



# NORTHERN AGRICULTURE FUTURES 2024 REPORT



# OVERVIEW

In 2024, NAF supported four Dehcho First Nations communities, helping to advance pilot projects, train community members, and engage in planning, policy and knowledge sharing, and support soil sampling. Notably, in 2024, NAF met with Tthets'éhk'edélî First Nation (Jean Marie River) who now feel they are ready to rebuild their greenhouse and garden, destroyed when the community flooded in 2019. Below is a brief summary of NAF activities.

## **KTFN:**

1. Salary funding for one adult staff to support pilot projects implementation;
2. Labour assistance in the garden, firebreak and composting program by Laurier students;
3. Mentorship of two youth including a youth co-authoring a peer-reviewed article;
4. 2 Workshops focusing on composting and food preservation organized by Ecology North;
5. Erected a new greenhouse, doubling production capacity for the garden;
6. Initiated a community composting program, along with training and awareness raising;

## **SKFN:**

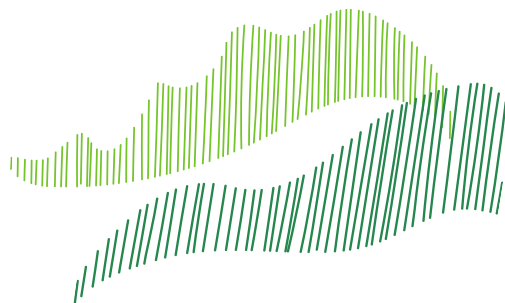
1. Salary funding for the SKFN Garden Coordinator and staff;
2. Labour assistance in the garden by Laurier students;
3. Cooking classes with garden produce led by Laurier students;
4. Re-prioritization of garden produce within the store and a farmers' market;
5. Annual review and updates to SKFN Agroecology Action Plan;
6. Beginning to develop a succession strategy for the next SKFN Garden Coordinator.

## **KFN and JMRFN:**

1. Soil sample were collected and analyzed by a University of Guelph student to determine ideal locations for gardening and agriculture production

# HIGHLIGHTS

- Pilot Projects
- Training and Capacity Development
- Policy and Knowledge Sharing
- Soil Sampling
- Challenges
- Next Steps



# PILOT PROJECTS

## Ka'a'gee Tu First Nation (KTFN)

Kakisa pilot projects include 1) a greenhouse and garden; 2) a community composting programs; 3) a demonstration plot with native berries transplanted into the community's fuel break.

The greenhouse and garden pilot project is now in its 4th year of operations. In 2024, the field was extended to 0.25acre plot, and half the field was planted with potatoes. In fall, a second greenhouse was erected to replace the previous one damaged by heavy snow. In total the garden and greenhouse project now has 2 greenhouses with a total of 35 interior and 7 exterior raised beds, a 0.25acre garden plot, a tool shed and gazebo.

In 2024, a community composting initiative was launched. This involved development of composting infrastructure built by a community member, training one staff to manage the program, and education materials for households. KTFN youth also participated in a composting camp run by Ecology North.

Also in 2024, KTFN initiated the fuel break berry project and food forest. A demonstration plot was established in the community's fuel break and 50 plants consisting of wild berry species (raspberries, blueberries, cranberries, and cloud berries) were transplanted from the surrounding area to the new plot. Mulch was used and drip irrigation system was installed to increase transplantation success.

## Sambaa K'e First Nation (SKFN)

A pilot project with SKFN and the Sambaa K'e Development Corporation included a novel shelf space analysis that looked at the type of food on shelves at the local store, how accessible/visible those shelves were, and how these findings compared with community member visions for how the store can contribute to healthy, sustainable food system. Working with the store staff, a student calculated that 80% of the shelf space was allocated for processed foods and took up high-visibility locations, such as the front of the store. After conducting interviews with community members, the shelves at the front of the store were restocked with free garden produce and recipes.

## Jean Marie River First Nation (JMRFN)

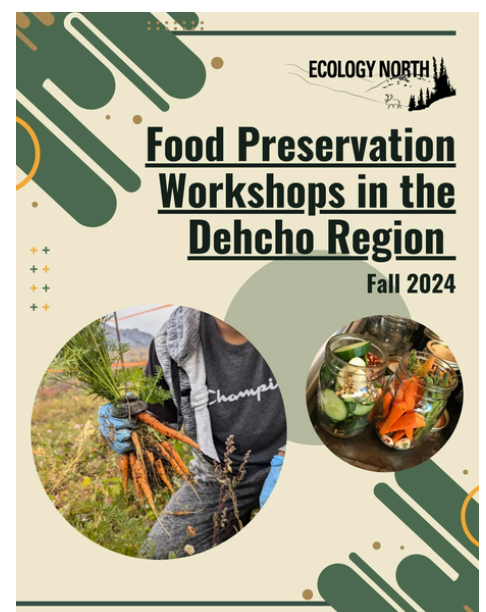
Two visits to JMRFN to build relationships and work with community leadership to initiate a garden and greenhouse project in 2025.



