



August 2023

Human Nature  
Projects Ontario  
Newsletter

# TABLE OF CONTENTS



FEATURE: Increased Permafrost Degradation in Canadian Indigenous Communities	<b>3-4</b>
YOUTH Environmental Advocacy Fellowship	<b>5-7</b>
FEATURE: Inadequate Sewage and Waste Management in Canadian Indigenous Communities	<b>8-9</b>
EXECUTIVE of the Month	<b>10</b>
SOCIALS	<b>11</b>
CREDITS	<b>12</b>
BIBILOGRAPHY	<b>13-14</b>



# INCREASED PERMAFROST DEGRADATION IN CANADIAN INDIGENOUS COMMUNITIES

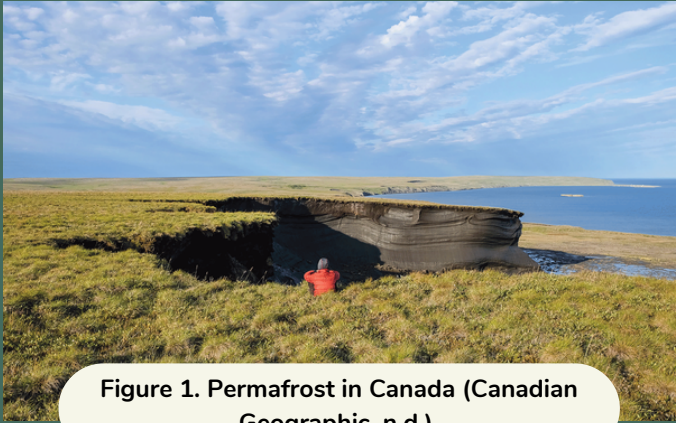


Figure 1. Permafrost in Canada (Canadian Geographic, n.d.).

## INTRODUCTION

Permafrost is a mix of rock and soil that is held together by ice on ground that has been frozen at or below 0 degrees celsius for a minimum of two years in a row (D'Amore, 2019). According to Canadian Geographic, permafrost makes up between 40 and 50 percent of the land in Canada and roughly 25 percent of the area in the northern hemisphere (D'Amore, 2019). Researchers from the University of Alaska Fairbanks have discovered that permafrost layers in Nunavut and the Northwest Territories have started to thaw decades sooner than anticipated (D'Amore, 2019). Infrastructures on the top layer may shift and collapse as the centuries-old ice begins to thaw. The destruction of infrastructure caused by permafrost melt poses a serious risk to Indigenous populations in food security, safety, transportation, health, education, employment prospects, and culture.

## CAUSES

Permafrost thermal breakdown can be accelerated by wet and warm weather conditions. Although rising temperatures are significant, permafrost also reacts to ground moisture. The consultants came to the conclusion that while rising temperatures are the main cause of permafrost thaw, rising and extreme precipitation, and precipitation extremes could hasten the process of degradation, especially in areas where heat is transferred to ice-rich permafrost through rain, causing thermo-erosion and thawing (Phillips, n.d.). The quick and dramatic changes to the terrain that can result from the thawing of ice-rich permafrost include slumping, sinkholes, landslides, and the unexpected expansion or draining of water bodies (Phillips, n.d.).



Figure 2. Tarmac road crumbling due to permafrost thaw (Dore, 2021).

# INCREASED PERMAFROST DEGRADATION IN CANADIAN INDIGENOUS COMMUNITIES



**Figure 3. Firelight Interview Participants' Locations in Canada (Firelight Research Inc., 2022).**

## IMPACTS ON INDIGENOUS COMMUNITIES

Indigenous culture could be impacted by the permafrost melt in numerous ways. The permafrost thaw is affecting and will continue to affect hunting and fishing by causing changes in wildlife populations, potential health effects on traditional foods, decreased travel safety, and higher costs related to hunting and fishing. Human Rights Watch stated in a study from 2020 that Indigenous communities in the Yukon, northern British Columbia, and northern Ontario have reported a significant decrease in the amount of food they can collect and an increase in danger due to permafrost conditions (Firelight Research Inc., 2022). The movement of Northern Indigenous communities on the land has been disrupted by permafrost melt. Large melting and slumping occurrences that modify trails will interfere with the traditional pathways and important sites (Firelight Research Inc., 2022). In Northern localities, the cost of building and maintaining roads is expensive, which leads to insufficient infrastructure for transport. Due to permafrost thaw, there have been bridge and infrastructure collapses that have cost millions to fix and keep operational (Firelight Research Inc., 2022).

