

*Review of Intersettlement Trade Opportunities for Arctic Food
Products in Nunavut
Final Report*



*Presented to the
Department of Environment
Government of Nunavut*

*Submitted by:
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Section 1: Introduction

Background and Purpose of the Study

Arctic foods from the lands and waters of Nunavut, generally known as country food, have always provided the mainstay of the diet for Inuit in Nunavut. Traditionally, arctic foods constituted the sole source of protein and nutrients for Inuit. Food was distributed, based on values of sharing and reciprocity, through extended families and to others. Where certain types of arctic foods were not available in specific locations or during certain seasons, exchange between camps would supplement local food resources.¹

Following contact with Europeans, European foods began to supplement arctic foods for Inuit. In addition, the economy of Inuit evolved over time into a mixed economy where harvesting, distribution and consumption of arctic foods for subsistence became integrated with wage work, as the money generated by wage work became an essential component of the economy that provided the resource for Inuit harvesters to reinvest in the equipment they required for wildlife harvesting.

Since the 1950s, various development initiatives have been pursued in communities in Nunavut to provide work and income through the commercial production and sale of arctic foods. Some of these early attempts included canning of seal or whale meat, maktaaq and other foods from local sources of supply.

By the 1980s, exploratory fisheries and pilot projects with land-based animals were resulting in the establishment of arctic foods projects or businesses that were not only supplying local demand on a commercial basis, but also selling arctic foods to other communities and to export markets outside of Nunavut. Coordinated programs in all the three regions of Nunavut provided freezer facilities for both subsistence and commercial use in almost every community, with

¹ Rosemary Keenainak interview; Weihs et al. [Country Food Report for Royal Commission]

processing facilities constructed in a large number of communities as well. Arctic food products of various kinds, from smoked fish to caribou sausages, were developed and sold by local Hunters and Trappers Organizations (HTOs) and others, with varying degrees of success. According to the Nunavut Economic Outlook prepared by the Conference Board of Canada, in 1999 commercial food processing was contributing \$7.4 million to the Nunavut economy.² Along with a number of smaller fish or meat processing plants across Nunavut that still operate, there are now four larger plants providing federally inspected fish and meat – Kitikmeot Foods Limited, Kivalliq Arctic Foods, Pangnirtung Fisheries, and Iqaluit Enterprises.

During the same period, a number of strategies for the commercial development of arctic foods for intersettlement trade within Nunavut and for export were prepared, along with development and business plans for specific arctic foods projects. The information provided by these strategies and reports have been utilized in the preparation of this current report. A summary report on issues and opportunities for development of commercial foods in Nunavut, prepared in 2001, identified three major issues facing the further commercial development of arctic foods – maintaining sustainable levels of commercial harvests, transportation constraints, and the direction for future development of arctic foods.³

In terms of sustainable harvests, the 2001 report noted that the production and marketing of arctic foods clearly had to be carried out within the confines imposed by the supply of resources. However, the difference between harvest levels required for breakeven production and the available commercial quotas was seen to be not that great. This raises issues for both resource use and economic viability of food production. The high transportation cost for air freight creates a major challenge to the viability of food processing operations in Nunavut. Currently three of the large processing plants in Nunavut are owned by the Nunavut Development Corporation, which provides subsidies for their annual operating costs. Key recommendations at the time included the need to maintain government subsidies for the transportation of meat and fish, the need to maximize value-added production and minimize resource harvest costs, and the need to pursue potential markets for arctic foods, especially for intersettlement trade within Nunavut.

The purpose of the current study is to examine the current state of commercial demand and supply of arctic foods and to assess the prospects for development of increased intersettlement trade within Nunavut. The primary source of information for this study are a series of interviews and surveys with organizations and individuals involved in various areas related to intersettlement trade in arctic foods, supplemented by a review of previous studies and literature on intersettlement trade. The study examines the following areas:

- Commercial demand within Nunavut for arctic foods;
- Constraints on supply and demand that limit the development of intersettlement trade within Nunavut; and
- Specific opportunities for increased demand and supply of arctic foods for the hospitality, retail and institutional sectors in Nunavut.

² Conference Board of Canada. 2001. Nunavut Economic Outlook: An Examination of the Nunavut Economy.

³ RT Associates. 2001. Meat and Fish Processing in Nunavut: Issues, Factors and Opportunities for Future Development.

Conclusions and recommendations address the prospects and requirements for enhancing utilization of arctic foods in Nunavut through the promotion of intersettlement trade, including potential mechanisms and models for promoting increased utilization and trade of arctic foods within Nunavut.

Methodology

In order to obtain the information required to meet the objectives of the project, a number of research tasks were employed. These tasks were initially identified in the proposal and were revised to address certain developments and challenges that developed during the research phase.

The first element of the methodology was a document review. A number of documents were identified in the proposal and in addition, the project contact within the Department of the Environment suggested a number of additional documents. These documents were reviewed and key information formed the basis of the background section of the report as well as informing the other sections of the report. A number of documents were difficult to obtain and several were not received during the course of the project. In these cases, information from earlier documents or from other research sources had to be retrieved and utilized.

In consideration of the timeline for the project and the large number of respondents that were to be contacted, a master survey form was developed in order to collect the maximum information from the maximum number of respondents. This master survey was based upon the key issues of interest identified in the initial Request for Proposals. From this master survey, individual surveys were developed to draw specific information from key informant groups. Surveys were faxed out to respondents along with a cover letter stating the purpose of the survey and clearly identifying it as a GN project. In addition, the cover letter clearly identified where the completed surveys could be faxed to and a person and telephone number that could be contacted if there were any questions. Most respondents were given two weeks to complete the survey. Surveys for the HTOs were in Inuktitut and English.

The primary survey groups were:

- Hunter and Trapper Organizations (HTOs)
- Wildlife Officers
- Retail sector – Northern stores (Northmart), co-operatives, main private retailers
- Hospitality sector - main hotels, restaurants primarily in the regional centers
- Institutional sector – hospitals, correctional institutions, elders' centers, half-way houses

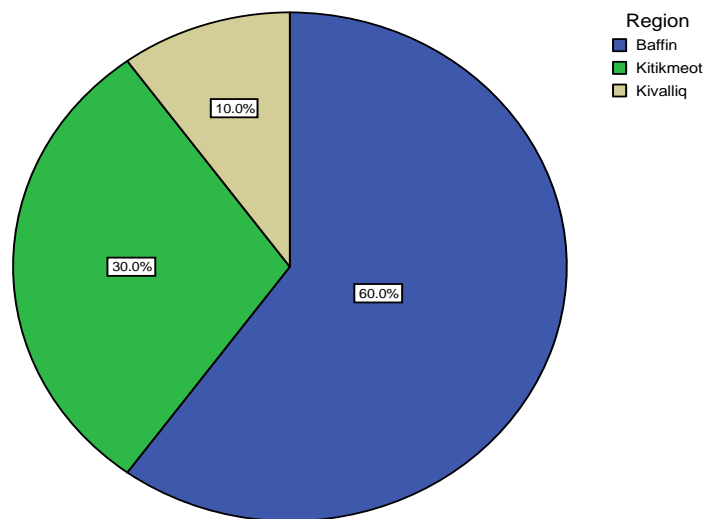
Several challenges were encountered during the survey process. The initial problem was a low return rate among the HTOs. While all 26 HTOs were sent surveys, only 10 were completed. After the conclusion of the two-week completion period, a project person called the remaining HTOs and either left messages or asked respondents if they would like another survey sent and if they required assistance. Local project team members were also asked to contact their local HTO and go over the survey with them.

There were incidences of non-response in all the survey groups to a certain degree. The Wildlife Officers responded with the highest level due in part to the fact that they were all in attendance at a meeting in Iqaluit where a Department of Environment employee handed out the survey. Follow-up calls to non-respondents again helped increase the total number of surveys collected.

The following charts indicate the distribution of the HTO and WO responses.

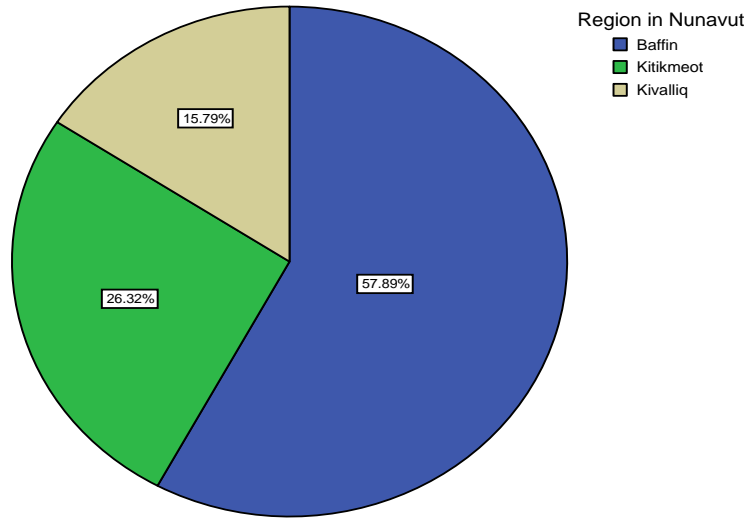
HTO Survey

Responses to the HTO Survey were received from 10 HTOs. The Qikiqtani region accounted for 60.0% (6 out of 10) of completed surveys, the Kitikmeot 30.0% (3 out of 10) with the remaining 10.0% (1 out of 10) coming from the Kivalliq region. The distribution of responses by region is illustrated below.



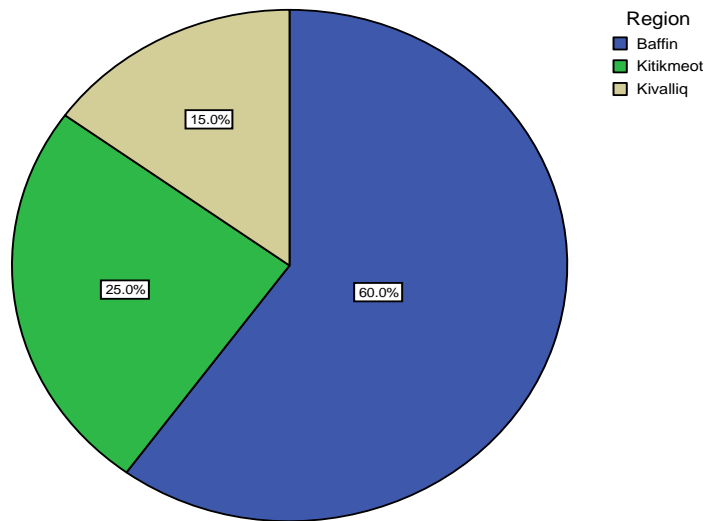
Wildlife Officer Survey

Responses to the Wildlife Officer Survey were received from Wildlife Officers in 19 communities out of 26. The Qikiqtani region accounted for 57.9% of completed surveys, the Kitikmeot 26.3% with the remaining 15.8% coming from the Kivalliq region. The distribution of responses by region is illustrated below.

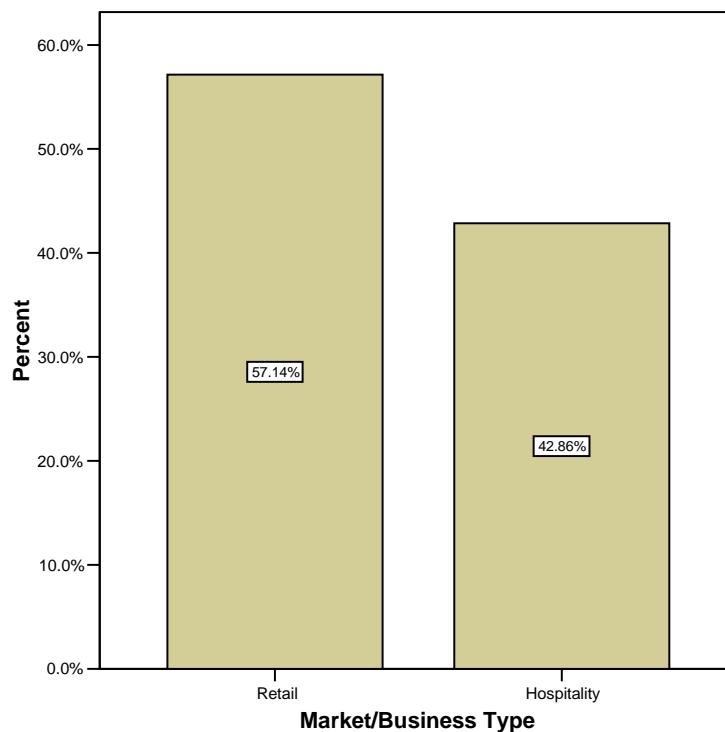


Retail, Hospitality and Institutional Surveys

Combined, a total of 21 retail and hospitality surveys were received. Of these, 12 or 60.0% were received from the Qikiqtani region, 5 or 25.0% were from the Kitikmeot region and 3 or 15.0% were from the Kivalliq region. In addition to the 20 that were received from Nunavut-based businesses, one was received other from a Winnipeg-based business that operates in Nunavut.



Further grouping of the Retail/Hospitality survey into its two respective markets illustrated that of the 21 completed surveys, 12 or 57.1% were Retail businesses/organizations and 9 or 42.9% were Hospitality businesses/organizations.



Of the retail and hospitality surveys, just over half of the completed surveys were received from retail and hospitality establishments outside of the three regional centers, and just under half from retail and hospitality establishments in regional centers. Five surveys were received from organizations in the institutional market, 3 in the Qikiqtani region, one in Kivalliq region, and 1 is Kitikmeot region.

The final research tool employed for the project was interviewing key informants. In conjunction with the Department project contact, a list of key informants was developed drawn from a broad range of organizations and businesses across Nunavut. Overall, the response rate for interviews was quite high with the vast majority of people on the contact list participating in interviews. An effort was made to have project team members interview people in person where possible, and researchers in Cambridge Bay, Rankin Inlet, Iqaluit and Pond Inlet were able to meet informants personally to conduct the interviews. Where face-to-face interviews were not possible, telephone interviews were arranged. In several cases, key informants were unavailable or were short of time. In these cases, project team members strove to supplement the information with other sources. A total of 46 interviews were conducted.

Comments from survey respondents suggest that there is a growing fatigue among many northern organizations and people concerning the seemingly endless stream of researchers that seek their input and opinions across a wide range of topics. As well, conducting survey and interview-based research during the last month of the fiscal year asks respondents to increase their already substantial workloads during a period when spare time is at a premium. The confluence of these two factors resulted in lower responses and some gaps in the information gained that may not have been so apparent had the research been conducted during a less busy time of year.

Lists of those organizations, businesses and people that completed surveys or who were interviewed are provided in the Appendices.

Section 2: Market Demand

The responses to the surveys indicate very clearly that there is significant overall demand for arctic foods within Nunavut. There is a strong market demand at all levels, with arctic char and caribou being the products with the highest levels of demand. Two other products that are generally rated in high demand are maktaaq and muskox, particularly musk-ox jerky. Other arctic foods examined in this report - seal, walrus, turbot, shrimp and polar bear - had much lower levels of market demand.

The trading of country food for cash is a relatively recent concept for Inuit. Traditionally, hunters and their families consume their catch and share it with extended family members and the community. Therefore there is some resistance among Inuit to the purchase of arctic foods, particularly the more traditional foods.⁴ At the same time, it was suggested in the interviews that traditionally Inuit camps would get foods from other camps that they couldn't readily obtain themselves. This indicates a market opportunity today, whereby foods can be supplied to other communities on a commercial basis where they are not available seasonally or at all, and where there is a high demand. For example, caribou is currently sold from communities in the Kitikmeot to the High Arctic communities in the Qikiqtani region where caribou is not readily available as a food source.⁵

In general, the interviews and surveys also indicate that Inuit tend to prefer unprocessed country foods. For example, smoked caribou from Kivalliq Arctic Foods has high sales among non-Inuit in Qikiqtani, but not to Inuit since many Inuit they feel it doesn't taste like caribou. There is also a very high demand among non-Inuit, as well as to some extent among Inuit, for value-added products such as muskox jerky, caribou steaks, hot and cold smoked char filets, etc. However, this interest in value-added products does not generally extend to value-added seal products.⁶

⁴ Rosemary Keenainak interview

⁵ Simon Awa interview

⁶ Larry Simpson interview

Regional centers in Nunavut provide a strong market potential for arctic foods. A number of factors are in play that will ensure these centres will continue to provide a significant market in the future. Larger populations in these centres require a much greater supply and variety of arctic foods than can be provided locally. Large Inuit populations ensure that there is a general demand for arctic foods, and a large non-Inuit population provides a market for char and caribou with emphasis on value-added products such as smoked char, jerky, and sausages. A majority of households in these centres is involved in the wage economy leaving less time for harvesting food from the land and sea. These factors ensure that there will be an enduring market demand for arctic foods in the foreseeable future.

The largest regional market in Nunavut is Iqaluit. The sheer size and composition of the population in the capital provides a solid market for commercial arctic foods. Current demand in Iqaluit for products such as caribou and smoked char are not being met.⁷ In some cases, products for which there is significant demand, such as caribou sausages, no longer have a ready source of supply.⁸ Large retail, institutional and hospitality markets broaden the market for arctic foods considerably.

Retail sector

The retail sector is the largest market in Nunavut for arctic foods. HTOs, fish and meat processing plants, Co-operatives, Northern Stores and other retail businesses are involved with the retail sales, at one level or another, of arctic foods. As an example, Iqaluit Enterprises, which sells to the retail as well as to hospitality and institutional markets, has approximately 60% of sales to the retail market.⁹

Types and Amounts of Arctic Food Products Sold

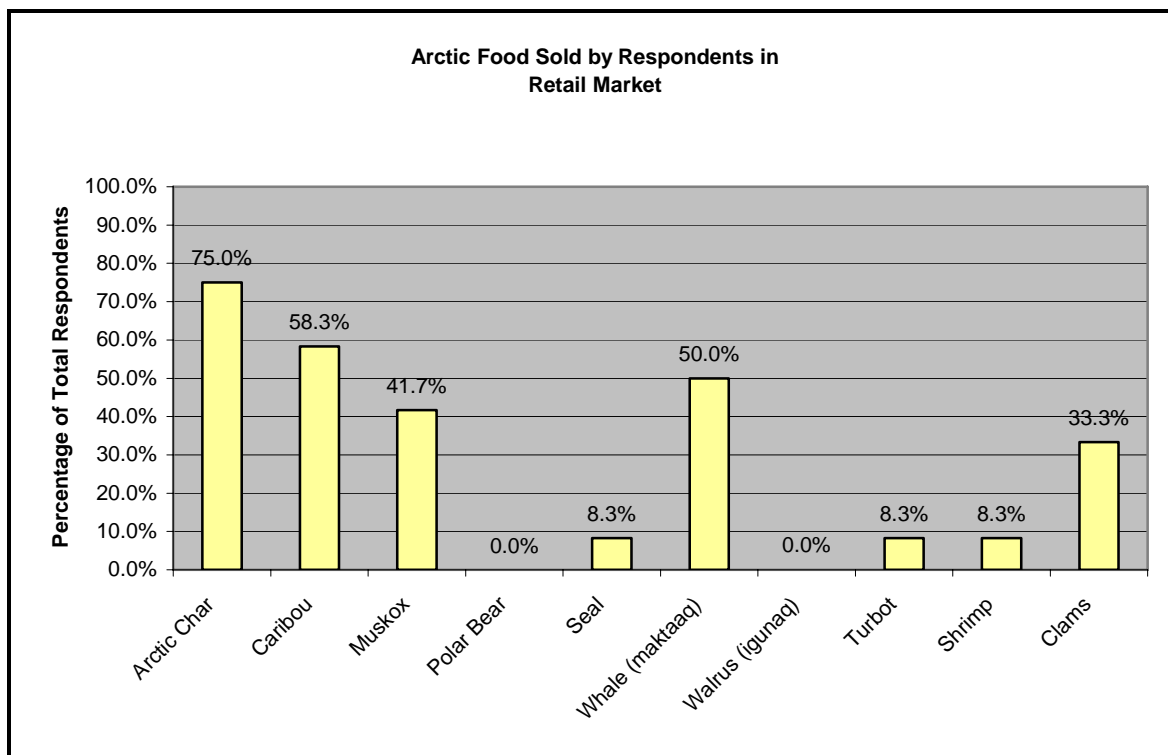
The responses to the Retail Survey provide detailed information on the characteristics of the retail market¹⁰. The distribution of the various types of arctic foods sold in the retail market, as indicated by the number of survey respondents selling each type of food, is shown in the following graph.

⁷ Bob Long interview

⁸ Larry Simpson interview

⁹ Jim Curry interview

¹⁰ The statistics are based on the information from respondents and thus only provide an indication of the amounts and types of arctic foods commercially sold within Nunavut. While caution should be exercised in terms of extrapolating from this limited information, the information is useful as it provides critical information regarding what food is most popular and what has the most potential for expansion at the retail level.



The graph shows that the top four arctic foods sold in the retail market, in terms of the number of outlets where they are sold, are arctic char, caribou, maktaaq and muskox. Arctic char is the top product with 75% of retail establishments, followed by caribou at 58% of overall outlets.

Survey respondents were also asked to indicate the quantity of each type of arctic food that they sell in kilograms in a year. The following table shows the minimum and maximum amounts reported for each type of food by the retail establishments, as well the mean or average of these amounts.

Annual Sales of Arctic Foods by Retail Outlets

Arctic Food	No. of Responses	Minimum	Maximum	Mean/Average
Arctic Char	9	50kg	3000kg	742.3kg
Caribou	6	100kg	1000kg	337.7kg
Muskox	5	10kg	300kg	90.0kg
Polar Bear	0	--	--	--
Seal	1	300kg	300kg	300.0kg
Whale (maktaaq)	6	50kg	500kg	300.0kg
Walrus (igunaq)	0	--	--	--
Turbot	1	50kg	50kg	50.0kg
Shrimp	1	50kg	50kg	50.0kg
Clams	4	50kg	33280kg	8399.3kg

While average annual sales are significant for all four types arctic foods noted above, the sales of arctic char are approximately twice those of caribou, seal and whale.

Potential for Expanding Retail Sales

Survey respondents from the retail market were asked to estimate how much more of each arctic food they felt that they could serve in kilograms per year, assuming the product was of consistent and very good quality and within their price targets. The following table lists the minimum, maximum and mean/average amount for each type of food.

