Canada Target 12: Detailed Assessment Report

INTRODUCTION

This detailed assessment report supports the evaluation of progress toward Canda Target 12:

By 2020, customary use by Aboriginal peoples of biological resources is maintained, compatible with their conservation and sustainable use.

In order to evaluate progress achieved toward this target, the following indicators were assessed:

1. The number of households participating in traditional activities
2. Consumption of traditional foods
3. Case studies illustrating customary use of biological resources

SPECIAL CONSIDERATIONS

Please note that the terms 'Traditional Knowledge' (TK), 'Aboriginal Traditional Knowledge' (ATK), and 'Indigenous Knowledge' (IK) are used interchangeably throughout this report. The terms TK and ATK were formally used in the Canadian context, and the government of Canada is now turning to the use of the terms 'Indigenous' and 'Indigenous Knowledge'(IK).

INDICATOR 1: NUMBER OF HOUSEHOLDS PARTICIPATING IN TRADITIONAL ACTIVITIES

SUMMARY OF FINDINGS

There is limited data available to assess activity according to this indicator. A key data source is the Aboriginal Peoples Survey conducted by Statistics Canada once every five years. Results from the 2017 survey will not be available until late 2018 and were not availble to inform Canada's 6th National Report to the CBD.

New data from the First Nations Regional Health Survey, conducted by the First Nations Information Governance Centre, suggests that there has been a downward trend with regards to participation of on-reserve First Nations in traditional activities.

Another source, the First Nations Food, Nutrition, and Environment Study, shows that on average, across several provinces over the course of the last decade, 65% of on-reserve First Nations households participate in traditional harvesting activities.

Current information on the participation of Inuit, Métis, and off-reserve First Nations peoples in traditional activities was not located to support this assessment.

There is a large volume of anecdotal information concerning current efforts, on behalf of governments and Indigenous peoples, to encourage and support the customary use of biological resources. For example, Indigenous-led Guardians programs that promote environmental stewardship and land management, land-based food security initiatives, and projects aimed at reviving northern farming. Some of this information is detailed in the case studies set out in this report.

SOURCES USED

The First Nations Food, Nutrition, and Environment Study (FNFNES) seeks to identify and document the environmental and nutrition health status of First Nations people. It is a ten-year project mandated by the Assembly of First Nations' Chiefs-in-Assembly and developed in partnership with First Nations and academia (the University of Ottawa and Université de Montréal). Using an ecozone sampling framework, the FNFNES aims to gather information from 100 randomly selected First Nation communities across Canada about current traditional and store bought food use, food security, nutrient values and chemical hazards contained in traditional foods, as well as contaminants found in drinking and surface water. This study demonstrates the impact that traditional food consumption can have on the daily nutritional outcomes for First Nations people.

Survey results over the past decade indicate that roughly 65% of First Nations households participate in traditional harvesting activities.

The First Nations Regional Health Survey (FNRHS, or RHS for short) is conducted by the First Nations Information Governance Centre and is a First Nations -governed, national health survey in Canada. The first phase of the survey was conducted in 1997, and the most recent, third phase was released in July, 2018. It collects information about on-reserve and northern First Nations communities based on both Western and traditional understandings of health and well-being. The most current FNRHS provides insight into a wide array of factors, from language and culture to health-care access and food security,

that affect the health and well-being of First Nations people living on reserve and Northern communities across Canada.

The recently published survey results indicate that, while participating in traditional activities remains an important contributor of health for on-reserve First Nations (in both children and adults), there has been a slight decline in this area since 2010. For instance, 18.3% of survey respondents reported hunting or trapping in the three months prior to the survey, compared to 22.1% in 2008-2010. Similarly, 16.8% reported berry picking or other food gathering, compared to 28.3% in the previous survey, and 22.5% of adults reported fishing in comparison with 32.2% in 2018-2010. 8.3% of adults reported canoeing or kayaking in 2008-2010, vs. 5.7% in the most recent survey.

SOURCES THAT WILL DELIVER NEW INFORMATION IN THE COMING MONTHS

The Aboriginal Peoples Survey (APS), conducted by Statistics Canada (the primary governmental source of data in Canada), is a national survey of First Nations people living off reserve, Métis and Inuit living in Canada. The 2017 APS is a thematic survey with a focus on participation in the Canadian economy, and collects important information concerning Indigenous peoples such as health, language, housing and mobility. The APS provides detailed information on participation of Indigenous peoples (including on and off-reserve First Nations, Inuit, and Métis) in traditional activities, including making clothing, footwear, arts or crafts (for example, carvings, drawings, or jewellery), as well as hunting, fishing, trapping, and gathering wild plants.

The APS is the key data source which would provide insight into current practices and trends for Inuit, Métis, and First Nations living off-reserve since Canada's 5th National Report to the CBD. The results of the 2017 survey will be released in late 2018, and were not available to inform Canada's 6th National Report to the CBD.

The Nunavik Health Survey (led by the Nunavik Regional Board of Health and Social Services' (NRBHSS) Public Health Department in partnership with the *Institut national de santé publique du Québec*),[1] entitled *Qanuipitaa?*, which translates as "How are we now?", was first conducted in 2004. It examined various health considerations of the Nunavik Inuit population.

The 2017 survey seeks to show trends in health issues through time. It examines the state of health of the Nunavik population to date. *Qanuilirpitaa? 2017* is a survey conducted for and by the Inuit. The survey documents physical and mental health outcomes, as well as the social and cultural factors associated with these outcomes. The three components of the survey are: 1) a follow-up of the health status of the 2004 participants covering chronic diseases, infectious diseases and mental health; 2) a new youth cohort to identify indicators of health and well-being pertaining to this critical component of the Inuit population; and 3) a diagnosis of health and well-being at the community level in each 14 Nunavik communities.

In 2004, the survey released information about the participation of Nunavik Inuit in hunting, fishing, and other collecting activities, as an indicator of health and connection to the environment. It is anticipated that that the 2017 survey will offer similar information for comparison.