## THE IGLOOLIK COMMUNITY

In an interview with Firelight, a member of the Igloodik Community expresses their worries about problems with ground stability brought on by thawing permafrost. The participant points out that if the permafrost on the beach disappeared, a lot of mud would be produced, which would cause landslides in the nearby areas (Firelight Research Inc., 2022). Mudslides, which pose a threat to all occupants, would develop over time as a result of the mud and the shifting soil (Firelight Research Inc., 2022). While thawing permafrost has created a stability issue on the grounds of Igloodik, it has also questioned the community's health and well-being of the environment through social changes (Firelight Research Inc., 2022). The participant in the Firelight interview shares that their ancestors and parents were nomadic, and one of their major concerns was never settling down for more than three years at a time. They believed that you were actually killing the land if you were occupying it for too long. Due to the thawing, their nomadic lifestyle has been disrupted. As said in the quote, "We actually killed the Island of Igloodik." (Firelight Research Inc., 2022). However, they have used this opportunity to collect the melted permafrost as drinking water in regions (Firelight Research Inc., 2022).



# YOUTH ENVIRONMENTAL ADVOCACY FELLOWSHIP



## What is it?

The **Youth Environmental Advocacy Fellowship** is a transformative program developed by Human Nature Projects Ontario to equip students with the knowledge and skills to make a tangible impact in the lives of Indigenous Canadian people and communities.



This program is completely free - there are no admission or application fees to apply!



## What does this fellowship experience offer?



Earn up to 50 volunteer hours in just a week!

Receive a certificate of participation upon successful completion of the program!

Enhance your formal report writing skills.



Top 2 teams may have an opportunity to receive monetary prizes.



Connect with like-minded individuals and network with professors!



Showcase your passion for health and environmental advocacy work.

Enhance your collaboration skills.



Put this down as an internship experience to enhance your resumes!





# YOUTH ENVIRONMENTAL ADVOCACY FELLOWSHIP



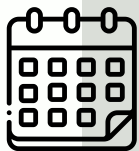
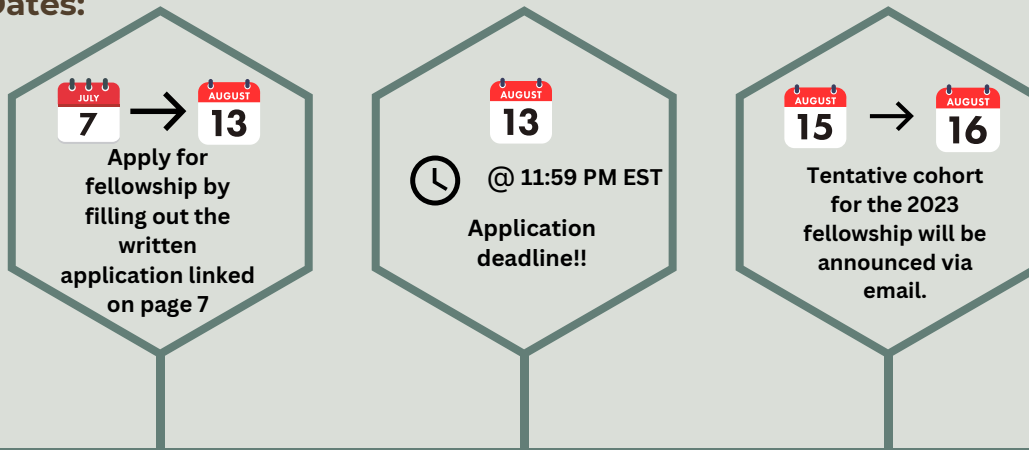
## The Fellowship Entails:



- Five days of VIRTUAL programming on Zoom  →  from 10:00 AM to 3:00 PM EDT for youth aged 14-22.



## Important Dates:



## What you will do:

Research + learn about the health and environmental issues of Indigenous communities

Attend workshops led by Indigenous community members and professors

Work collaboratively to write a short report on an environmental concern that impacts one Canadian Indigenous community.

## Eligibility Criteria:

✔ Be a high school or post-secondary student between the ages of 14-22.

✔ Have a reliable Internet connection and a laptop or computer to join zoom meetings for the duration of the fellowship.