**Potential for Increased Sales in Arctic Foods
Retail Market**

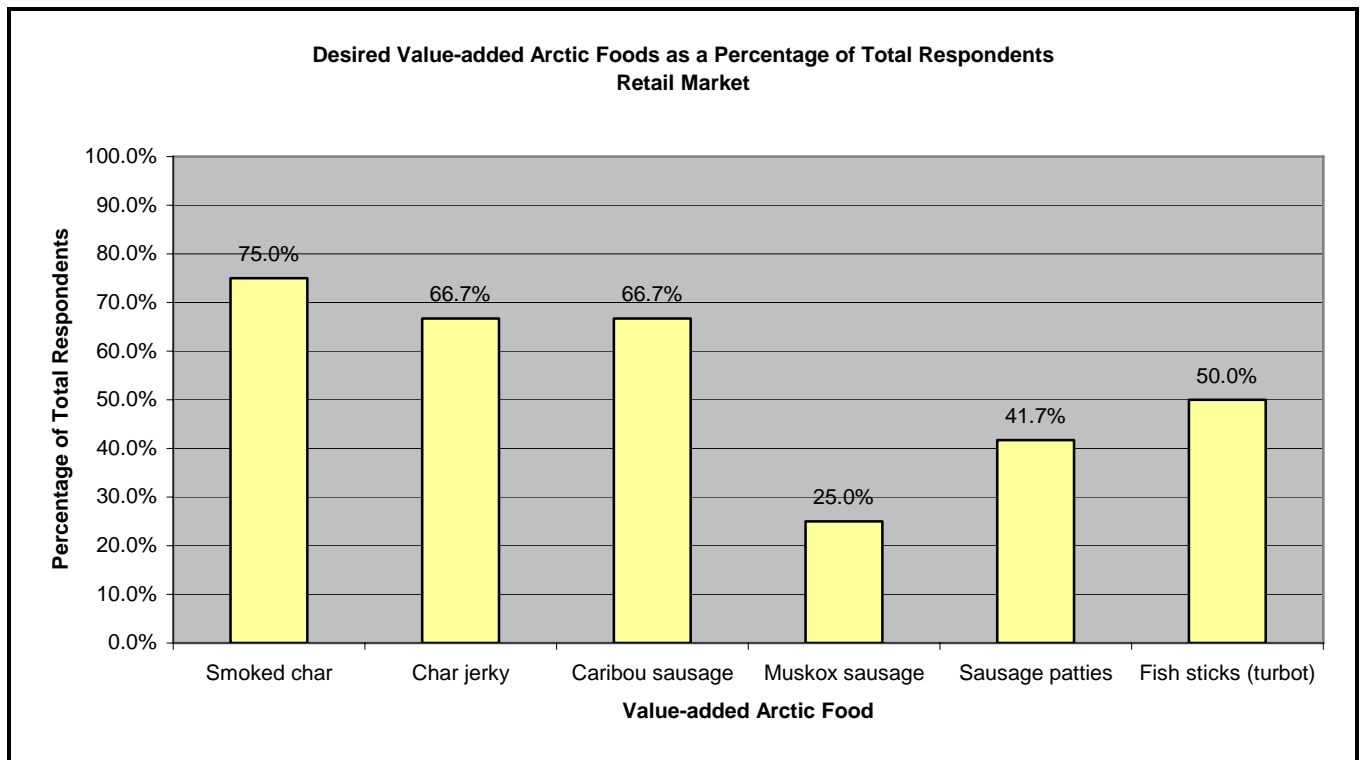
Arctic Food	No. of Responses	Minimum	Maximum	Mean/Average
Arctic Char	3	150kg	2000kg	850.0kg
i. whole	5	25kg	1560kg	917.0kg
ii. fillet	6	50kg	1560kg	476.7kg
iii. smoked	7	50kg	1040kg	399.4kg
Caribou	3	300kg	5200kg	2166.7kg
i. loin	6	50kg	500kg	216.7kg
ii. steak	6	50kg	650kg	275.0kg
iii. roast	5	50kg	650kg	310.0kg
iv. ground meat	7	50kg	2600kg	557.4kg
v. jerky	8	100kg	1000kg	479.6kg
Muskox	3	80kg	100kg	93.3kg
i. primary cuts	5	20kg	500kg	174.0kg
ii. secondary cuts	4	20kg	500kg	192.5kg
iii. jerky	8	40kg	520kg	187.0kg
Polar Bear	1	30kg	30kg	30.0kg
Seal	1	50kg	50kg	50.0kg
i. choice cuts	3	25kg	400kg	151.7kg
ii. lesser cuts	2	25kg	30kg	27.5kg
Whale (maktaaq)	7	30kg	7800kg	1608.9kg
Walrus (igunaq)	1	30kg	30kg	30.0kg
Turbot	5	20kg	200kg	100.0kg
Shrimp	6	30kg	3250kg	862.0kg
Clams	3	30kg	100kg	60.0kg

In terms of the potential for increased sales of arctic foods, the average increase in sales is highest for arctic char (2,463 kg average), caribou (4,005 kg average), muskox (646 kg average), maktaaq (1,608 kg average), and shrimp (862 kg average).

Value-Added Products

While most retail establishments sell whole fish and basic cuts of caribou, seal, etc., there has been an increasing demand over the years and increasing supply of value-added products for sale in the retail outlets. This trend is confirmed by the results of the survey. When asked if there are additional value-added arctic foods that the retailers would like to see available, 64% of respondents said that they would like to see additional products available, with the remaining 36% stating that they didn't know or were not sure. None of the respondents replied that they did not wish to see additional value-added products.

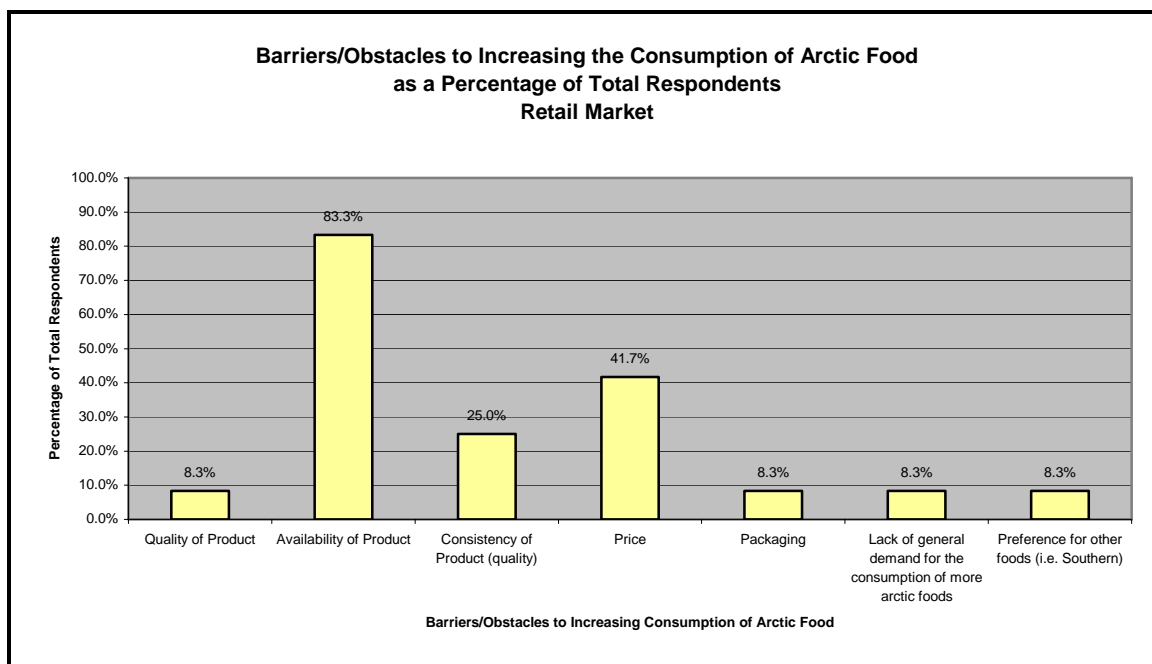
Survey respondents were then asked to identify the specific value-added products that would be of particular interest to them as retailers. The results for the top 6 value-added products are shown in the chart below as a percentage of the total respondents.



Once again, it is clear that the value added products most desired are those related to char and caribou, although there is considerable interest in the other value-added products as well. In the case of products such as smoked char or caribou sausages, interviews indicate that supply is lagging significantly behind demand.

Barriers to Increased Consumption of Arctic Foods

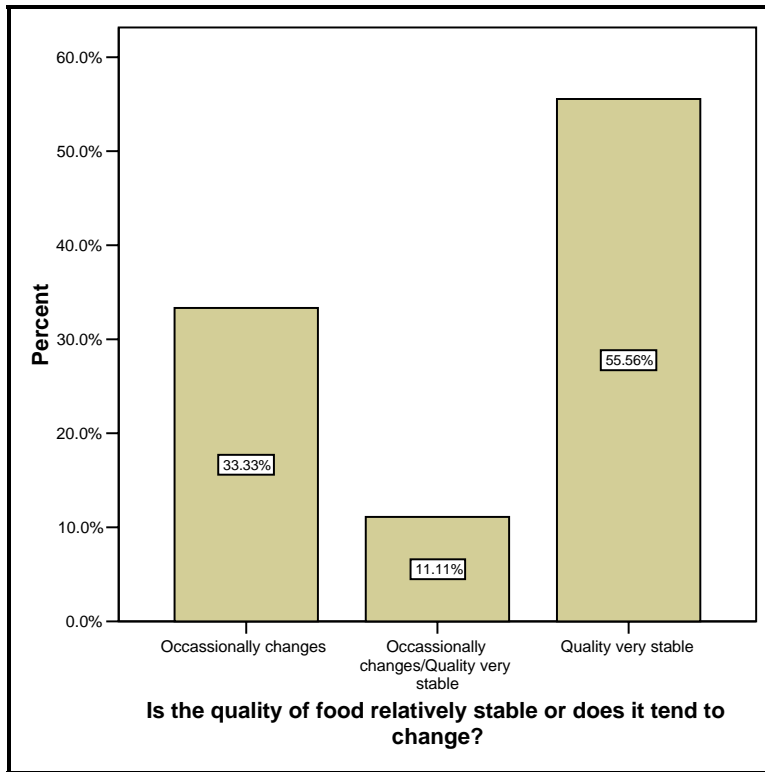
Retailers were also asked what they perceive to be the barriers or obstacles to increased consumption of arctic foods. A summary of the responses is provided in the chart below.



These results indicate that the greatest barrier by far is the availability of products. Over 80% of retailers identified this as a barrier. In interviews, retailers stated emphatically that, given a stable source of supply, they are very willing to market, showcase, and sell arctic foods. The second most frequently identified barrier is price. Third, although quality of product was ranked quite low as an issue, consistency of product quality was a greater concern.

From the producer perspective, the survey of HTOs found that 55.6% of HTOs interviewed felt that the quality of the product they harvested was very stable (see chart below). Another 11% indicated that the quality did occasionally change but overall the quality was very stable. Finally, 33% felt that there were occasional changes in the quality of the product that were significant enough to have an impact on consumer demand. The variation in quality could be the result of a number of factors associated with the nature of the species being harvested, migration patterns, or the season in which they are harvested.

HTO Survey Consistency of Food Quality



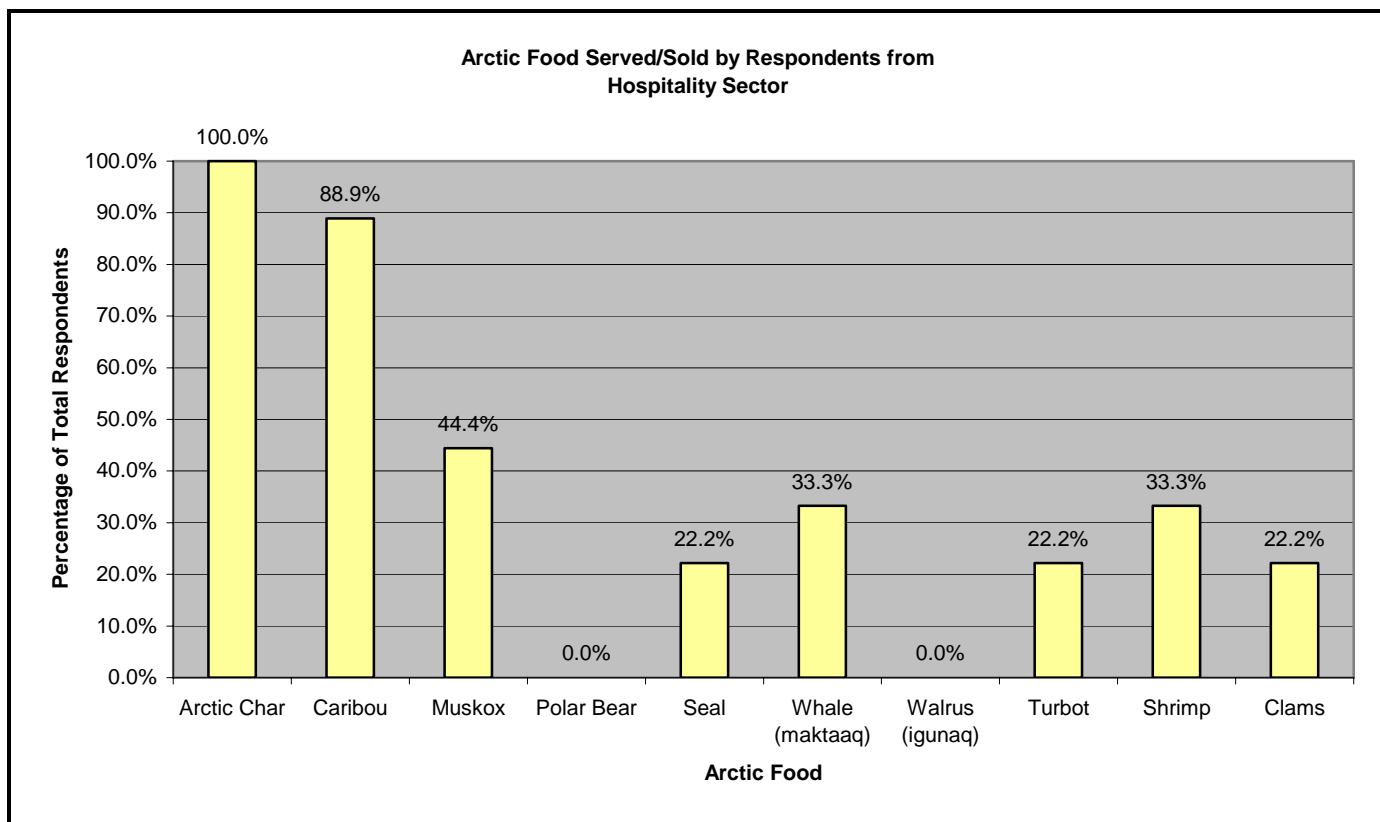
Hospitality Sector

The hospitality sector, which consists of restaurants, caterers and hotels, is an important commercial market for arctic foods. In Iqaluit, as well in many other communities in Nunavut, restaurants serve significant amounts of arctic foods. For example, approximately 35%-40% of the sales of Iqaluit Enterprises go to the hospitality sector.¹¹

Types and Amounts of Arctic Food Products Sold

The responses to the Hospitality Survey provide detailed information on the characteristics of the hospitality market. The distribution of the various types of arctic foods sold in the hospitality market, as indicated by the number of survey respondents selling each type of food, is shown in the following graph.

¹¹ Jim Curry interview



Of those surveyed in the hospitality market, 100% of respondents indicated that they served arctic char, while 88% serve caribou. Similar to the retail market, both muskox and whale (maktaaq) also ranked comparatively higher than other foods, although they were significantly less than both char and caribou. In addition, shrimp¹² was also served as frequently as maktaaq.

Survey respondents were also asked to indicate the quantity of each type of arctic food that they serve, in kilograms per year. The following table shows the minimum and maximum responses reported for each type of food by the hospitality establishments, as well as the mean or average of these amounts.

Annual Servings of Arctic Foods by Hospitality Establishments

Arctic Food	No. of Responses	Minimum	Maximum	Mean/Average
Arctic Char	9	5kg	4200kg	684.4kg
Caribou	7	5kg	1200kg	218.6kg
Muskox	3	5kg	360kg	131.7kg
Polar Bear	0	--	--	--
Seal	2	25kg	100kg	62.5kg
Whale (maktaaq)	3	14kg	500kg	179.7kg

¹² Most retailers sold shrimp imported from the south.

Walrus (igunaq)	0	--	--	--
Turbot	2	20kg	900kg	460.0kg
Shrimp	3	10kg	1300kg	536.7kg
Clams	2	50kg	225kg	137.5kg

The largest volumes of arctic foods served by hospitality establishments are fish and seafood – arctic char, shrimp and turbot - with moderate amounts being served of caribou, maktaaq, and muskox.

Potential for Expanding Hospitality Sales

Survey respondents from the hospitality market were asked to estimate how much more of each arctic food they felt that they could serve in kilograms per year assuming the product was of consistent and very good quality and within their price targets. The following table lists the minimum, maximum and mean/average amount for both the retail and hospitality market combined¹³.

Potential for Increased Sales in Arctic Foods - Hospitality Market

Arctic Food	No. of Responses	Minimum	Maximum	Mean/Average
Arctic Char	1	4200kg	4200kg	4200.0kg
i. whole	5	20kg	227kg	133.4kg
ii. fillet	4	20kg	500kg	160.0kg
iii. smoked	5	20kg	100kg	38.4kg
Caribou	1	20kg	20kg	20.0kg
i. loin	3	5kg	500kg	171.7kg
ii. steak	2	5kg	20kg	12.5kg
iii. roast	2	5kg	20kg	12.5kg
iv. ground meat	2	5kg	20kg	12.5kg
v. jerky	4	40kg	227kg	141.8kg
Muskox	0	--	--	--
i. primary cuts	0	--	--	--
ii. secondary cuts	1	200kg	200kg	200.0kg
iii. jerky	3	100kg	100kg	100.0kg
Polar Bear	0	--	--	--
Seal	1	200kg	200kg	200.0kg
i. choice cuts	1	100kg	100kg	100.0kg
ii. lesser cuts	0	--	--	--

¹³ Again, these estimates are from a relatively small number of hospitality sector respondents. The respondents were indicating how much they thought they could increase their sales by based on certain assumptions. Estimates for Nunavut-wide consumption increases could loosely be extrapolated from this albeit with some caution. The information is most useful to indicate potential market expansion and trends in consumption patterns.

Whale (maktaaq)	2	100kg	1000kg	550.0kg
Walrus (igunaq)	0	--	--	--
Turbot	2	20kg	900kg	460.0kg
Shrimp	6	10kg	363kg	152.2kg
Clams	2	40kg	200kg	120.0kg

The potential for increased sales of arctic char, including whole frozen, fillets and smoked is much higher than for retail, about 4,531 kg on average annually per establishment. However, the potential for increased sales of caribou, unlike the retail sector, is much lower, at 371 kg on average annually per establishment. Potential for most other foods is somewhat lower than the retail sector, with the exception of turbot.

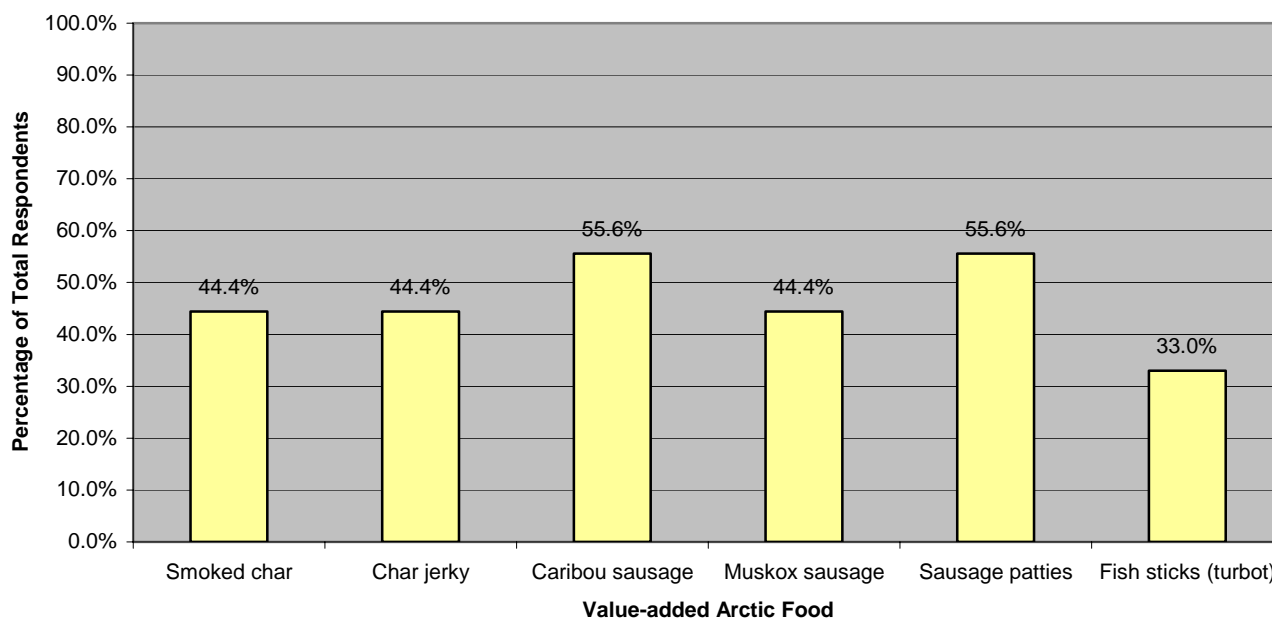
Value-Added Products

Within the hospitality market, there is demand for value-added products produced from arctic foods, although it is somewhat less than in the retail sector. Compared to the retail market, when asked in the survey if there are additional products that they would like to see for sale, only half of the establishments said yes, and 12.5% said no. Just over a third of the establishments said they didn't know or were not sure.

Respondents were then asked, if they were interested in value-added arctic food products, what specific products would be of interest to them. Once again, there was emphasis on char or caribou related products; however, there was an equal emphasis on muskox sausage and some interest in turbot products, specifically fish sticks¹⁴.

¹⁴ Respondents were provided with an opportunity to identify value-added products they thought had the most potential. Fish sticks made from turbot were not identified as a primary product for development for the hospitality market although there was a basic assumption that if they could be produced within a price target similar to imported products, they would likely replace those products.

**Desired Value-added Arctic Foods as a Percentage of Total Respondents
Hospitality Market**



Barriers to Increasing Consumption of Arctic Foods

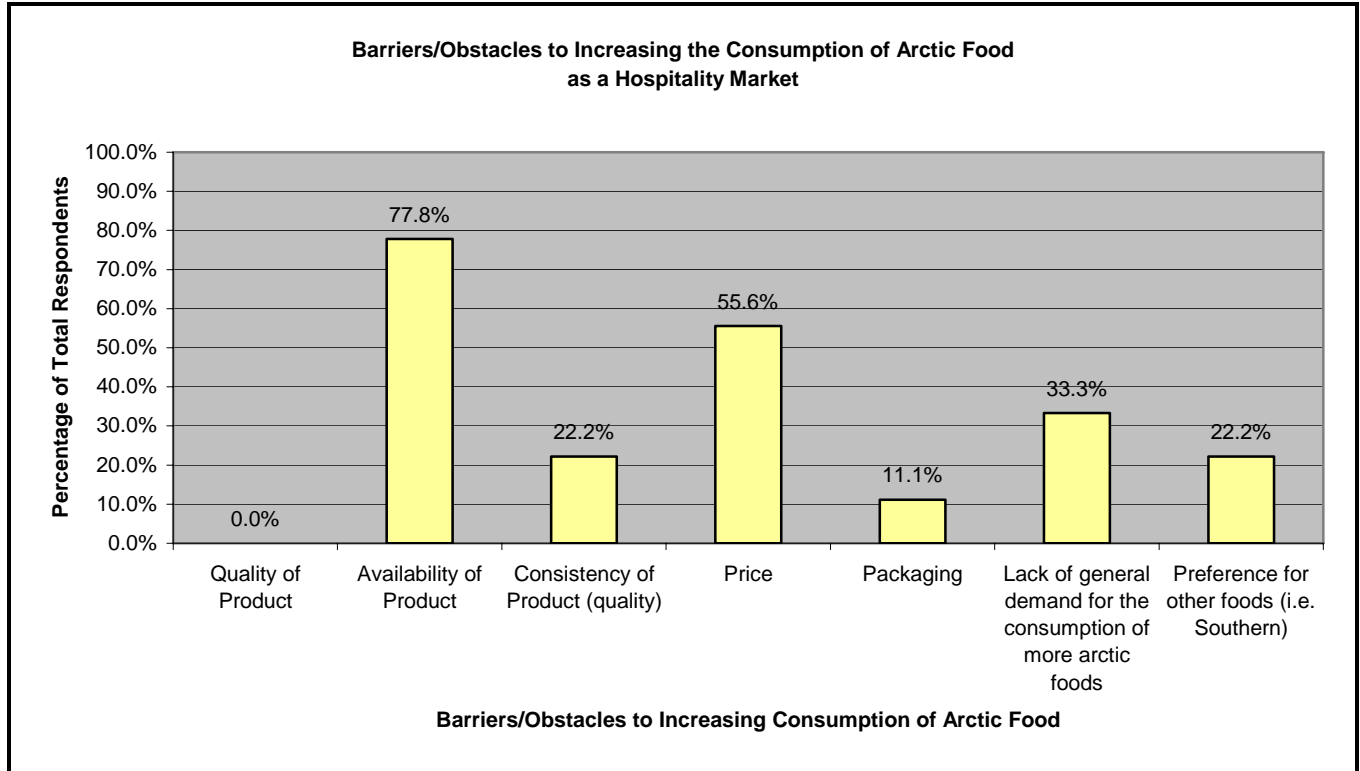
Hospitality business owners were asked what they perceived to be the barriers or obstacles to increased consumption of arctic food. A summary of the responses is provided in the table below.