[1] http://nrbhss.gouv.qc.ca/en/departments/public-health/health-portraits-health-surveys/qanuilirpitaa-2017; also see http://nrbhss.gouv.qc.ca/sites/default/files/Qanuilirpitaa%202017%20-%20General%20facts%20sheet.pdf

Data for this survey was compiled in 2016 and 2017. First data will likely be available by the end of summer 2018, and will be released periodically over 2018 and 2019. Results were not available to inform the assessment for Canada's 6th National Report to the CBD.

INDICATOR 2: CONSUMPTION OF TRADITIONAL FOODS

SUMMARY OF FINDINGS

The availability of data to assess activity related to this indicator is very limited. There is partial evidence for First Nations living on reserve, but no information is currently available on the consumption of traditional foods for First Nations living off-reserve, for Inuit and for Métis.

Data from the *First Nations Food, Nutrition and Environment Study* (University of Ottawa, Université de Montréal, Assembly of First Nations) released on a province-by-province basis over the last decade show that a high percentage of First Nations on reserve are consuming traditional foods. However, there is no baseline to compare with, making it difficult to track progress. It can still be viewed as a general indicator that First Nations on reserve are consuming traditional foods.

Recent data from the *First Nations Regional Health Survey* indicates an increase in the consumption of traditional foods by on-reserve First Nations, with nearly all First Nations adults having reported consuming traditional foods often or at least a few times in the year preceding the survey. Similar trends have been reported for on-reserve First Nations children.

SOURCES

The First Nations Information Governance Centre recently released new data from the *First Nations Regional Health Survey* indicating that on-reserve First Nations are increasingly consuming traditional foods. In the most recent survey (released in July, 2018), 96.7% of adults reported having consumed traditional foods often or at least a few times in the past year, compared to 85% in 2008-2010.[2]

Large land-based animals (moose, caribou, bear, deer, bison, etc.) were the most commonly reported protein-based traditional food often consumed in the past 12 months (30.4%, compared to 26.4% in 2008-2010) by First Nations adults, followed by: freshwater fish (24.8% compared to 22.3% in 2008-2010), game birds such as goose or duck (10.9%), small game such as rabbit or muskrat (9.9%), and saltwater fish (8.3%). First Nations adults are consuming other types of traditional foods such as bannock or fry bread (42.6%), and 26.2% reported often eating berries or other wild vegetation (compared to 18.6% in 2008-2010). There appears to be an increasing trend in the proportion of on-reserve youth and children reporting consumption of some traditional foods in this survey compared to the 2008-2010 survey.

Table 1 and Figure 1, below, provide detailed information about the amount of traditional foods consumed by on-reserve First Nations[3]:

[2] First Nations Information Governance Centre *First Nations Regional Health Survey,* 2018. Available online at: http://fnigc.ca/sites/default/files/docs/fnigc_rhs_phase_3_volume_two_en_final_screen.pdf p.72

[3] First Nations Information Governance Centre *First Nations Regional Health Survey,* 2018. Available online at: http://fnigc.ca/sites/default/files/docs/fnigc_rhs_phase_3_volume_two_en_final_screen.pdf p.724-75

Table 1: Percentage of First Nations adults, youth and children who reported often consuming traditional foods in the past 12 months. *Source: FNIGC 2018. Regional Health Survey Phase 3. Table 4.3, page 74.*

	Adults		Youth		Children	
Traditional Food	**Often Consumed**					
Protein-based traditional food	%	[95% CI]	%	[95% CI]	%	[95% CI]
Large land-based animals	30.4	[28.0, 32.8]	26.4	[23.7, 29.4]	23.3	[21.0, 25.9]
Freshwater fish	24.8	[22.5, 27.2]	18.6	[15.9, 21.6]	15.0	[13.1, 17.1]
Game birds	10.9	[9.1, 13.1]	10.4	[8.1, 13.3]	7.7	[6.1, 9.6]
Small game	9.9	[8.6, 11.3]	6.9	[5.3, 9.0]	5.7	[4.4, 7.2]
Saltwater fish	8.3	[7.5, 9.2]	4.3	[3.6, 5.1]	4.1	[3.6, 4.8]
Other water-based foods (shellfish, eels, clams, seaweed, etc.)	4.8	[4.3, 5.5]	2.9	[2.3, 3.5]	2.1	[1.8, 2.5]
Sea-based animals	1.0[E]	[0.6, 1.5]	0.8[E]	[0.5, 1.4]	0.6[E]	[0.4, 0.8]
Other traditional food						
Bannock or fry bread	42.6	[40.3, 44.8]	46.0	[43.0, 49.0]	42.7	[40.3, 45.1]
Berries and other wild vegetation	26.2	[24.6, 28.0]	23.2	[21.0, 25.6]	23.1	[21.2, 25.1]
Meat, fish or vegetable broth	22.7	[21.0, 24.5]	19.2	[17.0, 21.5]	15.8	[14.4, 17.4]
Wild rice	9.8	[8.7, 10.9]	8.4	[7.2, 9.7]	6.4	[5.4, 7.7]
Corn soup	7.0	[6.0, 8.1]	6.9	[5.6, 8.3]	4.5	[3.8, 5.4]
Other	3.6	[3.0, 4.3]	3.4	[2.8, 4.2]	2.2	[1.7, 2.9]

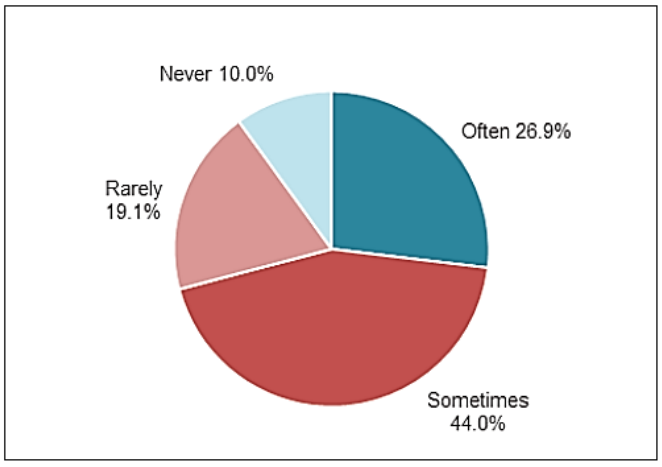

Figure 1: Percentage of First Nations adults who had traditional food shared with their household in the past 12 months. *Source: FNIGC 2018. Regional Health Survey Phase 3. Figure 4.10, page 75.*

Similarly, data from the *First Nations Food, Nutrition and Environment Study* indicates that 83% to 94% of First Nations people living on reserve have consumed traditional food in the past year (83% in the Atlantic region, 93% in Ontario and 94% in Alberta and Saskatchewan). Results for British Columbia are inconclusive, and further results are expected in all other provinces.

