



Understanding Our Food Systems: Building Indigenous food sovereignty in Northwestern Ontario

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Abstract

Setting The impacts of colonization have resulted in disruptions to food systems, land, language, and the overall health and well-being of Indigenous Peoples across Turtle Island. Food insecurity affects Indigenous People's health disproportionately due primarily to poverty and inequity, anti-Indigenous racism, and the ongoing effects of settler colonialism. Despite these challenges, Indigenous communities have used food as a tool for the resurgence of their cultures, identities, and self-determination.

Intervention Understanding Our Food Systems (UOFS) is a participatory, community-engaged action project led by the Thunder Bay District Health Unit, a team of researchers and community development professionals, and a circle of Indigenous Elders and Knowledge Keepers working to build a deeper understanding of food security, Indigenous food sovereignty, and self-determination in Northwestern Ontario. The project takes leadership from and supports fourteen First Nations within the Thunder Bay District (Robinson Superior Treaty of 1850 and Treaty 9 areas) in their efforts to reclaim their traditional food systems.

Outcomes Since 2018, the UOFS project has helped to establish and implement food sovereignty visions, priorities, and action plans for each of the First Nations communities; provided ongoing funding, workshops, training, and general assistance; hosted regular gatherings to learn, share, and plan collaboratively; and developed resources to support Indigenous food sovereignty across the region.

Implications The UOFS project has contributed to enhancing Indigenous food sovereignty and self-determination across Northwestern Ontario. The project has also resulted in building a network of First Nations communities and reflective learning among the TBDHU and non-Indigenous participants about how to work in partnership and support First Nations to achieve their food sovereignty priorities.

Résumé

Contexte Les répercussions néfastes de la colonisation ont touché les systèmes alimentaires, les terres, les langues et, de façon générale, la santé et le bien-être des peuples autochtones de l'Île de la Tortue. L'insécurité alimentaire a des effets délétères sur la santé des Autochtones de façon disproportionnée, principalement en raison de la pauvreté et des inégalités, du racisme antiautochtone et des effets persistants de la colonisation des terres. Malgré ces difficultés, les communautés autochtones ont utilisé l'alimentation comme un outil pour faire renaitre leurs cultures, leurs identités et leur autodétermination.

Intervention Understanding Our Food Systems (UOFS) est un projet d'action participative et communautaire mené par le Bureau de santé du district de Thunder Bay (TBDHU), une équipe de chercheurs et de professionnels du développement communautaire, ainsi qu'un groupe d'aînés et de gardiens du savoir autochtones. Ce projet vise à approfondir la compréhension de la sécurité alimentaire, de la souveraineté alimentaire autochtone et de l'autodétermination dans le Nord-Ouest de

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l'Ontario. Il s'appuie sur quatorze Premières Nations du district de Thunder Bay (territoires du Traité Robinson-Supérieur de 1850 et du Traité n° 9) dans leurs efforts pour se réappropriier leurs systèmes alimentaires traditionnels.

Résultats Depuis 2018, le projet UOFS a contribué à l'élaboration et à la mise en œuvre de visions, de priorités et de plans d'action en matière de souveraineté alimentaire pour chacune des Premières Nations de la région; a fourni un financement continu, des ateliers, des formations et une aide en général; a organisé des rencontres régulières pour apprendre, partager et planifier en collaboration; et a développé des ressources pour appuyer la souveraineté alimentaire autochtone dans toute la région.

Implications Le projet UOFS a contribué à renforcer la souveraineté alimentaire et l'autodétermination des Autochtones dans le Nord-Ouest de l'Ontario. Il a également permis de bâtir un réseau de communautés des Premières Nations et de favoriser l'apprentissage par la réflexion parmi les participants du TBDHU et les participants non autochtones quant à la façon de travailler en partenariat et d'appuyer les Premières Nations dans la réalisation de leurs priorités en matière de souveraineté alimentaire.