It is clear, as it was with the retail sector, that availability of product is the most salient concern, with almost 80% of hospitality businesses identifying this barrier. This point was emphasized equally in the interviews: for the hospitality sector, availability is a critical factor. If a restaurant is willing to put a particular arctic food item on its menu, it wants to be assured that there is a regular and stable supply of the product. Therefore, caution has to be exercised in developing a hospitality market for arctic foods when continuity of supply cannot be assured. At the same time an option for restaurants is to list an item as “seasonally available.”¹⁵ To assure supply, one caterer purchases caribou carcasses and smoked char well in advance of major events as a way to deal with irregular supply issues.¹⁶

Price and consistency of product quality are also significant concerns as they were in the retail market. However, in the hospitality sector two other related barriers are also significant – lack of demand for consumption of more arctic foods and a general preference among hospitality customers for other, southern foods.

¹⁵ Jack Meckling interview

¹⁶ Bob Long interview



Institutional Sector

In Nunavut, demand for arctic foods from the institutional sector – hospitals, youth and elders centers, correctional centers – is not as strong as the demand from retail and hospitality sectors. Institutions tend to require higher levels of stability in supply and reliability in quality, and also have strict requirements for meeting the price targets required for the institutions’ operational budgets. Elders’ centers tend to use a much higher level of arctic foods than other institutions, but the majority of this is generally donated from the various home communities of the residents. Approximately 10%-15% of the sales of Iqaluit Enterprises are to the institutional market.¹⁷

Interviews were conducted with the managers of a number of institutions in Iqaluit and Cambridge Bay. In addition, five responses were received to the institutional sector survey, 3 in Iqaluit, 1 in Cambridge Bay, and 1 in Coral Harbour. The information from their responses is summarized below.

¹⁷ Jim Curry interview

Types and Amounts of Arctic Food Products Sold

The primary arctic foods that are being purchased and served in the institutions responding to interviews and the survey are arctic char and caribou. Other arctic foods purchased and served include muskox in Cambridge Bay, and some seal, maktaaq, and turbot in Iqaluit¹⁸.

Average quantities of arctic foods served per year by the respondent institutions are:

Char:	290 kg
Caribou:	700 kg
Maktaaq:	105 kg
Muskox:	150 kg
Seal:	80 kg

Potential for Expanding Institutional Sales

In terms of the potential demand for increased supply of arctic foods, the institutions surveyed reported that there was a reasonable potential for increasing sales of arctic char, caribou, muskox and seal to the institutional market.

In general, the potential increase in sales of specific arctic foods was less than that projected for the retail and hospitality markets. The potential average annual increase for arctic char, caribou, muskox and seal are:

Arctic char fillets	100 kg
Caribou loin	160 kg
Muskox, primary cuts	150 kg
Muskox, secondary cuts	50 kg
Seal, choice cuts	50 kg

Value-Added Products

In terms of value-added products, the institutions surveyed were most interested in value-added products from caribou and char, with some interest in turbot. Specific products identified were:

- Caribou sausage;
- Smoked char;
- Char jerky.

¹⁸ The amounts currently and potentially utilized within the institutional sector are relatively small compared to other sectors. Overall however, the sector offers the potential of being a long-term, consistent consumer of arctic food products if pricing and availability issues are met.

Barriers to Increasing Consumption of Arctic Foods

The responses to the surveys indicate that the key barriers to increased purchase of arctic foods within the institutional sector are availability of products and price. The cost of freight is seen as a major contributing factor to the high price of arctic foods. There was also recognition that for some institutions, their clients have a general preference for southern foods.

Health concerns did not appear to be a major barrier, except that one institution noted that there is a lack of policies and guidelines for handling of arctic foodstuffs that make it more difficult for institutions to make decision concerning the purchase and handling of arctic foods.

At the Iqaluit hospital, the food contractor is not able to offer the variety of country foods that that both residents desire and the dietician would like to see. Food for the hospital does have to be held to a higher degree of safety than other commercial outlet; however, while there is some concern about health issues, this does not constitute the main barrier. Key issues that have limited the amount purchased are availability and cost.¹⁹

The Manager of food services for the Baffin Correctional Centre is responsible for several facilities with a total resident population of 120. Nearly all of the residents in these facilities are Inuit and there is a definite demand for more country food. However, cost and availability were once again cited as limiting factors in meeting this demand. Currently they purchase char, caribou, and occasionally seal and maktaaq. Caribou and muskox are of great interest, but because of budget limitations, these have to be the same price as beef or only a little more. Jerky is popular with residents, but generally considered to be too expensive. Caribou sausages and patties would be desirable at the right price.²⁰

Existing Inter settlement Trade

The current overall market for arctic foods in Nunavut is difficult to quantify. A significant amount of inter settlement trade is not carried out on a cash basis, but rather through informal exchange. For example, caribou may be provided by one HTO in exchange for gas money or other types of food that is desired by the recipient community. While there is a considerable amount of activity and potential for this informal and non-cash type of trade, it lies outside the focus of the current study. Secondly, a considerable amount of cash sales of arctic foods are carried out by individual harvesters with commercial licenses, who sell directly to HTOs, hotels, or organizations or businesses in other communities, rather than by organized arctic foods businesses. It was not possible within the context of the current study to obtain detailed information on this type of sales.²¹

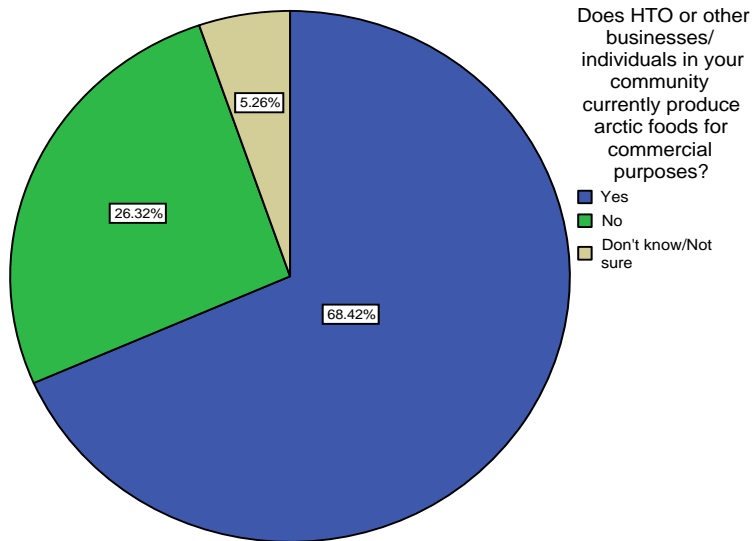
The Wildlife Officer survey provides information on the current production of arctic foods for commercial purposes. In response to the question “Does the HTO or other businesses in your

¹⁹ Jennifer Sneddon interview

²⁰ Angela Warner interview

²¹ Baba Pedersen and Fred Pedersen interview

community currently produce arctic foods for commercial purposes?” 13 out of 19 respondents, or 68% indicated that the HTO or another business or organization within their community currently produced arctic food, 5 out of 19, or 26%, specified that none did, and 1 respondent or 5% didn't know or was not sure (see chart below).



The responses to the Wildlife Officer and HTO surveys have been combined to provide an overview of the current commercial activity in arctic foods by community. This information is summarized in the table below.

The HTO survey also indicated that of the 10 HTOs responding, only 2 HTOs sell arctic foods produced by HTOs in other communities.

Community	Are there currently Arctic foods being produced for commercial purposes in your community ²² ?		
	YES	NO	Don't know/No Response
QIKIQTANI REGION			
Arctic Bay		√	
Cape Dorset	√		
Clyde River	√		
Grise Fiord		√	
Hall Beach	√		
Igloolik	√		
Iqaluit	√		
Kimmirut		√	√
Pangnirtung	√		
Pond Inlet	√		
Sanikiluaq	√		
Resolute		√	
KITIKMEOT REGION			
Cambridge Bay		√	
Gjoa Haven	√		
Kugaaruk	√		
Kugluktuk	√		
Taloyoak	√		
KIVALLIQ REGION			
Baker Lake			√
Chesterfield Inlet			√
Coral Harbour	√		
Rankin Inlet		√	
Repulse Bay		√	
Whale Cove			4
TOTAL	13	7	1

Three of the largest producers of arctic foods in Nunavut are the meat and fish processing plants owned by the Nunavut Development Corporation. These are Kitikmeot Foods Limited (KFL), located in Cambridge Bay, Kivalliq Arctic Foods (KAF), located in Rankin Inlet, and Pangnirtung Fisheries Limited (PFL), located in Pangnirtung. Current sales for these processing plants (2003-04) are as follows:

- KFL: \$524,790, consisting of sales of Arctic char (79% of revenues) and muskox (21%);

²² Respondents were asked if there was any arctic food being produced commercially in their community. There may have been an assumption on the part of respondents that this did not include larger processing plants. As a result there are some contradictions in some of the results.

- KAF: \$1,468,749, consisting of sales of caribou (90% of revenues) and char (10%);
- PFL: \$2,430,525, consisting of sales of turbot (85% of revenues) and arctic char (15%).

Nunavut Development Corporation also owns a small fish processing plant in Whale Cove, Papiruaq Fisheries Limited, which supplies arctic char to KFML in Rankin Inlet. Sales of Papiruaq Fisheries in 2003-04 were \$34,990.²³

Intersetlement Trade in the Kitikmeot Region

Char:

Within the Kitikmeot region, the primary sales of char are by Kitikmeot Foods Limited in Cambridge Bay, which is the main producer of char in the region, and is the only real source of organized sales of arctic foods on an intersettlement basis. However, most of the char is exported outside the region, with small sales of whole char and some value-added products sold within the community. Whole char does not sell well in other communities, since they generally have their own supply. Co-op Stores and Northern Stores in other communities sell smoked and canned char from Kitikmeot Foods. There is a small processing plant in Gjoa Haven that processes char, along with as caribou and muskox, but production is very limited and sales are only within the community of Gjoa Haven itself. The Gjoa Haven plant is operating at about 20% of capacity.

Caribou:

Within the region, Kitikmeot Foods does produce a small amount of caribou, which it sells mostly for export. However, there is some caribou sold by hunters to High Arctic communities like Grise Fiord. As a result of the restrictions on harvesting of Peary caribou in the High Arctic, caribou has been brought in to Grise Fiord from other communities since 1996. The small plant in Gjoa Haven produces a small amount of caribou that is sold only within the community.

Muskox:

Currently Kitikmeot Foods sells muskox purchased from the Sachs Harbour harvest, since the harvest in the area around Cambridge Bay has not been operating since the harvest in 2001. Generally, there is not a great deal of intersettlement trade in muskox products, and most of the muskox products of Kitikmeot Foods are sold for export outside the territory. However, there is a small ongoing demand for muskox from other communities as far away as Rankin, Iqaluit and Pangnirtung. Muskox jerky produced by Kitikmeot Foods is a popular item that is sold by Co-op stores and Northern Stores within the Kitikmeot as well as in other regions, and it is a popular item in Iqaluit. The small plant in Gjoa Haven produces a small amount of muskox that is sold only within the community.

Polar Bear:

There are no commercial sales of polar bear meat within Kitikmeot, or in any of the other regions of Nunavut.

²³ Nunavut Development Corporation Annual Report, 2003-04.

Seal:

There is no commercial intersettlement trade in seal meat within the Kitikmeot, as seal stocks are small compared to those around the eastern Nunavut communities.

Maktaaq:

Maktaaq is purchased by Kugluktuk from sources as far away as Arctic Bay, and sells well even at a high price, as there are relatively few whales and little maktaaq produced within the region.

Intersettlement Trade in the Kivalliq Region

Char:

The primary producer of arctic foods in the Kivalliq region is Kivalliq Arctic Foods Limited (KAF) in Rankin Inlet. Most of the char products from KAF are exported outside of the territory. In terms of intersettlement trade, fish are purchased by KAF from a small fish plant in Whale Cove and from a small plant in Chesterfield Inlet.

Caribou:

Kivalliq Arctic Foods (KAF) is also a major producer of caribou products. The caribou is obtained from Southampton Island, which has KAF. KAF produces and sells about 74,830 kg of caribou, mostly for export. Small amounts are sold locally and to other Nunavut communities: for example, North Mart in Iqaluit purchases about 1,814 kg annually from KAF.²⁴

Intersettlement Trade in the Qikiqtani Region

Most communities in Qikiqtani region have a trade link for arctic foods with Pangnirtung and Iqaluit. Pangnirtung benefits in turn from its proximity to Iqaluit. The southern communities have an advantage due to better freight rates than North Qikiqtani communities. However, many of the existing links are between a commercial or institutional purchaser and individual fishermen and hunters in communities.²⁵

Char:

The primary producers of char in the Qikiqtani region are Pangnirtung Fisheries Limited in Pangnirtung, and Iqaluit Enterprises in Iqaluit. Pangnirtung Fisheries sells turbot and char, and most of the product is exported for sale outside of Nunavut. Pangnirtung Fisheries also sells fish to hotels in Iqaluit, about 90% of these sales being char. Iqaluit Enterprises sells whole frozen char, and processes and sells smoked char and some dried char. Overall, the two plants cannot keep up to market demand and have no problem selling their products.

Char is sold by harvesters in Clyde River, Qikiqtarjuaq, Cape Dorset, Kimmirut and Igloodik mostly to Pangnirtung Fisheries and Iqaluit Enterprises, or to other retailers, hospitality, or

²⁴ Robert Connelly and Theresie Tungilik interview

²⁵ Jim Curry interview; Larry Simpson interview

institutional establishments in Iqaluit. There is a very high demand in Iqaluit for smoked char products that cannot be fully met.

Caribou:

There is little intersettlement trade in caribou in the region. The market in Iqaluit is supplied mostly from Iqaluit, when caribou is available. Iqaluit Enterprises processes and sells cuts of caribou. There is not enough available however to meet market demand in Iqaluit.

Seal:

There is a significant market in Iqaluit for seal meat. It is generally supplied from local hunters, or from hunters in south-eastern Qikiqtani communities. Iqaluit Enterprises processes and sells cuts of seal meat.

Maktaaq:

There is a high demand for maktaaq in Iqaluit, which is supplied principally from Pond Inlet. The Arctic Bay HTO previously processed and sold maktaaq from narwhal to other communities through its business arm, Niqisuk, however, it went out of business in 2002.

Walrus:

While there is some demand for igunaq (aged walrus meat), primarily from Igloolik, there is little market for walrus meat.

Turbot:

Most of the turbot harvest is exported outside of Nunavut, and there is little intersettlement trade. About 10% of the sales by Pangnirtung Fisheries to hotels in Iqaluit are turbot, with the other 90% composed of char.

Shrimp:

There is little shrimp available in Nunavut as most is harvested offshore and sold to external markets. Therefore unmet demand exists within Iqaluit and other communities.

Other:

Currently clams are shipped from Qikiqtarjuaq to Pangnirtung and Iqaluit.

Market Trends

According to Jim Curry of Iqaluit Enterprises, there is an increasing demand for arctic foods in all areas of their sales. This is a result of the increasing population in Iqaluit, including the increase in business and government people in the city. There is also some growth in tourism, but this represents a small portion of the increased market demand. Overall, those interviewed on the subject indicated that there was a solid demand for major arctic foods such as char and caribou.

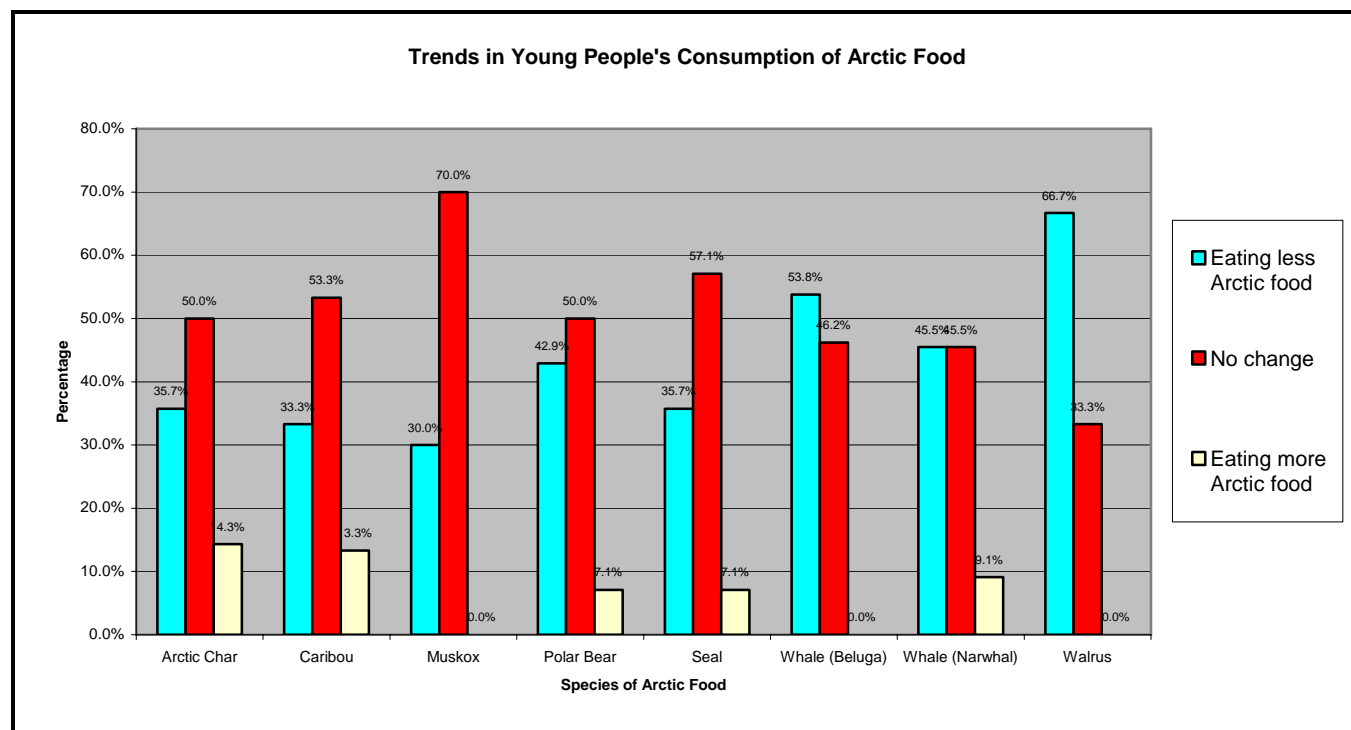
The increase in demand in Iqaluit comes from both Inuit and non-Inuit consumers. There does seem to be an increasing concern with health among both Inuit and non-Inuit that is helping to

fuel the demand for arctic food. At this point in time, it is not possible for Iqaluit Enterprises to keep up with the demand, given the limitations on supply. This is generally the case, with the overall demand for arctic foods in Nunavut surpassing the current supply.²⁶

Given that over half the population of Nunavut is 24 years of age or under, future consumption of arctic foods will depend to a significant extent on the diet and eating habits of younger people. The survey for Wildlife Officers included several questions concerning perceived trends in the market for arctic foods. When asked if they had noticed any change in the demand for arctic foods:

- Over 40% of respondents indicated that they had not noticed any change in the demand for arctic foods;
- 26% indicated that there was a decrease in the consumption of arctic foods;
- 26% indicated they did not know whether there was a change in consumption of arctic foods;
- Fewer than 10% indicated that there might be a small increase in consumption levels of arctic foods.

The survey also asked whether the Wildlife Officers had noticed any changes in the food consumption habits among youth in their communities. The results are summarized in the table below.



The overall finding evident in the above graph is that very few respondents thought that youth were eating more arctic foods. For a large number of species, including arctic char, caribou,

²⁶ Jim Curry interview

muskox, polar bear and seal, at least 50% of respondents felt that there was no observable change in consumption patterns in their communities. A significant minority of respondents suggested that young people are consuming more char and caribou in their communities. In the case of beluga, narwhal, and walrus, there was a pronounced trend toward eating less arctic foods.

An initial analysis of this information suggests that youth are not in general eating more country food and are consuming less of key species that may be more associated with the more traditional foods. Youth preferences have shifted towards those species most popular across the broader Nunavut market - char and caribou.

Section 3: Supply Factors

Harvest Levels

The harvesting of wildlife in Nunavut is carried out to meet a variety of needs, including subsistence for Inuit families in Nunavut and the personal consumption of other residents. In order to establish baseline data on harvesting levels within Nunavut, the Nunavut Wildlife Management Board gathered harvesting data from all Nunavut communities over a five-year period, from 1996 to 2001. The data from the Nunavut Wildlife Harvest Study is now available, and has been utilized in this study to identify the overall levels of harvesting of key species that are of potential interest for commercial intersettlement trade.

Based on the data available from the Wildlife Harvest Study, the total number of animals harvested over the five-year period by each community was calculated for five key species relevant to intersettlement trade, and from this, the annual average harvest for each species was obtained. The results of this analysis are presented in the table below, consolidated both by region and for Nunavut as a whole. The estimated edible weights of the harvests have also been calculated, using data from previous harvest studies.

The detailed results by community are presented in the Appendices. The data for individual communities has been utilized in the Development Opportunities section found later in this report.

**Nunavut Wildlife Harvest Study:
Total and Average Annual Harvests and
Estimated Edible Weights**

		QIKIQTANI	KITIKMEOT	KIVALLIQ	NUNAVUT
Arctic Char	5 yr. TOTAL	508,779	178,030	73,316	760,125
	5 yr. AVERAGE	101,756	35,606	14,663	152,025
Caribou	5 yr. TOTAL	40,993	14,725	31,909	87,627
	5 yr. AVERAGE	8,199	2,945	6,382	17,525
Muskox	5 yr. TOTAL	76	202	29	307
	5 yr. AVERAGE	15	40	6	61
Walrus	5 yr. TOTAL	1,455	-	117	1,572
	5 yr. AVERAGE	291	-	23	314
Whale	5 yr. TOTAL	2,218	50	1,468	3,736
	5 yr. AVERAGE	444	10	294	747

Commercial Quotas and Commercial Harvest Levels

Within Nunavut, there are systems that limit the overall number of animals in a specific wildlife species that can be harvested, and the number that can be harvested for commercial purposes. Where information is available, the current quota is noted, as well as the most current information on commercial harvests of the species.

In general, quotas are not a limiting factor for those species considered to be of interest in commercial intersettlement trade. In most areas, available commercial quotas are not fully used. It was suggested by some interviewees that the reason for this is that generally it is not economically feasible to do so without additional subsidies.²⁷

It is understood by wildlife managers as well as by those involved in intersettlement trade that wildlife populations are delicate resources to be managed with extreme care. Animal populations must be managed carefully and monitored regularly, and quotas serve as a key management tool.²⁸ In fact, many biologists are not in favour of the commercialization of country food

²⁷ Simon Awa interview.

²⁸ Jim Noble interview

supply, as they see it as potentially leading people to alter the reasons for harvesting as well as the methods used, which could eventually threaten the species' viability.

Char

The Department of Fisheries and Oceans (DFO) is responsible for determining commercial quotas for char. These quotas are identified for specific bodies of water, based on the results of a series of test fisheries. Current quota figures could not be supplied by DFO in part due to the complexity of the data base in which the data is stored and in part due to the fact that the quotas are allocated by body of water and not by community. Therefore, the most recent figures available for the commercial char quotas, from 1999-2000, are provided below, and compared to the available data on commercial harvests delivered to KFL, KAF, and Pangnirtung Fisheries.

**Arctic Char
Commercial Quota and Commercial Harvest Region
1999-2000**

	Quota (kg)	2000 Harvest (kg)	Harvest as % of Quota
Kitikmeot Region	62,355	39,916	64%
Kivalliq Region	87,900	14,463	16%
Qikiqtani Region	74,770	20,408	27%
Total	225,026	74,780	33%

Source: RT and Assoc., 2001

The total commercial quota for these areas utilized by these processing plants in 2000 represents 59% of the estimated edible weight of char harvested on an annual basis, based on the harvest figures from the Harvest Study. In that year, 33% of the total available commercial quota was harvested for commercial purposes, varying from 64% in Kitikmeot to 27% in Qikiqtani, and to a low of 16% in the Kivalliq region.