SOURCES WHICH WILL DELIVER NEW INFORMATION IN THE FUTURE

As in 2004, nutrition will be a central theme of the *Nunavik Health Survey*, in an effort to help Nunavimmiut define new preventive health strategies as well services for the future. It is expected that the survey will provide important data on traditional food consumption. Data for this survey was compiled in 2016-2017, and will not be released on time to inform this report. It will however help determine trends in the consumption of traditional foods by Inuit in subsequent reporting processes.

The Inuit Health Survey: The 2007/2008 *Inuit Health Survey* (IHS) was a large comprehensive research study that examined the health of Inuit in the Inuvialuit Settlement Region, Nunavut and Nunatsiavut.[4] The survey, entitled "*Qanuqitpit? Qanuippitali? Kanuivit? How about us? How are we?"* was built on partnerships between Canadian universities and researchers, and northern organizations. The funding for the IHS was provided as part of the International Polar Year funding, an international scientific initiative that focused on the Arctic and Antarctic from 2007 to 2009.

This comprehensive survey informed Canada's 5th National Report to the Convention on Biological Diversity. The survey has not been updated since then. The development of another Inuit Health Survey is a priority for the Inuit regions to ensure that actions are responsive to the health needs of the population. The organization Inuit Tapirit Kanatami is coordinating the development of a business case to present a path forward for a sustainable survey which embodies Inuit self-determination in research. In September 2017, ITK requested proposals from qualified consultants/companies to develop a business case that would outline the work required to undertake a sustainable Inuit Health Survey.[5] If this initiative is successful, it could become a part of a sustainable monitoring system to help measure progress toward this indicator, as well as Target 12 in general.

INDICATOR 3: CASE STUDIES ILLUSTRATING CUSTOMARY USE OF BIOLOGICAL RESOURCES

SUMMARY OF FINDINGS

The following case studies, some of which were provided by Indigenous groups, indicate advancements in the area of customary use of biological resources by Indigenous peoples in Canada. Through their intimate relationship with the landscape and resources derived from land and water, First Nations, Métis, and Inuit across the country continue to think of traditional, modern and creative ways of using resources to meet their physical, social, cultural, and spiritual needs. From harvesting traditional foods for food security purposes, to celebrating culture and passing down teachings, there appears to be a revival in the use of biological resources with the aim of maintaining or reviving ancient cultural practices, some of which were long-prohibited by government policies and programs, and almost lost.

There are also numerous examples of collaboration between the government and Indigenous peoples for the protection and conservation of species and the environment.

[4] https://itk.ca/wp-content/uploads/2017/09/20170906-RFP-Inuit-Health-Survey-Business-Case.pdf
[5] Ibid

The management of land and resources is also an important consideration in this analysis. Through Indigenous-led Guardians programs and other initiatives, such as the restoration of clam gardens, Indigenous peoples continue their important work as stewards of the land through ecological and cultural monitoring, and protection of sensitive areas and species, among other things.

CASE STUDIES

CASE STUDY 1: CENTRE FOR INDIGENOUS ENVIRONMENTAL RESOURCES (CIER) FOOD STRATEGY[6]

CIER is a First Nation environmental non-profit organization that works in partnership with Indigenous nations to support and build sustainable Indigenous communities and a healthy environment. They conduct research and provide training with the aim of building sustainable communities and protected lands and waters. CIER has developed a Food Strategy centered on food security and assisting First Nation communities in the development of thriving food economies and empowerment to manage their own food systems. The food strategy is meant to increase access to traditional and healthy foods to improve health, well-being, and prosperity in First Nations. CIER builds upon the idea that a healthy community is a community with a healthy culture, healthy food, and healthy connections between its members. Their food strategy is based upon the idea that these items are tied to Indigenous food and the ways in which Indigenous food brings community members together to gather, cook and consume nutritious and culturally important meals. Food is closely tied to the environment; a healthy environment can produce healthy foods. Eating fewer Indigenous foods can lead to decreased physical, mental and cultural health and well-being in Indigenous communities. Decreases in consumption of traditional foods can negatively affect the ability to maintain IK associated with these foods.

In the context of the Food Strategy, CIER has been working with Poplar River First Nation (PRFN), a remote community in Manitoba that relies heavily on food deliveries over winter roads and on planes. With fears surrounding limitations to food access, PRFN has taken steps to investigate ways to increase their food security. CIER worked with PRFN to conduct a Food Security Needs Assessment as a first step to identify ways to increase food security. Among other things, the food assessment identified the need to rely more on traditional foods and increase the amount of locally grown foods.

The needs assessment results were used to create a working paper that described a project to increase PRFN's food security. The project was further developed and funded and is currently underway at PRFN. The project goals were to:

- Carry out a 'growing local foods' survey of PRFN households and organizations to create community awareness of the benefits of local food self-sufficiency, identify skilled and interested community members willing to contribute to local food production at PRFN, and assess what types of foods and food production that PRFN wanted to focus on.

[6] http://www.yourcier.org/food.html

- Carry out practical training such as composting and gardening methods for community members who will be able to pass this knowledge on to others.
- Carry out home-garden site assessments for people who want to start back-yard gardens.

