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Commentary

The need for contextual, place-based food policies: Lessons from Northwestern Ontario

Connie Nelson[a], Charles Z. Levkoe[b], Rachel Kakegamic[c]

[a] Director of Food Security Research Network, School of Social Work, Lakehead University
[b] Canada Research Chair in Sustainable Food Systems, Department of Health Sciences, Lakehead University
[c] School of Social Work, Lakehead University

Abstract

In recent years, several reports have highlighted the need for a national food policy that takes a comprehensive approach to addressing food systems (CAC, 2014; Levkoe & Sheedy, 2017; Martorell, 2017; UNGA, 2012). These findings suggest that, at the core, resilient food systems must be built on interconnected knowledge and experience that emerge from place-based interrelationships between human and ecological systems. Drawing on these important learnings, this commentary voices our hopes and concerns around the recent efforts of the Canadian Government to develop a food policy for Canada. While we commend the Government's desire to "set a long-term vision for the health, environmental, social, and economic goals related to food, while identifying actions we can take in the short-term",[1] we caution any tendency to develop "best practices" that assume a universal, or "one-size fits all" approach to food policy development. We argue that Canada requires a set of contextual, place-based food policies that emerge from the grassroots, address local needs and desires, and build on the strengths and assets of communities.

Keywords: policy, complexity, food systems, northwestern Ontario, place

[1] www.canada.ca/en/campaign/food-policy.html

*Corresponding author: cnelson@lakeheadu.ca
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We suggest that sensitivity to place can be achieved through a shift toward understanding distinct experiences and patterns within food systems, rather than the standard approach of determining what is "best" through isolated perspectives and decontextualized data. Too often in policy development, multiple variables are assumed to possess a certain orderly and analyzable approach through the application of statistical probability techniques (such as regression analysis) applied uniformly to all situations. In this scenario, community knowledge and experiences are unknowns (randomized out) and thus not considered in policy development.

In contrast, we suggest that food systems are best viewed as complex systems comprised of factors such as human activities, industrial processes, and climate variability that all interact on growing capabilities such as soil, types of seed (e.g., hybrid, GMO, non-GMO, heritage) availability, water, and air to form a complex whole. All of these factors that comprise food systems are, on the one hand, independent from each other and unpredictable in their independence. However, all these aspects of the food system are interconnected such that small changes in one factor can have a significant impact for others, and thus co-evolve. Weaver (1948) referred to this as *organized complexity*, which implies that communities within the boreal ecosystem have different requirements to achieve viable, healthy, and nutritious access to food. Thus, a national food policy needs to consider place-based relationships that are open to the fluidity of social and environmental dynamics.

The perspectives of the three authors draw on over three decades of collaborative and community-engaged research in Northwestern Ontario. This research has explored access to, and utilization of, place-based food practices to enhance the quality, self-sufficiency, and sustainability of available food sources within both settler and Indigenous communities. The prospects for a national food policy afford the opportunity for participatory engagement processes and context-based priorities that support innovative and adaptive approaches to food systems development (Lang, Caraher, & Barling, 2009; MacRae, 2011). To encourage the diversity essential for addressing the heterogeneity of food sourcing pathways (cultivated and wild) available in Canada, a national food policy must be rooted in joined-up approaches that connect departments, sectors, and jurisdictions and establish opportunities for the self-determination of communities in relation to their food sources.

Based on our experiences working with northern communities, we caution against a universalist approach that considers the north as a single geography or homogenous area with a common set of assets and challenges. Instead, it is essential to consider the implications of "best practices" that are developed in one place and uncritically applied to another; and replace this "colour blind" approach with specificity and contextuality rooted in equity and an appreciation for the diversity of cultures and desires of communities. From this diversity, adaptive innovation for survival, connections, and purpose emerge. For example, our research with Indigenous communities has demonstrated that a historic agro-forestry approach to gathering and consuming traditional foods enhances connections to land, sense of purpose, and well-being (Stroink & Nelson, 2009; 2012).