In 2001-02 and 2002-03, Kitikmeot Foods Limited process approximately 38,636 kg and 41,759 kg of char respectively. These were from rivers in the Cambridge Bay area assigned by the HTO to the fishery. KFL also purchased some char from Pelly Bay in 2002, and from Gjoa Haven in previous years.²⁹

²⁹ Consilium Nunavut Inc., Kitikmeot Foods Limited: Marketing Study for a Fish and Meat Processing Facility in Cambridge Bay, Nunavut, pg. 32.

Caribou

Commercial tags are allocated to the HTOs in each community by the NMWB depending on the population and health of the particular caribou herd in the area. Data on the population estimates and commercial quotas for the various caribou populations in Nunavut are shown in the table below.

**Caribou Population Estimates and Commercial Quotas
2001**

Herd	Population	Survey	Quota
Bluenose	122,000	1992	-
Bathurst	350,000	1996	578
Beverly	286,000	1994	200
Qamanirjuaq	496,000	1994	535
Queen Maud Gulf	170,000	1994	275
N.E. Mainland	72,400	1995	570
North Qikiqtani	100,000	1995	125
N.E. Qikiqtani	120,000	1991	-
South Qikiqtani	10,000	1991	411
Southampton Island	29,000	1997	6,000
Victoria Island	27,800	1994	-

Source Caribou Project, Dept. of RWED, GNWT (From RT & Assoc., 2001)

The quota for the Qikiqtani region at that time was 536 animals, for Kivalliq 7,105 including the Southampton Island quota, and for Kitikmeot 1,053. The commercial quota of 6,000 caribou was established in Southampton Island in 1995, managed by the Coral Harbour HTO. Between 1995 and 2001, from 20% to 61% of the quota was utilized for the harvest. All of the meat from the harvest was shipped to KAF in Rankin Inlet for further processing and sale.

Now that the Nunavut Wildlife Harvest Study, which was required under the Nunavut Land Claims Agreement, has been completed by the Nunavut Wildlife Management Board, the NWMB is establishing Total Allowable Harvests (TAH) for species under Article 5 of the NLCA. The Total Allowable Harvest includes the Basic Needs Level, which is based directly on the harvest levels recorded during the Study and which may be adjusted by the NWMB to meet needs of intersettlement trade. The surplus between the Adjusted Basic Needs Level and the TAH is allocated by priority to personal consumption of other residents not included in the BNL, the continuation of existing sports or existing commercial operations, economic ventures sponsored by the HTOs and Regional Wildlife Organizations (RWOs), and finally for other uses. The new Wildlife Act, to be implemented in July 2005, will impact on existing quotas, and therefore on the establishment of the TAH, only in terms of non-quota limitations such as equipment use and protocols.³⁰ The TAH system will replace commercial quota for big game

³⁰ Malachi Arreak interview; NLCA 5.6.16-40

ungulates such as caribou. However, in the case of caribou, no TAH is recommended, with the exception of the Peary caribou populations in the high Arctic, since other caribou populations are either growing or relatively large under current harvest regimes. Both formal science and Inuit traditional knowledge suggest that the main cause of fluctuations in caribou population numbers is grazing effects on range conditions, rather than the harvest levels.³¹

Muskox

Overall quotas are established for muskox by the NMWB, and it is up to the individual HTO to determine how much of the quotas are utilized for commercial purposes.

From 1987 until 2001, a commercial muskox harvest was been carried out in the area near Cambridge Bay to supply Kitikmeot Foods Limited. The original quota of 100 in 1987 was gradually increased to the present commercial quota of 1300 animals. The largest harvest was carried out in 2002, when 326 animals were harvested and shipped to the processing plant. This represented only 25% of the commercial quota available. Then in 2002 the commercial harvest was halted. Planning is underway in the community to try to restart the annual harvest in 2005.

The recommended Total Allowable Harvest (TAH) for muskox by region is:

Qikiqtani	140 animals
Kivalliq	106 animals
Kitikmeot	1,880 animals

Polar Bear

The overall quota for polar bear is established by the Nunavut Wildlife Management Board for each community. At the community level, the quota is managed by the HTO, which determines how many tags will be set aside for sports hunts. A Total Allowable Harvest (TAH) of 518 bears for all of Nunavut was recommended to the NWMB and accepted this year (2005).

According to HTOs surveyed for this study, polar bear meat is never sold commercially, with the commercial tags used strictly for sports hunts. Under the system established by HTOs for polar bear sports hunts, once the hide is removed the meat is always donated to the community. There is no expectation on the part of the HTOs that there will be commercial use of polar bear for intersettlement trade.

³¹ Department of Environment, Government of Nunavut. 2005. Recommendations on Total Allowable Harvest (TAH) Rates for Terrestrial Wildlife Populations in Nunavut.

Seal

There are no commercial quotas in place for seals, and as a result harvests for commercial purposes are not monitored. Therefore, there is no data currently available on this.

Whale

Both beluga and narwhal are regulated through a system of community-based management, under which the HTOs decide on the number to be harvested.

Walrus

For walrus, in the Qikiqtani region there is a non-commercial quota system, with 4 animals allocated per person in the community, which can then be reallocated annually for the sport hunt up to a maximum of approximately 12.³² Information was not available for the other regions.

Turbot

Turbot stocks in the Davis Strait are managed by the Northwest Atlantic Fisheries Organization (NAFO). The NWMB allocates the turbot quota assigned to the Qikiqtani region among Pangnirtung Fisheries Limited, Qikiqtaaluk Corporation, and the HTOs in Qikiqtarjuaq, Mittimatalik, and Clyde River. The Baffin Fisheries Coalition is an alliance of hunters and trappers associations and fishery corporations, including Qikiqtaaluk Corp., Pangnirtung Fisheries and Cumberland Sound Fisheries. The Qikiqtarjuaq HTO and the Cumberland Sound Fisheries have withdrawn their membership in the coalition. It was not possible during the course of the project to obtain current quotas and harvesting levels.

Shrimp

Little information was available on shrimp due in part to the fact that the majority of shrimp is harvested offshore and is intended for export.

Seasonal Availability

In the section above on *Market Demand*, information from the interviews suggested that availability of supply was a primary consideration in determining potential for increased intersettlement trade. Also, seasonal shortages of specific arctic foods in a community can offer

³² Tom Demcheson interview

an opportunity for intersettlement trade from another community with available surpluses at that time of year.

The Wildlife Officer survey asked respondents to rate the availability of the various wildlife species in their community of interest for intersettlement trade in terms of availability throughout the year. Each species was characterized as Always Available (AA), Somewhat Available (SA), or Never Available (NA).

Survey responses were received from all communities, with the exception of Baker Lake, Chesterfield Inlet and Whale Cove in Kivalliq region, and with the exception of Qikiqtarjuaq and Resolute Bay in Qikiqtani region. The results from the survey are summarized in the table below.

Arctic Food, Species Availability								
Community	Arctic Char	Caribou	Muskox	Polar Bear	Seal	Whale (Beluga)	Whale (Narwhal)	Walrus
QIKIQTANI REGION								
Arctic Bay	AA	SA	SA	AA	AA	SA	AA	SA
Cape Dorset	SA	SA	NA	SA	AA	SA	NA	SA
Clyde River	AA	SA						
Grise Fiord	SA	SA	AA	AA	AA	SA	SA	SA
Hall Beach	AA	AA	NA	AA	AA	SA	SA	AA
Igloolik	AA	SA	NA	SA	SA	SA	SA	SA
Iqaluit	SA	AA	NA	SA	AA	SA	NA	SA
Kimmirut	SA	SA	NA	SA	AA	SA	NA	SA
Pangnirtung	AA	AA	NA	SA	AA	SA	SA	SA
Pond Inlet	AA	SA	NA	SA	AA	SA	SA	SA
Sanikiluaq	AA	AA		SA	AA	AA		SA
KITIKMEOT REGION								
Cambridge Bay	AA	SA	SA	SA	AA	SA	SA	NA
Gjoa Haven	SA	SA	AA	SA	AA	NA	NA	NA
Kugaaruk	AA	SA	SA	SA	AA		SA	
Kugluktuk	SA							
Taloyoak	AA	SA	SA	SA	AA	SA	SA	NA
KIVALLIQ REGION								
Coral Harbour		SA						
Rankin Inlet	SA	SA	SA	SA	SA	SA	SA	SA
Repulse Bay	AA	AA	SA	AA	AA	SA	SA	AA

In terms of each species, the table suggests the following general assessments of availability of species in the various regions:

Char: 61% of responses stated that arctic char was always available, while 38.9% indicated it was somewhat available.

Caribou: 72.2% of responses indicated that caribou was somewhat available, while 27.8% indicated that it was always available.

- Muskox: 46.7% of responses indicated that muskox was never available while 40% indicated it was somewhat available and 13.3% suggested it was always available.
- Polar Bear: 75% of responses indicated their communities had some access to polar bears, while 25% indicated that they were always available.
- Seal: 87.5% of responses indicated they had ready access to seals while only 12.5% indicated that they were somewhat available.
- Whale: According to the responses the majority of communities, 86.7%, had some access to beluga whale, and 66.7% had some access to narwhal. One community indicated that narwhal was always available.
- Walrus: 66.7% of respondents indicated they had some access to walrus, 20% had no access, and 13.3% had ready access to walrus (as noted in the above chart).

This data is used in the examination of specific opportunities for intersettlement trade in the *Development Opportunities* section later in this report.

Regulations

The harvesting, processing and distribution of arctic foods operate within defined federal and territorial regulatory frameworks. Separate regulations govern field operations for the harvesting of fish and marine and terrestrial mammals as well as for processing plant operations.

General regulations governing harvesting include:

1. *Land Use:*

Land use permits are granted by either the Regional Inuit Association for Inuit Owned Lands or DIAND for Crown Lands. The uses must conform to the requirements of regional land use plans if these are in place. Any significant impact of water use may require a permit for the Nunavut Water Board. Water quality is also governed by regulations of the Department of Health and Social Services, Government of Nunavut.

2. *Quotas and Tags:*

Under the regulatory regime in Nunavut, quotas for the fishing of arctic char and marine mammals (whales, seal, walrus) are established by the Department of Fisheries and Oceans. These quotas then fall under the authority of the local Hunters and Trappers Organization who allocate them to specific organizations in the community for specific purposes. Quotas for muskox and caribou harvests are established by the Nunavut Wildlife Management Board (NWMB). The HTOs establish conditions on the available tags that are then submitted to the Department of the Environment for approval. The HTOs' authority is supported by Nunavut Tunngavik Inc. that is currently acting as the Designated Inuit Organization for Inuit wildlife organizations having an interest in

initiatives associated with the harvest.

3. *Commercial Harvest Permit for muskox/caribou:*

A permit for the commercial harvest of muskox and caribou is issued by the Department of the Environment (GN), on recommendation from the HTO.

Territorial Harvest Regulations

Muskox or caribou harvesting involving the use of a portable abattoir and processing of meat out on the land at the harvest site, such as practiced at Cambridge Bay with the muskox harvest and in Southampton Island with the caribou harvest, must comply with legislation and regulations governing health and food safety. The regulation of the supply of safe food that is for territorial consumption is carried out under territorial guidelines, legislation and regulations.

The harvest, processing and distribution of country food is regulated under the following territorial legislation:

1. Wildlife Act (a new Wildlife Act for Nunavut is to be implemented in July 2005).
2. Agricultural Products Marketing Act
3. Public Health Act, specifically:
 - Meat Inspection regulations
 - Camp Sanitation Regulations
4. Business License Act, specifically:
 - Business Regulations: Eating or Drinking Places
5. Workers' Compensation Act
 - Worker safety

The Department of the Environment plays a major role in the regulation of country food harvesting, processing and distribution. The safe harvesting, processing and distribution of country food is supported by the Department's Guidelines for Commercial Wildlife Harvesting and Portable Field Abattoirs.

Regulations for Processing Plants

In terms of the processing of meat in a facility, any meat from a federally regulated harvest must be shipped to a federally registered processing plant in order for the meat to be exported out of Nunavut across territorial, provincial or international boundaries. The plant facilities and operations of Kitikmeot Foods Limited in Cambridge Bay, Kivalliq Meat and Fish Limited in Rankin Inlet, Pangnirtung fisheries in Pangnirtung and Iqaluit Enterprises in Iqaluit have been licensed by Canadian Food Inspection Agency (CFIA) inspectors. CFIA approved plants in Nunavut are only able to buy from other recognized processing plants that are certified. This is a condition of their certification. Federal restrictions prohibit processing of any non-federally approved meat in these plants.

Processing facilities can switch between meat and fish but must be re-certified before processing of different foods can begin. Any new processed red meat products produced by the plant (such as processed products as jerky) must be submitted to CFIA for formulation and label approval. This ensures that the products are properly labeled and that the ingredients don't create any food safety or health issues.

The processing of fish for export in the processing plant is regulated by the Fish Inspection Regulations, under the federal Fish Inspection Act. Up until five years ago, these were administered by DFO, but now they fall under the authority of the CFIA. The registration as a federally approved fish processing plant under CFIA remains continually in force, subject to an annual fee.

Future Regulatory Standards

The federal regulatory framework is undergoing some significant changes. First, there is an initiative within the CFIA to define a single set of standards, in the near future, for all processing plants. This initiative will harmonize the differing regulations for fish and meat plants as well as integrate the administration of these regulations. This will be especially important for multi-commodity plants, such as Cambridge Bay and Rankin Inlet.⁴¹

Second, the federal government is currently planning to align food safety laws to international standards by 2004. This involves the development of new Hazard Analysis Critical Control Points (HACCP) models. HACCP involves assessment by the company of potential areas of risk for food safety, controls to mitigate the risks, and monitoring procedures. As a result, increasing responsibility for food safety will be placed on the processing plants themselves. These standards are not different in kind from the standards now applied under the Meat Inspection and Fish Inspection Acts. However, the standards will be more rigorous. This approach is already mandatory in the United States and soon will be in Europe. By 2004, it will be mandatory in Canada.

The new HACCP models being developed in Canada use generic models that are appropriate for southern Canada, but not for northern harvests and northern processing conditions. Therefore, the CFIA will be working with other stakeholders to develop HACCP models appropriate to the North.

Territorial Environmental Health Officers currently inspect the existing Nunavut processing plants and the community freezers/processing plants twice a year. Interviews with EHO officials indicated that there is a need to update current regulations regarding Nunavut meat processing and the sale of commercial arctic foods. The initial legislation and regulations were inherited from the GNWT and need to be updated and revised to reflect the needs and priorities of Nunavut.

Health Concerns

Persistent organic pollutants such as PCBs and pesticides bio-accumulate in fats of fish and mammals. Other toxins can accumulate in the meat of big marine mammals such as narwhal and polar bear. However in discussions with CINE and the DHSS indicated that the health benefits for consuming country food far outweigh any risks that have been identified. There is currently no advisory out in regards to consuming any country foods in Nunavut. Women of childbearing years should be prudent in their consumption of marine mammals.

Certain species and their method of preparation are of concern to certain authorities. For example, the DHSS has indicated that there are health concerns regarding igunaq (fermented walrus) with respect to Botulism bacteria. In some communities such as Igloolik, DFO is planning to conduct testing on walrus meat over the summer in 2005. All meat would have to be tested prior to initial sales and on an on-going basis. The inspectors with DHSS visit existing plants twice a year although this rate may vary and there are budgetary and human resource limitations that limit the number of visits possible in a given year.

Section 4: Marketing and Distribution

Price Levels

It was noted in Section 2 above that the key barrier to increased sales of arctic foods is availability. The second most important barrier for all three markets discussed – retail, hospitality and institutional – is price levels for arctic food products.

It was also noted above that in some cases, people might be willing to pay high prices for particular arctic foods that are not readily available in all communities. This is the case for example with maktaaq sold in Kugluktuk that is shipped in from the Qikiqtani region.³³

However, it is clear that generally prices are a major determinant of arctic food sales. A major wholesaler of arctic foods suggests that prices are critical, and the very high prices clearly depress the market. In some cases, consumers are reluctant to purchase arctic foods at more than a moderate premium over southern foods. If shrimp, for example, is selling at a premium of \$6.00 per kilogram over shrimps from the south, this may make sales very difficult.³⁴

Selling prices are determined by the production costs of the producers, freight rates, and any wholesale or retail mark-ups. Freight rates are a major issue that is discussed below. In terms of production costs, it is essential that producers make an adequate margin on their sales; however, increases in production costs will affect the market. For example, the price of caribou from KAF is up about 20% this year due to higher production costs at the Southampton Island harvest, and this will have an impact on wholesale and retail sales.³⁵ This is even more the case in the

³³ Baba Pedersen and Fred Pedersen interview

³⁴ Jack Meckling interview

³⁵ Jack Meckling interview

institutional market, where institutions operate on a fixed budget, and there is a very direct relationship between prices and price changes, and quantities purchased and served.³⁶

In the retail and hospitality sector surveys, respondents were asked at what price per kilogram they would be able to purchase specific arctic foods products. These were supplemented by the interviews with the managers of a number of retail, hospitality and institutional establishments. In addition, interviews with management personnel involved with the NDC processing plants and with Iqaluit Enterprises provided information on current selling prices for a number of arctic foods products. This information has been compiled into the table below. The results for both the retail and hospitality interviews are consolidated, to obtain a reasonable sample size for the estimated prices. For each type of food, the number of responses is indicated, along with the minimum and maximum prices suggested. The average purchase price is then calculated for each food type. The final two columns present the information that was obtained from producers on retail selling prices for the products. The final column in the table presents estimated wholesale prices for the specific products.

Arctic Food	Retail and Hospitality Market Surveys: Suggested Prices for Purchase of Arctic Foods (\$/kg)				Processors: Retail Selling Prices (\$/kg)	Estimated Wholesale Prices
	No. of Responses	Minimum	Maximum	Average		
Arctic Char	1	4.00	4.00	4.00		
i. whole	9	2.00	20.00	7.13	10.58	7.94
ii. fillet	7	3.00	20.00	8.33	18.74	14.06
iii. smoked	8	3.50	40.00	19.01	44.65	33.49
Caribou	2	5.00	14.00	9.50		
i. loin	6	4.40	39.00	13.90	46.31	34.73
ii. steak	5	4.40	44.00	14.76	46.31	34.73
iii. roast	4	4.40	20.00	9.85	46.31	34.73
iv. ground meat	4	4.00	15.32	7.33	19.85	14.89
Muskox	3	6.60	44.00	23.20		
i. primary cuts	4	4.40	44.00	16.35	44.10	33.08
ii. secondary cuts	3	5.00	21.00	10.33	22.05	16.54
Polar Bear	1	5.00	5.00	5.00		
Seal	2	2.00	5.99	3.99		
i. choice cuts	3	2.00	15.00	7.00	8.82	6.62
ii. lesser cuts	1	2.00	2.00	2.00		
Whale (maktaaq)	6	6.00	11.99	8.50	18.74	14.06
Walrus (igunaq)	1	6.00	6.00	6.00		
Turbot	2	2.00	10.00	6.20	18.74	14.06
Shrimp	4	5.00	15.00	11.00	17.64	13.23

³⁶ Mark Canaan interview

Clams	2	5.00	7.00	6.00	17.00	12.75
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While this does not constitute an extensive market study, which is beyond the scope of the current project, these results do provide a general indication of the relationships between prices desired by organizations in the market and those producing and distributing products.

Char:

- There seems to be a reasonable match between market and wholesale prices for whole frozen char;
- In the case of fillets and smoked char, wholesale prices are higher than the average market demand price, but there is some room when compared with the maximum market prices cited.

Caribou

- The wholesale prices for all caribou products are much higher than the average market demand prices.
- There is room when wholesale prices are compared to the maximum market demand prices for loin, steak and ground meat.

Muskox

- The average market demand prices are well below the wholesale prices.
- Again there is room when wholesale prices are compared to the maximum prices for primary and secondary cuts.

Polar Bear

- While there is some market demand for polar bear, it is not available on a commercial basis.

Seal

- The estimated distribution price for seal cuts is in line with the desired market demand price.

Whale (maktaaq)

- The estimated distribution price is higher than both the average market price and the maximum market price noted in the surveys.

Walrus (igunaq)

- There is some market demand for igunaq, but this is not handled on a distribution basis for health and safety reasons, and is available only from the producers in the communities.

Turbot

- The distribution price is above both the average market demand price and the maximum market demand price noted in the surveys.

Shrimp

- While somewhat higher than the average market demand price, the distribution price is lower than the maximum market demand price noted in the surveys.

Clams

- The average market demand price and the maximum market demand price from the surveys are higher than the distribution price.

The general indications from this comparison on market demand prices and wholesale prices are that certainly sales within the retail and hospitality markets are possible and can be increased, in many cases. The gap between the maximum price specific market institutions are willing to pay and the wholesale prices is either relatively small, or non-existent. The same situation prevails in the institutional market, but in that market there is less flexibility to accommodate higher prices.

Retail and hospitality establishments can obtain products directly from harvesters in the communities in the case of whole frozen char. However, this is not as easy in the case of many other products. Promotion of increased sales of arctic foods to these markets requires that price levels be addressed. The most direct way of dealing with price levels is to address freight rates, which can easily be responsible for 40% of the distribution cost.

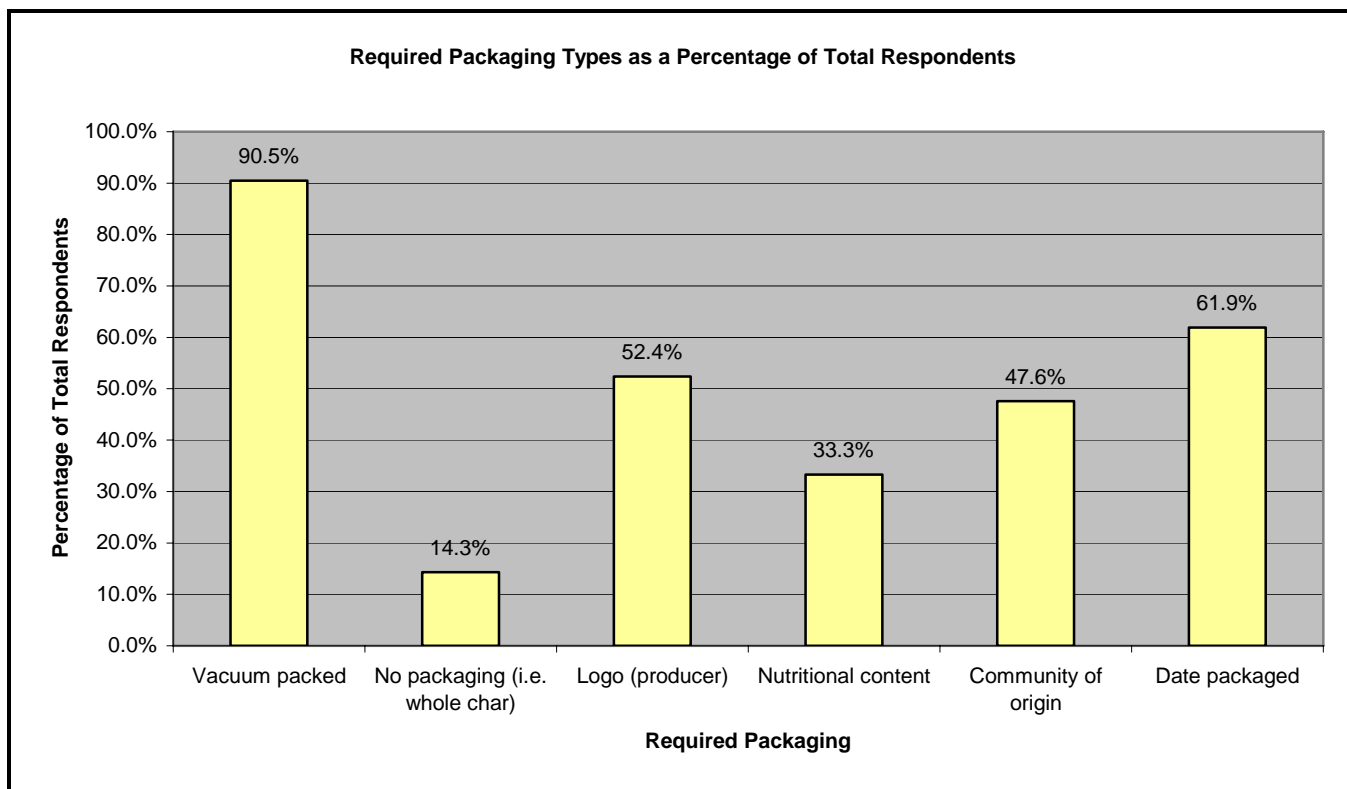
Packaging and Promotion

For sales within Nunavut, elaborate packaging is generally not required and the regulations are less stringent than for sales outside of the territory. For Inuit and non-Inuit consumers in Nunavut, elaborate packaging for arctic foods is not important as long as it is sanitary. The interview with Pangnirtung Fisheries noted that the fish plant has found that packaging is not an important factor in the sales of char and turbot. However, some producers of arctic foods, particularly Kitikmeot Foods Limited, have put a great deal of resources into product packaging, oriented primarily to southern markets and to tourists within Nunavut.

