28	36	7	7	1	1	3	12	139	0	248
Ranger Seal	1	6	1	1	3	1	0	0	2	4	9	4	0	32
Beluga Whale	61	106	8	60	78	55	28	8	8	32	19	13	0	476
Walrus	1	12	7	17	4	6	6	1	1	1	1	1	0	58
Polar Bear	5	13	6	3	9	5	1	2	1	1	5	7	0	58
Caribou	242	891	94	31	171	47	191	178	330	1310	1011	51	0	4,547
Arctic Fox	121	1429	340	553	538	189	414	145	370	848	489	27	2	5,465
Wolf	5	8	1	4	0	0	1	2	28	107	75	0	0	231
Snow Goose	2926	1209	453	3341	216	4	12	10	15	12	6	1	28	8,233
Canada Goose	4672	6603	1170	732	199	207	507	177	249	1722	523	106	500	17,367
Brant	478	301	15	55	1	1	2	50	5	16	18	0	33	975
Ducks	2978	3988	800	603	624	224	326	84	400	909	628	310	174	12,048
Duck Eggs	1604	3439	2082	955	3222	776	1469	605	1331	1745	2562	378	43	20,211
Arctic Hare	48	67	6	48	73	9	45	8	24	126	58	7	163	681
Ptarmigan	9809	8124	3420	7304	2060	2011	3776	1120	2632	17977	6852	1299	773	67,157
Grouse	137	304	3	0	4	10	42	7	49	279	97	31	29	992

## TABLE 4 (cont.)

# INUIT OF NORTHERN QUEBEC BEST ESTIMATES OF HARVESTING (NUMBER HARVESTED) AS ESTABLISHED BY THE NATIVE HARVESTING RESEARCH COMMITTEE

SPECIES	K	Ι	Α	S	K	0	K	Α	Т	K	K	K	С	TOTAL
	U	Ν	К	Α	Α	Ŭ	А	U	Α	U	Α	Ι	Н	
	U	U	U	L	Ν	Α	Ν	Р	S	U	Ν	L	Ι	
	J	K	L	L	G	0	G	Α	Ι	J	G	L	S	
	J	J	I	U	I	Т	I	L	U	Ū	I	I	A	
	Ū	Ū	v	I	0	Ā	R	Ū	J	Ă	0	N	S	
	Ă	Ă	T	Ť	Š	0	S	ĸ	Ă	0	Š	T	Ĩ	
	R	K	ĸ	-	Ŭ	×	Ŭ		0	×	Ŭ	0	B	
	A				J		ĸ		×		Ă	×	Ĩ	
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											JI			
											A			
											0			
Snowy Owl	23	3	4	2	1	1	1	5	1	3	1	1	6	196
Murre	37	551	22	70	111	15	36	5	21	53	128	65	8	2,619
Guillemot	79	120	29	34	58	4	18	11	8	53	67	24	35	1,164
Loons	440													901
Arctic Char	866	14251	13597	13054	10106	1732	9731	2353	6317	6317	19014	292	15	97,645
Salmon	61	160	29	0	1	6	98	7	38	6743	632	155	0	7,930
Lake Trout	818	10756	1300	970	661	543	1711	653	407	3506	1054	1	99	22,479
Codfish	2481	3152	293	197	13	2	0	3	4	142	65	635	104	7,091
Whitefish	4064	8063	2146	19	1	35	35	6	131	2723	469	0	1091	18,783
Book Trout	4294	1289	5	212	21	1	190	182	923	6703	3328	0	194	17,342
Sculpin	4444	456	220	548	1009	659	344	506	801	2521	965	19	82	12,574
Landlocked Char	94	208	6	391	250	301	227	125	53	111	170	52	0	1,988

Source: James Bay and Northern Quebec Native Harvesting Research Committee, *Research to Establish Present Levels of Native harvesting* for the Inuit of Nunavik