CIER also spearheads a project called 'Indigenous Food First', which is an interactive website for Indigenous youth to learn and share about Indigenous foods through fact sheets, how to guides, digital stories, sharing stories, and mapping their Indigenous foods. Educators can access a variety of resources from downloading fact sheets and how to guides, accessing information on upcoming food related events in their area, and learning about Indigenous food initiatives happening across the country.

Table 2. Expected outcomes and impacts of CIER's Food Strategy. *Source: CIER Food Strategy www.yourcier.org/food.html*

	A Few Outcomes	A Few Impacts
Delivers Environmental Capacity/Literacy	• Increased awareness and understanding in First Nations about food security • Community members are healthier and can spend more leisure time with their families and miss less work	• First Nations share knowledge within their community and with other communities to promote awareness of environmental issues.
Develops Indigenous Youth Leadership Programs for the Environment	• Youth have increased awareness and understanding about traditional foods • Youth are more connected to their traditional foods and making healthier food choices • Youth are involved in projects to improve their food security and health in their communities	• Youth are contributing towards building healthier communities • Youth are healthier and set an example for their entire community
Helps First Nations Build Sustainable Communities	• Communities have defined their food security needs and have developed a vision for their community • Implemented community-driven food projects	• Increased food security in First Nations • First Nations have Increased access to funding and resources, and built skills to support their food initiatives • First Nations manage their own food systems

CASE STUDY 2: NULUAQ: INUIT COMMUNITY-BASED FOOD INITIATIVES MAPPING PROJECT[7]

The Nuluaq Project addresses the growing Inuit food insecurity crisis. For Inuit, the impacts of food insecurity also extend to cultural well-being because of the continued importance of country foods such as seal, whale, and fish harvested from the local environment.

[7] https://itk.ca/nuluaq-mapping-project/about/#project

The Nuluaq project was developed to reach the following objectives:

- Highlight and promote the work of community-based initiatives
- Facilitate partnerships and improve coordination between initiatives
- Bring attention to the food insecurity situation in Inuit communities
- Help guide decisions about where to direct resources
- Inform advocacy and influence policy

The project aims to increase the information available on Inuit community-based initiatives that play an important role in addressing food insecurity among Canadian Inuit communities. These initiatives are very diverse and include food banks, land-based programs, and community kitchens. They also employ a range of approaches from supporting nutritional needs, teaching traditional skills, and strengthening social connections around food. Here are a few examples of initiatives among many others that have been mapped and shared publically:

Aklavik Hunters and Trappers Committee – Community Harvesters Project:[8] The Aklavik Hunters and Trappers Committee receive funding from the Government of Northwest Territories for community harvesting. With this funding, the Committee helps local harvesters with costs associated to fuel so they can better provide for their families. They also help organize caribou hunts and other community events out on the land, such as berry picking and youth camps. This helps young community members to connect with the Land and provides an opportunity to learn about traditional food systems. The Committee works closely with Indigenous Knowledge holders to document, incorporate, and share important information related to harvesting.

The IlikKuset-Ilingannet/Culture-Connect project:[9] This project was initiated to find strategies to support mental health in ways that reflect and celebrate Inuit culture as a priority. Throughout the course of a research project in 2013, there were strong requests from respondents (youth in communities) to have opportunities to learn cultural skills and participate in cultural activities. If land-based activities are going to be disrupted by climate-related changes, they expressed an interest in having other opportunities to feel connected to culture and to ensure that skills get passed on through generations, as a valuable way to support mental health and promote positive activities in the community. This initiative also provided the opportunity for youth to work with adult role models in the middle generation (given that they already have many opportunities to speak with Elders and seniors). The project served as a pilot initiative in Rigolet, Makkovik, and Postville, Nunatsiavut (Labrador), whereby five youth in each community worked with five adult mentors (35+) for 5-7 hours per week to learn cultural skills, such as hunting, trapping, sewing, art, carving, snowshoe making, music, and wild food preparation. The project had positive impacts on relationships between youth and mentors, confidence, pride, as well as knowledge transmission and sharing, among others.

[8] https://itk.ca/nuluaq-mapping-project/initiative/aklavik-hunters-and-trappers-committee-community-harvesters-project/
[9] https://issuu.com/ashleecunsolowillox/docs/culture-connect_report_final_april_

NiKigijavut Nunatsiavutinni Project (Our Food in Nunatsiavut)[10]: This project was led by Food First NL, a not-profit organization aimed at increasing food security in Newfoundland. The first phase of this project involved a community-led food assessment (CLFA) in Nunatsiavut to take an in-depth look at all of the issues that affect access to food in the community. The project is now in its second phase, which uses the information gathered in phase I (and CLFAs more broadly) and aims to increase access to healthy food, improve health, and achieve healthier weights in other Inuit communities in Nunatsiavut and across Canada. A multitude of interventions/initiatives have resulted from this initiative; for instance, a Youth Outreach Program in Hopedale, Nunatsiavut. Through the CLFA, community members discussed the importance of connecting youth and elders to ensure traditional harvesting, preparation and preservation of wild food is passed on from generation to generation. Community members voiced that teaching youth about traditional ways of life is key to preserving Inuit culture and tradition engage youth in traditional Inuit activities and create intergenerational connections between experienced hunters and youth in the community. The program connects youth and elders in going off on the land to harvest wild food and learn traditional skills. The food harvested is distributed through the community or provided to elders and low-income community members.

CASE STUDY 3: OUR FOOD NL

The *Our Food NL* Project builds off the learnings from the *NiKigijavut Nunatsiavutinni: Our Food in Nunatsiavut* Project (see case study 2) and aims to further enhance access to healthy and culturally-appropriate food in Newfoundland and Labrador at local, regional, and provincial levels. Similarly to 'Our Food in Nunatsiavut', the Our Food NL Project takes a deeper look at the factors impacting access to healthy food, and support the creation of programs in each community that address local challenges accessing food.

