



Short communication

Food policy in the Canadian North: Is there a role for country food markets?

James D. Ford^{a,*}, Joanna Petrasek Macdonald^a, Catherine Huet^a, Sara Statham^b, Allison MacRury^b^a Department of Geography, McGill University, Montreal, Quebec, H3A 0B9, Canada^b Department of Health, Government of Nunavut, Iqaluit, Nunavut, X0A 0H0, Canada

ARTICLE INFO

Article history:

Received 29 September 2015

Received in revised form

11 January 2016

Accepted 22 January 2016

Available online 25 January 2016

Keywords:

Nunavut

Canada

Greenland

Food policy

Food security

Food systems

Inuit

Country food markets

ABSTRACT

Food insecurity is widely reported to be at a crisis level in the Inuit territory of Nunavut, Canada. Various policies, programs, and initiatives have been proposed to tackle the problem, with increasing interest in developing a system of country food markets (CFMs) similar to Greenland. We examine if CFMs offer a feasible, sustainable, and effective model for strengthening food systems in Nunavut, examining the model of Greenland and drawing on semi-structured interviews with key informants ($n = 45$). The Greenland experience indicates that CFMs can provide access to sufficient, safe, and nutritious food on a regular basis, and can diversify locally available foods. These benefits are transferable to Nunavut, although knowledge gaps, regulatory and institutional conditions, and concerns over how CFMs might affect the cultural basis of food systems, underlies apprehension over their development in the territory. We conclude that Nunavut is not currently in the position to develop CFMs, but the role of such markets in potentially strengthening food systems should not be discounted. Future development would need to solicit community input on CFMs, resolve regulatory issues around wildlife management and harvesting, and study how future risks would affect sustainability and effectiveness.

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1. Introduction

According to the Food and Agriculture Organization of the United Nations (FAO), food security exists “when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life” (FAO, 2015). To be food secure then, individuals and households must be able to reliably access food, the availability of nutritious food must be sufficient, and it must be of an acceptable quality (Ford, 2009; Gregory et al., 2005). Food insecurity occurs when food is not accessible, available, and/or of sufficient quality, and is a major challenge in the Canadian Arctic, particularly for Inuit communities (Council of Canadian Academies, 2014; Loring and Gerlach, 2015). The Inuit Health Survey (2007–2008), for example, reported that 69% of Inuit households were food insecure in the territory of Nunavut (Egeland et al., 2011a, 2010). Similarly, decision makers, Inuit organizations, and qualitative

studies have documented significant challenges around food insecurity, with wide-ranging health and societal implications (Council of Canadian Academies, 2014).

In Nunavut, where food insecurity has been identified to be at a crisis level, various policy initiatives have been launched (Wakegijig et al., 2013). Between 2009 and 2010, for example, the Government of Nunavut (GN) developed a territorial poverty reduction plan, emphasizing the need to take action on food insecurity and creating the Nunavut Food Security Coalition. The Coalition seeks to make adequate supply of safe, culturally preferable, affordable, and nutritious food widely accessible, and released the Nunavut Food Security Strategy (NFSS) in 2014. A key focus of the NFSS is on finding ways to improve the accessibility, availability, and quality of ‘country foods’; locally harvested wildlife species which form a central component of the food system in Nunavut by which food is produced, processed, distributed, prepared, and consumed (Council of Canadian Academies, 2014). The consumption of country foods—the most common including ringed seal, caribou, arctic char, and beluga—has been linked to higher rates of food security, and enhanced physical and mental well-being, but is being compromised by social, economic, cultural, and environmental

* Corresponding author.

E-mail address: james.ford@mcgill.ca (J.D. Ford).

changes in many regions (Council of Canadian Academies, 2014; Egeland et al., 2011b; Loring and Gerlach, 2015). The NFSS also focuses on store bought foods, which in Nunavut are expensive, tend to be of poor nutritional quality (high sugar, carbohydrates, salt and fat contents), and are often described as lacking variety, accessibility and freshness, with inconsistent and unreliable availability (Mead et al., 2010; Sheehy et al., 2015). The main policy initiative of the Canadian federal government meanwhile, has been to provide a retail subsidy to make nutritious and perishable foods more available and affordable in northern stores through the Nutrition North Canada program (Galloway, 2014).

