

# Identifying benefits and barriers to creating and operating Indigenous northern community gardens

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## PURPOSE AND BACKGROUND

- Identify challenges and benefits related to northern community gardens and greenhouses.
- Maximize the utilization of resources, time, and energy to their fullest potential for projects
- Food sovereignty is of growing concern for Indigenous communities across Canada.
  - Lacking adequate access to nutritious and sustainable food sources
  - Heavy reliance on expensive store-bought/imported foods
  - Increased risk of diet-sensitive chronic diseases and obesity
- The use of community gardens and greenhouses is one solution that is being used by Indigenous communities across Canada to address food security concerns.



The photos above are taken from the Moose Cree First Nation Community Garden project. The image on the left depicts the beginning stages of one of the community plots. The image on the right depicts the hoophouse that was added to the community garden in October 2019. (Ferrerira et al., 2021).

## OBJECTIVES

- Evaluate the challenges/barriers and benefits associated with relevant Indigenous community greenhouse and garden projects;
- Explore the implications of Indigenous community garden and greenhouse projects through interviews with project proponents;
- Create a framework that will help inform future Indigenous community garden projects in Manitoba and elsewhere in Canada.

## METHODS

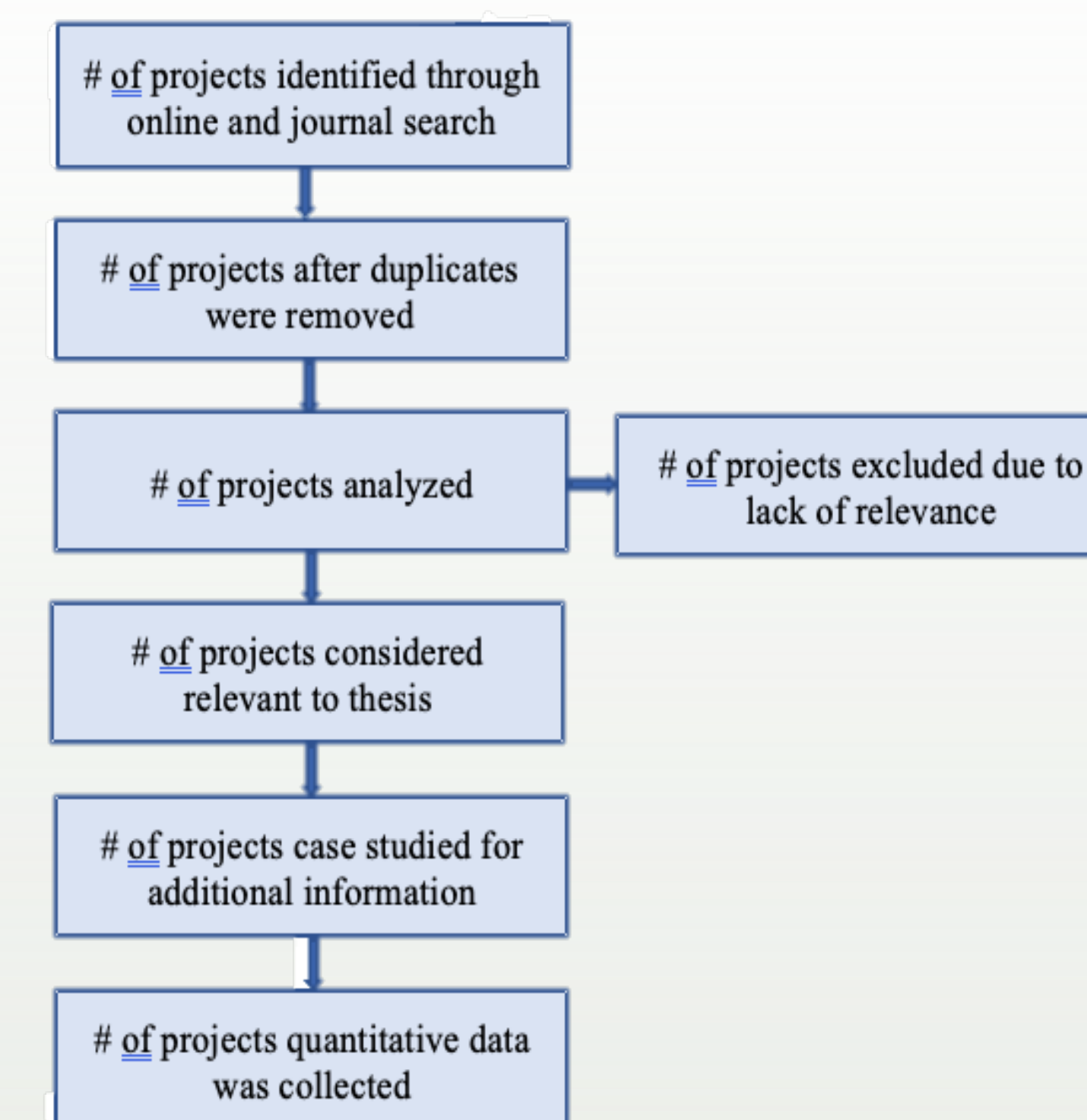
- Literature Review**
  - Analyze relevant Indigenous community garden and greenhouse project preferably focused on the north when possible,
  - Identify 6-8 individuals projects for additional quantitative research.
- Interviewing**
  - Complete the online Tutorial Course on Research Ethics (CORE),
  - Amend an existing ethics application provided by my advisor to enable me to begin my human-focused research,
  - Interview 6-8 projects for first hand information on creating and operating community gardens.
- Final Document**
  - Analyze emerging themes of challenges, benefits and general comments related to each of the operational community gardens
  - Create a framework document that can be used by other Indigenous communities who desire to create their own community garden and/or greenhouse

