



First Nations Food, Nutrition and Environment Study

UNIVERSITY OF OTTAWA
UNIVERSITÉ DE MONTRÉAL
ASSEMBLY OF FIRST NATIONS

Key Findings and Recommendations for Decision-makers

OCTOBER 2021



The right to food is recognized in international human rights law. It entails that individuals have sufficient access to food that provides all nutrients required for a healthy and active life at all stages of the life cycle, is safe for human consumption and free from adverse substances, and is culturally appropriate.



INDIGENOUS PEOPLES' FOOD SYSTEMS consist of locally hunted, collected or harvested foods and therefore are closely connected to the overall health of the environment. Declines in the health of the environment can affect the quality of Indigenous foods and, combined with social, economic, political and cultural factors, can restrict availability or curtail access.

There has been a gap in our understanding of dietary patterns, nutrition and exposure to contaminants from food because of the exclusions of First Nations populations on reserve from other national studies. **The First Nations Food, Nutrition and Environment Study (FNFNES) is the first comprehensive study to address knowledge gaps about the nutritional adequacy, quality and safety of traditional foods.** The FNFNES also focuses on the overall well-being and food security of First Nations to address gaps in knowledge about the diet, traditional foods and environmental contaminants to which First Nations are exposed.

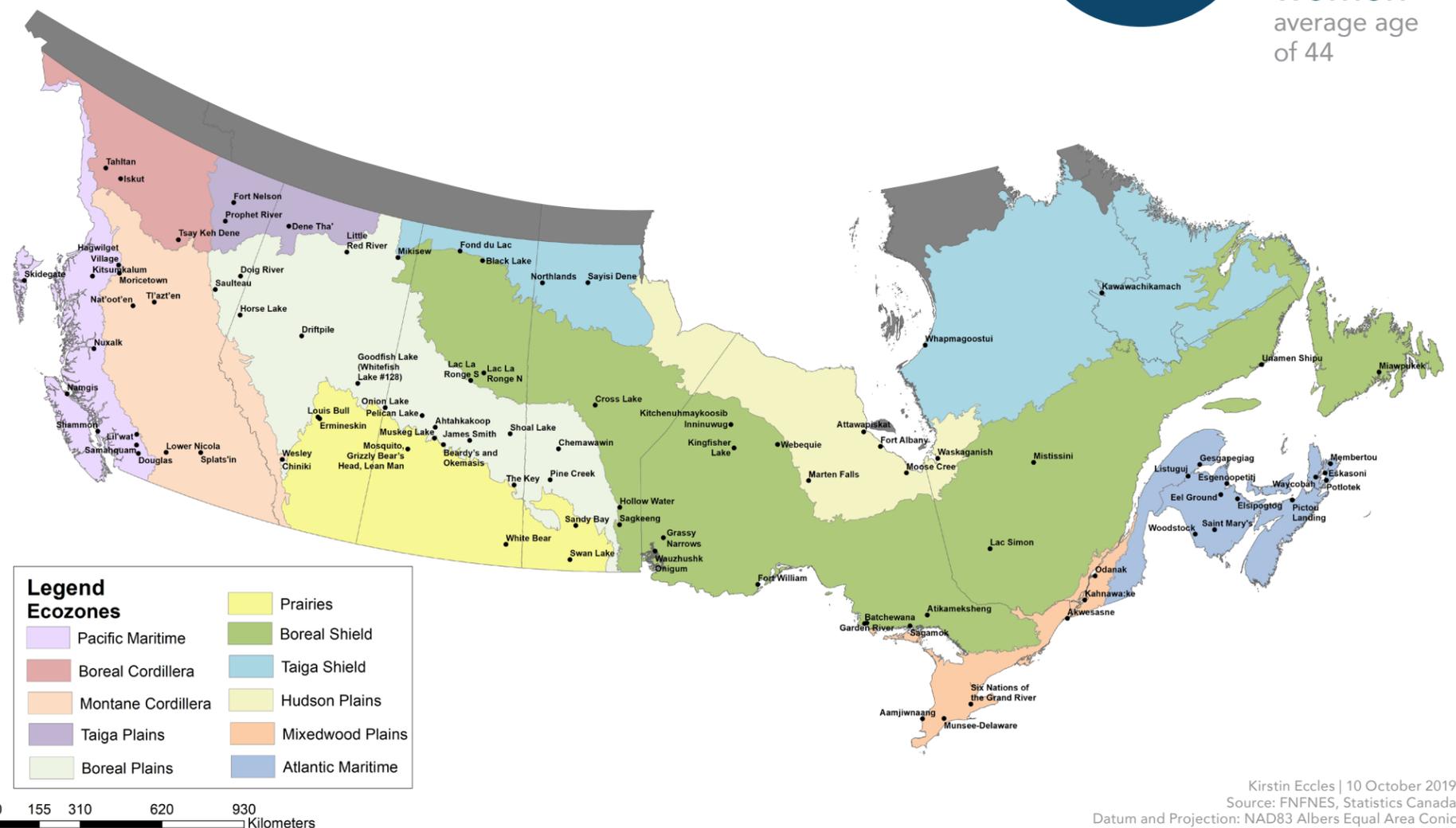
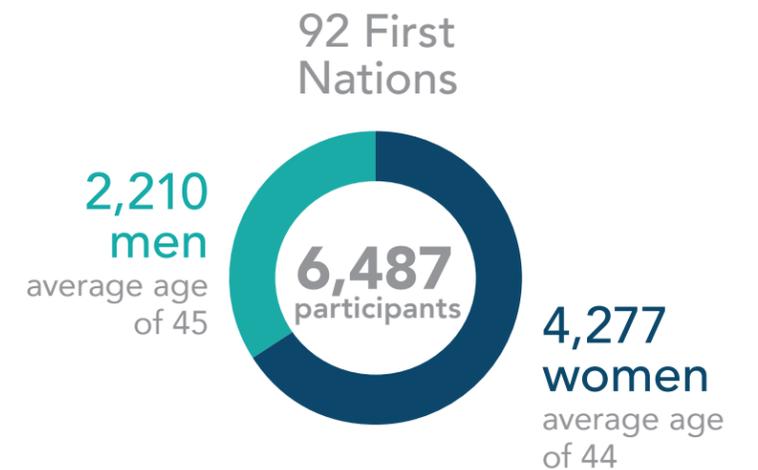
FNFNES STUDY APPROACH