A key component of the NFSS is to examine whether the development of country food markets (CFMs) within communities offers a means of reducing food insecurity (objective 1.4; for other components of the NFSS see [supplementary materials](#)). This recommendation, in part, stems from Greenland, where country foods have long been commercially exchanged and documented rates of food insecurity are low (Goldhar et al., 2010). Given the similarities between Greenland and Nunavut—both are Inuit regions and have food systems in which country foods play an important role (see [supplementary materials](#))—it has been argued that the Greenlandic experience offers transferable lessons for food policy (Council of Canadian Academies, 2014; Goldhar et al., 2010; NFSC, 2013). Despite interest in the development of CFMs in Nunavut, to our knowledge no studies have assessed what implications commercialization might have for food systems, or evaluated whether the Greenlandic model is transferable. In this paper we ask: do CFMs offer a feasible, sustainable, and effective model for improving the access, availability, and quality of country food in Nunavut? The work informs future priorities for the NFSS, and holds insights for other Inuit regions in Canada considering similar approaches to food policy.

2. Methods

Semi-structured interviews were conducted with 45 key informants: 6 in Denmark, 18 in Greenland, 20 in Nunavut, and 1 in southern Canada. Interviews in Denmark were mostly conducted with researchers, and reflect the fact that Greenland is an autonomous Danish dependent territory, with many researchers who work in Greenland based in Denmark. A fixed list of questions was avoided, with an interview guide used identifying key themes to cover in interviews. Interview questions sought to examine: i) the *feasibility* of developing CFMs in Nunavut, concerned with the extent to which the territory is capable of implementing a system similar to Greenland's based on existing institutional and management structures, regulatory regimes, resource availability, and public support; ii) the *sustainability* of developing CFMs in Nunavut, which captures the extent to which their development would not place unsustainable pressures on harvested wildlife populations and their ability to provide country foods on a regular basis; and iii), the potential *effectiveness* of CFMs in Nunavut for enhancing food access, availability, and quality. In Denmark and Greenland, interviews sought to document perspectives on feasibility, sustainability and effectiveness of CFMs based on their actual operation, while in Nunavut and southern Canada interviews were hypothetical, structured around the potential development of CFMs in the territory.

We interviewed a diversity of stakeholders in both regions, including high-level decision makers across levels of government (local, regional, national); representatives and leaders of Inuit, civil society, and harvester organizations; university researchers and northern-based scientists; and those employed in the northern food business. The majority of interviews ($n = 39$) were conducted in-person and often at their workplace, the remainder by phone

($n = 6$). In Denmark all in-person interviews were conducted in Copenhagen, in Greenland in Nuuk, in Nunavut in Iqaluit, and in southern Canada in Montreal. While all participants were offered the option of having a translator to conduct interviews in their preferred language, all chose to conduct the interviews in English. Interviews lasted on average one hour. For the majority of the interviews in Denmark and Greenland, two interviewers were present. In Canada, most of the interviews were conducted with one interviewer. Interviews were not audio recorded; rather, very detailed notes were taken by hand during each interview and reviewed immediately following the interview to add in any further detail. In cases where there were two interviewers taking notes, interview notes were compared and combined to ensure that no information was lost. All notes were transcribed following the interview. It is noteworthy that the insights of community members were not solicited in this project, an important gap for future research (see [discussion](#)).

A snowball sampling strategy was used to identify interviewees, whereby existing contacts and collaborators were used to identify relevant individuals to interview, who then suggested others, until saturation was reached. This selection process builds upon the considerable engagement of the project team in northern food policy, as both decision makers and researchers. The work was conducted under REB Certificate 204–1114 from McGill University; given the work was funded by the Government of Nunavut (GN) and was undertaken in-part by GN employees, a Nunavut Research License was not required. Interviews were complemented with a scoping review of the literature on the history of country food commercialization in the two regions (see [supplementary materials](#)).