## INUIT OF NORTHERN QUEBEC CALCULATION OF EDIBLE WEIGHTS PRODUCED FROM HARVESTS

SPECIES	TOTAL	EDIBLE	TOTAL
HARVESTED	NUMBER	WEIGHT	EDIBLE
	HARVESTED	(kg)	WEIGHTS
			( <b>kg</b> )
Ringed Seal	13,302	14.3	190,219
Bearded Seal	1,026	98.4	100,958
Harp Seal	248	43.1	10,689
Ranger Seal	32	27.7	886
Beluga Whale	476	284.4	135,374
Walrus	58	185	10,730
Polar Bear	58	158.7	9,205
Caribou	4,547	58	263,726
Arctic Fox	5,465	1.5	8,198
Wolf	231	0	0
Snow Goose	8,233	1.6	13,173
Canada Goose	17,367	2.1	36,471
Brant	975	1.4	1,365
Ducks	12,048	.8	9,638
Duck Eggs	20,211	.1	2,021
Arctic Hare	681	2.3	1,566
Ptarmigan	67,157	.4	26,863
Grouse	992	.3	298
Snowy Owl	196	1.6	314
Murre	2,619	.5	1,310
Guillemot	1,164	.4	466
Loons	901	1.1	991
Arctic Char	97,645	2	195,290
Salmon	7,930	3.9	30,927
Lake Trout	22,479	3.2	71,933
Codfish	7,091	1.1	7,800
Whitefish	18,783	.7	13,148
Brook Trout	17,342	.9	15,608
Sculpin	12,574	.2	2,515
Landlocked Char	1,988	1.1	2,187
TOTAL			1,163,869

Source: James Bay and Northern Quebec Native Harvesting Research Committee. 1976. Research to Establish Present Levels of Harvesting by Native Peoples of Northern Quebec; Part II, A Report on the Harvest by the Inuit of Northern Quebec: Final Report

\* From Pattimore, Inuit Wildlife Harvest for 1984 in the Baffin Region

## JAMES BAY CREE SUMMARY TABLE OF PRESENT LEVELS OF HARVESTING AS ESTABLISHED BY THE NATIVE HARVESTING RESEARCH COMMITTEE

SPECIES	Great	Fort	Paint Hills	Eastmain	Rupert	Nemaska	Mistassini	Waswanipi	All	Food	Total
	Whale	George			House					Portion	Edible
										( <b>lbs.</b> )	Weight
Canada Geese	5,040	29,906	9,069	6,154	7,509	428	4,458	572	63,136	4.7	296,739
Lesser Snow Geese	2,668	5,683	1,262	1,034	9,734	152	102	4	20,639	3.5	72,236
Brant	80	4,175	1,892	17	126	24	25	85	6,424	1.4	8,994
Ducks	3,356	16,632	4,390	1,900	3,322	768	17,250	3,098	50,716	1.7	86,217
Loons	426	1,430	742	81	25	31	743	99	3,577	2.5	8,942
Beaver	334	2,535	2,092	1,076	1,875	589	5,689	2,464	16,654	17.4	289,780
Otter	44	215	113	50	79	38	715	117	1,331	10.5	13,975
Lynx	2	240	78	137	67	51	237	84	896	8.5	7,616
Muskrat	458	3,677	1,108	427	822	198	1,773	1,344	9,807	1.4	13,730
Fox	45	279	76	35	39	9	132	15	630	0.0	0
Arctic Fox	10	80	3	3	4	0	12	1	113	0.0	0
Marten	6	4	16	1	334	24	352	754	1,491	0.0	0
Mink	70	302	138	82	132	61	1,158	345	2,288	0.0	0
Porcupine	313	901	335	91	2	30	638	7	2,317	10.5	24,328
Hare	296	13,037	6,671	4,448	6,883	1,887	5,409	3,289	41,920	1.9	79,648
Ptarmigan	14,990	25,774	6,379	3,054	1,672	323	3,663	64	55,919	0.8	44,735
Grouse	1,588	6,708	2,424	975	1,588	690	7,347	2,901	24,221	0.7	16,955

## TABLE 6 (cont.)

## JAMES BAY CREE SUMMARY TABLE OF PRESENT LEVELS OF HARVESTING AS ESTABLISHED BY THE NATIVE HARVESTING RESEARCH COMMITTEE

SPECIES	Great	Fort	Paint Hills	Eastmain	Rupert	Nemaska	Mistassini	Waswanipi	All	Food	Total
	Whale	George			House					Portion	Edible
										(lbs.)	Weight
Whitefish	11,781	48,807	23,937	11,293	13,928	1,541	12,378	16,764	140,429	1.3	182,558
Burbot	273	3,355	1,581	201	89	46	1,009	747	7,301	0.9	6,571
Speckled Trout	3,921	21,615	3,357	2,667	800	317	5,625	77	38,379	1.2	46,055
Lake Trout	3,807	5,310	290	124	82	389	9,173	51	19,226	2.6	49,988
Char	103	512	26	0	0	0	0	0	641	2.6	1,667
Pike	1,028	4,942	1,388	566	685	581	11,092	4,970	25,252	2.2	55,554
Sucker	4,270	15,009	2,649	487	3,350	1,259	19,775	15,488	62,287	1.2	74,744
Sturgeon	0	615	155	94	229	63	375	1,469	3,000	3.1	9,300
Dore	0	1,936	985	385	1,939	734	10,958	9,608	26,545	1.1	29,199
Moose	0	16	20	25	98	48	516	211	934	438.0	409,092
Caribou	177	74	13	4	51	16	430	3	768	128.0	98,304
Black Bear	13	37	23	20	24	8	70	19	214	210.0	44,940
Polar Bear	0	2	1	0	0	0	`0	0	3	350.0	1,050
Seal	123	367	151	9	7	0	0	0	657	52.0	34,164
Beluga	0	2	1	0	0	0	0	0	3	0.0	0
TOTAL											2,007,082