Food First NL recently received multiyear (2017-2020) funding through the Public Health Agency of Canada's Innovation Strategy for the Our Food NL Project.[11] Food First NL is a not-profit organization dedicated to improve food security in Newfoundland and Labrador. Among other things, they support informed discussions on the future of food security in the province and work on various projects that build on strengths from traditional food ways that have always been practiced: eating from the land and sea, hunting, gardening, fishing, berry picking, etc.

Community-led Food Assessments to inform locally-tailored and culturally-appropriate actions to support food security will be underway in 2018. This partnership is expected to bring significant learnings from a northern, Indigenous context achieved through NiKigijavut Nunatsiavutinni to both a First Nations and a non-Indigenous context on the island of Newfoundland.

[10] https://itk.ca/nuluaq-mapping-project/initiative/nikigijavut-nunatsiavutinni-our-food-in-nunatsiavut-project/
[11] http://www.foodfirstnl.ca/our-projects/2015/10/our-food-nl

CASE STUDY 4: COASTAL SALISH CLAM GARDENS[12]

Hul'q'umi'num and WSÁNEĆ peoples, whose ancestral territories criss-cross the southern Gulf Islands, have managed their lands and resources for thousands of years. Evidence of their hard work is found across the Gulf Islands in the form of canoe runs, camas meadows and clam gardens.

Coast Salish peoples care for their beaches using traditional practices such as removing kelp and sea lettuce. They turn their beaches with specialized tools to loosen the sand, allowing more room for creatures to grow. At some locations, Coast Salish peoples modify beaches by building rock walls near the lowest tide mark. These walls trap sand and sediment, creating a terrace on the landward side. Such modified beaches are known to some as "clam gardens." Knowledge holders and scientists explain that clam gardens can be highly productive, supporting four times as many butter clams and twice as many littleneck clams compared to unmodified beaches (Groesbeck et al, 2014). A tended clam garden has many purposes; it serves as a pantry, teeming with delicious food. It is also a classroom, where Elders share knowledge and work alongside youth. Together, the entire community cares for the clam garden to keep it healthy.

In 2014, the Gulf Islands National Park Reserve, in partnership with Hul'q'umi'num and WSÁNEĆ Nations, began restoring two clam gardens, which haven't been tended for hundreds of years. So far, the clams on the beaches have been monitored and restoration has begun. This work is guided by Coast Salish knowledge holders, and complemented by modern scientific methods. Some days, they move big boulders while listening to stories. On others, they use scales and gauges to assess the health of the intertidal ecosystem.

CASE STUDY 5: TRADITIONAL MI'KMAQ BIRCH BARK CANOE BUILDING PROGRAM[13]

In the summer of 2017, the Confederacy of Mainland Mi'kmaq launched a new program in partnership with Nova Scotia's Department of Communities, Culture and Heritage, whereby apprentices from First Nations across Nova Scotia can learn how to build a traditional birch bark Mik'maq canoe over a six-week long course at Milbrook's Cultural Centre. The group of apprentices works under the guidance of Todd Labrador, a seventh-generation canoe builder and petroglyph artist in the Kejimkujik region, learning how to transform spruce roots and birch bark into an elegant 16-foot vessel. Once spruce roots and birch bark are harvested, the apprentices go through the various steps required to build a canoe from the ground up. During the six-week course, elders also often drop by and share teachings from their own elders; things that may have been forgotten. In the past, elders often went out with their grandparents to harvest birch bark. Through this process, their lost stories start to come alive again.

[12] https://www.pc.gc.ca/en/pn-np/bc/gulf/nature/restauration-restoration/parcs-a-myes-clam-gardens
[13] http://www.cbc.ca/news/canada/nova-scotia/mi-kmaq-birchbark-canoe-building-todd-labrador-millbrook-1.4152046

Once they complete the program, the apprentices can then bring back the skills and knowledge they have learned to their communities. They can begin the practice of birch bark harvesting and traditional canoe building, passing down those cultural practices to new generations.

CASE STUDY 6: MANITOBA MÉTIS FEDERATION

The Manitoba Métis Federation (MMF) is the official democratic and self-governing political representative for the Metis Nation's Manitoba Métis Community. The MMF promotes the political, social, cultural, and economic interests and rights of the Metis in Manitoba. In addition, the MMF delivers programs and services to our community including: child and family services, justice, housing, youth, education, human resources, economic development and natural resources.[14]

MMF contributes to the customary use of biological resources by Métis Citizens in Manitoba through various initiatives. The following are a few examples that they shared:

Bison Hide Tanning Workshop: In March 2017, the MMF developed a Bison Hide Tanning Workshop. Métis citizens including women, children and elders participated in the customary tradition of Bison Tanning. The process began with procuring two raw bison hides generously donated by a Métis rancher and building two wooden frames for the bison to be stretched upon. The group met over the course of three weekends. Once the hides were dried, the group undertook the lengthy process of cleaning the hide with the use of traditional scraping tools made of bone. Cleaned of all fibres, the hide was then dressed in a solution made up of brain and oil. This "brain" solution allowed the hide to be softened and more pliable. Once set, the solution was scraped away and the hides were ready to be placed in the smoke shed, a natural preservation method.

The workshop has been used to help educate Métis citizens and the general public of this traditional custom. The MMF plans to continue the Bison Tanning workshop in the future, extending the workshop to include processing the animal immediately after slaughter.

Flower Beadwork Circle: The Flower Beadwork Circle is a group that functions on a drop-in basis and operates from September to May each year. During these weekly meetings, members work on individual beading projects and share their knowledge and ideas for beading, patterns, and techniques. The Louis Riel Institute, an affiliate of the MMF, hosts a variety of local beaders of all ages and skill levels that attend the weekly Flower Beadwork Circle. First time attendees are given a beginner project to work on, a traditional, beaded flower design on a piece of fabric. The second is a medicine bag which the new member will also learn to sew and put together before decorating with beadwork. Once these initial projects are completed, beaders can choose any project to their liking, including beaded leather gloves, footwear or sashes.

