



## **Climate Change Health Adaptation Strategies for Inuit Food Security – Arviat, Nunavut and Beyond**

### **Final Report**

Climate Change and Health Adaptation Program  
for Northern First Nations and Inuit Communities  
2012-2013 Funding

Arviat Health Committee, Arviat Hamlet Council

Contact; Shirley Tagalik, Project Manager

Telephone: 867-857-2817

E-mail: [inukpaujaq@gmail.com](mailto:inukpaujaq@gmail.com)

April 30th, 2013



The Arviat project on Inuit food security has been implemented since May 2012. The project operates out of the Arviat Wellness Centre where equipment and facilities have been provided in-kind by the Hamlet of Arviat. There are two Research Assistants who have been hired to work with project manager, Shirley Tagalik. This final report provides a summary of the work completed to date and the plans for the continued development of the work from this point.

The key research questions that guided this project include:

- What is an Inuit definition of “sharing” that can be applied to country food? What principles of “sharing” need to be applied to food distribution?
- How do Inuit concepts of “reciprocity” and “self reliance” affect the development of food security actions?
- What does previous scientific research on Inuit food security in Arviat and in the Arctic in general, combined with Inuit knowledge tell us about supporting family- based harvesting activities, and developing community freezers, community markets/barter systems, and food sharing systems?
- What assets does the community have that can be used to develop these country food supports in the face of climate change?

The responses to these key research questions are outlined in a series of summary reports. These include:

- Arviat Elders on Sharing- English and Inuktitut
- Issues Affecting the Health of the Caribou in Arviat- English and Inuktitut
- Kitchen Table Talks- English and Inuktitut
- How can we help people get more country food?- English and Inuktitut
- Survey results on the use of the community freezer- English and Inuktitut
- Community Workshop Summary Report- English only
- The Arviat Research and Knowledge Translation Model- English only
- Summary Report on the Young Harvester’s Program- English only

These reports address the objectives identified for this proposal.

### ***Short-term Objectives***

1. Conduct research with Arviat Elders to ensure the community food security plan is grounded in Inuit values, and is considered culturally appropriate in today’s context.
2. Build on previous research and community planning processes to address identified priorities in availability and accessibility to country food: 1) family-based harvesting activities, 2) enhanced use of the community freezer, 3) food redistribution through community markets and a barter system, and 4) a culturally appropriate food sharing system.
3. Document and share Elder perspectives on a culturally appropriate definition of “food sharing”, principles of reciprocity and self-reliance rather than dependence on community services.
4. Document the Arviat model for research with Elders as a promising practice in Indigenous research methods.

5. Share knowledge of the impact of climate change on Inuit food security in Arviat and the Elder- and community-driven responses to food security issues with Inuit youth and others through a community planning process, over community radio, through new programs for youth harvesters, in community workshops and through a final research report.

Considerable headway in addressing food security has been made through this project, but the community continues to work on the following long-term objectives.

***Long-term Objectives***

1. Effective climate change adaptation activities related to food security that are accepted by community members because they respect Inuit values and beliefs.
2. Community engagement in climate change mitigation.
3. Ongoing monitoring and response to changes in country food availability resulting from climate change using the methods developed.
4. Better health as a result of hunting and harvesting, improved diet through safe consumption of country food, maintaining cultural ties to the land and sharing resources.
5. Enhanced access to country food by applying research evidence and Inuit knowledge to create community solutions.

The project initially set out to achieve four very specific priorities to increase availability and accessibility to country food in Arviat:

1. family-based harvesting activities
2. a culturally appropriate food sharing system
3. enhanced use of the community freezer, and
4. food redistribution through community markets and a barter system.

As a result of the project, we have determined that we need to take a more comprehensive approach to family-based harvesting. In order to accomplish this, we will be piloting both a more formal Young Harvester's Program and a community harvest in 2013-14. These are being approached as community pilot projects and will be reported on as case studies with formal evaluations of the program available in March 2014. Both of these projects present potential as an adaptation to the reduced access to both caribou and seal as a dietary staple. The Young Harvester's Program will focus on reintroducing small game back into the community diet. The community harvest project will enable the community to share resources to target caribou harvests which increasingly will take place further from the community.

We are also exploring a more culturally appropriate food sharing system as identified by the elders in the three-day community workshop. This is another pilot project projected for 2013-14. This will be a family resource program and be elder-directed and run in collaboration with the Wellness Centre and Arviat Youth Piliriqatigiit (AYP). The plan is for elders to deliver the program at the AYP Drop-in Centre during the day before after school programs begin for youth. This program is also an adaptation to reduced access to country food such as seal and caribou and will provide community members the opportunity to learn food preparation skills that make use of all parts of the animals that

are harvested and also bring back the use of small game and local plants as dietary resource.

Recommendations regarding the community freezer will be made to the Hamlet and to the Nunavut Department of Economic Development. The enhancement of community freezer capacity is viewed as an additional adaptation that will enable the community to harvest and store meat when it is available with the expectation that a steady supply of meat will become limited as impacts of climate change continue to reduce access to main food staples such as seal and caribou. There is a definite demand for a second community freezer and for the freezers to accommodate land foods in one and seafood in the second. The suggestion of a separate freezer solution for dog team owners is also being explored through the piloting of traditional sod freezers. These will be constructed in the summer months in time for summer harvesting and storage.

We discovered that there is not community support for a country food market or formalized system beyond the proposed community harvest. The community harvest is to be run through community organizations such as the Wellness Centre and HTO. Expert hunters will train youth in cultural laws around harvesting, the considerations for sustainable harvesting, firearm safety and use and survival and land wayfinding. They will go to caribou harvesting grounds and complete a controlled hunt where they will learn proper skinning techniques, ways to handle skins, clean up of a harvesting site and proper ways to pack meat. The meat and skins will be brought back to the community where a team trained in butchering, cut and wrap will process the meat. Certain parts of the caribou will be passed along to elders who will instruct youth in the making and preparation of delicacies. These delicacy products will be sold to the community with the proceeds returning to the harvesting program. The rest of the meat will be distributed by the youth to families in the community. Skins will be given to the elder-run family resource program and used to instruct community members in skin preparation, sewing and making of equipment. The program will be run as a pilot in 2013-14. It will be documented as a case study and have a formal evaluation completed by March 2014. This program, which focuses on making full use of every part of harvested animals, will reduce the wastage and help ensure that the reduction in access to meat is mitigated through more efficient use of the meat that is harvested.

This project has managed to leverage funding for the next fiscal year in order to continue the work and build the community capacity around food security. The focus will be on investing in areas where climate change is having beneficial impacts on the community. This includes a lengthened growing season, warmer temperatures, increased precipitation, improving soil conditions, new plants and insect species. As an additional adaptation, the community will explore the potential for cultivation of local plants as food producing crops. Respondents in research surveys indicated that the community should pursue the potential for local produce since they have noticed the increase in the number of plants which now grow in our area and also in the size and abundance of those plants.

## Arviat Elders on Sharing

Smith (1999:105)

*Sharing is a good thing to do; it is a very human quality. To be able to share, to have something worth sharing, gives dignity to the giver. To accept a gift and to reciprocate gives dignity to the receiver. To create something new through the process of sharing is to recreate the old, to reconnect relationships and to recreate our humanness.*

Sharing is an essential concept in Indigenous communities around the world. For Inuit it has been identified as a key concept. The term generally used for sharing is *amiqqaaqniq*. Although the concept would have been well understood and actively applied in the past, today there is some confusion around Inuit sharing in today's context. In 2011, respondents in our community research into food security issues continually referred to country food as "free" since it is shared freely in the community. However, from the Elders' perspective, there was concern that many young people now think that hunters are obligated to supply them with "free" meat through the cultural practice. Elders increasingly view this as a faulty application of the practice. In current research, we hope to examine the cultural understandings around the sharing of food more deeply. We also hope to identify application that could help promote food security across the community. In our proposal for 2012 funding we identified the following two goals with regards to research with Elders.

1. Conduct research with Arviat Elders to ensure the community food security plan is grounded in Inuit values, and is considered culturally appropriate in today's context.
2. Document and share Elder perspectives on a culturally appropriate definition of "food sharing", principles of reciprocity and self-reliance rather than dependence on community services.

The following research questions formed the basis of this investigation with Elders:

- What is an Inuit definition of "sharing" that can be applied to country food? What principles of "sharing" need to be applied to food distribution?
- How do Inuit concepts of "reciprocity" and "self reliance" effect the development of food security actions?

### **Definitions of sharing:**

Elders indicated that there are several different practices around sharing.

*Pajukniq*-- This refers to a generous and considerate act of giving a person a small piece of meat. It was not meant to be a large volume. Often it was just the size of your fist. It was intended as an encouragement to someone—to heal, uplift and make the person feel supported. It was very unexpected and so was quite joyful for the receiver.