Keywords First Nations · Food security · Food systems · Indigenous food sovereignty · Northwestern Ontario

Mots-clés Premières Nations · Sécurité alimentaire · Systèmes alimentaires · Souveraineté alimentaire autochtone · Nord-Ouest de l'Ontario

Introduction

For Indigenous peoples in Northwestern Ontario, food is much more than sustenance. It is an essential part of communities' history, identity, and relationships with each other and with the land (Cidro et al., 2015; Power, 2008; Settee et al., 2020). From time immemorial, Anishinaabe people have cared for the land and watersheds and made use of the abundant wildlife, fisheries, and plant systems (Robidoux and Mason, 2017). These food systems were severely disrupted by the arrival of European settlers in the latter part of the fifteenth century and remain under threat from industry and settler colonial violence perpetrated by government and settler populations. Bolstered by legal structures and disregard of treaties, Indigenous peoples have been displaced from their traditional ways of knowing and territories, further compromising their food systems (Manuel, 2021). Restricted access to traditionally produced and harvested foods has been enhanced by the exacerbating climate crisis and the increasing threats of industrial agriculture, mining, and development (Malli et al., 2023). The impacts of colonization have resulted in disruptions to Indigenous food systems, land, language, and the overall health and well-being of Indigenous peoples.

Today, Indigenous peoples in Canada face disproportionately greater health risks than the general population (Kim, 2019). Specifically, many Indigenous peoples in northern parts of the country suffer from higher rates of diabetes, hypertension, and mental health challenges, with differential access to healthcare and social services (Schiff & Møller, 2021). Many Indigenous households face significantly higher than average levels of food insecurity, with communities often lacking safe drinking water and basic

necessities (Batal et al., 2021). Food insecurity also affects Indigenous peoples disproportionately due primarily to poverty and inequity, and anti-Indigenous racism (Isumonah, 2024; Shafiee et al., 2022). These health inequities are directly related to ongoing impacts of settler colonialism, land disposition, and other oppressions at the foundation of Indigenous-government relations and rooted within western healthcare systems (Crocetti et al., 2022; George et al., 2019; Josewski et al., 2023). While dominant health models tend to prioritize an individualized biomedical approach, Indigenous approaches to health take a much broader perspective that includes the interconnection among physical, spiritual, emotional, and mental dimensions rooted in relationships to the land and each other (Greenwood et al., 2015; Thiessen et al., 2020).

Despite these many challenges, Indigenous peoples have survived and continue to thrive. First Nations communities in Northwestern Ontario have used food as a tool for the resurgence of their cultures, identities, and food systems (Robidoux and Mason, 2017; Levkoe et al., 2019). The concept of Indigenous food sovereignty refers to a global movement of Indigenous communities taking control of their food systems through the integration of traditional and modern methods of hunting, fishing, growing, and gathering in relationship with people and the land (Brant et al., 2023; Coté, 2016; Robin, 2019). The Understanding Our Food Systems (UOFS)¹ project was established in 2018 to learn from and reflect on the experiences of Indigenous-settler relations and to build

¹ All the resources discussed in this article are available on the UOFS website at www.understandingourfoodsystems.com.



Image 1 A graphic representation of the UOFS project (designed by Shelby Gagnon)

on the experiences and resilience of Indigenous communities to support Indigenous food sovereignty. UOFS is a community-engaged, participatory action project coordinated by a small project team based out of the Thunder Bay District Health Unit (TBDHU) that includes researchers, community development professionals, and a circle of Elders and Knowledge Keepers working to build a deeper understanding of food security, reclamation of traditional food systems, and self-determination in Northwestern Ontario. The project takes leadership from and supports community food champions in fourteen First Nations communities within the Thunder Bay District (Robinson Superior Treaty of 1850 and Treaty 9) and provides support to the First Nations to better understand and advocate for Indigenous food sovereignty (see Image 1). Over the years, the UOFS project has worked to establish and implement food sovereignty visions, priorities, and action plans with each of the First Nations communities; provide ongoing funding, workshops, webinars, trainings, and general assistance; host gatherings to learn, share, and plan collaboratively; and develop resources to support Indigenous food sovereignty across the region.

This article offers context and background to the UOFS project, an overview of this work along with key lessons learned. As public health units across Canada work towards greater health equity and strengthening engagement with Indigenous communities and organizations, our experiences offer opportunities to ensure Indigenous communities have the ability to improve access to the food they want and advance self-determined food systems.