### Changes Made

- I will no longer be interviewing individuals involved with the Thompson community garden and greenhouse project, as I have narrowed my thesis to focus on only community gardens that are already operational (the Thompson garden is in developmental stages).
- I will no longer be including a lose procedure as to how to create and operate a community garden and greenhouse successfully, as through my literature review very few details on how to construct a garden/greenhouse were found.

## PRELIMINARY RESULTS

The literature review was geographically focused on northern Indigenous community gardens and greenhouses. The figure on the right explains how projects were chosen and narrowed down. The criteria used to exclude projects due to lack of relevance includes; **lack of recent information (in the last 4 years) being found online, little information online about the project in general, size of project, large greenhouses with no garden.** The projects that were chosen to have further quantitative data collected (be interviewed) were determined primarily by the amount of recent information found online. Several of the analyzed community garden projects either use a Facebook page or website to share information regarding their gardens. It is speculated from the literature review that many community gardens have halted operations due to the effects of COVID-19, as updates/posts about community gardens stopped prior to spring of 2020 for multiple communities.

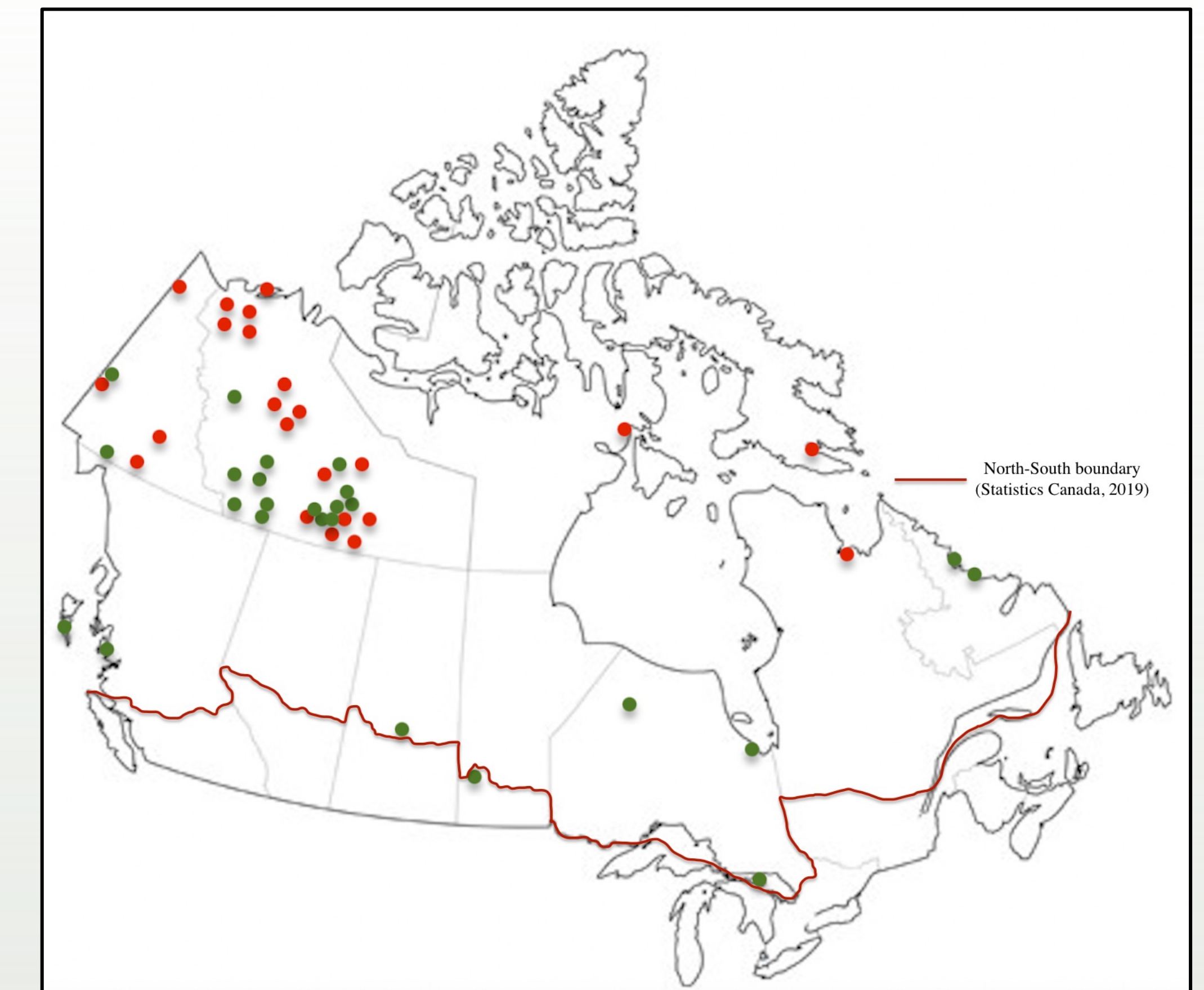


**50 community garden and greenhouse projects** were analyzed during the literature review (31 NWT, 6 YT, 2 BC, 1 SK, 1 MB, 2 NU, 3 ON, 1 QC, 3 NL). Of the original 50 projects, 25 community gardens and greenhouses were then further analyzed for trends in benefits and challenges related to creating and operating the community gardens (tables below). The majority of the projects are from the Northwest Territories due to the **Growing Forward Initiative**, a program signed by the Government of Canada through Agriculture and Agri-Food Canada and the Government of Northwest Territories through the Department of Industry, Tourism and Investment. One program of the Growing Forward Initiative is the **Small Scale Foods Program (SSFP)**, which is designed to focus on small community-based garden production of vegetables and fruits.

While conducting the literature review, documents released by various provincial governments on how to start a community garden were found. These documents will be further analyzed for potential challenges to starting community garden projects.