## HARVEST BY INUIT OF NUNAVUT: TOTAL HARVEST, HARVEST PER CAPITA, AND HARVEST PER HUNTER 1983-85

Region	Harvest	Inuit	Harvest Per	Hunters	Harvest Per
	( <b>kg</b> )		Capita (kg)		Hunter (kg)
Keewatin	927,652	4,325	214	970	956
Kitikmeot	870,309	3,220	270	623	1,397
Baffin	2,096,147	7,610	275	1,397	1,500
Total/Average	3,894,108	15,155	257	2,990	1,302

Source: P. J. Usher and G. Wenzel, ASocio-Economic Aspects of Harvesting@

# INUVIALUIT REGION HARVEST BY SPECIES AND COMMUNITY

SPECIES		NU	J <b>MBER H</b> A	ARVESTED 1	1988		TOTALS
	Sachs	Holman	Paulatuk	Tukoyaktuk	Inuvik	Aklavik	
	Harbour						
FISH		0.005			• • • •		
Arctic Char - anadromous	519	9,327	2,829	11	200	651	13,537
-		25	162				18/
landlocked			1 700	11 275	0.245	0.150	20 (00
Broad Whiterish			1,722	11,375	8,345	8,158	29,600
Lake whiterish			412	1,614	7,413	3,134	12,573
whiterish spp.			44	1,015		8	1,917
Ciana			252	24 252	000		1,004
CISCO Desifie Herring			255	54,552	090		<u> </u>
Pacific Herring/Ciaco			20	1.040			0,103
A motio Cod				1,940			1,940
Cod spp		1					1
Soffron Cod	Q	1		25		1	<u> </u>
Lake Trout	178	1 082	440	321	118	1	3 0 3 0
Burbot	170	1,702	440	290	3 496	2 917	<u> </u>
Inconnu			1	1 359	1 070	1 667	4 097
Northern Pike			2	1,335	2.126	1,507	3 678
Arctic Gravling			10	10	2,120	1,007	11
Chum Salmon			10			2	2
Fish spp.						350	350
MAMMALS					I	1 1	
Ringed Seal	151	1,076	55	6			1,288
Bearded Seal	14	12	5				31
Seal spp.	5		4			2	11
Walrus	2						2
Beluga				31	63	14	108
Caribou	224	655	665	812	616	1,214	4,186
Muskox	243	88	5				336
Moose			1	5	16	15	37
Dall's Sheep						1	1
Polar Bear	7	20	7	10		5	49
Grizzly Bear				1		2	3
American Black Bear					4	2	6

# TABLE 8 (cont.)

## INUVIALUIT REGION HARVEST BY SPECIES AND COMMUNITY

SPECIES		NU	J <b>MBER H</b> A	ARVESTED	1988		TOTALS
	Sachs Harbour	Holman	Paulatuk	Tukoyaktuk	Inuvik	Aklavik	
MAMMALS (Continued)						1	
Wolf			43	11	5	12	71
Wolverine			19	7	3	9	38
Lynx				4	9	7	20
Arctic Fox - white	155	650	184	330		29	1348
- blue				3	1		4
Red Fox - red			46	81	56	103	286
- cross		3	35	62	44	116	260
- silver				6	5		11
- black					2		2
Fox spp.					29	18	47
Ermine			16		152	25	193
American Marten			77	185	281		543
American Mink			4	19	185	87	295
Muskrat			1	12	14,513	17,721	32,247
American Beaver					10		10
River Otter						1	1
Hare spp.	66	26	5	120	445	414	1,076
BIRDS						<u>.                                    </u>	
Greater White-fronted	1		377	1,421	162	256	2,217
Goose							
Canada Goose	1	83	334	40	135	8	601
Snow Goose	1,395	32	1,507	2,481	285	185	5,885
Snow Goose (blue)			3				3
Brant	76	2	23	735			836
Ross Goose							
Goose spp.		2		15		6	23
Swan			27	19	4	12	62
Arctic Loon		9				2	11
Common Loon			6				6
Yellow-billed Loon			2				2
Loon spp.		7					7
Canvasback				23		10	33