However, standards for packaging are becoming higher in response to consumer demand for basic information about the products, and for packaging that promotes longer shelf life and prevents freezer burn. Cryovac is essential for longer shelf life. Tray packs are commonly used along with plastic or cellophane wrap for filets or smoked fish, various cuts of meat, etc. Special plastic tubing for whole char has been successfully used. In some cases, products have to be repackaged as the initial packaging has been damaged. Although federal regulations required French on products, there are fewer regulations in Nunavut.³⁷

The Retail/Hospitality survey asked respondents what types of packaging they felt was required for the commercial sale of arctic food. The following graph illustrates the combined retail and hospitality markets responses.

³⁷ Bob Long interview, Larry Simpson interview, Jim Curry interview



Almost all of the respondents felt that having the arctic food product vacuum packed was particularly important. The second most important elements for packaging, indicated by more than half the respondents in each case, were having information regarding the date on which the product was packaged and the name of the producer included. The survey and interviews for the institutional found similar results.

In terms of promotion, it was generally suggested in the interviews that advertising and promotion for sales of arctic foods within Nunavut can be kept to a minimum and rely upon such staid promotional devices as announcements on the local radio and word of mouth..³⁸ However, a number of people interviewed stressed that it is important to emphasize the health benefits of arctic foods.

A number of organizations have launched promotions to encourage people to eat more arctic food. Inuit Tapiriit Kanatami has developed a series of pamphlets and posters highlighting the nutritional and cultural importance of eating arctic foods. These were distributed widely across Inuit communities through schools, health centers and Inuit organizations and hamlets. Recently, Dr. Joel Gittelsohn from the John Hopkins School for Public Health has launched a program called Healthy Stores in Cambridge Bay. The objective of the program is to work with community groups and community stores to increase people’s access and awareness of healthy foods. The retailers who participate in this initiative and increase the amount of healthy food on their shelves are promoted within the community in a variety of ways including cooking demonstrations, recipe cards, promoted during radio awareness programs etc. Initial efforts to

³⁸ Bob Long interview

include the Northern Stores in this initiative have met with some interest³⁹. There is also an initiative funded by the Aboriginal Diabetes Foundation through which youth are operating booths at community events to sell healthier foods including char and muskox jerky. Beyond the obvious health benefits of such projects, they also provide important encouragement to youth to continue consuming arctic food products.

These promotional efforts for increased consumption of arctic foods for health reasons may have a significant impact on overall consumption of these foods. The trend to healthier eating is already contributing to increased sales for arctic foods outlets.⁴⁰

Freight rates

In almost all of the interviews, the high cost of air freight was identified as one of the key factors limiting the expansion of intersettlement trade in arctic foods. It was noted above that freight rates can easily constitute 40% or more of the cost of arctic foods currently being sold. In many cases, freight rates make intersettlement trade prohibitive where otherwise there is easily sufficient demand and supply to provide the basis for successful trade. Along with the high cost of freight on most routes, the lack of direct routes between communities with complementary situations for the demand and supply of arctic foods can make it prohibitive to ship through longer routes. For example, there is no direct connection between Clyde River and Pangnirtung and as a result it is less expensive to ship from Clyde River to Rankin Inlet than to ship from Clyde River to Pangnirtung.

Both First Air and Canadian North provide a special rate for the shipment of arctic foods. For example, First Air ships arctic foods at a 60% discount to the general per kilogram rate while Canadian North offers a 50% discount off of regular freight charges. However, Calm Air does not provide any special rate for shipment of arctic foods, and this can be a critical impediment to trade in the Kivalliq where they may be the only carrier.

Currently the Government of Nunavut also provides a fish freight subsidy that covers 50% of the freight costs for shipping fish between Nunavut communities and for shipping char to southern gateway cities. The seller of the fish has to pay the freight costs up front and then apply for payment of the subsidy.

There is consensus among those interviewed that continued or enhanced freight subsidies are essential to support intersettlement trade, and it was suggested that the subsidy for freight should be extended to other types of country food. It was also suggested that the Government of Nunavut should negotiate an expansion of the federal Food Mail Program that subsidizes freight rates for a select number of “fresh food items” to cover intersettlement trade of arctic foods.

The table below provides examples of freight rates from most communities in Nunavut. The rates are taken from the First Air freight rate schedule, with the exception of routes covered only

³⁹ Nunatsiaq News March 31, 2005.

⁴⁰ Jim Curry interview

by Calm Air, in which case the freight rates are those from Calm Air's schedule of rates. The First Air rates shown are net of the arctic foods discount offered by the airline. Calm Air rates are full cost since they do not offer a discount.

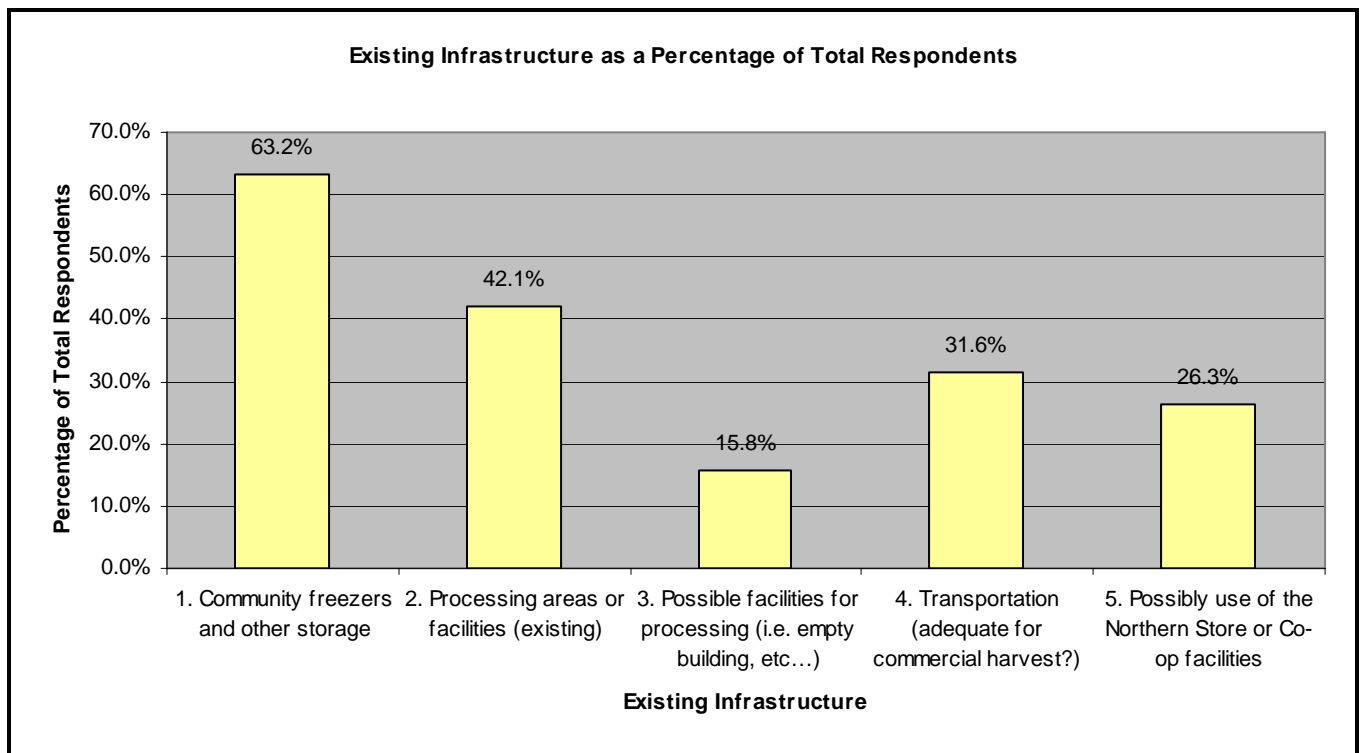
Representative Freight Rates Between Nunavut Communities

Qikiqtani		
From	To	\$ per kilo.
Igloolik	Iqaluit	\$2.14
	Rankin	\$3.23
	Cam Bay	\$3.79
	Kugaaruk	\$5.38
Hall Beach	Iqaluit	\$2.14
	Pang.	\$3.47
Pond Inlet	Iqaluit	\$3.63
Arctic Bay	Iqaluit	\$3.63
Clyde	Pang.	\$3.52
Clyde River	Iqaluit	\$3.20
Clyde	Pang	\$4.52
Clyde	Rankin	\$4.27
Hall Beach	Rankin	\$3.23
Pangnirtung	Iqaluit	\$1.37
Qikiqtarjuaq	Pangnirtung	\$1.08
Qikiqtarjuaq	Iqaluit	\$1.96
Pond Inlet	Cape Dorset	\$5.17
Cape Dorset	Iqaluit	\$1.59
Kimmirut	Iqaluit	\$0.81
Kivalliq		
From	To	\$ per kilo.
Repulse Bay	Rankin	\$2.50 (CA)
Rankin Inlet	Iqaluit	\$1.89
	Igloolik	\$3.23
Rankin	Pond	\$4.71
Chesterfield Inlet	Rankin	\$0.99 (CA)
Whale Cove	Rankin	\$0.99 (CA)
Arviat	Rankin	\$1.49 (CA)
Kitikmeot		
Gjoa Haven	Cambridge Bay	\$1.21
Gjoa Haven	Igloolik/Hall Beach	\$4.99
Cam Bay	Pangnirtung	\$3.03

Infrastructure

The distribution of arctic foods through intersettlement trade requires certain basic infrastructure at the community level, particularly freezer and storage facilities, and in some cases processing facilities. Starting in the 1980s, most Nunavut communities were equipped with community freezers through funding provided by the Special ARDA program. Processing facilities were also installed in a number of communities.

In the Wildlife Officer survey, Wildlife Officers were asked to indicate what infrastructure was available in their community related to the production and distribution of arctic foods through intersettlement trade (see chart below). Well over half of the respondents indicated that their community had community freezers (63.2%), with 42% indicating that there were also processing facilities in existence. A quarter of respondents indicated that storage facilities at the Northern or Co-op could possibly be used while 16% suggested that there were other potential facilities such as empty buildings that could be converted into processing or storage facilities with the appropriate amount of effort and funding. 31.6% indicated that transportation required for harvesting was adequate.



The same question on existing infrastructure in the community was asked in the HTO survey as well. The results of the Wildlife Officer and HTO surveys have been combined to give a more complete picture of the current infrastructure that exists in communities related to intersettlement trade in arctic foods (see table below). Responses were received from all communities except Qikiqtarjuaq, Baker Lake, Chesterfield Inlet, and Whale Cove.

Community	What local infrastructure currently exists in the community that is, or could be, used for commercial arctic food production ⁴¹ ?				
	Community freezers and other storage	Processing areas or Facilities (existing)	Possible facilities for processing (i.e. empty building, etc...)	Transportation (adequate for commercial harvest)	Possibly use of Northern Store or Co-op facilities
QIKIQTANI REGION					
Arctic Bay	√				
Cape Dorset	√	√	√	√	√
Clyde River	√	√		√	
Grise Fiord	√	√			
Hall Beach	√				
Igloolik	√	√			
Iqaluit		√	√	√	
Kimmirut	√	√	√		√
Pangnirtung	√	√			
Pond Inlet	√	√			√
Resolute Bay	√	√			
Sanikiluaq	√			√	√
KITIKMEOT REGION					
Cambridge Bay	√			√	√
Gjoa Haven		√			
Kugaaruk				√	√
Kugluktuk	√		√	√	
Taloyoak					
KIVALLIQ REGION					
Coral Harbour	√				
Rankin Inlet	√		√	√	
Repulse Bay				√	√
TOTAL	14	10	5	9	7

Three communities indicated that there were some facilities in adjacent communities that could be used to support the production of commercial arctic foods. These were Igloolik (facilities in Hall Beach), Kugaaruk (facilities in Cambridge Bay) and Resolute Bay (facilities in Grise Fiord).

While many of the communities have community freezers owned and operated by the HTOs or the hamlets, a large number of them need to be repaired and retrofitted. The hamlets have been requesting that the Government of Nunavut provide support necessary to bring up the

⁴¹ As noted in the text, some communities had freezers/processing plants but were not in operation.

community freezers up to operational requirements but to date there is no indication that the Government of Nunavut is prepared to undertake this, because of the large costs involved in operations and maintenance of the freezers.

The following communities have applied to ED&T for new freezers:

- Pond Inlet
- Repulse Bay
- Chesterfield Inlet
- Arviat
- Kugluktuk
- Arctic Bay

The Cabinet of the Government of Nunavut has given direction to departments to develop a policy on community freezers, and an interdepartmental committee has been established to work on this.⁴²

Iqaluit, Pangnirtung, Rankin Inlet and Cambridge Bay all have commercial scale processing and packing facilities. However, freezers, which are a critical part of the required infrastructure, can be a key bottleneck in the development of trade. Even the processing plants generally don't have enough storage capacity, and also don't want to bear the operating costs associated with storing product for longer periods of time to maintain inventory for future orders. At the other end of the supply/demand chain, commercial consumers such as restaurants and institutions don't have the freezer capacity either. Larger, centralized freezer facilities may be required to address this issue.

Existing Infrastructure in the Kitikmeot

Kitikmeot Foods has commercial scale, federally inspected processing and packing facilities. There are also community freezers in most communities, but these are not currently operating. In general, the Government of Nunavut is not willing to fund the operating costs of these freezers, and the HTOs do not have the resources to take over operation of the freezers. In Kugluktuk there is also a community processing facility, with a storage room, equipment and a freezer (in addition to the government-owned freezer in the community), but this has not been in use for a number of years.

Gjoa Have is currently using large chest freezers for storage for their processing plant as an alternative to the larger freezer to reduce operating costs, but their current production is small. In the Inuvialuit region, communities have provided chest freezers free to each household as a means of closing down their community freezer. The cost to this undertaking was apparently less than the operating cost of the community freezer for one year.⁴³

⁴² Rosemary Keenainak interview

⁴³ Baba Pedersen and Fred Pedersen interview

Existing Infrastructure in the Kivalliq

There are three processing plants in the Kivalliq Region, Kivalliq Arctic Foods in Rankin Inlet, which is federally approved, and small processing plants in Chesterfield Inlet and Whale Cove. Every community in the region has a freezer, but these have not kept up to the growth of the communities. They are used primarily for subsistence purposes, and in a number of the communities are not sufficient to meet the needs of both subsistence and commercial trade.

The freezers in Baker Lake, Whale Cove are operational. The freezer in Chesterfield Inlet needs repair and upgrading, although the community also has a refrigeration truck. Repulse Bay has a community freezer, but it is not operational: although it is supposed to be maintained by the Government of Nunavut, the required resources are not available.

The Coral Harbour Development Corporation has a portable abattoir used for the caribou harvest, and other essential infrastructure and equipment including bombardiers, sheds, cabins, storage facilities, snowmobiles, komatiiks, and a refrigeration truck.⁴⁴

Existing Infrastructure in Qikiqtani

In the Qikiqtani region, both Pangnirtung Fisheries and Iqaluit Enterprises have commercial scale, federally inspected processing and packing facilities. The Pangnirtung fish plant is a relatively new facility.

In the 1980s the Baffin Arctic Food Development Strategy recognized the need for storage infrastructure in the communities to hold inventories beyond the regular harvesting season to promote greater stability of supply and to increase prices paid to harvesters. As a result, all Qikiqtani communities with the exception of Iqaluit and Arctic Bay were provided with community freezers and stainless steel meat cutting plants in the 1980s and early 1990s. However, now that the freezers are twenty years old, some are in poor condition and need renovation and upgrading. Several communities have applied to have their freezers either upgraded or replaced.

Existing Organizational Capacity and Skill Levels

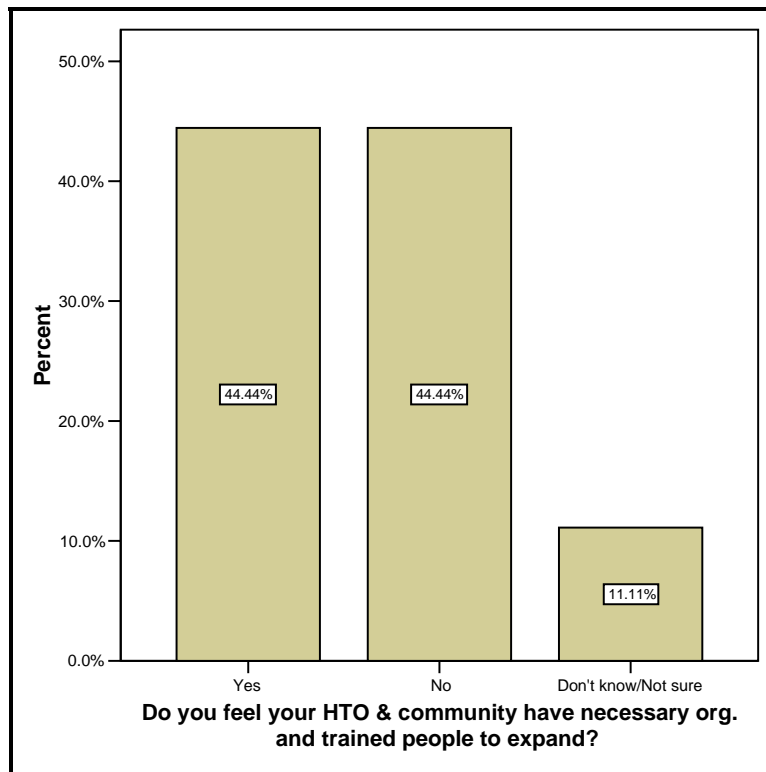
Organizational capacity at the community level is also an issue for the development of intersettlement trade. Many HTOs have developed business arms to try to fill the void due to lack of private businesses in the communities handling arctic foods. The high costs of setting up a business generally means that the HTOs are doing this on a relatively small scale.

HTO capacity is an issue for the development of intersettlement trade. For the HTOs, continuity and retention of skilled administrators and managers is a major issue because of lower levels of

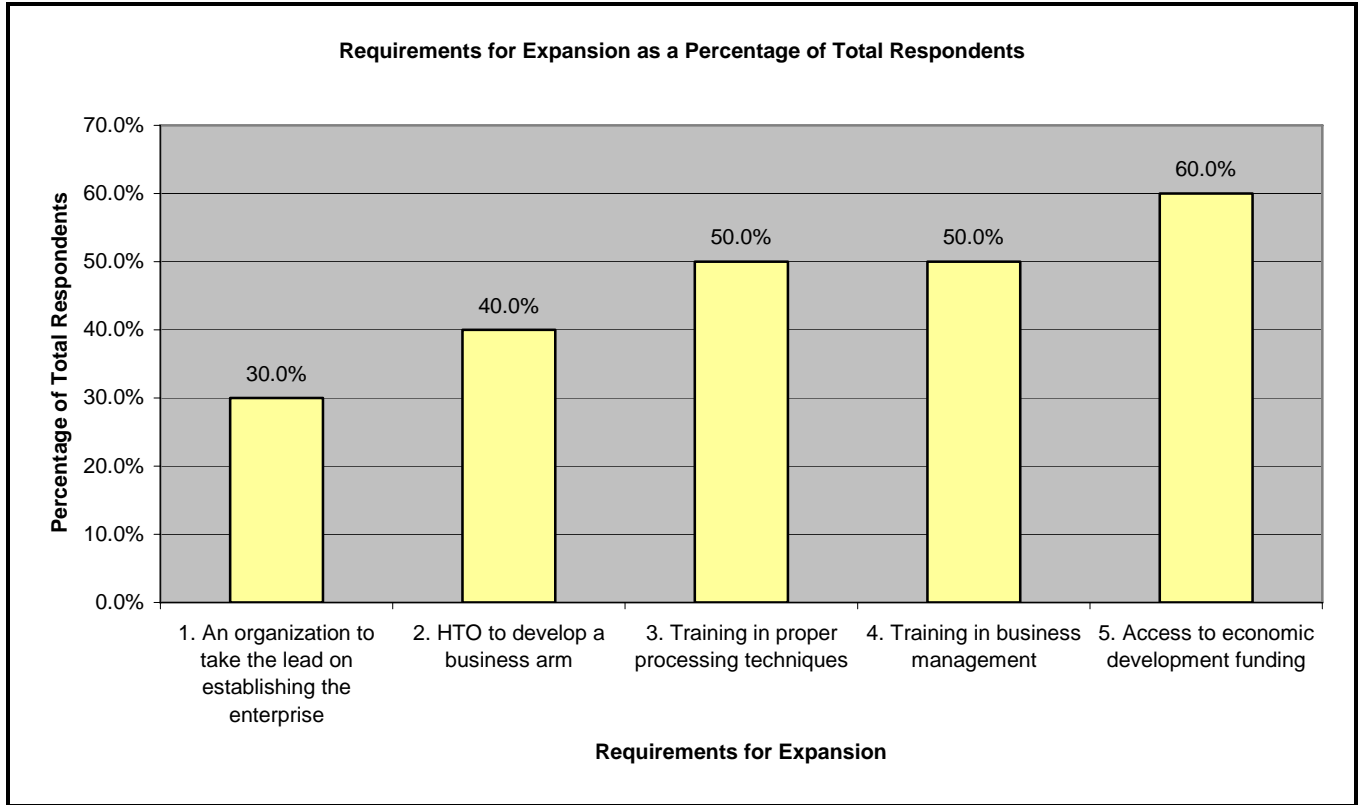
⁴⁴ Robert Connelly and Theresie Tungilik interview

compensation that these organizations can afford. Most HTOs are in need of proper office facilities, higher compensation for HTO managers and employees, and training in management, marketing and food handling and processing. Many arctic foods ventures succeed for a while until a key person leaves and then the venture no longer operates successfully.

The following charts reflect the general situation in regards to organizational capacity among the HTOs. When asked whether they believe their HTO and community have the necessary organizations and trained people it would need to begin or expand commercial production of arctic foods, about 44% responded yes while another 44% responded no (see chart below). Just over 11% of respondents were not sure.



The HTO survey also asked what the specific needs are in order for the HTO or community to proceed with the creation or expansion of a commercial arctic food project. The results reflect the points made in a number of the interviews: the specific needs are for economic development funding (60% of respondents), and training in business management and training in proper processing techniques (50% of respondents). The development of a business arm for the HTO (40%) and the need for an organization to take the lead in establishing enterprise (30%) also were identified as important requirements (see chart below).



Section 5: Challenges for Development

The following section reviews the primary challenges that face the development of commercial intersettlement trade in arctic foods within Nunavut. The majority of these issues were identified during interviews, supplemented by comments recorded in the survey process and by documents in the literature review.

Transportation costs

The most commonly identified challenge to developing commercial intersettlement trade in arctic foods was the high costs of transportation. As discussed above, freight rates for shipping products between communities within Nunavut often range from between \$2.50 and \$4.00 per kilo and can reach over \$5 per kilo. In addition, air routes have clearly not been designed with commercial food production in mind. In several cases, in order for a community to ship a product to an adjacent community, they have to ship through the regional centre. For example, for Clyde River to ship to Qikiqtarjuaq, a neighbouring community, the product would first have to go to Iqaluit and then be shipped to Qikiqtarjuaq.