Understanding Our Food Systems

The UOFS project was first established through funding from the Ontario Ministry of Health, which enabled the TBDHU to build on its existing partnerships and work in the region with the Indigenous Food Circle,² Lakehead University's Sustainable Food Systems Lab,³ and numerous organizations and individuals across Northwestern Ontario.⁴ The project's geographic scope spans across Anishinaabe-aki in present-day Northwestern Ontario and includes fourteen partner First Nations (see Image 2). UOFS began in 2018 with members of the project team visiting the communities to meet with new and existing contacts and discuss what they wanted the project to look like. That spring, a gathering was held in Thunder Bay for community food champions to engage with each other and share challenges and opportunities their communities were facing, as well as participate in learning opportunities regarding food security and food sovereignty.

The UOFS project is governed by an Advisory Circle made up of community leaders, Elders, and Knowledge Keepers active in food sovereignty issues. The purpose of the Advisory Circle is to bring together food champions from each of the fourteen First Nations to guide the direction of the project and support food sovereignty planning, sharing, and relationship building. Advisory Circle meetings occur virtually on a quarterly basis in association with the four seasons. The project team is made up of TBDHU staff, the director of the Sustainable Food Systems Lab at Lakehead University, and at times community development consultants, to collaborate on the workings of the project. Since 2021, the TBDHU has held funding for a full-time project coordinator to run the logistics of the project. The project team is committed to taking direction from the Advisory Circle and the fourteen First Nations communities about the goals, pace, and pathways of the work and entering into all activities as part of a process that acknowledges existing relationships and builds on them over the long term.

UOFS aims to support food self-determination through community-led initiatives and projects with the fourteen

² The Indigenous Food Circle was a network of Indigenous-led and Indigenous-serving organizations in the Thunder Bay region with the goal of reducing Indigenous food insecurity, increasing food self-determination, and establishing meaningful relationships with the settler population through food (see Levkoe et al., 2019).

³ The Sustainable Food Systems Lab, based at Lakehead University, is a hub for academics and community-based practitioners engaged in sustainable food systems research and action (see foodsystems.lakeheadu.ca).

⁴ Core supporting partners and organizations include Roots Community Food Center, the Food Action Network of Northwestern Ontario, and the Good Food Box.



Image 2 Map of fourteen First Nations involved in the UOFS project (designed by Reg Nelson)

partner First Nations. The primary objectives involve establishing food sovereignty visions for each of the fourteen participating communities. From these visions, the UOFS project supports the development of short-, medium-, and long-term priorities by providing implementation funds, workshops, training, and general assistance on an ongoing basis to support the priorities. Each year, communities have access to approximately \$2500 in implementation funds to spend as they see fit to support their food sovereignty visions and planning. Since 2021, the trends in implementation fund spending have occurred across five main categories:

Food preparation and preservation (e.g., improving kitchen infrastructure and upgrading appliances, cookware, materials, and supplies to preserve food grown or harvested from the land)

Food growing and harvesting (e.g., materials to build and maintain garden beds, greenhouse materials, materials and supplies to support on the land harvesting)

Direct food purchases (e.g., food for cooking programs and community events)

Knowledge building and sharing (e.g., travelling to other communities to learn from them, workshops, supporting certification training)

Shipping and installation

UOFS also hosts regular gatherings to bring food champions from the First Nations communities together with other partners and community-based organizations to learn, share, and plan collaboratively. The gatherings are spaces to build a support network, share progress and ideas, and engage in hands-on learning activities such as seed saving and growing, food preservation, hide tanning, fish smoking, butchering moose, roasting Manomin (wild rice), and cooking with food from the land. Gatherings have involved workshops on issues such as wild game policy and access to traditional foods, harvesting, and the impacts of glyphosate spraying on traditional lands. They have included prominent guest speakers like Winona Laduke, Gwich'in/Haudenosaunee Chef Rich Francis, and Oglala Lakota Sioux Chef Sean Sherman. The project team also took direction from the communities to conduct literature reviews, regional scans, and ongoing evaluation of the project to further grow the support offered by UOFS. In addition, UOFS has worked to develop resources to support Indigenous food sovereignty across the region. For example, a series of informational videos were created in 2020 on topics related to traditional foods such as trapping, fish emulsion, community gardening, and jam preservation.