A more detailed explanation of Northern Ontario's boreal forest ecosystem demonstrates the need to create contextual, place-based joined-up food policies. The immensity of the boreal ecosystem in Canada means that its characteristics have a major impact on how we sustain viable nutritious food within this biome. The boreal forest is noted for its spatial heterogeneity, which can aptly be described as a complex mosaic of landforms, soils, vegetation relationships, and animal population dynamics (Winterhalder, 1983). Since prehistoric times, evidence shows that survival and access to food depends on mobility as the boreal ecosystem is characterized by micro areas of rich food resources that are fragile unless rejuvenated by disturbance, such as regenerative growth by fire and periodic outbreaks of insects that open up the boreal forest canopy and add essential nutrients (Ontario Nature, 2017; Steegmann, 1983). This diverse aspect of geography points to the necessity of an adaptive, flexible, place-based approach to national food policy to ensure access to healthy, sustainable, and nutritious food.

To survive and sustain existence within this fluid and ever-changing dynamic of the boreal forest, Indigenous peoples have developed traditional knowledge for both abundance and scarcity. This traditional knowledge includes cultural adaptation, such as the major replacement of cattail pollen, pine moss, and lichen as flour for bread with European-sourced flour for making bannock when it became available in the late 1600s (Blackstock, 2007; Flannery, 1995).Through adaptation and trade, food plants indigenous to the Americas (e.g., potato, maize, beans, peppers, and squash) traveled northward to be integrated with northern indigenous food plants, *zizania aquatic* (wild rice) and *vaccinium angustifolium* and *vaccinium myrtilloides (*blueberries) (Boyd & Surrette, 2010; Boyd, Varney, Surette, & Surette, 2008; Nelson & Stroink, 2010). Vegetables were integrated into local habitats by being planted next to trapping routes. Indigenous food ways and governance systems were rooted in traditional knowledge that integrated social and ecological systems in decision-making processes. In other words, humans, plants, and animals coevolved in a symbiotic ecological relationship. However, European settlement and the abrupt imposition of the Indian Act with its imposed reserve system by the settler-colonial government brought severe limitations to Indigenous self-determination and mobility that was vital to the adaptation of the boreal ecosystem's dynamics.

A number of historical events and policies have severely eroded the sustainability of northern food systems. For instance, residential schools were inflicted on northern communities resulting in devastating impacts on the continuity of generational food knowledge through abruptly severing food getting and sharing practices, experiential knowledge and oral traditions (Truth and Reconciliation Commission of Canada, 2015). The residential school system eroded the basic family structure essential for gathering and harvesting boreal food sources (Stroink & Nelson, 2012). In addition, negative experiences with gardening and agricultural left painful memories of forced work and abuse related to the acquisition of local food sources.

When residential schools were closed, children were mandated through the Indian Act to attend state run schools within and outside their communities. For many, this was viewed as another cultural blow to the continuity of traditional food knowledge and skills. The new schools imposed a provincial curriculum and scheduling timeframe that discouraged opportunities to

practice harvesting and foraging. After having lost their children through residential schools, many families were not willing to risk confronting the settler-colonial government by taking their children out of school to learn and practice traditional food knowledge (Driben, 1984).

Even today, few schools offer education and accommodation to participate in traditional food gatherings. For example, in order to take part in the *Fall Goose Hunt*, one of the most important food related cultural celebrations, students have to be away from school for a few weeks unless the school scheduling is modified to allow for these seasonal events. Accommodating additional food-related cultural events like Spring Walleye fishing or late Fall moose/caribou hunting can encourage the revitalization of agro-forestry food knowledge.

In addition, the reserve structure forced concentrated settlements that could not support nearby food sources (Durie, 2004). For a while, technologies like snow machines and four wheelers compensated for the longer distances needed to secure boreal food sources. However, in the last decade, the high cost of these machines and fuel has severely affected the acquisition of local food sources.