These costs have served to restrict and limit trade between communities even where market demand and product availability exist. For example, Kivalliq Arctic Foods cannot currently afford to purchase char from Repulse Bay, despite the market demand for char from the community. High freight costs in effect limits Repulse Bay from taking advantage of the trade opportunity.

Current subsidies for shipping arctic foods offered by the Government of Nunavut and by some airlines servicing the territory need to be extended to include all arctic foods being shipped within Nunavut and possibly increased to ensure that trade is encouraged. Considering that the high costs of shipping in Nunavut will in all probability persist for the foreseeable future, it is

likely that these subsidies will be an ongoing feature of any long-term effort to promote intersettlement trade.

Availability

Several sections of this report review the availability of various food species across Nunavut. These resources are not evenly spread across the territory and this reflects one of the very basic tenets of successful commercial trading – a product available in one area is relatively unavailable in another community thus creating potential demand and markets. The issue of availability goes beyond simply the ease of access to the resource locally to availability over time. Few products are available year round due to the very nature of the species in question. The need to stabilize supply over longer periods of time to meet certain market demands implies a need to harvest larger amounts of food species when available and to be able to store them adequately to meet ongoing market demand when supply may be interrupted. Again, this could present a case for the establishment of a larger, centralized processing, storage and distribution centre in a main centre as the costs in a number of areas would be reduced in this scenario. As well, packaging under this scenario would need to be tailored to provide longer product shelf life.

It should be noted that while the market research indicated that availability of the products was a key challenge and limitation to expanding or creating a market for arctic foods, this did not necessarily imply that the supply had to be static throughout the year. If some regularity of supply, even seasonally, was established, the commercial market could most likely build this into their budgets (assuming price targets are met) and menus to take advantage of these seasonal specialties.

Infrastructure

As the section above dealing with infrastructure revealed, the current status of community facilities varies widely. Overall, the community freezers are nearly 20 years old. A number are in poor condition and all are getting old and will require increasing amounts of money to be built in Iqaluit as a central processing/storage/distribution centre. Existing facilities in a number of smaller communities need to be either renovated or replaced with an eye to meeting current regulations and commercial-level production requirements. It should be noted that those current plants that have federal approval for exporting foods out of the territory are not able to process meat from other non-CFIA approved sources without suspending their licenses for a specific period. Once the food is processed, the plant has to be thoroughly cleaned and all non-approved product and equipment have to be removed from the premises before an inspection is made to reinstate the license. These requirements place an additional cost and effort to consider if non-CFIA meats are to be processed at federally approved plants and may be an important consideration when developing plans to renovate or replace existing community facilities.

Market Development

A significant commercial market exists for arctic foods. The largest market exists in Iqaluit primarily for char, caribou and maktaaq although a number of products are in demand to a lesser degree – smoked char, jerky, muskox, etc. Development and expansion of the market in the future will require increasing the awareness of Inuit youth of the importance and benefits of consuming arctic foods, developing more value-added products (particularly jerkies, smoked char and sausages) and ensuring consumers are aware of the products when they are available. This latter task should not be focused upon an expensive elaborate marketing campaign but rather through the informal networks that work well at the community level – radio announcements, a few posters, word of mouth etc. Shifting and generally declining appetite for many arctic foods on the part of Inuit youth will put pressure on the development of products such as char, caribou and jerkies while shifting the focus away from products such as fresh walrus, igunaq and seal.

Price points will also be a considerable challenge for commercial arctic food development. All sectors of the market identified price sensitivity as a critical element in the decision on whether to purchase arctic foods. In the institutional, retail and hospitality sectors, budgets and price points and availability were primary determinants. For the general public purchasing the food at the local retail outlet, it was pointed out that it is often cheaper for them to purchase imported salmon and beef than locally harvested arctic foods. A preference exists for arctic foods across the broad market but it was estimated by one interviewee that people would only be willing to pay a premium of up to 20% for arctic foods in comparison to similar imported items.⁴⁵

Operation and Maintenance costs

Both the surveys and interviews highlighted operation and maintenance costs as being a critical issue currently. The status of the community freezers vary widely and a number are currently closed due to high operating costs. While it could be a measure of success to have the proposed operations become independent over time, the high costs of operations may very well impose a critical barrier to the nascent operations preventing them from building sufficient capital for reinvestment, maintenance etc.

Support for Harvesters

Harvesting costs have risen steadily over the past decade. Oil and gas costs along with ammunition and other direct harvesting equipment costs consume the largest ongoing costs of harvesting activities. Capital costs such as skidoos, fishing boats and motors are all financial challenges few harvesters are able to cover without some form of assistance.

⁴⁵ Jack Meckling interview

The following cost estimates are drawn from Clyde River 2004⁴⁶. This is a basic "all-season" outfit and some harvesters have boat & motor combinations that can cost more than \$30,000.

Typical Outfit (rounded to the nearest \$100; no GST):

- 22' freighter canoe = \$8,100
- Snowmobile (Bombardier Scandic model) = \$8,700
- 55hp Johnson outboard motor = 8,200
- 90hp Honda outboard = 12,300
- Canvas tent (10'x12') = 550.00
- Coleman stove = 130.00
- .22-250cal Remington rifle (w/out scope) = 1,100
- .22-250cal ammo = 50.00 (box of 20 rounds)
- Honda 4-Trax ATV = 9,200
- Woods 3-Star sleeping bag = 400.00
- Socket set (for engine &/or suspension repairs) = 100.00

Typical 2-Day Snowmobile Hunt (n=4, mid-June):

1) Ave. Cost = @\$200.00

- Gas = 20gals/\$78.00 (19.50/5gals)
- motor oil = 38.96 (9.99/L)
- Coleman fuel = 33.00 (5.50/L)
- Misc. food (biscuits, tea, soup, canned meat) = @30.00
- ammo expended (avg. 3 hunts) = @20.00

Current support for harvesters includes NTI's Nunavut Harvesters Support Program. This program provides support to eligible harvesters for the purchase of harvesting equipment including those noted above as well as survival suits, radios etc. While this program has proven to be an important support for Nunavut's harvesters since its implementation, it is unable to meet the need of all harvesters. In addition harvesters receive some support from the Government of Nunavut through programs such as one for the purchase of sealskins that help offset some of the costs of harvesting.

In order to ensure harvesters in communities are able to participate in the harvesting activities associated with the commercial intersettlement trade in arctic foods, it is likely that additional support will be needed particularly in the areas of ongoing costs such as fuel, ammunition etc. as well as the purchase of large equipment.

HTO capacity

⁴⁶ George Wenzel, personal communication.

A review of the background of commercial food production in Nunavut (and indeed the Arctic) provided insight into the importance of having sufficient management and entrepreneurial capacity within an operation to ensure success. Time and again operations that are breaking even or even experiencing a certain level of success, begin to flounder once a key person leaves. Without sufficient internal capacity, the operation quickly begins to sink and eventually closes. Perhaps the single most important factor in any operation's success will be the ability to manage it effectively.

HTO capacity currently is very much in flux and varies substantially between specific organizations. The successful development of an arctic food production plant will entail supporting HTOs in the management and operation of the plant until such time as sufficient capacity is developed internally. Some informants identified the capacity issue at the community level as an argument for placing the central facility in Iqaluit where there is supposedly a greater potential in accessing sufficient managerial capacity within the community. Joint ventures between HTOs and private entrepreneurs that have the business and management skills can provide critical stability to a project.

Inspections

Arctic foods harvested on the land for subsistence consumption within Nunavut currently require no federal or territorial inspection. Once the food is sold on a commercial basis, it falls under the responsibility of the Department of Health and Social Services. Currently inspectors visit existing facilities twice a year. Restrictions on staff and budgets limit the expansion of these visits. It may be advisable to have an additional person or persons trained as an inspector if new commercial facilities are established in a particular region (i.e. North Qikiqtani).

Competition

The issue of competition was identified by a few respondents. They suggested that in some cases, the current commercial fish and meat plants owned by the Nunavut Development Corporation were undermining efforts of the local HTOs in those communities to become involved in commercial arctic food production. This underlines the need to provide sufficient support to HTOs to enable them to develop the capacity and resources necessary to seek out potential opportunities where they exist and to ensure there is coordination between NDC and communities as arctic foods strategies are developed.

Section 6: Key Opportunities for Development

Based on the information presented in the previous sections, this section of the report looks at a number of key opportunities for development of increased intersettlement trade within Nunavut. As noted above, this study is limited to an examination of commercial intersettlement trade conducted on a cash basis. Subsistence use of arctic foods will always be given priority in cases of resource use conflicts. Frequently, arctic foods are traded between individuals and between HTOs on an exchange basis. However, subsistence use and informal sharing and trading patterns are outside the scope of this study.

A considerable amount of intersettlement trade also consists of sales by individual harvesters to retail or hospitality businesses in other communities. Although each individual sale may be small, the overall volume of sales of this type is considerable. A number of people interviewed suggested that there may be significant opportunities to promote intersettlement trade in this area, compared to the trade from the organized processing plants, which for the most part are highly subsidized.⁴⁷ It was not possible to obtain detailed information on this area of intersettlement trade; however, some of the development needs for this area of intersettlement trade have been addressed in the recommendations.

Therefore this section focuses on key development opportunities in each of the regions, where demand in specific areas of the Nunavut market mesh with resource surpluses in other communities linked by feasible transportation connections. The specific opportunities were identified through the range of interviews conducted, supported by research data outlined in the previous sections.

⁴⁷ Baba Pedersen and Fred Pedersen interview

Kitikmeot Region

Currently there are sales by individual hunters in char between the communities in the region, as well as sales by hunters of caribou to Grise Fiord and Resolute Bay. There are purchases of small quantities of maktaaq by Kugluktuk from Arctic Bay. However, these are not on a scale for the development of organized intersettlement trade.

Longer-term Opportunities

Within the Kitikmeot region, there is an exploratory fishery being conducted on various species in Kugluktuk, including the starry flounder, which is intended to enhance the local diet through identifying species for subsistence harvesting. While this may result at some time in the future in some commercial intersettlement trade, the focus for the next period of time is on local, subsistence uses.

Current Opportunities

1. Gjoa Haven Processing Plant

There is a small plant in Gjoa Haven that processes caribou, musk-ox and fish, but only sells within the community. The plant was originally to be a feeder plant to Kitikmeot Foods but this did not work out. Therefore, they do community hunts and sell only in the community. The Gjoa Haven plant is not a full-time operation, and just processes as required. There is very good potential for putting more volume through the plant and supplying other communities. Right now the plant is operating at about 20% capacity.

Current production: Seasonal processing of musk-ox, caribou and char; operating at about 20% of plant capacity.

Commercial Quota: Caribou: Beverly herd commercial quota of 200 animals (2001); no specific future Total Allowable Harvest (TAH) recommended.
Muskox: Recommended future TAH (MX/11 CM, EX, WC) of 348 animals.
Char: Kitikmeot commercial quota (Cambridge Bay and Gjoa Haven areas) of 62,358 kg

Current Harvest: Data on commercial harvest in Gjoa Haven not available;
Overall harvest recorded in Nunavut Wildlife Harvest Study:
- Char: 5,419 char annually (estimated edible weight of 13,547 kg)
- Caribou: 339 caribou annually (estimated edible weight of 13,560 kg)
- Muskox: 11 harvested annually (estimated edible weight of 1,076 kg)

Availability⁴⁸: Wildlife Officer survey: char and caribou - somewhat available, muskox - always available

Potential Products: Roasts, ground meat, stewing meat, char fillets, whole char

Freight Rates:
To Cambridge Bay - \$1.21/kg (country food rate)
To Kugaaruk - \$1.25/kg (country food rate)
To Taloyoak - \$.50/kg (country food rate)
To Rankin Inlet - \$2.58 (country food rate)
To Iqaluit - \$3.45/kg (country food rate)

Market Demand: May be some demand for processed products in adjacent communities, but no overall lack of these resources in adjacent communities. Potential for demand from KFL for Gjoa Haven as feeder plant.

Existing Infrastructure: Processing facilities; community freezer, not operating; use large chest freezers for storage

Requirements for Development:

- Currently operating small plant at 20% capacity, only selling within community
- Char can be shipped to KFL
- Possible shipping of semi-processed products for further processing in Cambridge Bay at KFL
- Caribou and muskox requires CFIA approval for shipment to KFL
- Training in business management and food processing

2. Kitikmeot Foods Limited

Kitikmeot Foods Limited is a federally inspected and certified processing facility, owned by the Nunavut Development Corporation (NDC), processing and selling char and muskox products. Since 2002, the local muskox harvest has been suspended, and muskox has been obtained from the Sachs Harbour harvest. The plants had total sales in 2002 of \$514,959, and receives an ongoing subsidy from the NDC (46% of revenue in 2002)

Current production: Sales (2002): Muskox \$162,006; Char: \$309,351

Commercial Quota: Muskox (2002): 1,300 animals; recommended TAH (MX/10 VI) of 1,500 animals
Char (2001): 62,358 kg

⁴⁸ From commercial quota

- Current Harvest:** Char (2003): processed 41,759 kg of char (67% of available quota).
Muskox (2001): 326 animals (no harvest 2002 on, muskox purchased from Banks Island)
- NWHS data:
- Char harvested annually, Cambridge Bay: 4,826 char (estimated edible weight of 12,065 kg)
- Muskox harvested annually, Cambridge Bay: 8 muskox (estimated edible weight of 782 kg)
- Availability:** Wildlife Officer survey:
- Muskox somewhat available
- Char always available
- Products:** Char: whole dressed, steaks, fillets, smoked, canned, jerky
Muskox: primary cuts, secondary cuts, jerky
- Freight Rates:** To Kugluktuk - \$1.12/kg (country food rate)
To Taloyoak - \$1.45/kg (country food rate)
To Kugaaruk - \$1.66/kg (country food rate)
To Rankin Inlet - \$1.34/kg (country food rate)
To Iqaluit - \$4.35/kg (country food rate)
- Market Demand:** 2002: approximately half of KFL sales were to retail and hospitality markets within Nunavut;
Increase prices for muskox from Sachs Island have put pressure on muskox sales.
Opportunities for increased sales within Nunavut, particularly lighter products such as jerky and smoked char
- Existing Infrastructure:** Commercial processing facilities and freezers, inspected and certified by CFIA
- Requirements for Development:**
- Revival of musk-ox harvest around Cambridge Bay
 - Explore enhanced role as regional processor and distributor of meats and fish (Note: CFIA certification requires that only federally approved meat products enter the plant).

Kivalliq Region

Within the Kivalliq Region, the main focus for arctic foods currently in char and caribou. Only a small portion of the commercial quotas for char in the region is utilized. There have also been attempts to commercialize whitefish harvesting, but nothing has come of this. Every community

has a commercial quota for caribou, which are frequently used for sports hunting, except in the case of Coral Harbour, which has a large commercial harvest. A very common activity in the region is the harvesting of berries. Baker Lake is currently working on a local food development centre on a small-scale commercial basis. Maktaaq, seal and igunaq are traded on a small scale between communities. The large beluga population has allowed for harvests of 111 whales annually in Arviat⁴⁹, with small sales of maktaaq from Arviat to Iqaluit Enterprises in Iqaluit.

Longer-term Opportunities

There are a number of longer-term opportunities in the region, which are all at a very early stage and may require population studies feasibility and market studies, test fisheries or pilot projects, to determine if these present real opportunities for development These include:

- Possible development of a off-shore cod fishery;
- Harvesting of mussels in Whale Cove;
- Commercial harvest of muskox possibly centred around Baker Lake;
- Possible development of a commercial caribou harvest on the mainland from the Beverly and Qaminirjuaq herds.

Current Opportunities

Opportunities for Repulse Bay is considered to have the best char in the region. The reason is that the char in the more southern communities feed on capelin, which the more northern stocks from Repulse north feed on shrimp. The community is trying to develop a commercial char fishery.

1. Repulse Bay Char Fishery

Current production:	Local production and individual sales to other communities.
Commercial Quota:	Regional quota of 193,820 (2001). Currently only 4% of overall regional quota currently utilized ⁵⁰
Current Harvest:	Nunavut Wildlife Harvest Survey: - 3,775 char harvested annually (9437 estimated edible gross weight)
Availability:	Wildlife Officer survey indicated char always available
Products:	Char: may be able to emphasize value-added products to address cost of shipping.

⁴⁹ Data from Nunavut Wildlife Harvest Study

⁵⁰ Robert Connelly and Theresie Tungilik interview

- Freight Rate:** To Rankin Inlet, \$2.50/kg (Calm Air - no country food rate)
To Iqaluit \$4.49 (with country food rate, Rankin Inlet to Iqaluit)
- Market Demand:** Repulse Bay is considered to have the among the best char in the region, because as a northern stock, it feeds on shrimp rather than capelin. There is existing demand, but freight rates are a limiting factor. KAF would like to purchase char from Repulse Bay, but the freight rate means they can ship 2.5 times as much char from Whale Cove and Chesterfield Inlet for the same transportation cost
- Existing Infrastructure:** Community freezer, not operational. Need second freezer for commercial use, to leave room for subsistence in community freezer, and to separate for quality control.
- Requirements for Development:**
- Freight costs need to be subsidized to enable shipping to Rankin Inlet
 - Need to refurbish or reconstruct freezer facility specifically for commercial production and to ensure quality control

2. Kivalliq Small Fish Plants (Chesterfield Inlet, Whale Cove)

There are two small char processing plants in Kivalliq, one in Chesterfield Inlet owned by the community, and one in Whale Cove, Papiuruq Fisheries, owned by the Nunavut Development Corporation. Both plants ship char to Kivalliq Arctic Foods Limited in Rankin Inlet.

- Current production:** Char shipped to KAF in Rankin Inlet.
- Commercial Quota:** Regional quota of 193,820 (2001)
Currently only 4% of overall regional quota currently utilized
- Current Harvest:** Nunavut Wildlife Harvest Survey data:
- Chesterfield Inlet: 1,818 char annually (estimated edible weight of 4,545 kg)
- Whale Cove: 991 char annually (estimated edible weight of 11,362 kg)
- Availability:** Wildlife Officer survey: no response from these communities
- Products:** Products from both of these plants are sold only to KAF, about \$20,000 each annually⁵¹
- Freight Rate:** Chesterfield Inlet to Rankin Inlet - \$.99/kg (Calm Air, no country food rate)

⁵¹ Robert Connelly and Theresie Tungilik interview

Whale Cove to Rankin Inlet - \$.99/kg (Calm Air, no country food rate)

Market Demand: There is existing demand from KAF for char from them as feeder plants.

Existing Infrastructure: Both communities have small processing plants; Chesterfield Inlet has extra storage and a refrigeration truck. There are freezers and small processing plants in both Chesterfield Inlet and Whale Cove. The freezer in Chesterfield Inlet needs repair and upgrading, although the community also has a refrigeration truck.

Requirements for Development:

- Given the current constraints (infrastructure, freight costs), centralized facilities may make more sense. Chesterfield Inlet and Whale Cove are struggling to operate small commercial fisheries, because they have limited capacity for management and business. The labour is there, but there is a limited capacity to manage the business. Therefore, currently it is more feasible to have centralized facilities, with central management. As the infrastructure and capacity develops, it will be necessary to take a decentralized approach because the resources are in the smaller communities.
- Whale Cove plant closed down in 1996; from information available, it is unclear when it opened again.
- Training in management and business skills

3. Southampton Island Caribou Harvest

The harvest of caribou from Southampton Island has been operated by the Coral Harbour Development Corporation since 1995. Caribou undergo initial processing using field abattoirs, the entire production is shipped to KAF in Rankin Inlet for further processing.

Current production: Char shipped to KAF in Rankin Inlet.

Commercial Quota: Quota of 6,000 animals;
Under the TAH system, there will be no specific TAH recommended for the management area (BC/05), but sex-selective harvesting may be recommended

Current Harvest: Commercial Harvest: 3,636 caribou (2001)
Nunavut Wildlife Harvest Survey data:
- 892 caribou annually (estimated edible weight of 35,680 kg)

Availability: Wildlife Officer survey: caribou are somewhat available

Products:	Caribou is pre-processed and shipped to KAF in Rankin Inlet for further processing and sale
Freight Rate:	To Rankin Inlet - \$2.50/kg
Market Demand:	There is existing demand from KAF for caribou from them as a feeder operation
Existing Infrastructure:	The Coral Harbour Development Corporation has a portable abattoir used for the caribou harvest, and other essential infrastructure and equipment including bombardiers, sheds, cabins, storage facilities, snowmobiles, komatiiks, and a refrigeration truck

Requirements for Development:

- Explore potential of increasing harvest for the purpose of meeting territorial demand for caribou
- More value-added products such as jerky could be produced to meet territorial demand

4. Kivalliq Arctic Foods Limited

Kivalliq Arctic Foods Ltd. operates a processing plant, owned by the Nunavut Development Corporation and located in Rankin Inlet. It is federally approved by CFIA for processing of arctic char and caribou. Char is supplied from local sources and from small plants in Chesterfield Inlet and Whale Cove. The plant is also certified for sales to European Union markets. The majority of sales are to markets outside of Nunavut. The plant had total sales of \$1,468,749 in 2004. Operating subsidies in 2001 were 46% of total sales in that year.

Current production:	Char sales - \$92,931 (2001) Caribou sales - \$691,916 (2001)
Commercial Quota:	Char – regional quota of 193,820 (2000) Caribou – 6,000 animals (Southampton Island harvest) Under TAH system, there will be no TAH recommended for the Southampton Island harvest
Current Harvest:	Char harvested (2000) – 31,890 (16% of regional char quotas) Caribou harvest (2001) 3,636 animals (61% of allowable quota) Nunavut Wildlife Harvest Survey data: - Char: 1,582 char harvested annually from Rankin Inlet (estimated edible yield of 3,955 kg)
Availability:	Wildlife Officer survey: caribou somewhat available for Coral Harbour and Rankin Inlet; char somewhat available for Rankin Inlet

- Products:** KAF is the major producer of caribou products in the region, and of char. Caribou is sold mostly for export. Relatively small amounts sold locally and to other Nunavut communities
- Freight Rates:** To Iqaluit \$1.99/kg, (country food rate)
To Cambridge Bay \$1.78 (country food rate)
- Market Demand:** Caribou products are in high demand, within Nunavut and supply lags behind demand. There is also potential for increased sales of char products.
- Existing Infrastructure:** Commercial processing facilities and freezers.
- Requirements for Development:**
- Potential enhancement of role as regional processor while ensuring all meat brought into plant meets CFIA requirements.

Qikiqtani Region

There is a considerable amount of trade in arctic foods in the Qikiqtani region, although a great deal of it operates on an informal, exchange basis. Their primary trade links within the region are from other communities into Iqaluit. For example, currently char is shipped from Clyde River, Pangnirtung and Qikiqtarjuaq to Iqaluit, as well as from Cape Dorset and Kimmirut. Maktaaq is shipped from Arctic Bay, Clyde River and Qikiqtarjuaq to Iqaluit. There has been discussion and recommendations over the years for a central storage and processing facility in Iqaluit, but this has recommendation has never been implemented.

Longer-term Opportunities

There is interest in all the east Qikiqtani communities north of Pangnirtung – Qikiqtarjuaq, Clyde River, and Pond Inlet – in establishment or expansion of a commercial fishery. Qikiqtarjuaq is currently having a feasibility study done for a fish processing/storage facility. This is based on its allocation of the turbot quota and would be primarily for export. It is important that a coordinated, longer-term development approach be taken to this potential development to develop a rational system of harvesting, processing and distribution based on real market demand.

Current Opportunities

1. Hall Beach Fish Processing Plant

The HTO in Hall Beach is proposing to develop a fish processing plant to supply the local and Iqaluit markets. A pre-feasibility study has been prepared for the project⁵² although the initial results are not positive.