Indigenous food sovereignty in action

In this section, we share three stories of achievements throughout the project that exemplify the ways UOFS puts Indigenous food sovereignty into action.

13 Moons Traditional Harvesting Resources

The 13 Moons Traditional Harvesting poster was created in 2020 through the guidance of UOFS Advisory Circle members sharing food systems teachings from across the region about seasonal cycles and community practices in harvesting, gathering, storing, and preparing traditional foods and medicines (see Image 3). While there was great excitement about the poster, it became clear that many community members did not have knowledge or experience with the 13 Moon teachings. Further, non-Indigenous peoples across the region were asking questions about the meanings and interpretations of the poster. To make the poster more accessible, several educational resources were created to help community members and educators encourage engagement and learning with the concepts and approaches. This included a virtual interactive game using the poster design and a 30-min video of the Elders and Knowledge Keepers explaining the 13 Moons and their related stories and teachings. To expand learning opportunities, a kindergarten and grades 1 and 2 curriculum were developed along with a colouring book inspired by the themes of the 13 Moons.

Food sovereignty assessment

In 2021, Miikana⁵ was hired to conduct a collaborative, comprehensive, community-led assessment of the food sovereignty needs of the fourteen First Nation communities and develop recommendations to strengthen local and regional food systems, as well as provide future direction for the broader project. The assessment was rooted in story gathering and sharing back with communities. The study asked: How do the participating First Nations access culturally relevant and desired foods, and how can UOFS continue to support these efforts? Nine of the fourteen communities participated in the assessment, with over 150 individuals taking part in one-on-one and group conversations. The findings showed key areas of interest expressed by community members along with unanimous interest in receiving further support through the project. Primary themes included in-community workshops on food preparation, gardening, and homesteading; education in schools; community and youth

involvement; addressing transportation barriers; and land stewardship (see TBDHU, 2022). The assessment also made several recommendations for the project team and Advisory Circle to consider, such as more inter-community knowledge and skill sharing related to hunting, fishing, gathering, and food preparation, along with a request for further research and education about issues relating to the impacts of industry on traditional lands and sharing information with communities to support informed decision-making. These learnings became the core strategic direction for the next stages of the UOFS project.

Healthy food, people, and environments: listening to communities and sharing traditional knowledge

The food sovereignty assessment surfaced several community concerns about environmental contaminants, specifically the impact of glyphosate spraying on people, berries, animals, medicines, and fish. The concerns focused on the use of glyphosate-based herbicides, commonly known as Roundup and Vision, used by the province of Ontario. These chemicals are non-selective herbicides that are absorbed through leaves and stems, transported throughout the plant, and work by reducing certain amino acids that are necessary for plant growth, ultimately ending in plant death. Glyphosate is the most used herbicide across Canada and accounts for over 50% of all pesticide use across Ontario (Government of Canada, 2020). A graduate student in the Health Sciences department at Lakehead University conducted a literature review on the topic and shared the results at the 2023 UOFS gathering. In a discussion following the presentation, representatives from Animbiigoo Zaaigi'igan Anishinaabek (AZA) First Nations expressed specific concerns about the impacts of environmental contaminants on their traditional food systems, the land and watershed, and the community's health. While much of the scientific research has deemed these contaminants as safe, many AZA members identified negative impacts to their food systems. Of note, other Indigenous communities and researchers are also exploring the impact of chemical hazards on their traditional territories (Patterson et al., 2023; Popp et al., 2019) along with the different perspectives between communities' experiences, traditional ecological knowledge and western science (for example, see Dawson et al., 2021; Kimmerer, 2002; Johnson et al., 2016).

Building on these concerns, UOFS aimed to explore the experiences of people living off the land. Working with the graduate student, sharing circles and individual interviews were conducted to better understand these concerns. Findings focused on the impacts of the community's relationships with the land and the government, along with the ways that traditional knowledge systems could be used to better understand the impacts of environmental contaminants (Lovell, 2025). Individuals that participated in these conversations

⁵ Miikana is a "First Nations owned and operated consulting firm specializing in Indigenous strategy development, community development, leadership development, program design and management, economic development and governance work" (miikana.ca).