*Ningiq* is a term where you are part of the same hunting party. If one hunting partner catches something, he gives a share of the catch to the other partner who did not catch anything. That's *ningirniq* and it was an obligation between hunting partners. This obligation can be spread beyond hunting partnerships and be applied to a camp as a whole. Mariano Aupilaarjuq described the practice in the following way:

Of course, for instance, let me use seals, as an example--whenever one of the young boys of our generation caught a seal, we were expected to go and get our share of the seal meat. Whenever a seal was caught by one of the boys of our generation, we would all be expected to go get a part of the seal, based on what our fathers had arranged. Our father would make an arrangement with other fathers, to predetermine what to do when one of us (in our generation) caught a seal. Our fathers would agree to have us always get a piece of the seal, according to the way we were expected to address each other.

There are names for the parts of the seal produced once it has been butchered, such as the rump which is called, "*uuppaat*"; "*quujaaq*" is the meaty part, right near the rump; "*paamialuua*" is the tail area; "*saaniraa*", the side "*taunungaikkua*"; "*qimiluaa*", backbone; "*niaqua*", head; "*qungasinia*", neck; and these are just some of the parts that I mention. Each young boy of the same generation, called each other by the name of a seal part, which would have been ordained by their fathers. So instead of calling each other by our real names, these are the names we used. So, if one of boys, whom I called by a seal part, were to get a seal and I did not get a seal, I would go get the part of which I called him, which could be "*uuppaat*". The boy whom I called "*uuppaat*" would also call me that, because that is what our fathers had agreed upon.

As long as I can recall, it was the way our camp had it set up, when a young boy of our generation were to get a seal, and we would all have to follow, as it was our law and was not be broken, no matter what. (Mariano Aupilaardjuq, personal communication, 2008)

*Ninggniq* was most commonly practiced where hunters, especially young ones starting out, would always take meat to elders, widows or others in need. This sharing was the role of a hunter. It was expected. A hunter becomes very skilled and it is expected that he will use his skills for the common good. That is why the first hunt celebration is so important. When a person catches their first animal of any kind, they do not participate in the skinning or butchering of the animal. This is so there can be no chance of them taking a small piece of the animal themselves, even such as licking blood off fingers. The entire catch is shared in some way with the community to mark the hunter's role as a provider. The hunter will not consume any of the animal signifying agreement that contributing one's skill as a hunter to benefit others is most important.

This was one of the driving beliefs behind the creation of the Young Hunter's Program in Arviat, to instill these values and train youth in the role of providers, and also to create a

life habit of sharing one's harvest. Arviat hunters who participated in our kitchen table talks strongly reinforced their support of this practice to the extent that they did not want meat supplied to the community through food banks, for example, because this would break or lessen the relationship between a hunter and members of the community and might undermine the role of the hunter to provide for others.

Those who receive this kind of support are careful to support the hunter in return. Often a woman will make mitts or warm clothing for a hunter; an elder will pass along a well-made tool or weapon in order to help him continue to be successful. If you had nothing to give, you would share a blessing or wish for the hunter. These were considered to be very powerful and are still in use in the community today. In our recent survey, 47% of hunters who shared meat indicated that they received reciprocal support. Those hunters who received support indicated that 43% of the instances this was in the form of a blessing, but 28% of hunters received gas, 16% money, 36% use of equipment, 29% warm clothing, 38% tools, 15% received help in some way, 13% received help with butchering. The Elders said that these practices in the past were very deliberate and organized where as today it is much more random. Concern was expressed that the intent behind the practices is being lost.

There were also instances when some people were not successful in a season and might be in danger. Since members of one camp usually checked on each other, this situation would not be allowed to go on. *Nangiaqturniq* is a term used when the family which is struggling is being told, "look you're going to have to relocate to our camp to survive". This term refers specifically to relocating people in order to be able to share food with them to ensure their survival. In other circumstances, a camp that was in need might travel to join another camp they hoped was having better hunting results. Norman Attangala tells the story of a camp that had prepared well for the winter and had enough to support themselves, even though the hunting had been very difficult that season. One day a group from another camp arrived. They had not had a successful fall hunt and were struggling, knowing they would not survive the winter. The dilemma that the camp faced was to allow the newcomers to stay and take the chance of running short of food or to send them off, knowing that they would almost surely perish. Attangala said that based on the values of sharing, there was no hesitation but to accept the newcomers. As predicted, supplies dwindled and the Inuit perished together. One young man survived and was able to pass on this story. It was more important to apply the deeply held values about sharing above the interests of the individual. (Personal communication, 2009)

*Qinunig* is the term used for when someone actually goes to another person to ask for something very specific. *Aik&irniq* is the more general term. So, if someone caught a whale and there was maktaaq on the beach for people to pick up, that would be *aik&irniq*. Again, there is no necessity to reciprocate, although many people find ways to show appreciation for the successful and generous hunters.

The cause of a shortage might be because someone was trying to hunt, but just missed or fell short of the objective. This is *itigaatuq*. There is also another term, *inurqaq*.

*Iqaqsatuarlugu kisiani*, for example is when “I just need a bit of oil to get me through a couple more days and I think I’ll be fine” (*puigumiarnikavu uqausiqtaliugaluq*) A small act of sharing like this wouldn’t be expected to be paid back; you wouldn’t want something back for that especially when someone was really in need. However, it was always assumed that when I’m in need you’ll help me -- it’s sharing freely with that premise that someday you may be the one who needs help.

There were also instances when you needed physical help. Of course, some people will be willing to go right ahead and help you. You would always keep this in mind and try to consider what it is that they may be in need of, and then you could offer them that thing-- it’s not equal, it’s not meant to be an equal item for item trade back, it’s what you need the most that they would want to help you with in return for something that will help their need.

The term, *inunguijauniq* had many different meaning. Even though I did not spent a long time out on the land, but there were times when a family did not have enough food to eat. Many would wonder how they would survive day by day. Some would survive on fish. Whenever they are given food, they would say that they are now able to go on. Even being given just a little bit of food or something would make them very thankful. *Inungurluarnakuni* they would say. When a person is given another chance to live or given food to survive, he would say *pamirluanaqtuq*. Every little bit of help they got was very much appreciated in trying times. *Inunguijauniq* or *pamirniq* are the terms when a person is given another chance to live or be guided by someone. (Mark Kalluak, personal communication, 2004)

Today, Elders see it as critically important that in each family young people are taught sustainable harvesting. There must be a next generation of skilled harvesters who also understand the role and obligation of someone who is trained in this way. It is important to teach young hunters that all parts of the caribou must be brought back and that hunting is also a conservation and management activity. You never take more than is required. It is also a critical element of sustainable harvesting to leave the land clean of any disturbance resulting from a hunt. Any part of an animal that was not taken would have been buried or disposed of, not left for scavengers. There is concern today about hunters who kill whales, remove the maktaa and leave the carcass. Equally, hunters who leave caribou entrails in the migration paths damage future harvests.

**Is the sharing of country food different from sharing market food that one has to pay for?**



It was agreed that there is a significant difference because there is cost involved and not skill that enables one person to purchase things. When you cause this cost to others through your own poor decisions and lack of management this is viewed as a big burden. It is very heavy on the person being asked to meet this need, not because of the cost itself, but because of your lack of self-reliance. The point of *inunnguiniq* (Inuit childrearing) is to make a human being who will not cause worry to others. The loss of self-reliance amongst young people today is being born very heavily by the elders and others in the community. The fact that a person may ask for food, but not want country food, only market food is an example. Inuit will gladly share country food, but this insistence on market food creates a disappointment and often resentment between giver and taker. When the person asking also wants this as a handout with no obligation to repay or reciprocate, this adds further to the burden the elders describe feeling.

Another example cited is that, more and more, young people are choosing not to breastfeed. They make this decision even though they don't have the money to buy formula. Then they rely on other people in their family to supply their needs. The big difference is that in a breastfeeding society you're not asking for anything from anybody. Now with bottle-feeding there's a lot of asking that is completely unacceptable to those being asked. So it's about making choices in life, like breastfeeding, that enable you to be more self-sufficient. It is not viewed as sharing when people are making choices that are taking them away from being self-reliant, and that cause them to rely too heavily and cause a burden to others.

This kind of obligation would not have been imposed by one person upon others in the community, in the past. When people do this today, it makes life so much heavier -- *uqumai* -- just a heavy burden that is hard to deal with.

If you fall short it's *inurqqa*, and this was commonly expected, but if you make decisions that cause you to fall short and become a burden it is not acceptable and has consequences. We are seeing too much of this today amongst our young people.