FNFNES USED A STANDARDIZED APPROACH, with identical tools and methodologies, to conduct a survey of First Nations adults living on reserves in each of the eight AFN regions south of the 60th parallel in Canada. A random sampling strategy was adopted to ensure that the Study assessed and represented the diversity of diets of First Nations. Data were collected from 6,487 adult participants from 92 First Nations in 11 ecozones across Canada during the fall months (September to mid-December) from 2008 to 2016.

Respective First Nations were involved in the planning and implementation of data collection for the five principal study components: household interviews; tap water sampling for metals (of human health concern and for aesthetic objectives); surface water sampling for pharmaceuticals; hair sampling for mercury; and traditional food sampling for contaminants.

The intent of this summary report is to present summary findings and recommendations for decision-makers within First Nations and among different levels of governments.

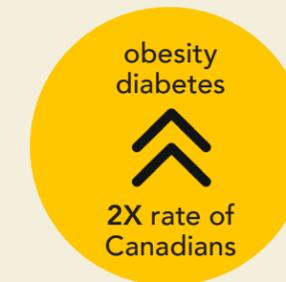
First Nations were involved in the planning and implementation of data collection for the five principal study components.



Kirstin Eccles | 10 October 2019
Source: FNFNES, Statistics Canada
Datum and Projection: NAD83 Albers Equal Area Conic

SUMMARY OF KEY FINDINGS

The FNFNES study offers coherent evidence on the human dimension of environmental degradation affecting First Nations.



- 1 This study offers for the first time a body of coherent evidence on the human dimension of the ongoing environmental degradation affecting First Nations citizens and communities.
- 2 Traditional food systems remain foundational to First Nations.
- 3 Traditional food has multiple core values for First Nations. These include cultural, spiritual and traditional values, along with enhanced nutrition and health, food security, ways of knowing and an ongoing connection to land and water.
- 4 Traditional food access does not meet current needs. Over half of all adults reported that harvesting traditional food is impacted by industry-related activities, as well as climate change.
- 5 Generally preferred to store-bought food, traditional food is of superior nutritional quality, and its inclusion significantly improves diet quality.
- 6 Traditional food is safe for consumption, with two primary exceptions:
 - Large predatory fish (such as walleye and northern pike) in some areas have higher levels of mercury, and some women of childbearing age have elevated levels of exposure, particularly in northern parts of Saskatchewan, Manitoba, Ontario and Quebec.
 - The use of lead-based ammunition resulted in very high levels of lead in many harvested mammal and bird samples. As a result, there is an elevated risk of exposure to lead for some adults and women of childbearing age. Use of other forms of ammunition can eliminate exposure to lead.
- 7 Many First Nations face the challenge of extremely high rates of food insecurity. Overall, almost half of all First Nations families have difficulty putting enough food on the table. Families with children are affected to an even greater degree.
- 8 The price of healthy foods in many First Nations communities is much higher than in urban centres, and is therefore beyond the reach of many families.
- 9 The current diet of many First Nations adults is nutritionally inadequate, which is strongly tied to food insecurity and limited access to healthy food options.
- 10 The health of many First Nations adults is compromised with very high rates of smoking, obesity (double the obesity rate among Canadians), and with one-fifth of the adult population suffering from diabetes (more than double the national average).
- 11 There continue to be issues with water treatment systems in many communities, particularly exceedances for metals. Metals can affect colour and taste, which limit the acceptability and use of tap water for drinking.
- 12 Pharmaceutical residues were found in surface waters in and around many communities, indicating potential sewage contamination.