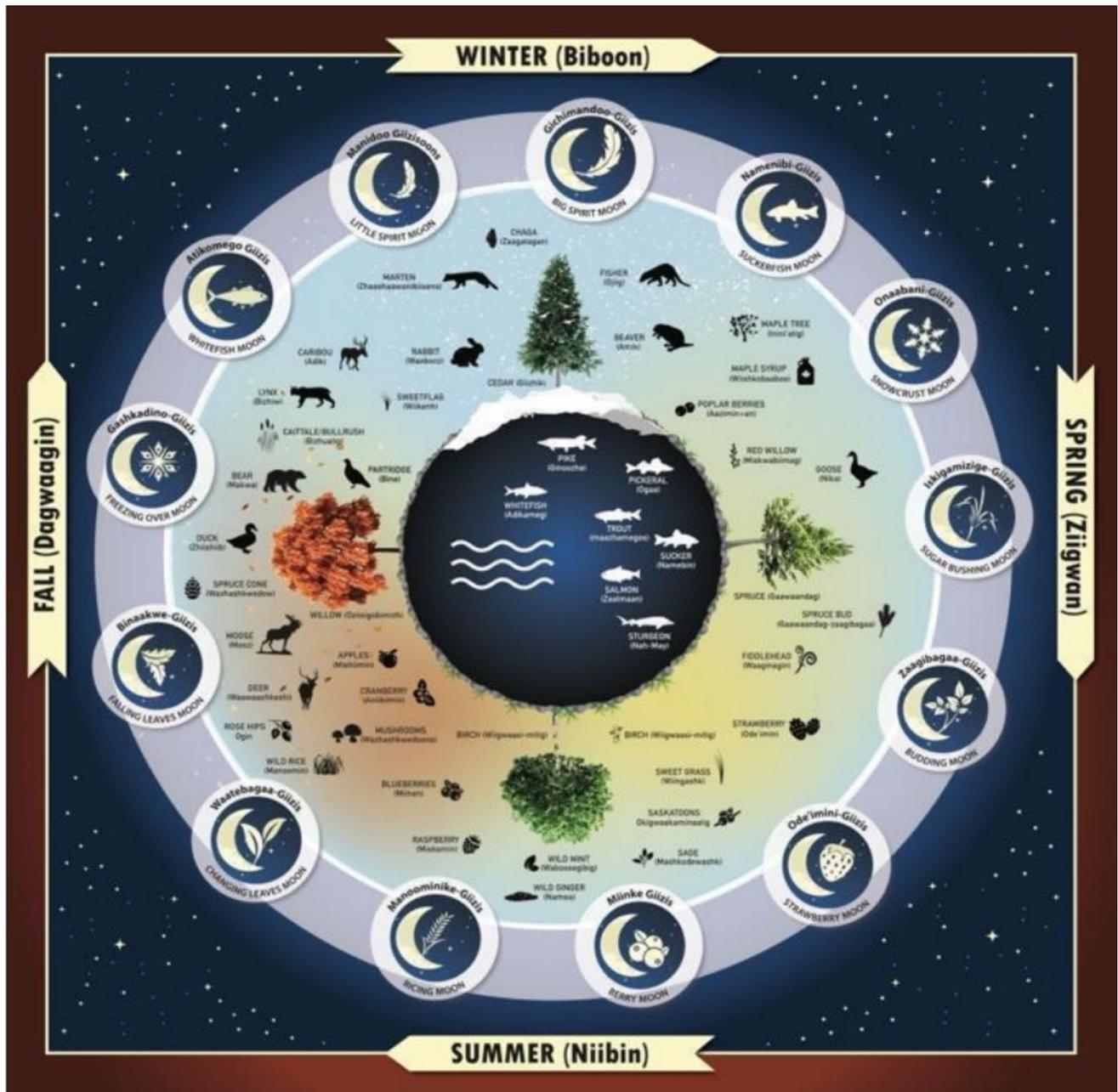


Image 3 13 Moons Traditional Harvesting poster (designed by Shelby Gagnon and Rob McKinnon)

shared experiences about finding fewer animals and plants in sprayed areas, making access to traditional foods difficult. Many participants expressed that animals were more diseased and that harvested and hunted foods did not taste, smell, or look the same as when they were younger. For AZA, loss of access to the land and waters means increased levels of food insecurity and less land-based teachings for their youth. AZA aims to use this research in their ongoing food sovereignty-related advocacy and policy engagement.