There used to be very stingy people of course, some not that bad, but some had no feeling for others, and then others who showed a lot of concern for others. Then of course there were others who were willing to offer everything to help. When you look at these you'll see that stingy people are always wanting because they have no respect for others. Their actions are turned back on themselves. (Rhoda Karetak, personal communication, 2004)

Today people like to eat traditional foods and will gladly eat like an Inuk. But though they are very happy to eat traditionally, they do not seem to think how and where the food came from and that it is a lot of work, a lot of ability is required and someone has to go out and harvest it for it to be eatable. They do not think they need to learn to be able to do this, or even try to help those who do. I don't understand how they can overlook this concept. Often I hear people asking to be given meat to eat, but yet do not try to become able

to provide for themselves or help those who can, so they get a portion of the catch because we live by the value of sharing, but they do not understand that sharing means reciprocating. I was hoping to find a way to cause those who are not trying, yet want to be given meat whenever they ask, to think. They are not doing anything and just want something for nothing-- this bothers me, and I would like it be known, it is a lot of work, a lot of studying and determination, equipment and time, timing, knowledge and you need to commit to that becoming an able person.

I do think about this and I think I understand it a bit better now. Back then the only way we survived was by harvesting wild game, taking great care to manage the harvest, or any food that we had, and having to always keep in mind, at anytime, things can suddenly become very difficult. I try to emphasize the importance of being careful, to be good at managing things in general, especially thinking of my grandchildren. I use money to express how important it is to learn to be well aware of management concepts. Just as wildlife, as a food source, was very important to manage well, money can be hard to get and so you must learn how to be careful of how you manage money, how you view money, because it is now becoming the way we survive today. Now, because some people cannot survive on wildlife alone, because they already don't know how to harvest wild animals the way it was back then, it is very important that they manage well with what they do have. Inuit always emphasized planning and preparing for the future. This is another part of our culture that is being lost. (Mariano Aupilardjuq, personal communication, 2008)

### **Conclusions:**

Elders describe several different instances of sharing. Implied in most is a reciprocal arrangement. The sharing of meat in a hunting partnership is already a reciprocal agreement between hunters. The sharing of meat by a hunter to those in the community in need does not require reciprocity, but it was almost always given in some form or another. There would appear to be erosion of this practice today where only 47% of hunters report receiving something in exchange for sharing meat. With this erosion come some feelings of imbalance in the relationship. If this imbalance persists, these sharing contexts may be further eroded.

Maintaining strong relationships is central to Inuit cultural values. For this reason, maintaining harmony and balance is identified as one of the four big laws or *maligait*. It is also a key reason for the strength of the reciprocal obligation that goes along with sharing. Elders describe the failure of many young people to appreciate this obligation as leading to imbalance and relational loss. One elder described it in the following way:

When I see things, I have desires and thoughts. When these aspects work in combination, they are very formidable indeed because now I must attain the object that we resisted. And in attaining it, I embark on an unhappy path, one that I would look back on in retrospect and exclaim regret over. This can cause

families to break apart-- once a relative finds out that we are covetous-- we will be held in contempt and not thought of positively. This is what this tendency can lead to, as *inuusiq* is very difficult to maintain. This I know -- even though you know what is the right way to live, it can be extremely hard to apply, especially today when materialism is valued in our society. I believe I developed this philosophy through direct experience. It is good to do right and move forward as it is so delicate a balance to maintain. In a balanced life, we are thankful for what we are given to use to meet our needs. We avoid wanting too much or becoming encumbered with material things that do not lead to maintaining the balance in life that we should have. By having too much, we can cause unhappiness in others and this breaks the harmony of the group.

Most significant in this imbalance is the perceived attitude that someone should satisfy my needs. Many Elders ascribe this to the introduction of welfare to Inuit.

Inuit *Qaujimaningnit* was slowly eroded when we started to be helped by the Government, when we started receiving welfare. Things started changing right away when we were forcibly relocated to live in these new communities. When we started living off welfare instead of being self-sufficient, our cultural knowledge beliefs and skills were let go, at least with me-- I am talking about myself. I did this, not knowing how much I would really regret it later, especially now that I see how difficult and restrictive white people's ways really are. I started to really regret trying to leave my heritage and culture, where I totally tried to leave our Inuit way of being. Now, as an Inuk, I see the way we were raised, and now, I long for it again.

Well, with large animals, such as the walrus, bearded seals; *ningniqniraqtaivalautut* means getting a piece of the meat from another hunter who caught it. It would not be the same as getting the seal part called *nikaituqniq*. Today we call welfare *nikaituqniq*. *Ninggniq* is the term, meaning to get meat from large animals.

This loss of personal responsibility and the growing dependency of young people upon others in the community creates a very stressful social context. Elders describe this as a burden that is overwhelming them, as it erodes the cultural values that were once social strengths and established an effective safety net for Inuit societies. Elders indicate that what was positive—sharing—is not been turned on its head and has become a negative activity that does not uplift individuals but contributes to dependence and a sense of entitlement. Social harmony cannot be maintained when this imbalance is allowed to persist. This is the dilemma that faces Inuit communities and contributes to the growth of food insecurity for families.

When you consider the meaning of respect... I mean when you have respect, when you are all alone it holds you back from taking something that is not yours that is really desirable to take, even though there is nobody around watching you. Somehow your heart begins to pound and you feel you will be indebted for doing something wrong and thoughts begin to twirl around. That's the feeling you get

...you should get. But nowadays people just grab things, something is wrong. But when you do things wrong, normally your heart should start to move and your conscience should trouble you.

The example used by this elder was that even in community feasts or events when food is offered, some people are grabbing more food than their share, even before others are served. Those at the end of the line often go without because of the greed of some. For Inuit this is very unacceptable and the elder sharing was concerned that this was becoming a way of operating in the community through disrespectfulness to others.

Elders also discussed the issues of country food markets and of sport events—both sport hunting and derbies. They indicated that the IQ *maligait* are the guiding principles and that if programs are developed according to these *maligait* then they cannot be argued. This also provides the basis for insisting that the agreement apply to all the communities harvesting in a given area. When there are clear rules and expectations laid out, people become self-governing. This is to be sought so that people work in the best interests of the community and environment and not for personal gain.

Even just reflecting on one's diet, in the past everything was healthy for you and they had no choices in terms of selection. So today they say they should be able to eat what they want to eat because they have this wide selection. It becomes hard to have people now consider the content and the quality of what they are eating and the impact of making poor food choices. How do you handle a world with so many choices?

It is a bit depressing to reflect on the state that people are in. It's like watching a person eat a lot of junk and not see that it is contributing to their becoming unhealthy. They do not connect the self-inflicted nature of these things. It is easy to see what is missing in people and more difficult to dig out the strengths. If we consider what should be in the hearts of each person such things as helping, loving/caring, serving, empathizing, ...

Much of this is a result of the loss of *ajiiqatigiiniq*. *Ajiiqatigiiniq*-- the main reason for this was for survival- in order to solution seek in the most purposeful ways. It brought people together in order to plan, so preparing for the future was foundational to *ajiiqatigiiniq*. Throughout the year, as things became more difficult, we would all meet in the area where they were having the most success. Everyone had an opportunity to have input and to contribute to the best plan for the future. It is good to see this happening again in our community.

The elders were appreciative of the opportunity to talk about Inuit ways of sharing, reciprocating and caring for others. They share a clear concern that the concept of "sharing" food is being reduced to receiving a handout. They are increasingly concerned that this handout is viewed as an entitlement and not as a gift to be respected and returned. They are also concerned that being self-reliant, actively managing one's resources, planning effectively for the future and appreciating the support of others by giving back are not strong expectations in society today. They are concerned that the way

we operate today is not sustainable as a growing number of dependent young people rely on an increasingly smaller group of capable, skilled harvesters. In their view this situation is not sustainable and will lead to very great hardship in the future if not confronted now.

Elders support the community research approach to planning for sustainable future and for improving food security and personal health. They said that this builds on the strengths of Inuit who relied on *aajiqatigiiniq* in order to seek solutions to difficult situations. In order for this kind of community consensus building to occur, it requires *tukkuqtuq*- a person who is always giving of themselves, with a heart for sharing. They said that when these kinds of people come together we will be able to achieve *tukkuqtuqningiq* and communities can become healthy and sustainable again.





































## **Issues Affecting on the Health of Caribou in Arviat**

Elders very accurately describe the cycles of animal populations in our area. Most population go through cycles of population increase and then, as the numbers become unsustainable in our environment, there is a cycle of decline. Elders describe these cycles as predictable and essential to the health of the natural world.

Arviat last experienced a cycling down of caribou in the mid-1970s. At that time, hunters were limited in their harvest of certain caribou in certain seasons. The herd cycled back up and for a very long period of time Arviarmiut have had access to large numbers of caribou for the past several decades. It may be that the length of the recent high populations cycle is related to an increasing abundance of forage as a result of warming climate. However, informants have seen changes in the health of caribou and hunters, over that period, have been concerned about diseases and parasites found in the meat and skin of caribou. Warmer temperatures are thought to have brought new and increased numbers of insects and parasites which impact the quality of the meat and the health of the herds which are now plagued with hot temperatures and swarms of bugs.