[14] http://www.mmf.mb.ca/

Metis Citizens scraping away fibres on a stretched bison hide.
(Courtesy of the Manitoba Métis Federation)

CASE STUDY 7: CELEBRATING MÉTIS FISHING TRADITION IN ST-LAURENT, MANITOBA

Every year in March, the St. Laurent Métis community organizes a festival to celebrate the end of the ice-fishing season. The Manipogo Festival, named after Lake Manitoba's famous serpentine monster, celebrates the region's fishing tradition by giving traditional ice-fishing demonstrations and offering visitors pickerel fillets at the Fisher's Ball.[15]

CASE STUDY 8: WOMEN'S EFFORTS TO PROTECT, CONSERVE, AND ADVANCE THE ENVIRONMENT (Shared by Native Women's Association of Canada)

The Native Women's Association of Canada (NWAC) is a national non-profit Indigenous organization representing the political voice of Indigenous women throughout Canada. It was incorporated in 1974 as a result of local and regional grassroots native women's associations over many years. NWAC was formed to promote the well-being of Indigenous women within Indigenous and Canadian societies, and focuses their efforts on helping women overcome sex-based discrimination.

NWAC has shared this story about Indigenous women's efforts to protect, conserve, and advance the environment:

Strawberry Teaching: The strawberry is an important food and medicine for many Indigenous cultures. Like many other teachings for girls and women, the strawberry teaching is derived from the land. As

[15] http://joiedevivremanitoba.com/en/destinations/southwest-region/category/st-laurent/manipogo-festival

Ojibew Elder Liza Mother talks to young women in her community about the 'heart berry' teaching, she teaches them about Indigenous womanhood and bringing life into the world. Like the heart-like shape of the berry, it teaches women about love, forgiveness, and peace, as well as the importance of maintaining heartfelt relationships with others in the community. During the strawberry harvest in June, many communities traditionally held annual feasts, welcoming everyone home, and letting go of differences, judgement and self-righteousness. Because of its interconnectedness with nature, when the environment in which the strawberry grows is threatened, so are the cultural teachings that accompany it. Here is a version of the story that inspires the Strawberry Teaching[16]:

A long time ago, there was a family that chose to no longer live in their village because of community feuding and ill will. This young family took their two little boys and said, "Let us go back into the forest, and we'll let the trees nurture our children; we'll let the birds sing songs to remind them of their own songs. And we'll let the animals become their friends." And so they packed up their little boys and went deep into the forest.

The father offered his tobacco, and asked the tree nation to give him a home. He was granted that gift and so he cut down the trees. He made a home for his family and they moved in. The boys grew tall and strong, and yet year after year they continued to play fight and wrestle. Finally when they were in their teens, their mother said to them, "It's time for you to give up your childish ways." And they said, "Okay mom, we won't wrestle anymore." But as soon as they were out of earshot from their mother, they said, "Let's go deeper into the forest and we'll build a wrestling ring for ourselves, so we can go out there any time we feel like it." And so they did. They cleared some land and went there secretly, without their mother's knowledge.

And then one fateful day the time came when the boys were wrestling and the older brother knocked his younger brother to the ground, where he hit his head on a rock and died instantly. The oldest brother was beside himself. He said, "Please, please wake up… Mom and Dad are going to kill me. Please, please answer me." The only answer was silence. He cried and begged his brother: "Please, please." Finally after a couple of hours, a voice told him: "Bury your brother." And so he dug into the ground and put his brother there. He covered him up and ran home.

Out of breath, he ran to his parents: "Mom, Dad, I've lost my brother in the forest - I can't find him." And so the parents went out with him and they looked. They couldn't find him anywhere. The father said, "I will go into the community, and seek out our relatives to come and help us form a search party so we can find him." So they searched for ten days, and ten nights, and then they went into mourning after they couldn't find their son.

But every day the brother would go to his little brother's grave, and he would say, "Please, please tell me that you're okay! Please!" And he would cry as he walked away, because he had no answer. And years went by. He carried this sadness into his manhood because only he knew where his brother's body lay.

After many years and visits to his grave, the elder brother saw a tiny plant. He watched it grow into a little strawberry vine on top of his brother's grave. Each day he watched the leaves grow and the berries come into fruition.

[16] http://www.fourdirectionsteachings.com/transcripts/ojibwe.html

White heart-shaped berries appeared first. Then, over days, they transformed into big red delicious berries, luscious and sweet. As he contemplated them, a voice from inside him said, "Take a berry and eat it." So he picked a berry and he put it in his mouth.

As he ate it, he became aware, for the first time in his life, that he could taste the sweetness of life again. No more did he blame himself for his brother's death, and no more did he blame his brother for not answering him. He no more blamed his parents for their strict upbringing. And most of all, he no more blamed the Creator for taking his brother's life. He was free. After all of these long years, he was finally free.

And so here in the western direction we have learned something about death and about the power of change and healing, and that finding peace doesn't necessarily come from the head – it comes from the heart. Death can be a place of freedom: freedom to go on, freedom to be. It's very important to remember that, because only then can we go on to enjoy the northern direction after we have given careful consideration to these teachings in the west.

CASE STUDY 8: TR'ONDËK HWËCH'IN TEACHING & WORKING FARM (Shared by the Native Women's Association of Canada)

At Tr'ondëk Hwëch'First Nation (THFN), the Tr'ondëk Hwëch'in Teaching & Working Farm is hosted in partnership with Yukon College and funded in part by Yukon's Training Policy Committee. This results in a learning initiative which empowers youth through education and practice through the application of a homestead-farming approach to gardening. Nutritional food is grown in the community for the community while creating a greater awareness of which vegetables can be grown locally and sustainably.