Trends in Benefits	Trends in Challenges
<b>Community Engagement</b> <ul style="list-style-type: none"><li>Multigenerational involvement</li><li>Facebook groups</li><li>Involving elementary schools</li><li>Harvest events</li><li>Teamwork, collaboration, networking</li><li>Sharing abundance, practicing generosity</li><li>Beautification of community</li></ul>	<b>Soil Quality</b> <ul style="list-style-type: none"><li>Hard clay/rocks, peat moss</li><li>Having to buy and ship soil into community</li><li>Fertilizer required</li></ul>
<b>Food Security</b> <ul style="list-style-type: none"><li>Grow wide variety of plants</li><li>Reduction in time to get fresh quality produce</li><li>Reduction in cost of vegetables</li><li>Home-grown foods taste better</li><li>Produce available year-round (greenhouse)</li><li>Addresses reliance on store-bought foods (low in nutrients, expensive, excessive packaging/plastic waste)</li><li>Expanding diets</li></ul>	<b>Volunteers</b> <ul style="list-style-type: none"><li>Lack of knowledge about gardening</li><li>Lack of interest/time</li><li>Consistent help required</li></ul>
<b>Improve Economy</b> <ul style="list-style-type: none"><li>Learned practical skills to grow food commercially</li></ul>	<b>Animals</b> <ul style="list-style-type: none"><li>Dogs</li><li>Local bison heard trampling garden</li><li>Having to install fencing</li></ul>
<b>Culture Connectedness</b> <ul style="list-style-type: none"><li>Reconnection with culture</li><li>Healing experience for Elder's (residential school survivors)</li><li>Learning traditional ways</li><li>Renewed relationships to the Earth/land and all living things</li></ul>	<b>Water</b> <ul style="list-style-type: none"><li>Irrigation for garden</li><li>Logistics of watering</li></ul>
<b>Workshops</b> <ul style="list-style-type: none"><li>Food preservation</li><li>Seed starting</li><li>Planting</li><li>Garden Maintenance</li></ul>	<b>Resources</b> <ul style="list-style-type: none"><li>Funding for garden supplies</li><li>Maintenance of garden beds (preparing for growing season)</li></ul>
	<b>Additional Trends in Information</b> <ul style="list-style-type: none"><li>Greenhouse may be added a few years after community garden is started if successful</li><li>Communal plots and raised garden boxes are the most beneficial use of space</li><li>A hired professional may be brought into assist the start of a communal garden project</li><li>Partnering with religious organization is somewhat common for funding</li></ul>

## PRELIMINARY RESULTS



**Projects that will be interviewed for quantitative data:**  
Moose Cree First Nation Community Garden (ON)  
Fort Simpson Community Garden (NWT)  
Fort Good Hope Community Garden (NWT)  
Dettah Community Garden (NWT)  
Carcross Community Garden (YT)  
Waywayseecappo First Nation Community Garden (MB)

## CHALLENGES AND PROBLEMS

- Lack of up-to-date information
  - Many projects have not been reported on in several years (over a decade in some examples)
- Contacting project managers
  - Although identified, contact information might be incorrect and/or out of date

## NEXT STEPS

- Finish literature review
- Create questions for each identified community garden project for interviews
- Contact project managers and conduct interviews
- Analyze interviews by transcribing them with Dedoose software
- Compare benefits and challenges trends from literature review and interviews
- Create framework for future Indigenous community garden/greenhouse projects

## REFERENCES

- Chen, A. & Natcher, D. (2019). *Greening Canada's Arctic food system: Local food procurement strategies for combating food insecurity*. Canadian Food Studies. Retrieved from <https://canadianfoodstudies.uwaterloo.ca/index.php/cfs/article/view/301>; Ferreira, C. G. (2021). *Local food development in the Moose Cree First Nation: taking steps to build local food sustainability*. Retrieved from *An International Journal of Multidisciplinary Research*: <https://www.tandfonline.com/doi/abs/10.1080/15528014.2021.1913557>; Government of Canada. (2011). *Growing Forward Small Scale Foods Program*. Retrieved from <https://www.intassembly.ca/sites/assembly/files/11-05-2014/37-166.pdf>; Government of Canada. (2016). *Greening Forward 2 Decho Region Report*. Retrieved from [https://www.it.gov.nt.ca/sites/it/files/g2\\_region\\_report\\_2016.pdf](https://www.it.gov.nt.ca/sites/it/files/g2_region_report_2016.pdf); Laychuk, R. (2017). *Community gardens help Waywayseecappo First Nation residents access fresh, healthy foods*. Retrieved from CBC: <https://www.cbc.ca/news/canada/manitoba/waywayseecappo-community-garden-1.4197641>; Sorensen, L. (2015). *Success Stories from Ndilo and Dettah, How School Gardens and Community Gardens are Growing Healthier Communities*. Retrieved from: <https://static1.squarespace.com/static/56af7218259b53bd8383cb8/1/574dea2c7c65e430df41dfb/1464724615537/Ndilo+Dettah+Gardening+SUCCESS+stories+July++2015+Final.pdf>; Statistics Canada. (2016). *Delineating northern and southern Canada*. Retrieved from <https://www150.statcan.gc.ca/n1/daily-quotidien/190704/mc-a001-eng.htm>