A total of 132 pages of interview notes were initially analysed by one analyst (58 pages from Denmark and Greenland and 74 pages from Canada), using a constant comparative method where themes between and within interviews were extracted and then compared (Boeije, 2002; Strauss and Corbin, 1990). This first involved reviewing all interview notes in which reflective memos made, focussing specifically on documenting perspectives on the feasibility, sustainability and effectiveness of CFMs. Following this, reflective memos were combined into one document of 42 pages that identified major themes and supporting data under each. Following this, a second review of this 42 page document was done to expand and detail lists of descriptive concepts and build concept maps, which were then reviewed among the team, including members of the Nunavut Food Security Coalition who are included as co-authors. The key themes provide the basis for the results presented here, with quotes from interviews incorporated to highlight key points in the interviews own words (and as recorded in interview notes).

3. Results

3.1. Country food commercialization in Greenland and Nunavut

The sale of country foods has a long history in Greenland, and is tightly regulated. Every hunter and fisherman requires a general hunting license and have to report their annual catch (Sowa, 2015) (see [supplementary materials](#)). There are approximately 2500 'professional hunters' who can sell their catch to processing plants, local institutions, private households, and CFMs (locally known as *kalaalimineerniarfik*). As one government representative from the Ministry of Fishing, Hunting, and Agriculture in Nuuk explained, "The natural economy is [the] income [of professional hunters]." In comparison, there are about 8000 'leisure hunters' who hunt for themselves and family, and can only sell their harvest in some small communities. Professional hunters have access to more species and

larger quotas than leisure hunters, are required to pay tax on their food sales, and at least 50% of the individual's total gross income must come from hunting or fishing.

CFMs have been in operation for over 150 years in Greenland, and larger towns typically have a permanent structure with running water and electricity, while small towns and villages have an outdoor shelter (Rasmussen, 2002; Rasmussen et al., July 2014). They are maintained by municipal authorities in association with the Greenland Association of Fishermen and Hunters (KNAPK). In the last decade new market buildings have been built in the larger towns, and are typically located in the town centre in well-equipped indoor facilities (see [supplementary materials](#)).

The history of country food commercialization in Nunavut is more limited, beginning in the 1960s and 70s when the federal government promoted the trade of country foods as part of broader efforts aimed at 'modernization' and acculturation. These efforts, however, had little success and were not long lasting (Aarluk Consulting Incorporated, May 2005; Reeves, 1993; Wenzel, 2013). Today, some harvesters sell directly to community Hunter and Trapper Organizations (HTOs), local restaurants, or regional processing plants, while there is a growing online market for country foods on Facebook. Some communities also have their own country food stores, and 'pop-up' markets have occasionally been organized in some communities in recent years.

3.2. Country food markets have the potential to strengthen food systems but could also undermine the cultural basis of Nunavut food systems

Country food access and availability were widely reported as being enhanced by CFMs in Greenland, and form part of a diversity of purchasing options that cater to households of various characteristics. One Greenland participant commented that "the market provides easier access to country foods." In the larger towns, the 'old' market is often the first choice for elders who value buying food directly from hunters that they know. The 'new' market, or supermarket, is mostly used by young professionals because the hours are reliable, the locations are easily accessible, and the facilities are perceived to be more hygienic (see [supplementary materials](#)). While some participants expressed concern about affordability for those of low socio-economic status, the idea of having a commercial space to sell country foods was widely supported. Indeed, government policy in Greenland has promoted the commercialization of country foods as a basis for sustainable development by reducing dependency on imported foods, promoting hunting, providing reliable access to healthy and culturally valued food, and supporting local economic opportunities.

In Nunavut, opinions were mixed on how CFMs might affect food access and availability, reflecting different perceptions of the main causes of food insecurity in the territory. Some interviewees noted that the problem of obtaining country foods was more related to there being too few animals available to support community needs in light of rapid population growth and declines in some wildlife populations (i.e. limited availability); in this view, CFMs would not be able to reliably supply country foods. Others, however, noted that the problem is more one of access, where obtaining country foods was identified as being particularly challenging for those with full-time employment who do not have a hunter in the household, who are not part of food sharing networks, and/or do not have hunting equipment. In this case, interviewees believed CFMs could expand availability and access by offering a physical space, option of paying cash, and lowering prices. As one male hunter in Iqaluit explained,

"I myself as a hunter could say that [country food is] never free ... it may seem to be free when you consume it but it never was free to the hunter. If you're looking at the green paper of the money, and looking at amount of labour that you're working for, it never was free ... it never was free for my great great grandfather, for my grandfather or my father, and [it is] not free for me. The hunter needs to have tools, transportation, and energy. You need all three or you're not able to hunt."