In Arviat, we are fortunate to have the regional caribou biologists who are long-term members of our community. Their work in tracking and assessing the health of the herd has been very important to keeping us informed and prepared. They have assured us that the decline in our caribou is not from over harvesting, but from a number of natural factors. Cycling down of a herd is necessary in order to allow the land time to heal from caribou over eating. The biologists expected a cycling down of the caribou herd before this. As a herd is cycling down, it is more susceptible to diseases and this makes it more vulnerable to predators. In fact, Arviat hunters have identified increased disease in the herd, but they numbers have remained fairly stable. The biologists feel that the natural cycle has also been delayed because so many hunters in this area have been harvesting predators such as wolves and grizzly. This has allowed the herd to retain numbers that should have been lost in a natural cycle. The herd has remained high in numbers for too long. This has caused considerable strain on the environment.

Basically, the land is being overused by the herd. This means that the nutrient content of the vegetation decreases and caribou have to eat more to get the same value from the food. When the food is not providing sufficient nutrition, females are less likely to become pregnant, caribou put on less fat and are more vulnerable to disease. Calves that are born are less likely to survive when the herd is not managing to eat well. The biologists report that lichens require 50-70 years to recover. Grasses lose their nutrient value until they are allowed to regenerate. We are also experiencing more rapid climate change which is impacting on vegetation as well. They predict that we might see a very rapid decline in the caribou quality and numbers.

As the land becomes overused and cannot sustain the herd, the herd will move. Since this herd is the second largest in North America, the move will be substantial and cover a large distance. We have been fortunate to have the herd very close to our community, this move will be very noticeable to Arviat hunters.











## Kitchen Table Talks with Harvesting Families

### **Sharing:**

There were 32 interview participants. Every /participant reported sharing of food with the community. This was described as a value they held. They viewed it as “the role of a hunter” and it was “how we were taught”. They further described sharing as a way of living their culture and of helping each other and maintaining strong relationships as a community. They indicated that some communities have lost this cultural value of sharing and hunters only sell meat to others. They did not want to see this happening in Arviat. Hunters indicated that they do not mind being asked for meat by people who are in need, but that it is very appreciated to also received something back from the person asking, even some life advice or wishes for future hunts. Hunters are also willing to share information about where caribou are located because this gives all hunters a better advantage and help to provide more broadly to the community. If a hunter is known for not sharing his meat, you might be less likely to give him information, but not always.

Hunters also discussed sharing prepared meat, such as igunaq and nipku. It was felt that they were taught how to make these delicacies and so if there were a surplus those also would be shared, especially with elders.

### **Respectful harvesting:**

Hunters reported having received very consistent and strong teaching. Rules such as never wasting, respecting animal migrations, disposing properly of carcasses and bringing home all parts of the meat were most readily mentioned. There are also practices such as if a hunter has turned up the head of a caribou then that indicates that he is coming back for his meat.

Hunters reported concern that there are some Inuit today who are hunting like sports hunters, “treating hunting like a sport”. The meat is being wasted and the animal horns/antlers are being shown off like trophies. This was not Inuit practice and was viewed by most hunters as disrespectful and might even bring harm to hunting in the entire community. When they see meat being wasted like this they reported that they bring it back to the community. It can always be used for dog food. “It is very hard to regulate these things. People have to be raised properly and trained to be respectful hunters. As a community we could make rules but we probably are still going to have those guys who are going out there and just shooting the caribou with the biggest antlers and bringing it back and sticking it on their trophy wall, even with Inuit Qaujimajatuqangit”. It was agreed that “if we had a set of community rules (about harvesting caribou) it really should be enforced by the hamlet and the HTO. An elder visiting from Baker Lake contributed the view that he is seeing a lot of dangerous animals coming into our communities now—wolves, polar bear and grizzly. This did not occur in the past and it made him think that it was disrespectful behavior of hunters today which might be causing this.

*The handling of wildlife is very different now. I have thought a lot about this. For example, the bears and wolves are coming into the communities. Why are they*

*doing this now? Why are they going after people? In the past there were teachings about how to respect animals—even not to talk about animals because they can hear you and not to disrespect animals because they have a protector. If we are disrespectful we invite danger from these animals. Animal behaviour has now changed and we have to ask what is causing this. I don't think they are hungry. It has a lot to do with the need for people to heal. Individual women and men were to be observant and to be alert. Today we are not doing this. If we are going to try to set up camps the way we did in the past. We were taught to each have our equipment that we needed to live and then to take good care of it. We were taught that an animal could be very close by and so by being very observant we would be aware of our surroundings and would thus be able to avoid dangerous contact with an animal. We need to be prepared. Even the need to have enough food and good water on hand must be met. These are things that families today are just not taking responsibility for. We need to rebuild this in people through healing. In order to have peace and contentment, you need to have good relationships. People are wrestling just to have the basics. They are not equipped with the teaching our parents gave to us so that we could build a good life for ourselves. (Norman Attangala, personal communication, 2012)*

Harvesting as a family was viewed as very important because this is where the best learning takes place. It also builds stronger family relationships and is the opportunity to teach children to do tasks and take on responsibilities. It is also important that, as parents age, the next generation is skilled enough to take over. Every family should plan for this and also should hunt as a family in every season. Also, butchering and preparing meat as a family is very important. In the spring many families work together making *nipku* and then *pipsi*. In the fall they still cache meat together.

The hunters discussed the changes in practices. It was mentioned that fishing derbies create an opportunity for families to go out together, but they also encourage a lot of waste and disrespectful harvesting. This is something the community needs to address, especially during the cod derby. It was suggested that the organizers of the derby have cooking pots going on the ice and that people should have to bring cod that is being wasted to be cooked for soup, stew or dog food at least.

The road has also helped by giving families easier access to going out together. There is concern about the number of families who do not hunt or try to support themselves, but are relying on others. It was suggested that the Young Hunter's program is an excellent way of addressing this, but after the program these young people could be linked with an active hunter who could keep taking them out. This was described as Win-Win in that hunters can always use help on the land and these young people need good training and opportunities to practice. The goal of every Inuk is to become self-reliant. This is being lost in the community today.

Concerns were also raised about disrespecting herds by using caribou collars. Renewable Officers who track the collars use this information to find and harvest caribou in large numbers using commercial tags. Some were concerned that the collars themselves caused

injury and stress for the animal. Low flying helicopters also stress out herds and these practices should be questioned by HTOs.

There was also concern over the auctioning of food in Iqaluit. It was felt this was very disrespectful and would undermine cultural values. It also drives the prices way up and will eventually lead to harvesting for non-formal commercial purposes that will not be sustainable if this is allowed to happen. There are also no guarantees with this process that you would be getting good quality food. This commercialization of country food could become very dangerous to people's health.

### **Community supports for harvesters:**

#### **Freezers-**

Many people are harvesting in the community and there are many dog owners who need to store country food. The freezer is definitely seen to be too small for the number of harvesters. Some improvements suggested were to divide the areas in the freezer so that land food and sea harvested food can be stored separately. There also needs to be a system for logging people's boxes in and out and for keeping one family's boxes together. There were a lot of concerns about security. It is suspected that some people, who are known not to be hunters, have taken boxes from the freezer and then gone on CB to sell other people's meat. The Hamlet needs a responsible system in place to safeguard people's hard work. It was recommended that the freezer be open earlier and stay open later; some suggesting it was needed all year round.

Other concerns were raised around preservation of food. The proper butchering and cleaning of meat is important to teach. It was felt that a community facility to support this would be a huge advantage and would help to ensure quality meat for redistribution. By providing smaller packages of meat, it would also help hunters share meat with more people in need.

#### **Food markets-**

There are many delicacies from country food that elders often crave. For this reason, hunters suggested that they bring all the parts back and perhaps give them to a group who are skilled in preparing these delicacies. Then these could be given to elders or sold at market. Although hunters do not want to give up food sharing practices and so lose their role as providers, they did think there might be potential in having a market available for any surplus. However, there was more concern that a full commercial system would further threaten Inuit value systems as it has in other communities such as Rankin Inlet. Community harvests were generally supported and these could provide meat for the community. The meat from a shared seasonal harvest could be provided to those in need and the unwanted parts of the animals can be used to make delicacies. These delicacies can be sold at market. Profits could go back into supporting the next community hunt. Also, it was felt that individuals who make delicacies could market those as well because this takes a level of expertise. It was felt there would be a market for things like jams, pickles, igunaq etc.

It was suggested that trading foods with another community might be something HTO should look into. The hunters do not support the sale of food, but a trade of pound per pound food such as Arviat provide 800 lbs. of caribou to Pond Inlet in trade for 800 lbs. of narwhal maktaaq.

### **Sustainability-**

It was suggested that hunters need more information about the parasites and infections they are finding in caribou, whales and fish. They want to be educated about these things so that meat is treated properly and that the quality of meat that they share is always good. Questions about the safety of infected meat for dog teams, and personal hygiene when butchering an infected animal were raised. They would like a workshop on this topic and pamphlets created to share the information.