# TRAINING AND CAPACITY DEVELOPMENT

## Ka'a'gee Tu First Nation

- Summer youth mentorship: One youth was employed to support the greenhouse and garden and participate in community-based research projects. Through the community-based research assistant position, one youth helped organize research activities, collaborated on a peer-reviewed article (Rodriuez et al., 2025), and recorded interviews with community members about agroecology in Kakisa, to be turned into a podcast.
- One full-time employee was paid to support food projects including the greenhouse and garden, community composting, and the firebreak berry initiative.
- Led by Ecology North, KTFN participated 2 workshops: a two-day composting camp for youth, where Kakisa youth learned about the importance of composting through educational games and a food processing workshop learning how to preserve food.



### Article Reference:

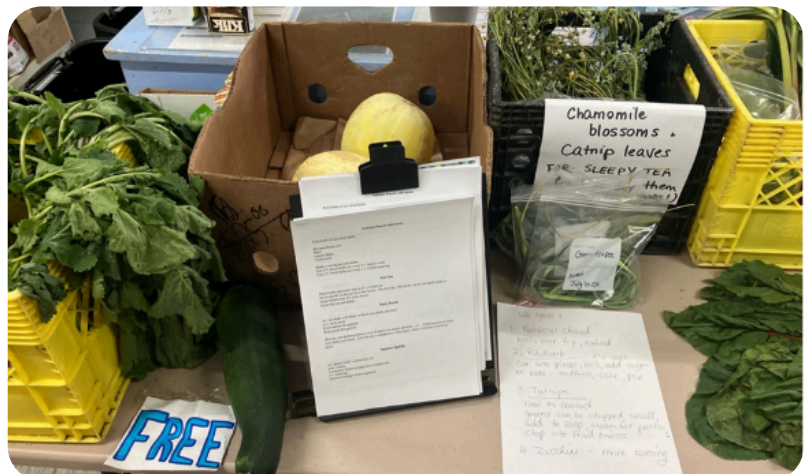
Rodriguez-Reyes, L., Spring, C., Temmer, J., Simba, R., Simba-Canadien, M., and Spring, A. (2025). Envisioning community economic development through an Indigenous-led social enterprise in Ka'a'gee Tu First Nation, Northwest Territories. *Journal of Aboriginal Economic Development*, 15(1), 23-31.



# TRAINING AND CAPACITY DEVELOPMENT

## Sambaa K'e First Nation

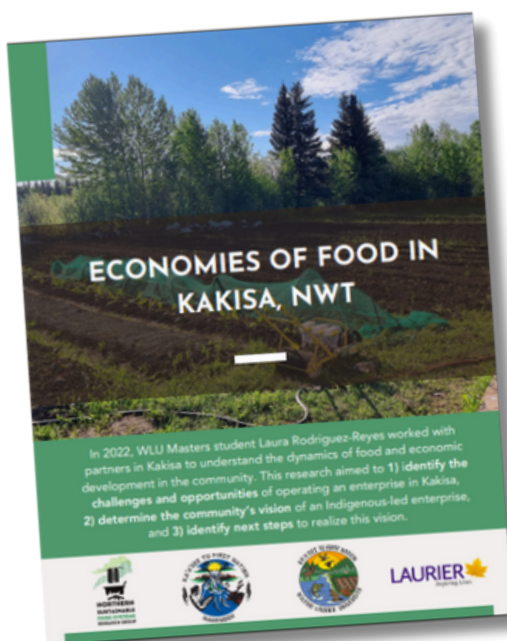
- NAF continues to provide salary funding for the SKFN Garden Coordinator and staff, including an Elder and two youth. This allows them to maintain regular employment where they build on-the-job skills and capacity.
- Two Laurier students worked in the garden alongside community staff while in the community for research data collection. One student supported the garden for 2 weeks, and the other for 2 months. Students provided informal training to less-experienced garden staff, such as how to distinguish a carrot seedling from a weed.
- The current Garden Coordinator would like to retire in the coming years, making succession planning a critical need for the community. Laurier students supported these efforts by providing a thorough briefing of the SKFN Agroecology Action Plan to one of the garden staff members, who has shown interest in taking over the position, including a discussion on the research process that led to its creation. They also discussed the possibility of research assistant training to develop local capacity for conducting research.
- Community leadership requested support for nutrition and cooking education for community members. As such, Laurier students conducted 7 cooking classes with approximately 50 community members, including one class organized in partnership with the school. Ingredients such as tomatoes, basil, garlic, onions, and peppers were harvested from the community garden and transformed into a homemade sauce and pizza toppings. This activity allowed students to engage directly with the foods they helped grow and to create a meal they were excited to eat. The other six cooking classes took place between July and September 2024. Classes included home delivery of garden produce and hot meals to Elders.