The project aims to help with the revival of northern farming, help improve food security in the Yukon, and develop the only Canadian First Nations teaching and working Farm School north of the 60th parallel. THFN determined to establish a sustainable, local supply of organic food; food that tastes fresh, is good for your health, and good for the land. Partnering with Yukon College to deliver an on-site "farm school" that is respectful of the land and all it has to offer, the farm serves as a teaching resource and provides practical hands on training for students in a healthy, wholesome environment on the land. The Yukon Research Centre provides assistance in working on new and innovative ways and means of successful growing in this arctic shoulder environment. The Yukon government Agriculture department has added the TH Farm to its list of farms that will assist the Yukon meet its agriculture strategies.[17]

CASE STUDY 9: BRING BACK THE BOREAL INITIATIVE – MOOSE MANAGEMENT IN CAPE BRETON HIGHLANDS NATIONAL PARK

In 2014, Cape Breton Highlands National Park (CBHNP) and the Mi'kmaq of Nova Scotia, represented mainly by *Unama'ki Institute of Natural Resources* (UINR: Cape Breton's Mi'kmaq voice on natural

[17] http://www.trondek.ca/media.php

resources and the environment, representing the five Mi'kmaq communities in Unama'ki, including Eskasoni, Membertou, Potlotek, Wagmatcook, and We'koma'q) launched *Bring Back the Boreal*, a now five-year Conservation and Restoration funded project to restore forest health in Cape Breton Highlands. In large areas of the National Park, forests are no longer regenerating due severe moose browsing. High moose numbers are attributed to the absence of significant predation, such as wolves and hunting, and to the immense food supply following a large spruce budworm infestation in the 1970s and 1980s. A species is considered hyperabundant if it exceeds the upper range of a natural state or variability that's characteristic of the ecosystem and begins to harm other elements of the ecosystem. In CBHNP, satellite imagery indicates that a third of the CBHNP boreal forest shows lasting impacts, while 11% of the park has been converted from forest to grass-dominated savannah. At this point, Boreal forest cannot recover without intervention, and the current state of degradation has impacts on a wide range of flora and fauna, including species at risk (Bicknell's thrush) and provincially-listed species (lynx, and American marten).

The project seeks to pilot promising strategies to inform longer term efforts to manage hyperabundant moose and initiate landscape forest restoration. Among other important objectives for *Bring Back the Boreal* initiative, Parks Canada seeks to initiate forest regeneration in areas of high and medium forest loss, and work closely with provincial Indigenous groups to enhance natural and cultural resource management that is informed through Indigenous knowledge and expanded world views.

One of the most important aspects of this project is the management of the moose population that is inhibiting forest regeneration in the Park. After considering many options, including moose confinement and predator reintroduction, CBHNP developed the *Hyperabundant Moose Management Plan.* The plan applies the established Parks Canada process of considering and developing strategies to manage hyperabundant moose on North Mountain until 2018, in the context of the *Bring Back the Boreal* project. Following this process and various consultations, lethal removal of moose from North Mountain was chosen as the most appropriate method to achieve project objectives. The operational target is to remove >60% of the moose present in the 20 km^2 treatment area (2% of CBHNP), through four fall Mi'kmaq harvest operations, and to measure for improvement in natural regeneration. Another key component of the project was the construction of a 5-hectare fenced moose exclosure in the Skyline trail, a highly popular facility with iconic seacoast views, where park visitors and professionals alike planted over 57,000 seedlings, protected from moose browsing. This site provides an excellent opportunity for the public to better understand CBHNP's issues of moose hyperabundance and forest degradation and to participate actively in forest restoration efforts.

The Nikani Awtiken Mi'kmaq youth camp has been visiting both North Mountain and Skyline trail since 2015, camping in CBHNP. The youth participate in planting and in various forms of wildlife and vegetation monitoring. Both CBHNP and Mi'kmaq mentors provide context and instruction from western scientific and traditional Mi'kmaq perspectives that help connect the youth to the land while providing practical work skills and hopefully and interest in a natural resource conservation career.

At the core of *Bring Back the Boreal* is an important governance component. Throughout this project, Parks Canada and Mi'kmaq groups have partnered closely through what is believed to be a successful pilot cooperative management approach. Although CBHNP works most directly with UINR on *Bring Back the Boreal,*the project ensures strong links to the Assembly of Nova Scotia Mi'kmaq Chiefs through regular involvement of the *Kwilmu'kw Maw-klusuaqn*Negotiation Office (or Mi'kmaq Rights Initiative).

As a result of a 2012 Agreement with Parks Canada, the Mi'kmaq of Nova Scotia hold the first

opportunity to harvest hyperabundant moose. Representatives of the Mi'kmaq of Nova Scotia accepted the first opportunity to engage in a harvest, which first occurred in 2015, and resulted in the harvest of 37 moose. Two subsequent harvests occurred successfully in partnership with the Mi'kmaq of Nova Scotia in the Fall of 2016 and 2017. Information was collected on harvest efficiency and effectiveness in removing moose, and forest regeneration monitoring took place in cooperation with the Mik'maq throughout the project since 2015. The project is meant to continue until the spring of 2018, expecting that there will be signs of some ecological rebound before then.

Moose are a culturally important species to the Mi'kmaq. The tradition of responsible moose harvesting is passed down from elder Mi'kmaq hunters. As explained by Clifford Paul, a moose management co-ordinator at Unama'ki Institute of Natural Resources, "this is the heart and soul of what the Creator has designed, for us to be participants within this ecosystem, for us to use ceremony, honour and respect. For me, this is telling that I am doing the right thing." According to legend, Indigenous people promised the moose they would hunt it with love in their hearts, treat it with respect, share it with people in need and harvest all its part, he said. That promise is at the core of the hunt, which in turn maintains the forest's biodiversity and environment for the moose. While non-Indigenous hunters have protested the hunts at various times since 2015, the Mi'kmaq are concerned with the balance of the ecosystem and believe that the biodiversity is essential to maintain for all mammals, like thrush, bobcat, pine marten and lynx, as well as moose.

Every harvest since 2015 was performed in a humane and respectful manner, consistent with traditional Mi'kmaq values and current practices, and all moose were removed by harvesters and distributed to Mi'kmaq and other Nova Scotia communities for food and materials for traditional crafts such as drums. In addition to helping with the harvest, Mi'kmaq knowledge holders have been involved to share their ideas and perspectives on moose management and forest regeneration. Furthermore, youth have been working with park staff to participate in restoration and monitoring activities. Efforts have also been made to provide opportunities for Indigenous partners to ensure their stories are reflected in public programming, whereby various groups have been able to share their stories outside the community.