Commercial Quota:	32,000 kg
Current Harvest:	Nunavut Wildlife Harvest Study data: - 4,826 char harvested annually (estimated edible weight of 12,065 kg)
Target Harvest:	13,605 kg from nearby lakes
Availability:	Wildlife Officer survey: char always available, although quality not a high in summer months
Products:	Whole frozen char; fillets, smoked char, steaks
Price:	\$3.30 to \$3.75 per kg whole char; \$22.05 per pound smoked char fillets; price in Iqaluit \$8,00 per kg whole and \$20/kg smoked
Freight Rate:	\$2.22/kg (country food rate)
Market Demand:	Iqaluit: high, unfulfilled demand for value-added products such as vacuum packed filets
Existing Infrastructure:	community freezer needs retrofit
Community Benefits:	employment: 4 employees, 30 weeks per year; payments to fisherman for char harvested

Requirements for Development:

- Approval and certification from Department of Health and Social Services, GN, and from CFIA (for products to be exported) for sales to fish plant in Iqaluit
- Consistency of supply
- Research and development in value-added products
- Training to ensure quality and process control
- Packaging to ensure quality
- Retrofit of community freezer
- Construction of processing plant (estimated \$200,00)
- Purchase of processing equipment (estimated \$84,000)

⁵² Market Assessment – Hall Beach Fish Processing Plant.

- Business and management training and management support for HTO
- Explore potential linkage to a centralized Iqaluit processing/distribution center

2. Pangnirtung Fisheries Ltd.

Pangnirtung Fisheries Ltd. Processes turbot and char for primarily export market. Local sales comprise a relatively small proportion of total sales. Nunavut Development Corporation is majority owner along with Cumberland Sound Fisheries that holds a minority position. Operating subsidies in 2001 were 16% of sales.

Current Production:	Turbot sales: \$1,447,396 (2004) Char sales: \$250,000 (2004) 85% of total sales are turbot, 15% char
Commercial Quota:	Winter quota (char): 33,333 kg Summer quota (char): 36,281 kg Pangnirtung utilized about 27% of char quotas assigned to Pangnirtung, Qikiqtarjuaq
Current Harvest:	Winter harvest: 4,535 kg Summer harvest: 11,337 kg
Availability:	Wildlife Officer Survey: char is always available
Products:	Almost all production sold for export outside Nunavut. This is the case with turbot, and only 4% of char production is sold locally
Freight Rate:	To Iqaluit - \$1.42/kg
Market Demand:	There is existing demand in Iqaluit for value added char products, such as smoked char and char jerky. These are not currently produced by Pangnirtung Fisheries
Existing Infrastructure:	Commercial processing and storage facilities
Community Benefits:	The plant employs over 65 people during peak season.
Requirements for Development:	<ul style="list-style-type: none">• Potential enhancement of its role as a regional fish processor and distributor and its relationship with future development of other Qikiqtani communities on the east shore of Baffin Island.

3. Igloolik Meat Processing Plant

The Hamlet and HTO in Igloolik are proposing the development of a meat processing plant to supply local and Iqaluit markets with caribou, as well as seal, narwhal, beluga whale and walrus.⁵³

Commercial Quota:	Current caribou quota – 570 (N.E. Mainland herd): commercial quota available subject to approval; new TAH system: no specific TAH recommended Seal: commercial harvest available Narwhal: no commercial quota available Beluga whale: no commercial quota available Walrus: no commercial quota available
Target Harvest:	Caribou: 40 animals, 2902 kg Walrus: 25 animals, 5675 kg Beluga/Narwhal: 25 animals, 4535 kg Seal: 90 animals, 2041 kg
Availability:	Caribou: hunters travel 9 hours to herds Wildlife Officer survey: all species are somewhat available
Products:	Igunaq, frozen walrus, fresh and frozen seal meat, caribou steaks and roasts, maktaaq and whale meat; value added products: smoked meat, jerky, sausages
Price:	Igunaq: \$6.62 per kg Caribou: \$3.31 to \$3.75 per kg; sells in Iqaluit for \$7.00 per kg Maktaaq: \$7.72 per kg Seal: \$2.21 per kg
Freight Rate:	To Iqaluit - \$2.22/kg (country food rate) To Pangnirtung - \$3.60 (country food rate) To Rankin Inlet - \$3.34 (country food rate) To Cambridge Bay - \$3.93 (country food rate)
Market Demand:	Walrus: igunaq locally and to other communities in Nunavut; fresh walrus meat to Iqaluit, but needs market development; Caribou: high demand in Iqaluit for caribou, no competition from eastern Qikiqtani Maktaaq: Iqaluit, very high demand Seal: Iqaluit, although market is small and freight rates higher than eastern Qikiqtani; needs market development

⁵³ Market Assessment – Igloolik Meat Plant

Existing Infrastructure: Freezer and processing plant – in need of some repair

Community Benefits: 6 employees, 30 weeks; payments to hunters

Requirements for Development:

- Approval and certification from Department of Health and Social Services, GN, and from CFIA for sales to fish plant in Iqaluit consistency of supply; may not obtain CFIA approval for walrus
- Address disposal of waste
- Testing of walrus meat, including mercury and other metal analysis
- Consistency of supply
- Research and development in value added products
- Training to ensure quality and process control
- Approvals for commercial quotas
- Packaging to ensure quality
- Construction of processing plant (estimated \$250,000), utilizing existing community freezer
- Purchase of processing equipment (estimated \$76,000)
- Business and management training management support for HTO
- Explore linkage to possible establishment of central processing/distribution facility in Iqaluit

4. Kimmirut Caribou Processing

The HTO in Kimmirut was active up to 10 years ago producing caribou sausages, which were had significant sales in Iqaluit. This was mentioned frequently in the market interviews, and there is a high demand in Iqaluit for caribou products of this type. There are existing processing and storage facilities in Kimmirut.

Current production: None

Commercial Quota: Commercial quota for South Qikiqtani (2001): 411 (100 in Kimmirut, 200 Cape Dorset, 100 Iqaluit)

Current Harvest: No commercial harvest currently; previous commercial harvest conducted for processing of caribou, production of sausages, etc. Nunavut Wildlife Harvest Study data:
- 284 caribou harvested annually (estimated edible weight of 1,136 kg)

Availability: Wildlife Officer survey – caribou somewhat available

Products: Caribou cuts, value added products, particularly sausage

Freight Rate: To Iqaluit - \$.84/kg (country food rate)

Market Demand: Iqaluit: high demand for caribou meat, and high demand for caribou sausages last produced in Kimmirut 10 years ago

Existing Infrastructure: Community freezer, processing facilities, possible facilities for processing (empty buildings etc.) and possible use of Northern or Coop facilities

Requirements for Development:

- This potential opportunity needs to be explored more examined.
- Need to explore potential linkage to possible establishment of centralized processing/distribution facility in Iqaluit.

Section 7: Other Models for Development

The following section provides an overview of efforts made within other Inuit regions to establish commercial arctic food production enterprises. These short case studies provide insight into how other efforts to develop the sector have fared and draw particular attention to key challenges that have limited their success.

Nunavik

The experience of commercial intersettlement trade in arctic foods within Nunavik has not been a great success story. Initial efforts at establishing commercial arctic food production began with an ambitious strategy in the 1980's to establish abattoir/freezer units in four communities to process caribou. The strategy proposed that harvesters would harvest caribou from several different herds and bring back the carcasses to the plants for processing. The company received a Quebec government permit to cull 1,800 caribou from the huge George River herd that migrates across the northern regions of Nunavik.

The local Hunter, Fisher and Trapper Organizations (HFTAs) would then purchase some of the product for local consumption with the bulk of the product going to hotel and restaurant clients in southern Quebec, Canada and internationally. The objective of the strategy was to establish a successful business that would provide employment and income, increase the availability of arctic foods and increase the cash flow within the region. During harvest, the industry provided six weeks of work for 40 people, in addition to longer-term jobs.

A number of problems limited the success of the operation. High freight and operating costs, coordination of harvesting and inspection teams, management issue and weather were all challenges that had to be addressed each year. For example, to get hunters, butchers and Agriculture Canada meat inspectors up to mobile camp was costing \$20,000 to \$30,000. In addition, the operation was achieved without ongoing subsidies. Several critical problems arose however that eventually caused the four plants to be closed down in 1996.

Under the James Bay and Northern Quebec Agreement, HFTAs were provided with funding to conduct community harvests to help feed communities. The funding included payment of hunters for each caribou they harvested. The level of pay for these harvesters was higher than what the community plants were paying for their caribou. As a result, the best harvesters often would take the caribou carcasses to the HFTA. This situation exacerbated the other problems facing the plants and limited the number of caribou that could be processed thus increasing the per unit cost of the operation.

Other problems included allegations of improper waste disposal at the Kangiqsualuuaq plant and concerns that harvesters were taking caribou from populations other those identified in the harvesting license. At one point the provincial government reduced the quota by half. After several years of operation, structural problems were found in the plants due to their design. With an estimated \$.5 million cost of addressing these problems, a decision was made to close the plants down.

Nunavik Arctic Foods continues to produce caribou products such as smoked caribou, caribou bourguignon, pâtés, and sausages. In 2001, it was awarded the "Agri-food Award.". The majority of the market and processing for these products occurs in the south.

Currently there are a number of intersettlement trade activities taking place in the region. The majority of these involve exchanging products in kind between individuals and communities. Some small amounts of char are sold to local hotels but the supply is irregular both in amounts and quality. Value-added products such as smoked char and *nikkuk* (dried caribou) are in big demand. The vast majority of trade in these products is done informally and in kind.

During the interview with the manager of Nunavik Arctic Foods, he suggested that any effort to establish commercial intersettlement trade in arctic foods be based upon solid business principles and not rely upon subsidies to support the endeavour. He felt that if the project won't work without subsidies, it has a much higher chance of failure. He acknowledged that there could be a need to provide some sort of subsidy initially for such expenses as air freight and suggested that the GN might talk to the federal government about expanding the food mail program.

He also suggested that portable abattoirs could be constructed in 40-foot containers that were designed to meet the necessary regulations. These would be portable and could be moved from community to community to take advantage of resource availability. The container could be backed up to a community freezer and thus have a processing line that would more easily meet the required standards. He suggested that the cost of such units should be under \$100,000. Taking advantage of back haul sealifts could reduce some of the costs.

Sachs Harbour Muskox Harvest

The largest commercial harvest of muskox in Canada takes place on Banks Island. Managed by the Inuvialuit Regional Corporation and the Sachs Harbour HTO. The quota for the harvest is

10,000 although actual numbers of animals harvest average far below that number ranging between 1,500 and 250 for the years 1997-2003.

Muskox are herded by snowmobiles into corrals and then harvested in field abattoirs where they are inspected by Agriculture Canada inspectors and veterinarians. Once the carcasses are processed initially, they are sent to be hung by a rail outside to be flash frozen. The next phase of the operation involves cutting the carcasses into “primals” (major sections) packaged and shipped south to a processing facility in Edmonton where the meat is further processed into final cuts and packaged for distribution. Virtually all the meat is sent to markets in the south although some sales are made within the region primarily to restaurants and hotels. In terms of market choice, caribou is the most popular arctic meat by a significant margin. Muskox jerky is a very popular value-added product.

There has been some controversy over the harvesting methods employed during the harvest. The stress levels of the penned animals tend to make the meat tougher than those harvested by more traditional methods. IRC has worked with researchers to develop ways of reducing the stress on the animals prior to harvesting and aging methods to provide a tenderer product.

In regards to local market development, the focus of the enterprise is export from the territory. One person interviewed indicated that Inuit have a much higher preference for caribou than muskox although there is a good market for value-added products such as jerky and sausage.

Labrador

As in other Inuit regions, interest in the commercial development of arctic foods in Labrador was based upon the need to develop local economies, reduce unemployment and the availability of abundant resources.

Commercial harvesting of caribou began in Labrador in 1985 with a modest but successful harvest. The meat from this harvest was sold within Labrador. Encouraged by this early success, the Labrador Inuit Development Corporation (LIDC) obtained a permit to expand the harvest for sale within the province. The initial market reaction to the product was very positive. The lack of adequate freezer space and processing facilities limited the economic impact of the harvest and LIDC sought funding to build a new facility. In 1987, a new plant was built as an extension of the existing fish plant.

The plant processed about 80 caribou a day, working double shifts and overtime. In 1988 the total production was for 1,500 (10,000 kg. of federally inspected meat for export out of the province and 50,000 kg. for sale within the province). The meat is being sold on average for about \$1.25 per kg in the province, and for about \$2.25 per kg outside the province.

Coordination and capacity problems would cause a halt to the hunt if the plant began to back up. Harvesters were selected from all five Inuit communities on the coast. A total of 100 people were employed during the peak harvesting season. This employment was particularly important as it

occurred during the period of highest unemployment in the region. The discovery of serious structural problems caused the plant being built on reclaimed land forced the closure of the plant in 1992.

Elements of a Model for Development

An important element in the interviews conducted for this study was the perspective of the interviewees regarding the model of development that should be established to pursue commercial intersettlement trade in arctic foods within Nunavut. The people who responded to this question came from a wide range of key sectors involved in arctic foods development including representatives from the Government of Nunavut's Department of the Environment, the Department of Economic Development and Transportation and the Department of Health and Social Services. As well a number of representatives from the non-profit sector and the private sector offered their recommendations regarding the more effective model of development for commercial intersettlement trade in arctic foods.

Despite the wide range of perspectives, backgrounds and responsibilities of the interviewees, there were several important fundamental elements common to the vast majority of them. These key elements form the basic structure of the model of development.

Two-Tier System

There was near unanimity regarding the basic structure of the model – essentially a two-tier system that provides a supply and distribution integration strategy. The model focuses supply and basic processing in a select number of communities that feed into a centralized processing, packaging and distribution in a primary regional centre.

This system capitalizes on the strengths and opportunities that have been identified above. Several communities have access to adequate, reliable and sustainable population of food species that are in demand. In addition, these communities have the basis infrastructure (albeit in likely need of upgrading and repair), a skilled harvesting workforce, and have already established some either formal or informal commercial trade links in arctic foods. The model seeks to capitalize on these existing factors to enhance the likelihood of success while also acknowledging that important steps must be taken to ensure these selected communities have the financial, business, infrastructure, and human resource training support needed.

These communities would benefit from increased employment through the harvesting of the food species, the initial basis processing and packaging of the product, and the overall management of the harvesting and butchering process. It should be noted that there is an assumption that these communities would place a priority on serving local and near-regional commercial needs after which food products could be forwarded to a larger regional facility.

Given a number of important constraints, a centralized processing, packaging and distribution centre provides the most logical economic choice in terms of bringing the semi-processed product from the smaller producer communities to market. A centralized plant would take advantage of a number of important cost factors including lower freight rates from producer communities, better access to management and skilled human resources, cheaper construction costs, proximity to major Nunavut markets for arctic food products, and provide a more solid economic rationale for building a large storage facility to serve the region.

It should be noted that every effort should be used to utilize existing facilities such as the NDC plants in regional centres where possible. At the same time, it needs to be recognized that CFIA regulations require that any meats entering these plants must also come from CFIA approved sources. Some flexibility does exist if a plant chooses to suspend its license to process non-approved product. The plant would have to complete a thorough cleaning and remove any non-approved product and equipment from the plant prior to an inspection and re-instatement of the license. Any new infrastructure constructed to support commercial trade in arctic foods must be developed within the context of how it fits in with the regional and territorial supply and distribution strategy. As well, opportunities to joint venture with existing private arctic food processors should be explored as a potential means to gain management and business experience while establishing the infrastructure required.

This two-tier approach was widely supported by those interviewed. However individual interviewees made a number of important points:

- It must be a sustainable venture both in terms of the resource it will depend upon and from the economic perspective. There was unanimity in regards to the fundamental priority of subsistence use over commercial harvesting.
- It must be demand driven. Without a distinct and health market for the products, it would be folly to establish such a facility.
- As the infrastructure and capacity develops within certain supplier communities, a further process of decentralization could occur where a greater degree of processing could take place at the community level.
- Each product harvested at the community level should be identified (scanned) at the harvesting site, sent for initial processing, scanned again as it moves through value-added process in the central facility and tracked through the shipping processes all the way to the consumer.

Support Mechanisms

Among those interviewed it was generally agreed that continued subsidization of freight rates for fish (GN) and for arctic foods (airlines) is essential. A number of people suggested that the Government of Nunavut should expand its freight subsidy to include all arctic foods shipped between communities in Nunavut. There were also suggestions that the freight subsidy program

be easier to access for smaller producers and that the turnaround time for repayment be shortened.

In addition, a number of people suggested that the Government of Nunavut ask the federal government to review the federal food mail program to determine if it can be restructured to cover the shipment of healthy foods (arctic foods) between communities at the reduced rates that are currently being used for shipping in healthy foods from the south.

A small number of people suggested that the GN assume responsibility for marketing of the arctic foods. This would include ads in the newspapers, posters, promoting arctic foods at events such as the Nunavut Trade Show, and providing local consumption via radio shows, tent cards on restaurant tables etc. A suggestion was made that very little promotion was required – that word of mouth and a local radio announcement would be sufficient to let the market know about the availability of arctic foods and at a very low cost.

Most community freezers and processing plants have struggled to pay operating and maintenance costs, and many are currently not operating for this reason. In particular, hydro costs have gone up substantially over the past year across Nunavut placing a strain on the ability of the operators to keep up with the costs. There was a significant recognition of the fact that these facilities would likely need, at a minimum, several years of operating and maintenance subsidies to help them become established. Several people suggested that this subsidy be made ongoing.

There is currently no Government of Nunavut policy towards supporting commercial intersettlement trade in arctic foods. A strong supportive policy is needed that clearly states the intention of the GN to support this sector, along with integration of integrate existing policies and programs into a coherent, cohesive strategy, and the subsequent development of new policies and programs that would set in place the supports necessary to encourage and promote the consumption of arctic foods in Nunavut. Local control and accountability and sharing benefits with communities should be key pillars of this policy.

Section 8: Conclusions and Recommendations

Conclusions

The interviews and surveys that provide the basis for this current review of commercial intersettlement trade in arctic foods indicate that there is a strong overall market demand for arctic foods, most particularly in the regional centers. This market demand provides a solid basis for future development within the arctic foods sector. The greatest demand within Nunavut markets is for char and caribou products, with significant demand also for muskox and maktaaq a number of value-added products most importantly jerky. There is less but significant demand for food products from seal, turbot, shrimp and walrus.

There is also a solid wildlife resource base to support intersettlement trade. Generally ongoing harvesting for commercial purposes is well below the commercial quota levels. For example, the caribou harvest in Southampton Island was utilizing in the range of 60% of the commercial quota, and the most recent recommendations from the Department of the Environment are that no specific Total Allowable Harvests need to be specified for caribou because current information suggests that harvesting is not a primary cause of the fluctuations in population numbers. The most recent muskox harvest around Cambridge Bay utilized 25% of the commercial quota. In the Kivalliq, the processing of char by Kivalliq Arctic Foods Limited, the main processor in the region, was utilizing about 4% of the total commercial char quotas in the region.

There has been significant development of intersettlement trade since the major development initiatives of the 1980s, when infrastructure development was supported in most communities of Nunavut. Arctic foods are an essential and important element of people's diets, and a critical source of income for people in all communities. At the same time, the overall levels of growth predicted over the years for this trade remain an elusive goal. Many of the same issues and constraints identified over the years are still having a major impact in limiting opportunities for

development within the sector. Overall, the harvesting, processing, distribution and sale of arctic foods within Nunavut remain a highly subsidized endeavour. Operating subsidies are required from NDC to support the continued operation of its three main processing facilities. Additional subsidies are provided through support programs for harvesters, for the operation of community infrastructure, and through ongoing subsidies for the cost of transporting fish between communities.

Despite the ups and downs experienced over the years, the development of arctic foods remains a key element of life, livelihood and economic development for Nunavut. The Nunavut Economic Development Strategy emphasizes the maintenance of the mixed economy, based on small scale commercial harvesting, as a key goal for development. While the long-term goal for development of intersettlement trade must be the operation of self-sustaining, viable, community-based enterprises, there are a number of essential elements that define the context in which this development will occur.

First, subsistence use of wildlife resources must always have priority over commercial development of these resources. Biologists emphasize that caution must be continually exercised in the development of wildlife resources since any commercial development contributes to modifications in harvesting. Also, the need for viability could at some point in time, if economic pressures for viability and profitability increase, place undue pressure for increased harvesting levels on vulnerable species. Although this latter concern has not been a problem to date in the development of the sector, with harvesting levels well below commercial quota levels, it could become an issue at some point in the future.

Secondly, subsidization of infrastructure, operations and distribution will remain an essential element of intersettlement trade for the foreseeable future, and ongoing efforts are made to achieve a more self-sustaining level of operations. Subsidies for transportation costs will have to be maintained and quite likely increased. Initiatives must be pursued to reduce the dependence of larger and smaller processing facilities on operating subsidies, but this will take time. The government will continue to have a key role in this. In addition, the government will have a critical role in the development of clear policies in relation to the development of commercial intersettlement trade, and in the development of programs focused more directly on the needs for development of commercial intersettlement trade.

Community-based harvesting, and where appropriate, community based processing, will always be the foundation for intersettlement trade in arctic foods, and the role of HTOs are essential to the success of any system of intersettlement trade. For this to work effectively, additional resources must be available to the HTOs, along with ongoing provision for training in business management and food handling and processing for HTOs and private businesses to develop capacity at the community level. At the same time, central processing, storage and distribution facilities in regional centers may be essential in providing current management capability and economies of scale. In many cases, a two-tier system of harvesting and initial processing at the community level, integrated with regional facilities, will be appropriate. The Nunavut Development Corporation will have a key role to play in further development of a coordinated approach in this area.

Based on the experience within Nunavut, and reflecting the experience for development of arctic foods within Nunavik and other Inuit areas of the north, initiatives for the construction of major new processing and distribution facilities in each region of Nunavut cannot provide a foundation for success. Development will have to be based on current organizational realities, and on improving its overall viability. The one exception may be in the establishment of additional regional facilities in Iqaluit, which need to be coordinated with rather than compete with existing plants in place in the region. Revitalization of processing facilities at the community level will be essential, but should be undertaken cautiously and with an eye to overall coordination.

Future development of intersettlement trade must be demand-led. This report begins with a consideration of market demand, and this must be the basis for future development. There are a number of significant areas for demand identified in this report in relation to the retail and hospitality markets, as well as some opportunities within the institutional market, including opportunities for the further development of value-added products. Market development initiatives must include promotional efforts in relation to healthy eating, and to the promotion of increased consumption of arctic foods within the younger population.

In terms of the supply of arctic foods for commercial intersettlement trade, the key limiting factor is the availability and stability of the supply of arctic food products. In addition, price levels and consistency of quality have a significant impact in currently limited expansion of intersettlement trade and must be addressed. Centralized processing and storage facilities, transportation subsidies, and inspection standards all have a role to play in addressing these needs in relation to supply of arctic food products.

Finally, it was clearly recognized by many of those interviewed, that much of the current intersettlement trade is carried out by individual harvesters and HTOs responding to ongoing requests for small quantities of arctic foods from individuals, HTOs and businesses in other communities. Within the scope of this study, it is not possible to quantify or investigate in detail this aspect of intersettlement trade due to its largely informal nature. However, this is a viable and important element of the trade between communities, and must be supported through appropriate policies and initiatives. Initiatives for increased intersettlement trade must be viewed as part of an overall strategy for supporting the mixed economy, which work in conjunction with initiatives directed at the development of craft and carving production, at the utilization for commercial purposes of other parts of animals harvested, and at the reduction of restrictions imposed by Marine Mammal Protection Act and other similar legislative barriers to export trade.

The conclusions outlined in this section provide the base for specific recommendations outlined below. While recommendations are presented on specific development initiatives, the most important recommendations address the need for the government and other key players to make fundamental decisions about the basic direction for future development. The government must take a leadership role, renewing its vision and, through consultations with communities and with community and regional organizations, establishing clear directions and policies for development of commercial intersettlement trade. The government must decide on the fundamental purposes underlying development of intersettlement trade. An approach based purely on economic realities will be different than a tempered approach that takes into account social and community realities and benefits. There are no quick fixes available. Progress must be made based on the

current community and organizational structures, and on the significant, if partial, successes achieved to date in the development of intersettlement trade.