More fundamental concerns were articulated in Nunavut, however, about how the development of CFMs could undermine sharing networks. In the belief system common to Nunavut Inuit, harvested food is seen as a gift from nature, in which animals offer themselves to the hunter or fisher, and where the sharing, distribution, and consumption of wild foods is closely linked to cultural identity (Wenzel, 1995, 2013). As one Iqaluit participant noted, "food sharing is one of the important fibres of the culture." Country foods are thus often viewed as belonging to the people and not having a cash value. Many Nunavut interviewees feared negative cultural impacts if CFMs were to be developed, and identified the potential for the food security of the most vulnerable to be compromised as a result of country foods being diverted from sharing networks to being sold. Food sharing has been identified as particularly important for households in need, including the elderly and those with limited income (Beaumier and Ford, 2010). Yet some participants acknowledged it was unrealistic to rely on a limited number of hunters to supply communities with country food considering the cost of living in the North, limited income earning opportunities, and population growth increasing demand. Reflecting this, some reported that the social stigma around selling country foods was beginning to soften, with several interviewees observing that the strong resistance to selling country food on Facebook initially encountered has decreased, with strong community support also reported for occasional 'pop-up' markets.

3.3. Country food markets can diversify the types of locally harvested foods available in communities

CFMs were viewed to increase diversification of country foods available for consumption, and promote non-traditional species. In Greenland, a wide variety of foods are available through the *kalaalimineerniarfik* including various kinds of meat, fish, birds, berries, and plants. A concerted effort has been made in recent years to reintroduce certain traditional foods that have disappeared from contemporary diet, yet are widely available locally and have positive nutritional benefits (e.g. seaweed). In Nunavut, it was noted that CFMs could be used to make a variety of products from across the territory more available in communities and would help in promoting the incorporation of different species that are plentiful but not widely consumed (e.g. snow geese, turbot). A participant who works for an Inuit organisation in Iqaluit noted that, "People don't eat harp seal— the point is that right now we are not fully utilizing our resources" Particularly given the stresses being placed on a small number of preferred species in Nunavut (e.g. caribou), and in the context of climate change impacts, species diversification has been identified as needing further examination in the NFSS (objective 1.7).

3.4. The physical infrastructure of country food markets can provide important socio-cultural spaces

The physical infrastructure provided by CFMs was reported to have potential socio-cultural benefits. In Greenland, markets were described as a well-used space for local hunters and fishermen to

butcher and sell their harvest, serving an important social function for sellers and buyers. One of the most important reported aspects of markets is that they act as a social space with direct interaction between harvesters and buyers. Although, new markets in the larger towns hire staff to receive and sell the country food, and there was concern expressed that this would undermine the social function of CFMs (see Figs. 1–3 in supplementary materials). The social networks generated by the old markets were also reported to act as an informal mechanism of keeping hunters accountable and ensuring safe, high quality country food. One participant in Nuuk, a researcher at the University of Greenland, explained this informal accountability mechanism and emphasized that the best way to avoid poor quality or unsafe foods is for people “to know who is good and caring” when it comes to harvesting and processing practices.

In Nunavut, many interviewees felt that harvesters could benefit from a space where they could clean sealskins, butcher products, and dry or smoke fish, since such spaces rarely exist in communities. These spaces could provide a permanent location for cultural activities, which are often structured around harvesting, be they targeted at food procurement (the act of hunting including fixing equipment, building sleds, etc.) or food processing (e.g. butchering, sewing skins) (Organ et al., 2014; Pearce et al., 2015). Additionally, CFMs were described as potentially providing an opportunity to encourage relationship building between consumers and harvesters. Indeed, interest in CFMs among Nunavut respondents was equally centred, if not more so, on a space to process rather than to sell. Some participants felt that having such infrastructure would also support supplying and receiving country food from other communities, important if enhanced community trade is to be promoted as part of territorial food programming. As one participant who is a hunter in Iqaluit said, a space available to hunters “would give people a place to prepare and also provide the social piece of people being able to talk about good places to hunt, learn safe preparation ... and where young people could learn from Elders.”