This initiative has been successful in strengthening relationships between the government and Mi'kmaq groups.

CASE STUDY 10: INDIGENOUS GUARDIANS – NI HAT'NI DENE PROGRAM

Indigenous-led Guardians programs empower communities to manage ancestral lands according to traditional laws and values. Guardians are employed as the "eyes on the ground" in Indigenous territories. There are more than 30 Indigenous Guardians programs across the country. They monitor ecological health, maintain cultural sites and protect sensitive areas and species. They play a vital role in creating land-use and marine-use plans, and promote intergenerational sharing of Indigenous knowledge—helping train the next generation of educators, ministers and nation builders.[18]

In Lutsel K'e and the Dehcho region of the Northwest Territories, First Nations established Indigenous Guardian programs to help manage ancestral territory. These programs employ Indigenous community

[18] https://www.ilinationhood.ca/our-work/guardians/

members to act as stewards on the land, patrolling protected areas, monitoring fish and wildlife harvests, collecting data on the impacts of climate change, tracking industrial development activities, and educating visitors about proper land use. In the process, Guardians help secure the Dene way of life for generations to come. They also help conserve vast stretches of the Boreal Forest, a globally significant ecosystem that has more intact forest than the Amazon and nearly twice as much carbon in storage as tropical forests. The programs in Lutsel K'e and Dehcho launched just eight years ago, but they already deliver significant social, economic, and environmental benefits.[19]

Ni hat'ni Dene Program: Dene Watching the Land[20]

Thaidene Nene (the "Land of the Ancestors"), is the sacred homeland of the Lutsel K'e Denesoline. While this traditional territory remains pristine, it is surrounded by increasing pressures and industrial development. Consequently, the Lutsel K'e Dene First Nation (LKDFN) has proposed Thaidene Nene as a protected area and has established the Ni hat'ni Dene (the "Dene Watching the Land") program with the broad mandate of promoting stewardship and watching over this sacred land.

Some of the partners for this initiative include the Akaitcho Aquatic Monitoring Program, Parks Canada, the Department of Fisheries and Oceans (through the Aboriginal Fisheries Strategy), Government of Northwest Territories, University of Saskatchewan, Environment and Climate Change Canada, and the Nature Conservancy Canada.

The LKDFN envisions a network of Ni hat'ni Dene located throughout Thaidene Nene, working "on-the-ground" in all seasons as the stewards of the land. Since its inception in 2008, the Ni hat'ni Dene program has expanded its monitoring activities to three culturally significant and strategic areas: Kache (Reliance), the heart of Thaidene Nene, as well as Kaldele (Talthelei Narrows) and Pekanatui Point, the gateways to Thaidene Nene. These three places have served as basecamps out of which two crews of Ni Hat'ni Dene Rangers keep watch over the land by:

- Monitoring environmental indicators using Indigenous knowledge and science;
- Maintaining the integrity of cultural sites and natural beauty within Thaidene Nene;
- Communicating to visitors the significance of Thaidene Nene and administer visitor surveys;
- Hosting and providing interpretive tours for visitors in the area;
- Transmitting cultural and scientific knowledge to younger generations

In the summer, the monitoring activities focus on water quality, fish health and populations, bird populations, as well as interpretive services for visitors of Thaidene Nene. Ni hat´ni Dene crews also play an important role in search and rescue activities, visitor safety and observing and reporting unauthorized activities within Thaidene Nene. During the winter, monitoring activities include caribou monitoring, whereby they travel with hunting parties and record harvest locations, numbers, gender, and general conditions of animals harvested. All monitoring knowledge and activities will be used to inform decision-making at the provincial/territorial and federal level.

As the traditional territory of the Lutsel K'e Denesoline, Thaidene Nene is rich in history and important cultural heritage sites. Some of these sites were surveyed to catalogue cultural artefacts, and stories were collected through interviews with elders to shape interpretive tours of the sites. These efforts,

[19] http://www.ilinationhood.ca/wp-content/uploads/2016/11/value-in-indigenous-guardian-work-nwt.pdf
[20] See : Ni' Hat'Ni Dene : Lutsel k'e Dene First Nation. *Dene Watchers of the land: Protecting the land of our ancestors and the land of our future generations*. 2016.

along with the collection of Indigenous Knowledge by the Ni Hat'ni Dene during their monitoring activities, contribute to the preservation of Denesoline culture and history for future generations. The program also contributes to the transmission and continuation of Denesoline language and cultural practices by pairing experienced leaders and youth to foster traditional activities during patrols.

A large part of Ni Hat'ni Dene mission is to serve as ambassadors of Lutsel K'e, both within the community and to visitors of Thaidene Nene. As such, youth within the program keep regular journals of their activities while out on the land and write stories about their experience. These stories serve to communicate the purpose of the program and inspire youth within the community to become Ni Hat'ni Dene Rangers in the future.

Beyond providing employment opportunities for the youth in the community, the Ni Hat'ni Dene program also trains youth with hard skills related to field work and research, boat safety and marine navigation, emergency first aid, non-restricted firearm safety as well as visitor hospitality. These skills increase the employability of youth in the community and insure that community members will play a central role in the monitoring and patrolling Thaidene Nene well into the future.

With the creation of the Thaidene Nene, economic opportunities related to tourism and National Park management will become available to the community. The Ni Hat'ni Dene program plays an instrumental part in training community members for skills required in park-based sustainable economy.

This Indigenous Guardians program is a strong Indigenous-led program aimed at protecting the environment. It is also an example of customary use of biological resources by the Lutsel K'e Denesoline in a sustainable manner and the way in which Indigenous Knowledge can sustainably inform conservation activities and management decision-making in Canada.

For additional information about the Indigenous Guardians program see Canada's 6th National Report to the CBD, Section II.