Recommendations

Context for Future Development

1. That the development of commercial intersettlement trade in arctic foods be identified by the Government of Nunavut as a key policy goal within the overall context of maintaining the mixed economy for Nunavummiut who divide their time between wage-based and land-based activities.
2. That the Government of Nunavut promote enhanced coordination among departments in relation to the development of commercial intersettlement trade in arctic foods, including policies and programs for business development, training and income support.
3. That access to wildlife resources for subsistence purposes always be safeguarded as a first priority over the commercial utilization of wildlife resources for intersettlement trade.
4. That development and marketing efforts for increased intersettlement trade in arctic foods operate within the limits imposed by a conservative, cautionary approach ensuring the maintenance of sustainable yields from wildlife resources.
5. That the Government of Nunavut recognizes through its policies the need for continued support of existing regional and community infrastructure essential for intersettlement trade activities as progress is made towards eventual self-sustainability.

Directions for Future Development

6. That initiatives for the development of intersettlement trade be demand-led in order to enhance their likelihood of long-term success and sustainability.
7. That any major initiatives for construction or enhancement of infrastructure be considered within the context of their contribution to improving the overall viability of the arctic foods sector.
8. That future development of intersettlement trade be based, where appropriate, on a two-tier system of harvesting and initial processing in communities, linked to regional facilities providing further processing, storage and distribution capacity.

Roles

9. That the Government of Nunavut focus on a role in relation to the development of commercial intersettlement trade of providing overall policy direction, defining the regulatory environment, undertaking critical research, and providing support programs where required.
10. That the Nunavut Development Corporation consider adopting a coordinating role in relation to the development of commercial intersettlement trade of working with other organizations to improve overall coordination and rationality in distribution activities, and on potentially improving the viability of their existing operations through support for the development of more value-added processing and taking a lead in marketing and market development of arctic food products.
11. That new development initiatives designed to increase commercial intersettlement trade in arctic foods be coordinated with the plans and activities of NDC-owned processing, storage and distribution facilities.
12. That the HTOs continue to play a key role at the community level in the development of arctic foods, including regulation of harvesting at the community level and initial response and coordination of development initiatives related to commercial intersettlement trade.
13. That the Government of Nunavut work with other agencies to promote the development of skills and capacity for the greater involvement of private entrepreneurs in arctic food operations.
14. That the Government of Nunavut and NTI coordinate their activities and programs in support of individual harvesters who may be involved in commercial intersettlement trade.

Specific Support Measures

15. That the Government of Nunavut, through the Nunavut Development Corporation, continue to subsidize the operations of regional processing and storage plants, with the goal of enhancing their role as regional processing, storage and distribution facilities serving the needs of community arctic food operations, working towards a longer-term goal of self-sufficiency.
16. That the needs within communities for enhancement of organizational capacity and individual skill levels be addressed through the provision of ongoing training programs in management, business operations, and in food processing and handling as required.
17. That the Government of Nunavut work with NTI and other organizations to increase the financial resources available for the operation of HTOs to enhance their effectiveness in relation to the development and operation of commercial intersettlement trade activities.

18. That the Government of Nunavut investigate extending the current subsidy for the transportation of fish products within Nunavut to help offset the high costs of transportation of other arctic foods products within Nunavut.
19. That the Government of Nunavut encourage all airline carriers operating within Nunavut who do not presently offer a country food rate to provide such a special discounted rate for the transport of arctic food products.
20. That the Government of Nunavut begin negotiations with the federal government to expand the food mail program to include the shipment of arctic foods within Nunavut.
21. That the Government review its support programs for harvesters to determine how their impact can be improved in relation to the needs of harvesters involved in commercial intersettlement trade in arctic foods.

Promotion

22. That the Government of Nunavut develop, in conjunction with Nunavut Development Corporation, specific marketing support programs oriented to organizations involved in intersettlement trade, including the development of information and promotional materials.
23. That the Government of Nunavut develop policies and provide guidance on the packaging and labeling of arctic foods products sold within Nunavut.
24. That the Government of Nunavut work in concert with other organizations on programs to promote healthy eating including the consumption of arctic foods by the general population and by young people in particular.

Inspection Standards

25. That the Government of Nunavut review and update inspection standards related to arctic foods handling and processing.
26. That the Government of Nunavut consider options to make additional inspectors available to address the needs of the arctic foods sector for compliance with health standards, and promote training of Nunavut residents in meat and fish inspection to increase the number of resident inspectors.

Specific Development Initiatives

Longer-Term Initiatives

27. That adequate resources be made available to support ongoing assessment of resource development opportunities related to intersettlement trade in arctic foods, including longer-term opportunities identified for:
- Potential development of wildlife resources in Kugluktuk for local use and for intersettlement trade;
 - Potential development of cod stocks in western Hudson Bay for local use and for intersettlement trade;
 - Potential development of mussel stocks around Whale Cove for local use and for intersettlement trade;
 - Potential development of mainland caribou and muskox populations in the Kivalliq region.

Current Opportunities

28. That further development of the processing plant at Gjoa Haven be investigated for the sale of char, muskox and caribou to Kitikmeot Foods Limited, including the need for CFIA approval for sales of muskox and caribou to the KFL.
29. That the production of value-added char products in Repulse Bay as a feeder plant to Kivalliq Meat and Fish Limited be investigated to overcome the barrier of high freight rates to Rankin Inlet⁵⁴.
30. That revival of the muskox harvest around Cambridge Bay be a priority to provide a local supply of muskox to Kitikmeot Foods Limited.
31. That development of additional markets within Nunavut be investigated for Kivalliq Arctic Foods Limited supported as required by additional harvest levels of caribou from Southampton Island.
32. That the feasibility of a centralized processing, storage and distribution facility in Iqaluit be investigated, with the option of establishment as a joint venture with the existing privately-owned processing facilities for arctic foods in Iqaluit.
33. That a coordinated approach be taken to the development of fishery resources to supply the Nunavut market in the communities of Qikiqtarjuaq, Clyde River and Pond Inlet on the east coast of Baffin Island, and that the option of supplying Nunavut markets through Pangnirtung Fisheries or a centralized distribution facility in Iqaluit be investigated.
34. That development of the meat processing plant in Igloolik be investigated including the option of acting as a feeder plant to a centralized distribution facility in Iqaluit.
35. That the development of a fish processing plant in Hall Beach be investigated including the option of acting as a feeder plant to a centralized distribution facility in Iqaluit.

⁵⁴ The central regional facility would be used as a storage and distribution centre for other Kivalliq communities.

36. That the establishment a laboratory in Nunavut to support the arctic food trade be investigated. This lab would be used primarily to expedite the inspection of food samples within the territory.
37. That investigations be conducted to explore the feasibility of establishing a high-efficiency storage freezer for Iqaluit to provide a critical element in the infrastructure needed to support the commercial arctic food sector.
38. That a feasibility study be conducted to consider the feasibility of developing a mobile 40' container/processing line for arctic foods as a pilot project.

Implementation Plan

Policy Development

Action	Responsibility	Timing	Potential Cost
Identification of intersettlement trade as a key policy goal for the Government of Nunavut	Cabinet	End of fiscal 2006	
Policy development initiatives to coordinate government policies and programs for business development, training and income support to complement government policies in relation to the commercial arctic food sector	Departments of Environment, Economic Development and Transportation, Education	End of fiscal 2006-07	

Consultation

Action	Responsibility	Timing	Potential Cost
Consultations on intersettlement trade strategy with NDC management and Board	Departments of Environment, Economic Development and Transportation	End of 2006	
Consultation on intersettlement trade strategy with HTOs	Departments of Environment, Economic Development and Transportation	End of 2006	
Consultation on intersettlement trade strategy with NTI, Regional Inuit Organizations, and regional Inuit training organizations	Departments of Environment, Economic Development and Transportation, consultant	End of fiscal 2006-07	\$30,000

Support Measures

Action	Responsibility	Timing	Potential Cost
Meetings with Department of Education, NTI Implementation Department, and regional training organizations to address strategy for delivery of training programs to HTOs and other community organizations and businesses involved in commercial intersettlement trade of arctic foods	Departments of Environment, Economic Development and Transportation, Dept. of Education, Kakivak Association, Kivalliq Partners in Development, Kitikmeot Economic Development Commission, others, consultant	End of 2007	\$35,000
Meet with NTI Wildlife Department and Implementation Department, NWMB, and Department of Economic Development to address resourcing issues related to HTOs	Departments of Environment, Economic Development and Transportation, NWMB, NTI,	End of 2006	
Investigate options for extending the current transportation subsidy to all arctic foods transported within Nunavut	Departments of Environment, Economic Development and Transportation, consultant	End of 2006	\$30,000
Meet with Calm Air to discuss establishment by the airline of a country food rate similar to other airlines operating in Nunavut.	Departments of Environment, Economic Development and Transportation	End of summer 2006	
Meet with representatives of Indian Affairs and Northern Development to discuss extension of the federal Food Mail Program to the shipment of arctic foods within Nunavut.	Departments of Environment, Economic Development and Transportation	End of fall 2006	
Review, in conjunction with NTI Department of Wildlife, all programs for support of harvesters in	Departments of Environment, Economic	End of fiscal 2005-06	

Nunavut in consideration of extending supports to meet the specific needs of harvesters involved in commercial arctic food production.	Development and Transportation		
Conduct a feasibility study to consider the feasibility of developing a mobile 40' container/processing line for arctic foods as a pilot project.	Department Economic Development and Transportation, consultants	End of fiscal 2008	\$50,000

Promotion

Action	Responsibility	Timing	Potential Cost
Meet with Nunavut Development Corporation management to discuss strategies for promotion of arctic foods, including production of promotional materials.	Departments of Environment, Economic Development and Transportation, NDC	End of fiscal 2006	
Meet with ITK, Department of Health and Social Services and other organizations to discuss strategies for promotion of healthy eating including programs for eating of arctic foods by youth	Departments of Environment, Economic Development and Transportation, ITK, DHSS	End of fiscal 2007	

Food Handling and Inspection Standards

Action	Responsibility	Timing	Potential Cost
Review policies and guidelines and the inspection standards on handling, processing and packaging of arctic foods.	ED&T, DHSS	End of fiscal 2007	
Develop options for making more inspectors available for arctic foods processing facilities	ED&T, DHSS	End of fiscal 2009	
Develop strategies for the education and training of additional, Nunavut-based inspectors	ED&T, DHSS, consultant	End of fiscal 2009	\$30,000
Investigate the establishment of a laboratory in	ED&T, DHSS, consultant	End of fiscal 2008	\$30,000

Nunavut to support the arctic food trade be investigated.			
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Longer-term Development Initiatives

Action	Responsibility	Timing	Potential Cost
Strategy for supporting assessment of development opportunity in Kugluktuk	Departments of Environment, Economic Development and Transportation, consultant	2005-2010	\$40,000
Strategy for supporting assessment of development opportunity related to cod stocks in western Hudson Bay	Departments of Environment, Economic Development and Transportation, consultant	2005-2010	\$50,000
Strategy for supporting assessment of development opportunity of mussel stocks around Whale Cove	Departments of Environment, Economic Development and Transportation, consultant	2005-2010	\$50,000
Strategy for supporting assessment of development opportunity related to mainland caribou and muskox populations in Kivalliq region	Departments of Environment, Economic Development and Transportation, consultant	2005-2010	\$50,000

Current Development Opportunities

Action	Responsibility	Timing	Potential Cost
<i>Gjoa Haven</i>			
Pre-feasibility of further development of	ED&T, consultant	End of fiscal 2006	\$35,000

REVIEW OF INTERSETTLEMENT TRADE OPPORTUNITIES FOR ARCTIC FOOD PRODUCTS IN NUNAVUT

processing plant at Gjoa Haven			
Conduct feasibility study, depending on results of pre-feasibility	ED&T, consultant	End of fiscal 2006	\$60,000
<i>Repulse Bay</i>			
Pre-feasibility of development of value-added char products at Repulse Bay	ED&T, consultant	End of fiscal 2006	\$35,000
Conduct feasibility study, depending on results of pre-feasibility	ED&T, consultant	End of fiscal 2006	\$60,000
<i>Cambridge Bay</i>			
Support for re-establishment of muskox harvest at Cambridge Bay	ED&T	On-going	
<i>Rankin Inlet</i>			
Support for development of additional Nunavut markets for Kitikmeot Meat and Fish Limited	ED&T	On-going	
<i>Iqaluit</i>			
Pre-feasibility of establishment of centralized processing, storage and distribution center in Iqaluit	Department of Economic Development and Transportation	End of 2005	\$35,000
Conduct feasibility study, depending on results of pre-feasibility	ED&T and consultant	End of July 2006	\$75,000
Consultation and meetings with NDC, HTO and Iqaluit Enterprises on joint venture opportunities, based on expansion of existing private facilities	ED&T and consultant	End of summer 2006	\$35,000
Develop ownership structure and agreements	“	October 2006	
Complete proposal and approval of funding agencies	“	Dec. 2006	
Development of management and training plan	ED&T and consultant		\$35,000
Tendering, ordering of material and for additional construction	ED&T and consultant	End of summer 2007	Estimated expansion costs for existing Iqaluit facilities, \$1,200,000
Undertake investigations to explore the feasibility of establishing a high efficiency storage freezer for Iqaluit to provide a critical element in the	ED&T and consultant	End of fiscal 2008	\$50,000

infrastructure needed to support the commercial arctic food sector			
<i>East Qikiqtani Fishery</i>			
Consultation meetings with east Qikiqtani communities – Pond Inlet, Clyde River, Qikiqtarjuaq, Pangnirtung, on coordinated strategy for further development of east Qikiqtani fisheries	ED&T, HTOs and consultant	End of fiscal 2005-06	\$40,000
<i>Qikiqtani Maktaaq</i>			
Consultation meetings with communities in Qikiqtani interested in development of intersettlement trade in maktaaq along with other products – Arctic Bay, Pond Inlet, Qikiqtarjuaq, Igloolik and others	ED&T and HTOs	End of fiscal 2005-06	

Section 9: Appendices

Review of Inter-settlement Trade Opportunities for Arctic Food Products In Nunavut

APPENDIX 1: Total and Average Annual Harvests in Nunavut

		Arctic Bay and Nanisivik	Arviat	Baker Lake	Bathurst Inlet	Cambridge Bay	Cape Dorset	Chesterfield Inlet	Clyde River	Coral Harbour	Gjoa Haven	Grise Fiord	Hall Beach	Igloolik
Arctic Char	5 yr. TOTAL	48,944	11,948	1,428	2,905	24,130	35,936	9,091	39,805	19,109	27,096	1,974	26,308	61,911
	5 yr. AVERAGE	9,788.8	2,389.6	285.6	581.0	4,826.0	7,187.2	1,818.2	7,961.0	3,821.8	5,419.2	394.8	5,261.6	12,382.2
Caribou	5 yr. TOTAL	3,752	9,683	6,838	251	2,725	1,373	2,553	1,661	4,458	1,695	190	3,311	7,632
	5 yr. AVERAGE	750.4	1936.6	1367.6	50.2	545	274.6	510.6	332.2	891.6	339	38	662.2	1526.4
Muskox	5 yr. TOTAL	6	7	11	3	76		3			57	31	1	
	5 yr. AVERAGE	1.2	1.4	2.2	0.6	15.2		0.6			11.4	6.2	0.2	
Walrus	5 yr. TOTAL	11	6				143	6	1	59		29	405	667
	5 yr. AVERAGE	2.2	1.2				28.6	1.2	0.2	11.8		5.8	81	133.4
Whale	5 yr. TOTAL	426	555				174	68	99	243		66	42	97
	5 yr. AVERAGE	85.2	111				34.8	13.6	19.8	48.6		13.2	8.4	19.4

		BAFFIN	KITIKMEOT	KIVALLIQ	TOTAL
Arctic Char	5 yr. TOTAL	508,779	178,030	73,316	760,125
	5 yr. AVERAGE	101755.8	35606	14663.2	152025
Caribou	5 yr. TOTAL	40,993	14,725	31,909	87,627
	5 yr. AVERAGE	8198.6	2945	6381.8	17525.4
Muskox	5 yr. TOTAL	76	202	29	307
	5 yr. AVERAGE	15.2	40.4	5.8	61.4
Walrus	5 yr. TOTAL	1,455	0	117	1,572
	5 yr. AVERAGE	291	0	23.4	314.4
Whale	5 yr. TOTAL	2,218	50	1,468	3,736
	5 yr. AVERAGE	443.6	10	293.6	747.2

Iqaluit	Kimmirut	Kugaaruk	Kugluktuk	Pangnirtung	Pond Inlet	Qikiqtarjuaq	Rankin Inlet	Repulse Bay	Resolute Bay	Sanikiluaq	Taloyoak	Umingmaktok	Whale Cove	TOTAL
16,539	17,443	41,417	26,577	134,008	53,165	31,697	7,911	18,875	3,432	37,617	52,464	3,441	4,954	760,125
3,307.8	3,488.6	8,283.4	5,315.4	26,801.6	10,633.0	6,339.4	1,582.2	3,775.0	686.4	7,523.4	10,492.8	688.2	990.8	152,025.0
5,187	1,419	1,823	5,051	8,089	7,774	424	2,947	3,374	76	105	2,392	788	2,056	87,627
1037.4	283.8	364.6	1010.2	1617.8	1554.8	84.8	589.4	674.8	15.2	21	478.4	157.6	411.2	17525.4
		22	28		3		5		35		16		3	307
		4.4	5.6		0.6		1		7		3.2		0.6	61.4
51	12			53	17	19	13	33	23	24				1,572
10.2	2.4			10.6	3.4	3.8	2.6	6.6	4.6	4.8				314.4
102	65	26	3	243	522	89	200	258	136	157	21		144	3,736
20.4	13	5.2	0.6	48.6	104.4	17.8	40	51.6	27.2	31.4	4.2		28.8	747.2

Appendix 2: List of Interviews

Person	Position	Interviewer
Steve Pinkson	Director of Policy Enforcement – Dept. of the Environment	David Boulton
Dale Smith	Food Manager – Northern Store – Cambridge Bay	Helen Tologanak
Jason	Group Home – Cambridge Bay	Helen Tologanak
Angela Butt	Manager, Ikaluktutiak Co-op Retail Store – Cambridge Bay	Helen Tologanak
Jacques Larabie	Manager, Ekaluktutiak HTO – Cambridge Bay	Helen Tologanak
Calvin Schindel	Manager, Kitikmeot Foods – Cambridge Bay	Helen Tologanak
Angela Warner	Manager of Food Services, Baffin Correctional Centre, Young Offenders Facility	David Boulton
Bruce Trotter	Environmental Health Specialist, Dept. Health and Social Services	David Boulton
Larry Gombrel	Canada Food Inspection Agency	David Boulton
Laurie Chan	CINE	David Boulton
Michael Sanagan	Senior Advisor, Monitoring and Evaluation – ED&T	David Boulton
Mitch Taylor	Chief Biologist, Dep. Environment	David Boulton
Mitch Campbell	Biologist, Kivalliq Region, Dept. Env.	David Boulton
Jennifer Sneddon 867) 979-7688	Regional Clinical Dietitian, Baffin Regional Hospital	David Boulton
Neil Greig	Manager, Nunavik Arctic Foods	David Boulton
Bob Long	Manager, Baffin Business Development Centre	David Boulton
Jack Meckling	Arctic Lands Inc. Yellowknife	David Boulton
Bert Dean	NTI Wildlife Dept.	James Arreak

REVIEW OF INTERSETTLEMENT TRADE OPPORTUNITIES FOR ARCTIC FOOD PRODUCTS IN NUNAVUT

Manager	Northern Store, Rankin Inlet	James Arreak
Manager	Wolf's Den Restaurant, Rankin Inlet	James Arreak
Sakiasie Sowdluapik	Sealing Senior Advisor, ED&T	Duncan Cunningham
Dushyenth Ganesan	Senior Advisor, Trade, ED&T	Duncan Cunningham
Sim Akpalialuk	Manager of Community Capacity Building, ED&T	Duncan Cunningham
Nedd Kenny	Manager of Tourism Trade & Export Development, DOE	Duncan Cunningham
Larry Simpson	Senior Advisor Fisheries & Sealing Department of Environment	Duncan Cunningham
Simon Awa	Deputy Minister, Environment	Duncan Cunningham
Rosemary Keenainak	Assistant Deputy Minister, Economic Development and Transportation	Duncan Cunningham
Malachi Arreak	Regional Director, Economic Development and Transportation	Duncan Cunningham
Jim Noble	Executive Director, Nunavut Wildlife Management Board.	Duncan Cunningham
Michael Nowinski	General Manager, Pangnirtung Fisheries	Duncan Cunningham
Simon Inootik	Food plant worker, butcher, Pond Inlet	Duncan Cunningham
Brian Zawadawski*	Nunavut Development Corporation	Duncan Cunningham
Judah Innualuk	Amarok HTO Sec. Manager Iqaluit	James Forth
Scott Drysdale	Northern Meat Manager, Iqaluit	James Forth
John Bens	Arctic Ventures Manager, Iqaluit	James Forth
Doug Lem	Nunavut Catering, Iqaluit	James Forth
Allen McCray	Royal Canadian Legion Manager – Iqaluit	James Forth
Mark Canavan	Elders Centre Restaurant Manager (Cook) Iqaluit	James Forth

REVIEW OF INTERSETTLEMENT TRADE OPPORTUNITIES FOR ARCTIC FOOD PRODUCTS IN NUNAVUT

Jim Currie	Iqaluit Enterprises	James Forth
Tom Demcheson	QWB Executive Director	James Forth
Baba Pedersen	Advisor Arts and Traditional Economy, ED&T Kitikmeot	Fred Weihs
Fred Pedersen	Community Development Advisor ED&T, Kitikmeot	Fred Weihs
Robert Connelly	Manager Community Economic Development, ED&T, Kivalliq	Fred Weihs
Theresie Tungilik	Advisor, Arts and Traditional Economy ED&T Kivalliq	Fred Weihs

*Interviewee preferred to send in written comments.

Appendix 3: People And Organizations That Responded To The Survey

HTOs

Communities from which surveys were received;

Cambridge Bay
Clyde River
Igloolik
Iqaluit
Kimmirut
Kugaaruk
Kugluktuk
Pond Inlet
Rankin Inlet
Resolute Bay

Wildlife Officers

Communities from which surveys were received;

Arctic Bay
Cambridge Bay
Cape Dorset
Clyde River
Coral Harbour
Gjoa Haven
Grise Fiord
Hall Beach
Igloolik
Iqaluit
Kimmirut
Kugaaruk
Kugluktuk
Pangnirtung
Pond Inlet
Rankin Inlet
Repulse Bay
Sanikiluaq
Taloyoak

Retail and Hospitality Markets

Businesses/Organizations from which surveys were received;

Aarraya Development Corp.

Clyde River

REVIEW OF INTERSETTLEMENT TRADE OPPORTUNITIES FOR ARCTIC FOOD PRODUCTS IN NUNAVUT

Arcite Island Lodge	Cambridge Bay
Arctic Ventures	Iqaluit
Ayuittuq Lodge	Pangnirtung
Cambridge Bay Cooperative Association Ltd.	Cambridge Bay
Canadian Legion	Iqaluit
Coppermine Inn	Kugluktuk
Frobisher Inn	Iqaluit
Igloolik Cooperative Ltd.	Igloolik
Kivalliq Inuit Centre	Winnipeg
Mitiq Cooperative Association Ltd.	Sanikiluaq
Northern Store	Gjoa Haven
Northern Store	Igloolik
Northern Store	Arviat
Northern Store	Iqaluit
Northern Store	Cambridge Bay
Nunavut Catering	Iqaluit
Pangnirtung Cooperative Association	Pangnirtung
Qammaq Hotel	Clyde River
Tara's Bed and Breakfast	Rankin Inlet
Wild Wolf Cafe	Rankin Inlet

Institutional Market

Organizations from which surveys were received;

Baffin Correctional Centre	Iqaluit
Baffin Regional Hospital	Iqaluit
Coral Harbour Health Centre	Coral Harbour
Elders' Centre	Iqaluit
Youth Centre	Cambridge Bay