## TABLE 8 (cont.)

## INUVIALUIT REGION HARVEST BY SPECIES AND COMMUNITY

SPECIES		NU	JMBER H	ARVESTED	1988		TOTALS
	Sachs	Holman	Paulatuk	Tukoyaktuk	Inuvik	Aklavik	
	Harbour						
<b>BIRDS</b> (Continued)							
Eider	24	4,749	35	5		5	4,818
Goldeneye					2	12	14
Merganser			12	6			18
Green-winged Teal	2					4	6
Mallard				16	130	211	357
Oldsquaw		5	187		58	36	286
Northern Pintail	1		12	113	24	54	204
Scaup	1		12		10	76	99
Scoter			1	49	84	127	261
Northern Shoveler				14		2	16
American Widgeon				48	217	184	449
Duck spp.					9	5	14
Ptarmigan	111	20	971	978	5	299	2,384
Sandhill Crane	8	4					12
Snowy Owl							

Source: Fabijan, M. 1991. Inuvialuit Harvest Study Data Report, July 1986-December 1988.

## INUVIALUIT REGION CALCULATION OF EDIBLE WEIGHT OF HARVEST (1988)

SPECIES	TOTAL	EDIBLE	TOTAL
	HARVEST	WEIGHTS	EDIBLE
		(kg)	HARVEST
<u>FISH</u>	10.505	2.0	<b>25</b> 0 <b>5</b> 4
Arctic Char - anadromous	13,537	2.0	27,074
-	187	1.1	206
* landlocked			
* Broad Whitefish	29,600	.7	20,720
* Lake Whitefish	12,573	.7	8,801
* Whitefich ann	1,917	.7	1,342
wintensii spp.	1,884	.7	1,319
Cisco	35,503	1.0	35,503
Pacific Herring	6,103	1.0	6,103
Pacific Herring/Cisco	1,940	1.0	1,940
Arctic Cod		1.1	0
* Cod spp.	1	1.1	1
* Saffron Cod	34	1.1	37
* Lake Trout	3,039	3.2	9,725
Burbot	6,707	1.0	6,707
Inconnu	4,097	1.0	4,097
Northern Pike	3,678	1.0	3,678
Arctic Grayling	11	1.0	11
* Chum Salmon	2	3.9	8
Fish spp.	350	1.0	350
MAMMALS			
Ringed Seal	1,288	13.6	17,517
* Bearded Seal	31	98.4	3,050
Seal spp.	11	13.6	150
* Walrus	2	185.0	370
Beluga	108	105.2	11,362
Caribou	4,186	40.8	170,789
Muskox	336	136.1	45,730
Moose	37	198.6	7,348
Dall's Sheep	1	34.0	34
Polar Bear	49	79.4	3,891
Grizzly Bear	3	79.4	238
American Black Bear	6	95.2	571

TABLE 9 (cont.)

# INUVIALUIT REGION CALCULATION OF EDIBLE WEIGHT OF HARVEST (1988)

SPECIES	TOTAL HARVEST	EDIBLE WEIGHTS	TOTAL EDIBLE
		(kg)	HARVEST
MAMMALS (Continued)			
Wolf	71	19.3	1,370
Wolverine	38		
Lynx	20		
Arctic Fox - white	1348	1.5	2,022
-	4	1.5	6
* blue			
*	286	1.5	429
ked fox - red	260	1.5	390
- cross	11	1.5	17
*	2	1.5	3
- silver			
- black			
* Fox spp.	47	1.5	71
Ermine	193		
American Marten	543		
American Mink	295		
Muskrat	32,247	.6	19,348
American Beaver	10	7.9	79
River Otter	1	4.8	5
Hare spp.	1,076	2.3	2,475
BIRDS			· · · · · · · · · · · · · · · · · · ·
Greater White-fronted			
Goose	2,217	1.6	3,547
Canada Goose	601	1.6	962
Snow Goose	5,885	1.6	9,416
Snow Goose (blue)	3	1.6	5
Brant	836	1.6	1,338
Ross Goose		1.6	0
Goose spp.	23	1.6	37
Swan	62		
* Arctic Loon	11	1.1	12
* Common Loon	6	1.1	7
Yellow-billed Loon	2	1.1	2
* Loon spp.	7	1.1	8
Canvasback	33	1.1	36