There was support for HTO-led community hunts because this would be an opportunity to demonstrate on a larger scale that meat should not be wasted and all parts of the meat can be eaten in the community. It is also a chance to further train young hunters. During these community hunts there should be a focus on safety, cultural rules around harvesting and conservation. It was strongly felt that community hunts should not be for commercial purposes. There was little support for the harvesting of caribou to supply other communities or the meat plant in Rankin. It was felt that this hunt does not benefit community hunters any more and that a very few people are benefiting from this, mostly the Renewable Resource Officers themselves. It was suggested that this is a conflict of interest and HTO should stop this hunt.

There was also concern about whale carcasses. These should not be sunk at sea. Now they are being left on the beach and Renewable is taking them to the dump and burning them. It was felt this was not a good plan. Carvers are interested in harvesting the bones, dog team owners wish to harvest the meat. It was suggested that we follow the example of Whale Cove where whales are left in a specific area.

Concerns were also raised about people leaving nets in the lakes, about the destruction of seaweed and waterfront environment due to the seepage from the sewage lagoon and meat being abandoned in sport hunting camps rather than being provided to the community. It was suggested that HTO should look into all these issues and provide guidelines to Hamlet and outfitters.

With regards to the cod derby, it was suggested that the organizers should have a cooking tent where they make cod chowder to share with families. This would give people a taste for cod and also show them how to live by the rules of sustainable harvesting.

It would be very helpful for hunters to begin to share their stories and especially for elders to pass along rules so that these ideas and practices are not lost to the next generation.





















## **Community Survey on Country Food**

A community survey was conducted. There were a total of 256 respondents. There were 100 respondents who self-identified as hunters and an additional 156 respondents who self-identified as country food consumers. The survey had two main components aimed at gathering data on use of the community freezer and also accessibility to country food and harvesting. The results are being shared in the following two tables.

### **How can we help people get more country food to eat?**

#### **HTO Programs (40 comments)**

1. Increased community harvesting program- 17 comments
2. HTO train hunters to be better harvesters- 6 comments
3. Provide more equipment subsidies with NTI- 5 comments
  - Those who receive equipment should be expected to lend it to others who need to hunt or to bring back a certain amount of caribou to the community
  - Change the HTO rules for the big ticket items so that working people can get a chance to get new equipment because those people can afford gas and maintenance
  - Those people who were selected for large equipment from NTI should help more often to people who need country food
  - User pay service- hunters can sign out HTO equipment and pay with caribou
4. HTO should have policies about sending caribou out of the community- 12 comments
  - Supply the community first- not the meat plant
  - Tags are only going to Wildlife Officers- conflict of interest
  - Local hunters are not benefiting from this program so stop it

#### **Promote Values (35 comments)**

1. Promote better hunting practices- 6 comments
  - Take care of meat and respect for wildlife don't kill more than what you need
  - Take care of country food good cause spring time people are just throwing country food
  - Less traffic on the Maguse road, no more man made roads, traditional knowledge of how to hunt be passed on to younger generations such as wait for the whole herd to cross the river before shooting one
2. Promote sharing of country foods- 18 comments
  - Wildlife can help us if we help one another



- Provide country food for those in need
  - When food is offered people do not need to be greedy and take more than their share
3. Teach cooking- 3 comments
  4. Teach storing and preserving foods- 7 comments
    - By saving country foods, store them in the freezer before they rot
  5. Promote healthy eating- 5 comments
    - Buy less junk food
    - Quit drugs, youth taking drugs, money going towards drugs

**Training (13 comments)**

1. Teach young people to hunt- 6 comments
  - Get hunters to provide meat but I think young hunters program is going great thanks keep it up
2. Encourage hunters to volunteer to hunt for the community- 3 comments
3. Encourage hunters to bring back all parts of the meat and to learn how to butcher and preserve meat better- 4 comments
  - Set expectations for good hunting practice and advertise these in the community
  - Place more posters in public buildings
  - Better educate in how to freeze, butcher and cook

**Community Initiatives (17 comments)**

1. Programs to facilitate the traditional sharing of food- 6 comments
  - Better facilities to store/market country foods
2. Sponsor a community harvest- 5 comments
3. Bingos should support addressing poverty, not creating it- 6 comments
  - Make all families on welfare buy enough country food to last 2 weeks with government help
  - Open the public places more often invitations from the churches or other places to soup kitchen using country food supplied by hunters with gas provided by bingos etc.

**Conclusions**

There were very positive responses to the community survey process. In total, 259 surveys were completed. Of these, 100 people self-identified as hunters; 159 as consumers. 98% of respondents indicated that they eat country foods. 70% said they had sufficient country food for their needs, but 96% said they would eat more country food if it were available. 76% of respondents eat small game (mostly geese- 45% and ptarmigan- 27%) and 96% eat fish (mostly char and lake trout).

The open-ended survey responses received have been categorized under four

headings: HTO programs, training, community initiatives, promoting values, with the majority of comments falling into issues for the HTO and concerns about promoting cultural values around respectful harvesting in the community.

Recommendations for the HTO would be to review the existing community harvesting and harvesting support programs to see how they can be improved and provide greater benefit to the community. In particular, there was dissatisfaction with the way the NTI harvester support program is operating, accountability and community benefits coming from that program. As well, there is significant dissatisfaction with the commercial hunt and the lack of benefit this provides to the community as a whole. There is positive expectation for HTO to take a more active leadership role in providing training to and expectations about respectful hunting practice in the community. There is also a strong expectation for HTO to become active in expanding a community harvesting programs that helps to sustainably address adequate access to country food in the community. Although most respondents felt that caribou would always be available—only 64% of consumers felt secure about this and 76% of hunters felt secure. Given that 30% of the population have some fear that caribou harvesting is not sustainable, this should be a key issue of concern for HTO members to address. It is also an area where the community needs to plan specific adaptations to ensure sustainability and continued access to healthy country foods in the light of changing conditions and supplies.

The concerns raised for the HTO are supported by the comments made about promoting respectful harvesting values, including the cultural value/obligation of hunters to share and to harvest without wasting. These views include the need to encourage hunters to prepare, preserve and store meat well to avoid waste and to continue to highly value the excellent nutrition provided from our environment. These values should be reflected in promotional and policy initiatives by the HTO, but also are essential for community wellness programs to address. Perhaps more collaborative planning between HTO and the Wellness Centre would help meet these expectations.

The comments for training programs should be considered for school-based programs, HTO programs and for inclusion in the Young Hunter's curriculum.

Comments for community initiatives are also covered under the recommendations for improving the community freezer. However, there were very specific comments about having seasonal community hunts supported by the Hamlet/HTO and Social Assistance which would create a supply of meat that would then be made available through community kitchen programs, a redistribution project to families on social assistance or those without a hunter, and potentially a regulated community market.

## How can the freezer be improved?

### Management:

Improve organization- 12

- More organization so boxes don't go missing
- Available for community, supply of tape, boxes and papers after everyone picks up, use it for everyone to drop off or pick up for needy

Individual lockers/spaces- 8 comments

Improve cleanliness- 6 comments

- Keep it clean and take off the ice inside more

More shelving- 5 comments

- It needs a ladder for the worker, she can't reach the top
- More freezer space at top can be used if it is accessible
- Make bigger space individually or by family

Security- 13 comments

- Less theft use logging book
- Log in/out sheet by alphabet
- I keep my country food at my home because I lose too much in the freezer
- By providing sign in/out and numbering system so we don't lose meat
- People just take anyone's meat maybe get a locker for each person with locks

Better supervision- 8 comments

- A better community freezer attendant so we won't keep losing our food

### Capacity:

Increase size- 72

Add a second freezer- 5

- Get a bigger freezer for caribou meat and the freezer were using can be used for maktaaq/fish

### Access:

Increase hours of operation- 23

- Open year round
- More extended hours especially weekends
- Open early before spring time
- Open longer in season
- Have the operator go there at any hour when the hunter returns before the meat decay
- As long as its open in every harvesting season

**Status Quo:** 21 comments

- Community has did a good job having a freezer
- Works very well and thank you
- It's good that its open during summer
- Up to the council, how they want it

**Conclusions:**

There were 259 respondents to the community harvesting survey. Of this number 100 self-reported as hunters and 159 self-reported as consumers. 67% of the respondents indicated that they use the community freezer.

The majority of respondents wish to see increased community freezer capacity. There is also a significant amount of support for increased access across the year. An issue raised in the interviews, but not mentioned specifically on the surveys was the amount of freezer space required by dog team owners and also the concern in the community about bears when storing meat outside of houses. There is support for a long term plan for increasing freezer space and access in the community.

With regards to the existing freezer, there were numerous suggestions about how to improve the operation of the existing freezer. The majority of comments centred on security and the fact that many people lose their harvest either through lack of an organizational plan for storage, or lack of supervision and oversight when people are removing boxes from the freezer. Several people suggested the need for an inventory system where boxes are logged in and out and must be clearly identified as to ownership. It was also indicated that there should be some obligation on the part of the freezer supervisor to provide this level of security and cleanliness.