RECOMMENDATIONS

THE PRINCIPAL INVESTIGATORS of this study call on decision-makers to urgently address systemic problems relating to food, nutrition and the environment affecting First Nations, and to do so in a manner that supports First Nations-led leadership and solutions.

A workshop was held in Ottawa on November 5-6, 2019 to review the FNFNES results with participating communities.

The following recommendations were developed with direct input from the 280 workshop participants from across the country, including leaders and technical staff from First Nations health authorities, health centres and Indigenous health organizations, as well as representatives of 80 First Nations communities, 60 of which participated in the FNFNES.

Recommendations were developed with direct input from workshop participants, leaders and technical staff from First Nations health authorities, health centres and Indigenous health organizations.

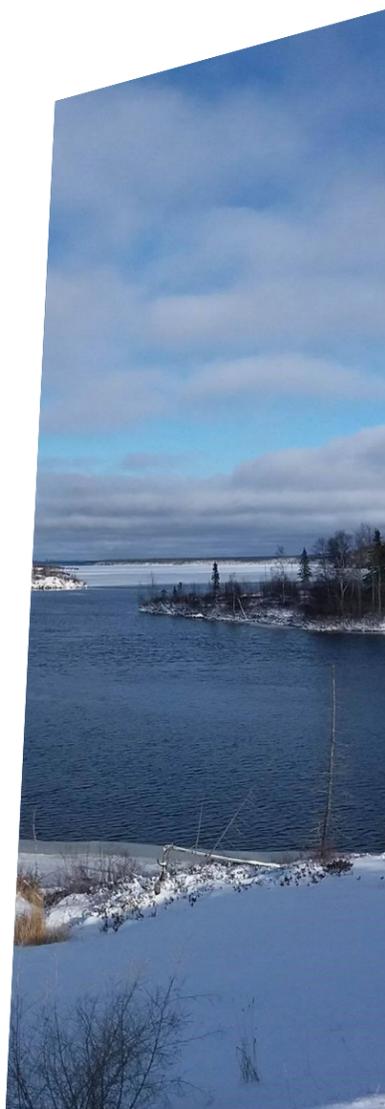
SUPPORT INITIATIVES that promote Indigenous rights, sovereignty, self-determination, values and culture.

1

- a. Support communities to make their own informed decisions regarding food security and food sovereignty.
 - i. Support the promotion of good health, access to healthy foods and general well-being as a human right.
 - ii. Maintain or enhance access to and availability of traditional food by addressing local land, water and fishing rights issues, including increased access to hunting grounds and resources needed to acquire traditional foods.
 - iii. Recognize and include Indigenous values and priorities in all federal, provincial and local government decisions with respect to land use, development, conservation and habitat protection.
 - iv. Recognize, protect and enforce First Nations priority rights to harvest in preferred areas to meet food needs, and to minimize and compensate any potential infringements on these priority rights to harvest.
- b. Take an approach to policymaking that recognizes regional differences and needs.
 - i. Create funding opportunities and policies that address the different needs of each region, within regions (e.g. between north and south), and within different communities (no one solution/recommendation).
 - ii. Increase community eligibility for subsidy programs that aim to reduce food price differences between major urban centres and local First Nations.
 - iii. Provide financial support to increase First Nations owned and operated food production and distribution businesses/organizations.
 - iv. Promote environmental health and nutrition in communities by increasing access to community dietitians and other experts or Knowledge Keepers, and develop incentive programs to bring local scientists, doctors, dietitians, biologists, chemists and other specialists back to their home communities.
- C. Recognition/education of traditional ways of knowing.
 - i. Create strategies to decolonize bureaucratic processes (e.g. change format of funding procedures to be flexible and meet the needs of First Nations).
 - ii. Develop Traditional Knowledge (TK) curricula.
 - iii. Integrate Indigenous Knowledge Systems (IKS) into nutrition programming, not only as an afterthought with reference to a "vulnerable group" but rather fully incorporating TK.