# POLICY AND KNOWLEDGE SHARING

## Ka'a'gee Tu First Nation

- KTFN developed a Food System Action Plan (2025-2030) that incorporates Dene values.
- KTFN and researchers also developed a northern food system model, the Community Agroecological Values Framework (CAVF) that informed the plan.
- KTFN and researchers co-published "Envisioning Community Economic Development through an Indigenous-led Social Enterprise in Ka'a'gee Tu First Nation, Northwest Territories". This article outlines KTFN's vision for a food hub and store that integrates entrepreneurship, social gathering, and access to healthy foods in the community. This article includes a Kakisa youth as a co-author.
- KTFN and researchers co-published 2 community reports:
  - KTFN Sustainable food Systems Research and Practice
  - Economies of Food in Kakisa





# POLICY AND KNOWLEDGE SHARING

## Sambaa K'e First Nation

- A Laurier student held a 2-year review of the SKFN Agroecology Action Plan with the Garden Coordinator to discuss progress and changes. Many action items were fulfilled, so the plan was updated with new goals. There were also discussions about actions where progress was slower than expected and how to overcome identified challenges.
- During the Action Plan review, the Coordinator requested a poster of the Plan be made to hang near her desk, so that she could reference it and discuss it more easily with community members and leaders. A student drafted the poster, had it reviewed by the Coordinator and a community leader, and printed and delivered it to the community.



SKFN Agroecology Action Plan 2023-2028		Governance: Self-Governance, Solidarity Networks, Land & Food Sovereignty		Knowledge: Traditional Knowledge, Community-led Research, Two-eyed Seeing	
Stewardship: Healthy Land, Healthy People, Harvesting & Growing		Topic	Future Goal	Topic	Future Goal
Continue using permaculture, organic & agroecological methods	The garden uses growing methods that support healthy soils and works with the local ecosystem	Featuring the land and SKFN members in decisions	SKFN has land and food sovereignty	Tribal governance practices (Pisa on the benchtop)	Dene laws and practices are incorporated into daily practice of the garden
	Everyone that comes to the garden knows how to take care of the land and water	All leaders and staff use familiar with this plan	Yearly meetings with all collaborators to work together towards all goals	Youth mentorship	Locally trained staff can manage the garden on their own
	The garden uses more local inputs than bought externally	Staff coordination	Garden staff work together to reach goals	Training and workshops	Community members and garden staff have the skills they need
	A renewable energy source powers all of the garden's electricity needs	Systeming and communication	Garden staff are organized and communicate effectively	Cooking classes	Community members eat new foods from the garden. Community cooks know how to cook with garden foods
Use what is available locally	The garden uses more local inputs than bought externally	SKFN, KTFN and other First Nations support each other	SKFN and KTFN maintain their strong bond and work together regularly	Learning in dome greenhouse	Youth learn in the greenhouse
Electricity	A renewable energy source powers all of the garden's electricity needs	Collaborations	Garden staff get regular support and share knowledge through collaborative partnerships	High school credits	Youth gain high school credits for the knowledge they learn in the garden
Vegetable Washing	Garden foods are clean, safe, and eaten by more community members	Reluctant evaluation	The benefits of the garden are shared with other communities and families	Economies: Sharing & Trading, Sustainable Livelihoods	
Bust cellar	Share enough food each year to meet the community's needs for the winter	Social: Culture, Language, Elders & Youth		Topic	Future Goal
Irrigation	Irrigation systems for all growing areas	Topic	Future Goal	Food gifts/obligations/debts (Share what you have)	Food from the garden is shared with all community members
Seedlings	Irregular lighting and dome greenhouse extend the growing season	Food Security	All community members replace some of the foods they buy from the store with food from the garden	Funding for garden staff	There is enough funding for garden staff every year
Seed saving	The majority of seeds for the garden are saved locally	Elder's role (help each other)	Community members regularly support the garden based on their skills, feel welcome at the garden and know how to help	Selling extra in other places	Selling extra funds help to financially support inputs, tools, and livelihoods
Berry orchard	Berries are enjoyed by community members, especially Elders that are not able to go in the bush	Dene Zhosha	One can hear Dene Zhosha spoken by all generations regularly in the garden	School government	The school buys foods from the garden. School children enjoy garden foods
Peaback Food Forest	Peabacks help to support traditional and garden foods	Plans for community members	Community members that want one have their own garden bed that grows well	Expanded hot foods counter and take home meals	Healthy food options that use foods from the garden are available on the store everyday
Raising Animals	Have a better picture of the feasibility for raising animals again	Community processing space	Have a processing space that is used by many community members	Foods from the garden make gourmet meals at the lodge	Guests at lodge enjoy 100% local meals and take home local specialty food items