It was suggested that the existing freezer should be organized with more shelving, improved access to the top parts of the freezer (including a ladder) and the possibility of locked cages should be considered.

## **Community Validation Workshop**

A three-day workshop was held in the community to present data, respond to concerns raised in the process and to validate the recommendations coming out of the study. The workshop was co-sponsored by the Arviat Wellness Centre and the Arviat Hunters' and Trappers' Organization. The entire workshop was filmed by the Arviat Film Society in order to document this part of the community research process. It is hoped that the footage will be used to create a digital story of Arviat's approach to improving country food sustainability.

## **Climate Change Health Adaptation Strategies for Inuit Food Security –Arviat, Nunavut and Beyond**

### **Community Workshop- Summary report**

#### **Day 1: Elder's Panel**

Four Elders presented to an audience of 14 people. The purpose of the panel discussion was to present the Elders' experiences of cyclic declines of caribou herds in past years. The 3-hour discussion covered many more caribou-related topics. For this report, the points below represent the information shared about the specific desired topic.

- The Elders recognize that there has been a decrease in the numbers and health of the caribou herd.
- They have experienced this in the past and they recognize that there are natural cycles which all wildlife/natural habit goes through. There may be a decrease in numbers or the population might just move to better feeding areas in order to let the land revitalize itself. This was always experienced.
- The Elders believe that there are other factors which also influence this cycle and they identified the fact that we live in a growing settlement rather than small nomadic camps which puts new pressure on the herd, climate change is bringing more parasites/disease to caribou, hot temperatures and flies bother and distress caribou, new animals are coming into the area and competing for a shared food source, weather is unpredictable and alters migration behavior, mining is heavily impacting on herd behaviour.
- There was also recognition that improper harvesting practices cause the herd to deviate from the regular routes. Many hunters are not following the rules of respecting caribou, such as not killing from the lead group which is scenting the trail for the others who follow. Other improper practices--such as leaving waste on the land has also deterred caribou. Mining debris, leaking barrels were of special concern. There has been no successful way to get these exploration companies to clean up the destruction and debris they bring into our hunting areas.
- Elders were also concerned about wastage of caribou. Leaving unwanted parts of butchered caribou on the land will cause the herd to move away because this attracts predators. In the past, Inuit were very careful to bury

caribou entrails that were not going to be eaten and to leave the land as one found it before the kill. It was especially important to preserve crossing areas.

- They spoke of the importance of respecting the seasons of the caribou. For example, females were seldom hunted and never in calving season. Hunters used to wait for the caribou to come to them because they did not have the means to go long distances to chase caribou. This meant that they observed the animals coming from a long distance and carefully planned which animals to harvest and which ones to let pass by. In this way, the herd was able to stay strong and there was no over harvesting of a critical element of the population such as females or yearlings.
- In the past, both animal behavior (especially ptarmigan) and weather were used to predict the coming of caribou. Being able to closely observe and understand nature was critical to being successful in harvesting. With all the rapid changes we experience today, this close observation and understanding of the natural world and natural cycles is even more important for young hunters to understand. In the past, we were so closely attuned that we could feel through the land the coming of a herd. Regaining this knowledge will help us to properly support caribou when they are stressed. For example, knowing the severity of winter, we didn't hunt caribou in the very cold months. At that time, their sense of smell is very acute and they are very hard to approach.

## **Day 2: Issues Affecting the Health of Caribou.**

### **Presentation by Mitch Campbell, GN Regional Biologist**

Mitch Campbell provided two powerpoint presentations to about 26 community participants. The first focused on the most commonly found parasites, symptoms, and impacts on the health of caribou for this herd. As the herd declines we can expect to encounter more of these parasites. They are also increasing as a result of climate changes.

Mitch presented an analysis of the health of the different caribou herds found in the sub-Arctic and Arctic regions and showed the areas their migration routes covered on maps. He reported that although at its peak the Qamanuriaq herd numbers about 600,000, it is in a slow decline and these numbers will be reduced for the next few years. This is a natural cycle and as the land recovers from over foraging, the herd numbers will also come back if there are not other factors that impede recovery. Of immediate concern to the government is the threat to the caribou calving grounds and the potential for over harvesting caribou for the purpose of internet sale of meat.

The calving ground for the Qamanuriaq herd has been in use for over 600 years. Although other herds have moved calving grounds or parts of a herd have selected various calving grounds, this herd has found such a well-protected area that they

have calved as a herd and have continually used the same area. When the calving grounds of other herds have been disturbed and they have been forced to find separated calving grounds, those herds have not recovered well. The loss of calving group also alters the migratory routes and home territory of the herds. The granting of mining right in the Qamanuriaq calving ground may cause the break up of the herd and limit the ability of the herd to recover naturally from their down cycle. There was some discussion of the incidence of caribou which actually seek shelter from predators near settlement and mining sites. These caribou are generally displaced animals who have lost touch with the main herd or may have been orphaned at a young age. They are not representational of the herd itself. We know that during the time of the Rankin Inlet nickel mine, caribou left that area and did not return for about 40 years. Caribou will avoid loud noises and disturbances on the land. They are particularly skittish during calving and exploration, mine development, road building through the calving ground will definitely drive this herd away. Elders have seen this in the past. It was also mentioned that mining is a non-renewable resource while caribou are not. Participants were very concerned that we would want the caribou around forever.

### **Day 3: Ideas for the community plan.**

A group of mostly elders met and discussed the issues raised for the community plan. Although there were few participants in the third day of the workshop, there were several ideas raised that will be reported back to the community and put forward for validation to a larger group.

1. The training of young people in sustainable harvesting needs to be paramount. This is not being done by parents or the school and needs to become an issue so that community-wide training is available to all young people. Training must include proper survival skills, wayfinding in addition to the rules of sustainable and respectful harvesting. Elders who are less able to go hunting now still have important knowledge in these areas to pass along and want to be involved in supporting the community. This kind of training would also help young people to value the benefits of country food.
2. Associated with this is the wastage of meat. This happened when people are not well trained and are not careful in harvesting. They take the wrong kind of animal, they leave parts of an animal behind, they see disease and discard the whole animal. There is also wastage when hunters return to the community and do not take care of their meat right away. Especially in the summer, meat needs to be unpacked, butchered and packaged properly and kept cool or frozen. As we now experience much hotter temperatures, the way meat is handled must become very specific in order to avoid wastage. There is meat going to the dump that has been left too long. This attracts scavengers to the dump and this is also not good for the community. Training people in how to properly take care of meat and to prepare meat well is an area where elders can provide expertise to the next generation.

3. The NTI Harvester Support program provides equipment, but the people who receive it often not using it to hunt and do not provide resources back to the community. This program should have positive outcomes for everyone in the community. When it becomes a handout with no obligations or accountability it has a negative impact on the self-reliance of the individual and the community. The money from this program should be used for a new program to support and benefit the community as a whole. The suggestion was that it be used to support youth training and a community harvest.
4. The food bank is another example of a program that does not follow Inuit beliefs about self-reliance and supporting one another. It is run by the nurses and they do not understand the IQ belief system. It would be better for a group of community elders to provide a service where families who are not able to be self-reliant can come to receive instruction, share food and necessities with them, but also with the expectation for giving back to the community and improving their skill levels to become less dependent on others and the GN systems. People need to be trained in order to plan and prepare and meet the needs of a family. This kind of instruction and learning how to overcome difficulties through being more resourceful should become part of this program. The Hamlet should consider this kind of program to replace the food bank the way it is being run now.

The following quote from an HTO member and Elder provides a good summary of the evening discussions:

The idea to help the youth I support very strongly especially for the standards for hunting. We understand the way of creating a program and we can assist with this. In this way IQ can be safeguarded. We need to understand the laws in wildlife and natural laws and we need to have all this out in the open. Laws help us to understand better. A lot of people have no clue about the natural laws of wildlife because they have not been taught properly about living with the environment, If you are not taught you cannot just pick these things up. We live by these laws everyday—how to handle food, how to plan and prepare, how to look ahead, how to deal with delays, how to find your way, how to deal with storms in life. Things can be calm and things can be very rough. You have to be able to handle all things. There is another way to look at it. Inuit always were told to look for something ahead. This really about hope. Even when we are hopeless there is still hope. It's just like fixing something. If something breaks there is always a way to fix it or get by without it. How we get ahead and how we survive in life is about how we have been prepared. We fall in the water, but little by little we try to reach safety. You must always be thinking of the next step. Even when we are very tired we should not forget the things that have to be done and the steps that have to be followed. Think how today we have so many advantages and things to help us. When you pay attention to the laws things are done well and then there is always hope because the laws provide support and security for you.