- a.** Improve measures that protect local ecosystems, mitigate against the negative impacts of pollution and climate change, and prevent further environmental damage.
- Improve environmental protection legislative frameworks and address regulatory gaps to ensure that environmental protection aligns with Indigenous rights and concerns, including First Nations' priority rights to access and use conservation areas, parks and other protected zones for food gathering (e.g. Indigenous Protected and Conserved Areas).
 - Acknowledge and address the impacts of a changing environment—climate change and other forms of environmental degradation—on food (in)security, nutrition, health and habitat loss (e.g. species loss and associated implications).
 - Increase funding to support initiatives that decrease pollution (land, air, water), including First Nations-specific monitoring and data collection.
 - Provide increased support for efforts/initiatives to reduce the impacts of climate change on First Nations food security/sovereignty.
- b.** Promote the consumption of traditional foods.
- Support the development of First Nations-led and Indigenous value-based public health communication efforts, with the aim of promoting the importance of continued reliance on traditional foods as a healthy food source while decreasing potential exposure to environmental contaminants.
 - Develop regional and ecozone-specific guidance for fish consumption that both highlights the importance of fish in diets and informs sensitive populations about decreasing exposure to mercury (e.g. women of childbearing age).
- c.** Reduce the levels of contaminants in natural and built environments through enhanced research, education, regulation, and communication.
- Establish stronger partnerships with government and industry to better regulate the release of environmental contaminants, including strategies to eliminate/reduce the contamination of First Nations' traditional territories from external sources.
 - Provide better public education and awareness on the importance of traditional foods and to support healthy lifestyle choices (e.g. cadmium exposure from organ meats together with smoking, lead from ammunition).
 - Develop national programming for the safe and affordable replacement of lead-based ammunition and fishing weights.



- Improve the communication of existing funding opportunities for programs that measure and mitigate levels of contamination.
- Develop a long-term nation-wide traditional food contaminant monitoring program.

d. Ensure good drinking water quality and trust in the safety of public water systems.

- Provide infrastructure upgrades to support the production and delivery of potable drinking water.
- Promote the consumption of tap water for drinking—the preferred option over sugar- and artificially-sweetened beverages for health reasons and over bottled water as a source of plastic pollution.
- Address concerns about the taste and/or appearance of drinking water to support tap water as a preferred option.
- Provide resources to support regular drinking water monitoring, inspection and maintenance programs to improve the safety, taste and appearance of drinking water supplies.
- Replace lead pipes with a safer alternative to prevent elevated lead levels in drinking water.
- Develop effective long-term strategies to prevent water pollution and to protect watersheds.

e. Ensure that pharmaceuticals are not present at levels potentially harmful to humans or animals.

- Develop a national pharmaceutical monitoring program with guidelines for the protection of aquatic and terrestrial environments to avoid unnecessary exposure to these and other contaminants.
- Develop detailed planning for appropriate sewage waste treatment and disposal.
- Provide proper Integrated Solid Waste Management infrastructure, including support programs for the return or proper disposal of unused or expired prescription drugs and medications as an alternative to flushing medications down the toilet or throwing them into regular garbage.
- Address regulatory/legislative gaps with respect to pharmaceuticals and enhance monitoring and surveillance systems in this regard.



BUILD CAPACITY to eliminate barriers to proper nutrition and to reduce food insecurity.

3

- a.** Incorporate a holistic approach to food and nutrition that involves addressing social issues and socioeconomic factors such as poverty, unemployment and education that contribute to food insecurity.
- i. Establish a culturally appropriate First Nations School Food program to ensure that every First Nations child has access to healthy foods based on local criteria.
 - ii. Increase access to affordable healthy market foods.
 - iii. Support sustainable and healthy lifestyles that contribute to disease prevention.
 - iv. Implement strategies to modify the built environment to help promote physical activity and overall well-being (e.g. walkability, recreational opportunities).
 - v. Provide easy access to culturally relevant/safe health services.
 - vi. Improve families' financial ability to engage in local harvesting and food production activities and to purchase healthy market foods, accounting for increases in the cost of living/inflation.
 - vii. Provide additional resources to support culturally appropriate and safe primary prevention, including acute and chronic disease prevention.
 - viii. Increase funding, education, and access to social programs and policies that address economic disparities through culturally relevant and/or land-based forms of employment (e.g. fishing, trapping).
- b.** Support communities to increase reliance on traditional food systems and build resilience against threats to food security/sovereignty, including extreme climate events/disasters (e.g. flood, drought, wildfire) and pandemics (COVID-19).
- i. Improve local availability and access to healthy foods, independent of imports (e.g. gardens, greenhouses, hydroponic units, agricultural activity and animal husbandry when appropriate).
 - ii. Promote the sharing and preserving of harvested traditional foods at the local level (e.g. community freezer), and improve access to traditional food systems through a combination of subsidies that support harvesting, growing, sharing and preserving traditional foods.
 - iii. Support knowledge transfer/exchange and skills acquisition regarding food (e.g. hunting, food preservation, food preparation, budgeting).
 - iv. Increase economic support/household income to support living/hunting costs.
 - v. Increase funding from all levels of government to monitor, protect and ensure local ecosystems are healthy and can support First Nations' ability to access sufficient traditional foods.