# SOIL SAMPLING

- **Kátł'odeeche First Nation (KFN):** Soil sampling was undertaken in summer, 2024 with Kátł'odeeche First Nation to support the community's land claim negotiations, identifying soils ideal for agriculture production.
- **JMR:** Soil sampling was undertaken in fall, 2024 with Jean Marie to inform community decision-making about an ideal location for the future greenhouse and garden project.
- In August and early September 2024, soil cores were taken from sites selected by KTFN and JMR which were transported to A&L Laboratories (London, ON) for nutrient analysis. Results from the 2024 sampling campaign were communicated back to community contacts in the spring of 2025 in both raw data and report-style formats.





# CHALLENGES

- **Ongoing climate change impacts:** In 2024, NAF communities continued to experience the impacts of climate change. All communities were either evacuated or placed under evacuation alert for a period between May-October 2024. Due to evacuations in Sambaa K'e, a planned NAF regional gardening training workshop in KTFN had to be cancelled.
- **Changes in leadership/ uncertainty of rebuilding:** As Enterprise continues to rebuild its community, the garden has continued to flourish, however continual changes to the Hamlet's leadership limited capacity to receive extra support. Despite the need to reforge relationships with the local council, we continue to work with and engage the Enterprise seniors, many of whom are currently located in nearby Hay River. In 2024, students attended the Enterprise Jamboree, and KTFN hosted a fish fry in Kakisa for Enterprise seniors with help from Laurier students.

# NEXT STEPS

- **KTFN:** 1) Continue to train youth and community in gardening; 2) work with the band council and NODA to develop a food hub to improve processing, storage and distribution of garden foods. Complementary funding is being sought through Food Banks Canada, National Research Council, and Government of Canada Local Food Infrastructure Fund for Northern Communities.
- **JMRFN:** Continue to support development of a new garden and greenhouse in the community to replace the previous infrastructure destroyed in the 2019 flood.
- **SKFN:** 1) continue to support succession planning for the SKFN Garden Coordinator; 2) research and implement alternative economy models to ensure garden foods are shared within the community while having sustainable funding for the garden's operations; 3) continue to support community-based nutrition and cooking education, including conducting research on effective strategies; 4) explore improvements to the community store's supply chain and healthy food environment; 5) develop a plan and take action on creating community-led firebreak co-benefits similar to those in Kakisa.
- **Enterprise:** Continue to engage with Enterprise council and seniors' association to support their garden and community re-building efforts. This will be a slow process under the current circumstances, but the garden infrastructure was spared from the 2023 wildfire so we are hopeful that this project will become a point of cohesion and support for the community moving forward.
- **KFN:** Kát'odeeche First Nation was initially only interested in engaging with NAF to support soil sampling to identify areas ideal for agriculture production. However, as they move forward with food security and agriculture projects, there may be opportunities to further support these initiatives. We continue to build relationships and work with the environment coordinator on this front.

# ACKNOWLEDGEMENTS



**SAMBAA K'E  
FIRST NATION**



**NORTHERN  
SUSTAINABLE  
FOOD SYSTEMS  
RESEARCH GROUP**



**Laurier  
Centre for  
Sustainable  
Food Systems**

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This research is supported by Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) through the Climate Change Preparedness in the North Program (CCPN) and Indigenous Services Canada through the Climate Change and Health Adaptation Program (CCHAP).



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