3.5. Country food markets can contribute towards alleviating the financial burden of harvesting

Contemporary harvesting activities require significant capital outlay for boats, snowmobiles, all-terrain vehicles, rifles, ammunition, gasoline, safety equipment, and maintenance. In Greenland, the ability to sell country foods was reported to be important in providing access to financial resources to compensate for these costs. In particular, participants noted that having a reliable marketplace and guaranteed price provided hunters with the assurance that there is a venue in which they can sell their catch on a regular basis. Being a professional hunter is thus considered a viable livelihood option, although often reliant on having additional household income. A representative from KNAPK for example, noted that in Greenland, “the cost of living is so high ... most hunters rely on spousal support with stable income.” The need for increased economic opportunities for hunters was widely noted in the Nunavut interviews, where a lack of jobs, high unemployment, and high costs are consistently identified as major constraints to the contemporary hunting economy (Duhaime and Edouard, 2015; Wenzel, 2013). Even limited earnings from being able to sell foods in local markets could help maintain the ability to hunt in light of increasing costs and help promote a more regular supply of country food. The potential of CFMs to foster life skills training for younger Inuit was also reported, and is supported by cases where country food stores have been opened in Nunavut communities, with positive impacts documented linked to employment and community pride (Myers, 2002).

3.6. The sustainability of wildlife populations could be undermined by the development of country food markets in Nunavut in absence of regulation

In Nunavut, concerns were widely expressed that CFMs might affect the sustainability of wildlife resources, with commercialization leading to increased pressure on wildlife populations. Indeed, some community HTOs have publicly expressed concern that online demand will add increasing stress on some wildlife populations (e.g. caribou). Issues of sustainability were often discussed in the context of limited scientific data on wildlife stocks and harvesting rates, which was argued would limit the ability to assess the impact of commercialization efforts or decide what level of harvesting would be sustainable. As one participant in Iqaluit stressed, “the way we're going now is that all species will have quantitative harvest limits.” The last comprehensive Nunavut-wide harvesting survey was conducted in the early 2000s; currently, the status of a number of wildlife stocks is contested or not fully understood. Climate change and resource development create additional uncertainties over the future status of wildlife stocks (Durkalec et al., 2015; Ford et al., 2014). In light of these challenges, it was continuously re-affirmed by Nunavut interviewees that subsistence and associated sharing should have precedence over commercial uses.

In Greenland by comparison, there are extensive longitudinal data on wildlife stocks and harvest data (Hamilton et al., 2000). The Greenland Institute of Natural Resources (GINR) is mandated to provide the scientific basis for assessing the sustainable use of the living resources in and around Greenland, and provides baseline knowledge for informing the regulatory system for hunting and fishing. This was reported to underpin the sustainability of the market system by participants in Greenland, although some Nunavut interviewees questioned the stringency of Greenland's wildlife management system for populations shared between the two regions (e.g. beluga, narwhal). However, it was recognized that if Nunavut were to promote CFMs, some form of enhanced regulation would be required.

4. Discussion

This paper examines perspectives on the operation and effectiveness of country food markets (CFMs) in Greenland and evaluates if they offer a feasible, sustainable, and effective model for Nunavut. The Greenlandic experience has largely been positive. In Nunavut, however, while potential benefits of such markets were recognized, an underlying theme challenged whether they would provide the basis for strengthening the food security of the most vulnerable community members most in need of support. Indeed, many pointed out alternative programs to address food insecurity would likely have greater success, including increasing emphasis and funding for harvester support programs, providing education and training in food preparation, investing in community freezers, and enhancing food support mechanisms, similar to what has been proposed in the literature (Chan et al., 2006; Fillion et al., 2014; Organ et al., 2014). Yet, negative attitudes towards the selling of country foods are softening, and in light of the food security challenge facing Nunavut, there is interest in exploring new ways of improving country food access, availability, and quality. As such, while the idea of CFMs was received with caution, there was openness for keeping debate around the issue alive, and further examining how markets might be developed. Herein, this study identifies a number of knowledge gaps and regulatory and institutional conditions that would have to be resolved prior to CFMs being promoted in territorial food policy.