Learnings and future directions

An important objective of the UOFS project has been to regularly reflect on the work and learn how to build better settler and Indigenous partnerships that can support First Nations to achieve their food sovereignty priorities. While future directions communities hope to undertake are specific to each of the First Nations, some common themes across the UOFS project include the following: exploring solutions to internal and external transportation challenges needed to

purchase foods in the city and access traditional lands to harvest traditional foods such as moose, deer, partridge, fish, or fresh garden foods; enhancing youth engagement through sharing intergenerational knowledge and skills on the land through youth camps focused on hunting and fishing; teaching community gardening and food preparation activities through workshops such as butchering, canning, preserving, and seed saving; improving land stewardship through greater knowledge about chemical spraying on traditional territories, mining, and forestry; using knowledge and experience to advocate for policy change that supports Indigenous food sovereignty and self-determination.

Throughout the lifespan of UOFS, the project team has gathered input and feedback from the Advisory Circle, food champions, First Nations' leadership, and community members to reflect on the processes and impacts of the project, what works and what needs to be changed. While the project eventually received core funding and was successful in finding additional funds to support some of the sub-projects, money alone is not enough to make a project like this work. The most important learnings to date have been that relationships and collaborative partnerships are a core element of success. Importantly, the work with Indigenous communities has been grounded in place and is context specific, guided by the knowledge of First Nations Elders, Knowledge Keepers, and communities. This work is slow because it is long-term. Having access to ongoing funding is essential to engage in food sovereignty work. Leadership from the TBDHU means showing up, listening, learning, and knowing when to step back to ensure communities are at the forefront. Food is an important starting point, and it also allows for engagement of communities in discussions and actions on broader issues that are connected through food systems. UOFS takes a strength-based approach, recognizing that Indigenous peoples have the knowledge and skills to do this work and that learning can be shared across communities. It also uses a systems lens that acknowledges the complex and interconnected aspects of a food system and the need to address systemic inequities through meaningful, place-based, community-led solutions. There is always more learning to do, which demands confronting the hard truths and discomforts that come up as a part of this work. As UOFS develops and expands, it will be valuable to continue sharing the successes and challenges and continue to build relationships.

Implications for policy and practice

What are the innovations in this policy or program?

- While UOFS is coordinated by a public health unit, it takes leadership from Indigenous peoples and communities.

- The UOFS project builds a network of First Nations communities involved in Indigenous food sovereignty.
- The UOFS project has contributed to enhancing Indigenous food sovereignty and self-determination in the region.
- UOFS fosters significant learning among the TBDHU and non-Indigenous participants about how to work in partnership and support First Nations to achieve their food sovereignty priorities.
- UOFS brings the prevailing practice of public health into conversation with Indigenous ways of knowing.

What are the burning research questions for this innovation?

- How can learnings from food sovereignty initiatives in one community be better shared with other First Nations and in other places?
- How can the learnings from the UOFS project be translated into provincial and federal policy, programming, and public health funding structures?
- How can Western and Indigenous ways of knowing be integrated to produce and enhance public health policy and practice?
- How can UOFS know that it is achieving the food sovereignty visions?

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Data availability All data related to this paper is owned and controlled by the relevant First Nations communities, with copies held by Levkoe (according to OCAP principles).

Code availability Not applicable.

Declarations

Ethics approval Ethics approval for glyphosate-related research discussed in this paper was provided by the Lakehead University Research Ethics Board (see attached approval letter).

Consent to participate All participants involved in the glyphosate-related research discussed in this paper received an information letter and signed a consent form (see attached).

Consent for publication All participants involved in the glyphosate-related research discussed in this paper consented to publication in the consent form (see attached). In addition, the Advisory Committee approved publication of this article.

Conflict of interest At the time of writing, McGibbon was employed by the Thunder Bay District Health Unit, Strutt was a consultant, and Levkoe served as an advisor and researcher with the Understanding Our Food Systems project.

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