## **The Arviat Research and Knowledge Translation Model**

### ***Community Applied Research***

The Arviat Wellness Centre has two full-time local community researchers who are being trained to investigate issues in the community and also to assist with on-going community-driven research related to community wellness planning processes. They have been involved since the beginning of this project in all the data collection, transcription and reporting back to community through knowledge translations material development. This is key to the community-driven research process, which has been found to be the most effective for Arviat. The process engages tools found to be effective and relies heavily on an iteration of making public health information available, providing opportunities for open discussions, collecting responses to the information, collaborative solution seeking use of the information to suggest next steps for the community process. In this project, the process included these components:

1. The research began with the gathering of Elder responses to a set of described research questions about the definitions of sharing from an Inuit perspective. Elders are invited to attend the data collection session based on their reputations for having expertise in the topic being discussed. All Elders receive honouraria for participating.

In data collection sessions with Elders direct questions are not posed but are outlined in a broad over view of the goals of the study and the knowledge that is being sought. Elders are then free to discuss the topic broadly. The interviewer will seek clarifications throughout and may steer conversations to points not fully explored. The Elders set their own parameters for the discussion and also determine when they are satisfied that a topic has been fully covered. This information is shared back to the group in an oral format presenting a summary of the main points of the conversation. Elders are free at anytime to add to the content or expand on it.

2. Over the 12 months of the project a series of radio shows were used to widely disseminate information/research knowledge on a topics of effective use of the community freezer, challenges to the caribou herd, benefits from harvesting of small game, promotion of the Young Harvester's Program, Inuit beliefs about sustainable harvesting, ideas for the provision of caribou meat to the community. The information presented in the radio shows was also provided to the community in the form of a short pamphlet available at several outlets such as the Health Centre, Hamlet office and schools.
3. Radio program sessions included radio call-in shows so that community members could engage with the information being presented. Respondent comments were anonymously added to the data. The names of respondents were placed in a draw for a small prize.

4. Each Friday, following the radio show, random surveys were collected by the Research Assistants. These were designed to assess knowledge uptake and identify concerns/questions still unaddressed from the public perspective. This was usually done near one of the stores or around the schools.
5. The topics were also discussed through three focus-group sessions and three kitchen-table talks. Focus groups were composed of a range of community stakeholders with some expertise in the topic. For kitchen table talks, a prominent family group was asked to invite 10-12 participants to attend a talk. The hosts were given a small voucher for inviting people to the event. The Wellness Centre provided refreshments. A great deal of very rich data was collected from these sessions. We were also able to ask participants to respond to some comments already provided through surveys and radio programs, so these sessions extended the community discussions in a more focused way and served also to validate many of the responses that we had received.
6. The three-day workshop event was designed to provide further opportunities for information dissemination, direct responses to requests for new information and validation of emergent themes and of the data collected. New ideas and suggestions for further consideration will be used to ultimately develop a community plan for sustainable access to country foods.
7. The formalized results from the entire process are available in a report format with recommendations for next steps so that all research is part of an iterative community development process. The report will be presented to funders and to policy partners. These results will also be summarized and shared back to the community through community radio and in poster formats.

### ***Community Action Planning***

The Arviat Wellness Centre uses a community development model to consult and create its action plans. This is the next step. The action planning engages two levels of community respondents. The first level includes feedback and validation of the report recommendations from Elders, community participants and youth members through focus group sessions. The second level involves policy groups such as the Hamlet Council, Hunters' and Trappers' Organization, Inuit organizations and the Nunavut Department of the Environment. The goal is to assess the components of the community recommendations and describe these with goals, timelines, resource requirements, actions needed and policy implications. Once this has been accomplished at the community level, the policy level needs to be engaged in order to provide agreements about the policy supports that will be required. The Arviat Sustainable Harvesting Plan may require some small pilots to be completed in order to provide a more accurate assessment of the viability of proposed action. The plan should ultimately have a 5-10 year projected life with reviews and evaluation of the progress at regular intervals.

## The Arviat Young Harvesters' Project

Arviat is a community located in one of the richest harvesting areas in Nunavut. It is, therefore, an increasing concern to the Arviat Health Committee and Hamlet Council that many families are food insecure and that many children do not receive adequate nutrition to ensure basic health. Through community-driven research around food security (Ford & Tagalik, 2011), community members reported not having access to country foods because there was either no hunter in the family or the family did not have equipment necessary for harvesting. In additional community-initiated data collection into children's nutritional intake we found that the diet of our children aged 4-12 years consists of only 12% protein. The bulk of the diet comes from processed carbohydrates (53%) and sugar drinks (26%). When we surveyed parents to find out why children are not consuming country foods the consistent reply was that "they did not like the taste".

*Inusiysiarniq* is a program initiated in the community to help address these issues. The program targets 4-12 year olds that seeks to promote consumption of country foods, limit consumption of non-foods and encourage physical activity. It was a 12-month pilot, based on the idea that if we provide information about strong food choices, children will take those messages into their homes, becoming the strong food advocates in their families. It is expected that a positive shift in diet amongst young children will establish better eating patterns for life. Funding from the Public Health Agency of Canada for this project ended in December, 2011.

One component of this program is the Young Harvesters' Project. The objective of the program is to train young harvesters between the ages of 8-10 in sustainable harvesting methods and in Inuit values and hunting practices. The group of 12 children, lead by 2 youth, work with community Elders learning about respectful harvesting, animal seasonal patterns and habitat. They also learn how to make tools and weapons, equipment required for harvesting and transporting catch, butchering and preserving foods. The focus is on the abundant small game that is harvestable within walking distance from the community. The harvesters work with youth who are strong hunters and practice skills daily after school in order to prepare for harvesting sessions. Small game is harvested using slingshots, spears and snares. The group also goes on occasional longer hunting trips. They have been able to harvest caribou on these occasions. For most of these boys, this is their first catch. The game is returned to the community and shared and the celebrations of a child's first catch observed. Since a family must eat everything a young hunter brings back, ptarmigan, hares and duck are becoming part of family meals. The caribou, which has been scarce for several months, was widely celebrated.

It is reported that the children readily eat what they have harvested. The boys also "thank" Elders by cutting ice blocks and bringing them to their homes, as well as some game and small gifts. The Elders are very supportive of this program.



Sewing canvas hunting bags not only ensures that harvesters have a place to keep tools and weapons. It also provides the opportunity to teach them about preparing for harvesting, what to always carry with you onto the land and what is necessary for survival. We expect that this program will begin to address the dilemma of families who have no hunters by sparking an interest and ability in hunting early in life. We are also linking these children through significant relationships to experienced hunters who can guide them as they begin to harvest more independently. The program also dispels the myth that hunters require large equipment in order to harvest for their family.

Presently, there are 12 boys participating in this program. We are already receiving many requests for additional intakes and also requests from girls who want to become harvesters. We feel that it is very important to be able to continue to deliver this program through the spring and summer so as not to miss teaching in every season. Funding for the program pays youth wages, some Elder honouraria and small amounts for materials required for weapon and equipment making.

We are currently looking for potential sponsors for a 12 month project. We want to both continue to offer and to also enhance the program. We greatly appreciate any funding support that may be available.



**Comments from parents:**

“I am really happy with the program because my son doesn’t go hunting with his father. I noticed that he is a lot happier now and likes to help out more.”

“I think it is a very good that the Young Hunters’ Program takes young boys out on the land. And the boys really enjoy it and have very active leaders who enjoy going out on the land. My son is active and happy now that he is in the program. He gets really excited when they are about to go on a land trip and is more active than usual. He seems to be happier now that he is going out on the land.”



## Evaluation Plan & Results

<b>Objective 1: Conduct research with Arviat Elders to ensure the community food security plan is grounded in Inuit values, and is considered culturally appropriate in today's context.</b>			
<i>Project Activities</i>	<i>Performance Indicators</i>	<i>Data Collection Techniques/tools</i>	<i>Comments</i>
Research with Elders	<ul style="list-style-type: none"> <li>▪ Elder satisfaction with process</li> <li>▪ Research adhered to solution-based method</li> <li>▪ Elders were “heard”</li> <li>▪ Elders validate process</li> <li>▪ Community plans reflect research knowledge</li> <li>▪ Community valued Elder input</li> </ul>	<ul style="list-style-type: none"> <li>▪ Group interviews after Elder meetings and at end of project</li> <li>▪ Team analysis of plan</li> <li>▪ Feedback at community meetings; interviews with community participants &amp; focus groups</li> <li>▪ Number and types of Elders participating</li> </ul>	<ul style="list-style-type: none"> <li>▪ Qualitative and open ended evaluation techniques are most appropriate with Elders</li> <li>▪ Elders remained involved throughout the process</li> <li>▪ Elders made key recommendations for next steps</li> <li>▪ Elders have committed to on-going leadership/participation</li> <li>▪ 24 Elders are highly involved</li> </ul>
<b>Objective 2: Build on previous research and community planning processes to address: 1) family-based harvesting activities, 2) enhanced use of the community freezer, 3) food redistribution through community markets and a barter system, and 4) a culturally appropriate food sharing system.</b>			
<i>Project Activities</i>	<i>Performance Indicators</i>	<i>Data Collection Techniques/tools</i>	<i>Comments</i>
<p>Summarize previous research and planning activities and present to community members</p> <p>Hold planning meetings</p>	<ul style="list-style-type: none"> <li>▪ Participants were satisfied with research summaries</li> <li>▪ Their knowledge increased over course of project</li> <li>▪ Community plans reflect research knowledge</li> <li>▪ Participants are engaged in process and agree with the plan</li> </ul>	<ul style="list-style-type: none"> <li>▪ Group interviews after research meetings and at end of project</li> <li>▪ Team analysis of plan</li> <li>▪ Feedback at community meetings</li> <li>▪ Interviews with community participants</li> <li>▪ Number and range of community participants</li> <li>▪ Community validation of data</li> </ul>	<ul style="list-style-type: none"> <li>▪ Indirectly the communication plan will receive on-going adjustment; it is important that the action plan reflects both Elder input and research knowledge</li> <li>▪ Knowledge uptake was steady and supportive</li> <li>▪ community members shared ideas</li> <li>▪ excellent response to surveys</li> <li>▪ Program specific recommendations were forthcoming from the</li> </ul>