Further threats to food system viability and sustainability include legacies from past decisions and practices that still create challenges for a robust place-based food system. Provincial policy toward fire suppression began in 1917 and resulted in significant changes in the vegetation composition and thus in access to key food sources. The ecological impact of fire suppression is to drive critical food sources such as moose and caribou to areas further away from human settlements to areas where fire occurs naturally (e.g., through lightning strikes). Where there has not been imposed fire suppression, these animal food sources have access to shrubs for browsing, which is vital to their health and survival. Thus, fire suppression policy drives up the time (i.e., added days), fuel costs, and human power needed to hunt and transport essential traditional food sources like moose and caribou. In contrast, traditionally Indigenous peoples were able to intentionally burn land to create favourable plants and habitats as food sources (Johnson, 2013). In the last two decades there has been growing awareness of the important ecological role that fire plays in the boreal forest. Thus, when developing joined-up food policies, an ecological approach is vital to place-based food sources.

Other examples of these legacies are industrial mining and forestry activities that resulted in leaks of toxins into waterways and contamination of healthy soils for animal habitat and foraging activities. Other risks have occurred from flooding of land associated with hydroelectric energy projects that resulted in naturally occurring mercury being released from the decomposition of boreal forest trees and shrubs; toxic contamination of the boreal forest from abandoned mines and related limitations in legislatively controlled environmental codes; and forest management practices (e.g., herbicide sprays used to control competitive growth in forest regeneration).

Current policies that are intended to protect against overfishing by tourists are also a threat, as they may simultaneously compromise food security. Quota limits for harvesting of fish deter access opportunities for smoking and freezing of fish as a food source. In addition, in

Northern Ontario, hunting and harvesting restrictions for "species at risk" like sturgeon and caribou impact the availability of traditional and historic local food sources.

While many Indigenous communities are now reviving traditional practices, the harm, and the loss of cultural knowledge in gathering local traditional foods caused by these policies and government actions remain. This impact is clearly evident by observing the shift from less locally sourced foods to more refined, processed foods imported and accessed at considerable additional transportation costs. (Martin, 2012; Stroink & Nelson, 2009; Stroink & Nelson, 2012).

All of these examples point to significant challenges to revitalize and sustain an ago-forestry food system of cultivated and wild boreal forest foods as an alternative paradigm, one in which policy gives primacy to social and ecological relationships in Northwestern Ontario. This alternative paradigm affords opportunities to emphasize reconciliation and healing initiatives that address past Indian Act policies, such as discouraging Indigenous communities from selling cultivated food to non-native people (Waisberg & Holzkamm, 1993) and the ongoing residual impacts of forced participation in food production during the residential school era.

In summary, contextualized and place-based policy leads us in a different direction than a universalist, "best practices" approach. Policies that may facilitate sustainable food systems include ensuring children living in reserve communities have access to school programming that encourages learning about the gathering and harvesting of local food resources, and establishing respectful nation-to-nation relationships between Indigenous communities and the state. A joined-up policy framework that includes an ecological approach would include policies that encourage alternatives to herbicide spraying, such as with glysophate, since this practice jeopardizes healthy access to food sources such as blueberries and moose who browse on sprayed forests. In addition, establishing appropriate guidelines for controlled burns that offer a more balanced approach to fire suppression encourages diversity in the availability of vital traditional food sources near communities.

We encourage the Government of Canada to develop an innovative Food Policy for Canada that is not set in stone, but will evolve and endorse a contextual, place-based approach. As described in the examples above, food systems issues exist as contextual points in time, influenced by multiple factors that are interrelated into an organic whole (Weaver, 1948). Our research and experiences lead us to recommend that a Food Policy for Canada needs to consider place-based relationships that are open to the fluidity of social and environmental dynamics. It must embrace the specificity of context in order to realize the transformative opportunity to establish healthy, equitable, and sustainable food systems for all.

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