SPECIES	TOTAL HARVEST	EDIBLE WEIGHTS (kg)	TOTAL EDIBLE HARVEST
<b>BIRDS</b> (Continued)			
Eider	4,818	1.1	5,300
Goldeneye	14	1.1	15
Merganser	18	1.1	20
Green-winged Teal	6	1.1	7
Mallard	357	1.1	393
Oldsquaw	286	1.1	315
Northern Pintail	204	1.1	224
Scaup	99	1.1	109
Scoter	261	1.1	287
Northern Shoveler	16	1.1	18
American Widgeon	449	1.1	494
Duck spp.	14	1.1	15
Ptarmigan	2,384	.4	954
Sandhill Crane	12		
Snowy Owl		2.3	0
TOTAL			438,408

## INUVIALUIT REGION CALCULATION OF EDIBLE WEIGHT OF HARVEST (1988)

Sources: Usher, P.J. "Renewable Resources" in Canada. 1977. Northern Frontier, Northern Homeland: The Report of the Mackenzie Valley Pipeline Inquiry. Ottawa: Canada, Supply and Services

Those indicated with an asterisk (\*) are from:

James Bay and Northern Quebec Native Harvesting Research Committee. 1976. Research to Establish Present Levels of Harvesting by Native Peoples of Northern Quebec; Part II, A Report on the Harvests by the Inuit of Northern Quebec: Final Report

## INDIAN SUBSISTENCE HARVEST OF MAJOR SPECIES IN THE YUKON

Species	Edible Weight (kg)
Moose	183,300
Caribou	102,500
Salmon	53,000
Other fish, small game,	
& minor food sources	61,200
Total	400,000

Source: P. J. Usher and W. L. Staples, Subsistence in the Yukon

## NORTHERN LABRADOR VALUE OF MEAT AND FISH CONSUMED 1979

Species	Edible Weight (lbs.)	Percentage of Total	Value per pound	Total Value
		Food	(\$)	(\$)
Caribou	151,625	25.4	4.00	606,500
Seal	119,525	20.0	4.00	478,100
Birds and small game	44,000	7.4	2.50	110,000
Fish	282,000	47.2	2.00	564,000
TOTAL	597,150	100.0		1,758,600

Source: P. J. Usher, Renewable Resources in the Future of Northern Labrador

# NORTHERN LABRADOR GROSS INCOME FROM MAJOR SOURCES, 1979 (\$,000s)

SOURCE	TOTALS
Full-time employment	1,410
Casual employment	520
Fish plant employment	445
Wage Employment Subtotal	2,375
Unemployment insurance	680
Statutory payments	795
Social assistance	490
Transfer Payments Subtotal	1,965
Fish	695
Fur	236
Handicrafts, etc.	55
Commodities Subtotal	986
Total cash income	5,326
Meat and fish	1,756
Wood and other	188
Total Domestic Income	1,944
OVERALL TOTAL	7,270

Source: P.J. Usher, Renewable Resources in the Future of Labrador

## GROSS DOMESTIC PRODUCT BY INDUSTRY NORTHWEST TERRITORIES, 1984

Gross Domestic Product at Factor Cost Annual: Millions of Dollars

BUSINESS SECTOR		
Agriculture & Related Services (1350001)	0.2	
Fishing & Trapping (1350002)	1.8	
Logging & Forestry (1350003)	0.2	
Mining, Quarrying & Oil Well (1350004)	531.6	
Manufacturing (1350005)	17.9	
Food (1350108)	0.2	
Printing, Publishing & Allied (1350119)	1.5	
Construction (1350006)	233.1	
Other Utilities (1349482)	59.2	
Transportation & Storage (1349481)	67.0	
Wholesale Trade (1349483)	9.6	
Retail Trade (1349484)	38.0	
Health Services (1350143)	15.2	
Accommodation & Food Service (1350144)	32.7	
NON-BUSINESS SECTOR		
Government Service (1350024)	216.8	
Defence (1350471)	23.7	
Federal (1350472)	58.9	
Territorial (1350473)	106.4	
Local (1350474)	27.8	
Educational Service (1350160)	66.9	
Health & Social Service (1350161)	22.0	
SPECIAL AGGREGATES		
Goods Producing Industries (1350033)	845.7	
Non-Business Sector Industries (1349485)	325.9	

Source: Government of the Northwest Territories, Bureau of Statistics, Statistics Quarterly: December 1992

## CONSUMER PRICE INDEX FOR CANADA 1975 TO 1993

## (1986 = 100)

1975	
1775	
	44.2
1976	47.5
1977	51.3
1978	55.9
1979	61.0
1980	67.2
1981	75.5
1982	83.7
1983	88.5
1984	92.4
1985	96.0
1986	100.0
1987	104.4
1988	108.3
1989	114.0
1990	119.5
1991	126.2
1992	128.0
1993 (May)	130.1

Source: Statistics Canada

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