IMPROVE PARTNERSHIPS, collaboration and communication between First Nations and all levels of government, as well as partnerships between First Nations to support sharing information about food, nutrition and the environment.

4

- i. Create networks between First Nations, governments and the private sector to address food insecurity.
- ii. Build partnerships with governments to better communicate jurisdictional responsibilities and to help navigate bureaucratic processes (e.g. create a toolkit about bidirectional communication with government, including cultural safety).
- iii. Identify opportunities and support community partnerships and collaboration between neighbouring communities (e.g. better intercommunity communications to enable sharing of initiatives and resources).
- iv. Increase collaborations with government and industry to regulate the release of contaminants into the environment by involving First Nations in discussions early on in the process, including the identification of alternatives.

SUPPORT CONTINUING RESEARCH, education and public awareness.

5

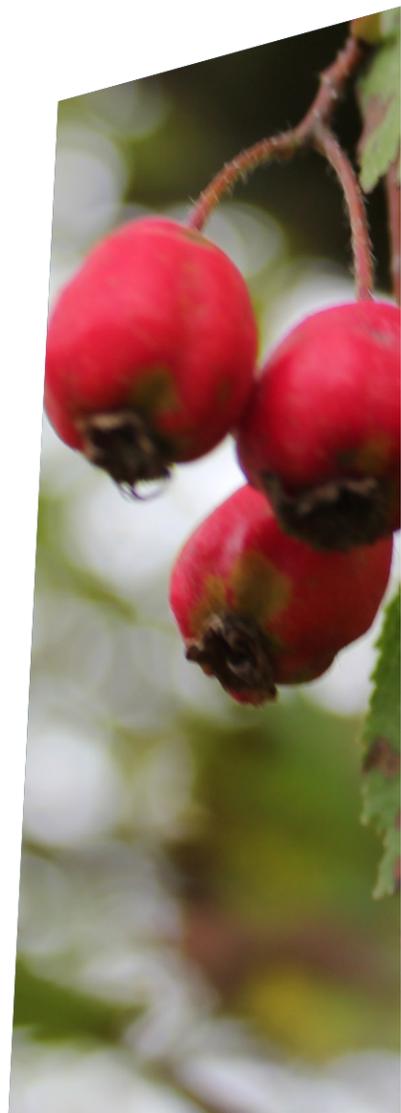
- i. Use FNFNES data to support communities in confirming the need for programming and planning, intervention and mitigation.
- ii. Disseminate information in ways that are relevant, appropriate and meaningful to First Nations by applying collaborative and community participatory methods.
- iii. Highlight how positive outcomes and examples can be used to contribute to the development of tools beyond the level of the community, region or country (e.g. share lessons learned internationally).



CREATE A JOINT TASK FORCE or committee to plan how to implement/operationalize these recommendations.

6

- i. Form a First Nations-led task force consisting of First Nations rights holders, along with multi-level and cross-sector stakeholders, to broadly review recommendations, identify priorities at the local, regional and national levels, lead consultations/engagement, and facilitate the operationalization of recommendations.
- ii. Create an action plan with deadlines for the implementation of action items/objectives, recognizing that the nature of implementation will vary from region to region.
- iii. Include grassroots/community-based and Indigenous knowledge-based initiatives/solutions in an action plan, including the implementation of policies by First Nations at the local level.
- iv. Monitor and evaluate the effectiveness of existing food access programs for First Nations in curbing food insecurity and revamp programs based on feedback from First Nations.
- v. Facilitate engagement to develop multi-level interventions and identify/guide future research needs and priorities.
- vi. Continue to monitor nutrition and food insecurity, and create appropriate mechanisms to establish accountabilities in progress and transparency in reporting.



Better
knowledge
for better
health.



First Nations Food, Nutrition and Environment Study

UNIVERSITY OF OTTAWA
UNIVERSITÉ DE MONTRÉAL
ASSEMBLY OF FIRST NATIONS

fnfnes.ca