Firstly, the perspectives of community members on CFMs are needed, as the findings of this study are based on interviews with

those in decision-making, advocacy, and research roles. Given the important socio-cultural role of country food to Inuit, any effort to promote CFMs needs to be community-led and driven, and flexible to local circumstances. Building on such local engagement, the piloting of CFMs through an expansion of some of the recently organized ‘pop-up’ markets, for instance, would be an important first step for developing empirical insights on the work reported here.

Secondly, some degree of regulatory oversight is needed if CFMs are to be promoted in Nunavut. A number of wildlife populations are already under stress, and climate change, resource development, and increasing demand due to population growth could further affect sustainability (Ford et al., *In Press*). The Greenlandic regulatory model however, is not directly applicable to Nunavut, where the Nunavut Land Claims Agreement (NLCA) codifies the right of Inuit to harvest wildlife resources, stipulating (section 5.7.30) that “... an Inuk shall have the right to dispose freely to any person any wildlife lawfully harvested. The right to dispose shall include the right to sell, barter, exchange and give” (see [supplementary materials](#)). As such, and in contrast to Greenland, harvesting by Inuit in Nunavut does not require a license, and hunters are not required to report their harvest amounts. Various wildlife management options are currently employed in Nunavut though within the remit of the NLCA (e.g. total allowable harvests, trophy fees, regulations for the commercial sale of narwhal ivory), and offer potential vehicles through which wildlife harvested for sale could be managed. Any such development would require careful negotiation between the various institutions with mandate and jurisdiction for wildlife management, including Nunavut Tunngavik Incorporated, the Nunavut Wildlife Management Board, the Government of Nunavut, and the Government of Canada.

Thirdly, regular monitoring and evaluation of wildlife populations for species being commercially sold is important for reinforcing sustainable management and ensuring food safety. There is significant ongoing research examining the status and health of various species in Nunavut, yet in contrast to Greenland where the GINR directly conducts research for informing decision making, little of the work in Nunavut directly addresses stock management needs. As such, research may be insufficient for informing the regulatory structure needed to support CFMs: for example, wildlife decision making in Nunavut is mandated by the NLCA to be based on science and Inuit Qaujimagatuqangit (IQ) (Inuit traditional knowledge and cultural values), but IQ is poorly integrated into many science-led biological research projects (Brunet et al., 2014). Moreover, there is an absence of contemporary harvest data for most Nunavut communities, and few studies characterize the operation of food systems in terms of how food is procured, distributed, and consumed; in absence of these data, detecting and monitoring impacts of CFMs (e.g. on sharing networks) will be challenging. These data limitations require a co-ordinated response across multiple levels of government, by Inuit organizations, and the research community.

Finally, the pricing of country foods in markets needs to be examined. Greenland has maintained control over pricing, seeking to maintain a regular supply of country food at consistent prices across communities; a factor important in maintaining regular availability and access. Irregular food supply by season and community, by comparison, have been identified as major challenges facing Nunavut food systems; in the case of ‘pop-up’ markets, for example, food often sells out in a matter of minutes. If CFMs are to enhance food security they need to provide enough food at an affordable price consistently, yet it is unclear if harvest levels supplying markets would be enough to achieve this, or if an affordable price would meet the costs of harvesting.

5. Conclusion

It has been argued that developing country food markets (CFMs) similar to those in Greenland offers a model for improving the access, availability and quality of country foods in Nunavut. While the Greenland experience has been positive, we conclude based on the interviews conducted here that Nunavut is not currently in the position to develop CFMs given knowledge gaps and regulatory and institutional conditions. A strategy for developing CFMs would first have to consult communities across the territory to document perspectives on country food commercialization, identify and resolve regulatory issues around wildlife management and harvesting, examine how the system would be funded and administered, and study how future risks such as climate change and resource development would affect sustainability and effectiveness.

Acknowledgements

The work in this paper was funded by a contract from the Government of Nunavut. It also benefited from ongoing support from the CIHR Applied Public Chairs Program, FRSQ, ArcticNet, SSHRC, NSERC, and the IDRC. The research was undertaken under REB Certificate 204-1114 from McGill University. We would like to thank all the interviewees who made this research possible, and Ed McKenna and Natan Obed, co-chairs of the Nunavut Food Security Coalition, for their support in the project.

Appendix A. Supplementary data

Supplementary data related to this article can be found at <http://dx.doi.org/10.1016/j.socscimed.2016.01.034>.

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