			participants
<b>Objective 3: Document and share elder perspectives on a culturally appropriate definition of “food sharing”, principles of reciprocity and self-reliance rather than dependence on community services.</b>			
<b><i>Project Activities</i></b>	<b><i>Performance Indicators</i></b>	<b><i>Data Collection Techniques/tools</i></b>	<b><i>Comments</i></b>
Prepare a report on the Elder research	<ul style="list-style-type: none"> <li>▪ Report reflects Elder views</li> <li>▪ Elder satisfaction with report</li> </ul>	<ul style="list-style-type: none"> <li>▪ Group meeting with Elders</li> <li>▪ Number and reach of report distribution</li> </ul>	<ul style="list-style-type: none"> <li>▪ Elders were satisfied with the report</li> <li>▪ Elders participated in other research activities</li> <li>▪ Elders’ knowledge was shared on community radio and in panel discussions as public meetings</li> <li>▪ Report is being made available to Inuit organizations and interested stakeholder groups nationally</li> </ul>
<b>Objective 4: Document the Arviat model for research with Elders as a promising practice in Indigenous research methods.</b>			
<b><i>Project Activities</i></b>	<b><i>Performance Indicators</i></b>	<b><i>Data Collection Techniques/tools</i></b>	<b><i>Comments</i></b>
Prepare a report on the Elder and community research model	<ul style="list-style-type: none"> <li>▪ Report reflects model used</li> <li>▪ Model was effective in eliciting knowledge</li> </ul>	<ul style="list-style-type: none"> <li>▪ Group meeting with Elders</li> <li>▪ Team analysis of report</li> <li>▪ Interviews with community participants</li> <li>▪ Number and reach of report distribution</li> </ul>	<ul style="list-style-type: none"> <li>▪ Model was successful in generating knowledge uptake, community participation and varied responses and recommendations</li> </ul>
<b>Objective 5: Share knowledge of Elder- and community-driven responses to food security issues with Inuit youth and others through a web-based educational tool and curriculum resource.</b>			
<b><i>Project Activities</i></b>	<b><i>Performance Indicators</i></b>	<b><i>Data Collection techniques/tools</i></b>	<b><i>Comments</i></b>
Communicate results of projects and promote tool	<ul style="list-style-type: none"> <li>▪ Focus group members are able to use the plan to develop “next steps” and demonstrate an</li> </ul>	<ul style="list-style-type: none"> <li>▪ Focus group feedback</li> <li>▪ Number, types and reach of communications products and</li> </ul>	<ul style="list-style-type: none"> <li>▪ Community stakeholders were excited about the data and recommendations generated</li> </ul>

	<p>increased knowledge of food security</p> <ul style="list-style-type: none"> <li>▪ Focus group members report satisfaction with the plan and process</li> </ul>	activities	<ul style="list-style-type: none"> <li>▪ Research process and results has gained buy-in from key groups such as HTO, Dept. of Environment</li> <li>▪ Although this is a community project, the results will be made available to other communities who express an interest in receiving them.</li> <li>▪ Web-based tool not in use yet, but it is expected that reports will be available on the Arviat community website and Facebook over the summer</li> </ul>
--	---	------------	---

## Communication and Dissemination

Many activities occurred during this project. The activities were coordinated by the local team, based on a communication plan. This included very regular use of community radio, word of mouth, e-mail, announcements at other gatherings and phone. Facebook and other methods such as the community website for engagement and follow-up are planned to occur over the summer months. A three-day community workshop was held to share results and key recommendations with the community. It was also used to present Elder and other expert knowledge around the health of caribou.

Distribution of final deliverables will occur first in the community of Arviat through community radio call-in shows, poster and postcard distribution and additional community stakeholder workshops sessions. Project communications, promotion and dissemination of the project deliverables will also be loaded onto the community website.

## Summary of findings

This research project allowed the community to have a broad discussion around the many issues that are impacting food security, access and availability of country food and the various changes, including climate change, that impact on the health of the community. Key to improving community health is stable access to strong country foods and healthier food choices which include fresh and local produce. The nutritional profiles that we completed for our 6-12 year olds clearly indicate that



our children's current diet is significantly deficient in protein, iron, vitamins and minerals. Only about 16% of all dietary intake for these children comes from meat, fruits and vegetables. They are receiving about  $\frac{1}{4}$  of the recommended amount of daily dairy intake and their overweight and obesity rates are 33% higher than the Canadian average. Clearly food security is not about quantity of food; it is also reliant on access to quality foods.

Although most of the data gathered about access to harvesting is anecdotal, there is wide consensus that warming temperatures had stressed various animal populations on which Arviarmiut rely. There are definitely fewer seals in every season. Some respondents felt that this was due to the much warmer temperatures of the Hudson Bay waters and that seals are now further out into the bay. Other people feel that it is the huge increase in the polar bear population, which is now denning around Arviat and has a year round presence, that has contributed to the decline in seal numbers. The impact is that seal is not widely available as a staple food item. As well, caribou are noticeably stressed by the heat and by increased numbers of insects and parasites. Their normal migration patterns are being altered as a result. They are becoming less reliable as a staple source of food.

Both of these conditions require the community to identify adaptations which can help to mitigate loss of food sources. The recommendations for adaptations to come out of the community study include support for program such as a community harvest and the Young Harvesters Program to ensure that harvesting continues to be sustainable. There was also a strong emphasis on revitalizing cultural teachings around harvesting that ensure sustainability. There is support for expanded and improved community freezer capacity to allow harvesters to harvest across seasons and reduce wastage through continual access to preserving country foods well. As well, there is a very considerable expectation for the community to investigate the potential benefits of climate changes and to explore this potential to improve food security. In the next iteration of our research and community planning process we will assess the availability of local plants as a food source, the possibility of cultivation and production of plants for food and also the possibilities for a commercial food-producing venture.

## Budget

Expense	Description	Health Canada Funding Request	Funding from Other Sources	Comments & Actuals
<b>Core Expenditures</b>				
Salary	Researchers – 2 x 11 months @ \$3,333/mo	73,326		
Benefits	@ 12% above	8,799		
	Elder participation –	1,000		\$100 a session for 5 Elders x 2 sessions
Professional services	Project manager – 60 days @ \$500/day + 2.5% GST	15,375	15,375 volunteer +\$7,000	\$7,000 was paid to the project manager. An additional \$7,000 was made available to the Young Harvester's Project and the project manager donated the remainder of her time.
	Community animation, consultation and meetings – 15 days @ \$500/day		7,500 in-kind	Hamlet Wellness Centre
Translation	Elder materials – 1600 words @ .40	640		
	Final report summary – 600 words @. 40	240		
Materials	Meeting materials, photos		2,500 - in-kind	Hamlet
Communications	printing postage	20		
<b>Core sub-total 1</b>		99,400	41,775	
<b>Administrative/Management Costs</b> (maximum 10% of total request from Health				

Canada)				
Office materials/supplies			500	Wellness Centre
Copier and photocopies	12 months @ \$20/mo		240	Hamlet
Telephone and telecommunication	Internet, phone and fax - \$130/mo x 12 months		1,560	Hamlet
Office rental	12 months @ \$650/mo		7,800	Hamlet
Maintenance and repairs				
Postage, shipping and handling			100	Wellness Centre
Accounting fees	Accounts payable and receivable, audit		5,000	Hamlet
Human resources, payroll services	Payroll, HR policies and oversight	10,000		
Computers	Computers, printers, software – 12 mos. @ \$150/mo		1,800	Wellness Centre
Local transportation	12 months @ \$50/month	600		
<b>Admin subtotal 2</b>		10,600	16,500	
<b>Total Cost of Project (subtotals 1 and 2)</b>		110,000	58,175	