✔ Successfully make it through the Written Application and be willing and prepared to commit time and effort towards the fellowship.





# YOUTH ENVIRONMENTAL ADVOCACY FELLOWSHIP

---

Use the link below to apply to the fellowship. All applications will be screened by the hiring committee at HNP Ontario. The deadline to apply is **Sunday, August 13th, 11:59 pm EST.**

## APPLY NOW!

For more information on the fellowship, visit:

<https://www.hnpontario.org/youth-environmental-advocacy-fellowship>



# INADEQUATE SEWAGE AND WASTE MANAGEMENT IN CANADIAN INDIGENOUS COMMUNITIES



## INTRODUCTION

As Indigenous communities continue to protest for their rights, sewage and waste management remain a crucial part of the conversation. From several water advisories to environmental protests, Indigenous communities in Canada persist in their fight for safe living areas and resources. Research continues to show that Indigenous communities are disadvantaged in access to safe drinking water and adequate sewage management systems. The Oceans North report have found that Northern communities have less access to critical waste disposal service systems and infrastructure after gathering data from 51 settlements across Inuit Nunangat (Black, 2021). Due to poor waste management in the past, communities have experienced significant pollution in their rivers, land and air (Bharadwaj, 2006). As a result of this, Indigenous people have suffered great harm to their physical and mental health.



Figure 1. Signs about waste reduction in First Nation communities in B.C. (The Conversation, 2022).

## GOVERNMENT OF CANADA AND WASTE MANAGEMENT

On July 15th, 2021, the Government of Canada created a program called “First Nations Waste Management Initiative.” The program was intended to support Indigenous communities in developing sustainable sewage and waste management systems through modern infrastructure, operations, training, and partnerships (The Government of Canada, 2021). Funding was made readily available for many waste management activities, including the construction of transfer stations, engineered landfills in remote and isolated communities, and waste awareness and education programming (The Government of Canada, 2021). The groups that are eligible to apply include the First Nations and Tribal Councils (The Government of Canada, 2021). Despite the Canadian Government’s attempt at prioritizing the safety and efficiency of waste management systems, Indigenous communities still struggle with poor water quality and inadequate waste management systems.



Figure 2. Rankin Inlet landfill on fire (Kivalliq News, 2021).



# INADEQUATE SEWAGE AND WASTE MANAGEMENT IN CANADIAN INDIGENOUS COMMUNITIES



## NUCLEAR WASTE SITES IN DEEP RIVER, ONTARIO

The Near Surface Disposal Facility (NSDF) has been proposed to build a nuclear waste site near the Ottawa River near Algonquin Anishinaabe lands (Byers and Gourdon, 2023). The site is said to span across 16 hectares and store up to 1 million cubic meters of waste (Byers and Gourdon, 2023). The waste site has accumulated unwavering disapproval from Algonquin First Nations, contrasting with the 140 municipalities in Quebec and Ontario that support the waste site. The waste facility is set to negatively affect watersheds, ecosystems, and national reconciliation efforts in Canada. If the waste facility affects the watersheds, it also has an impact on the waste management and water filtration systems. As a response to the situation, the Canadian Nuclear Laboratories (CNL) made an Environmental Impact Statement, saying “the new NSDF would “enable the remediation of historically contaminated lands and legacy waste management areas, as well as the decommissioning of outdated infrastructure to facilitate the Chalk River Laboratories site revitalization” (Byers and Gourdon, 2023). While concerns are still being expressed, there is no certainty on what the future of the NDSF will hold, especially in regards to water and waste management systems.



Figure 3. First Nations region experiencing symptoms of Mercury poisoning (CBC News, 2019).

## UNIVERSITY OF GUELPH AND WATER SANITATION PROBLEMS

The University of Guelph published a study in May 2023, reporting on the lack of safe drinking water and sanitation issues within Indigenous communities. Not only is safe drinking water necessary for consumption and cooking, but it is also necessary for waste and sewage management. UofG researcher Heather Murphy stated that “Systemic racism and social exclusion are to blame for a drinking water and sanitation crisis in high-income countries (HICs)” (University of Guelph, 2023). Murphy further attributed the lack of access to safe drinking water to three factors: systemic racism, infrastructure funding, and housing ownership. For systemic racism, Murphy declared that “historically marginalized people and low-income communities are more likely to lack access to safe water and sanitation” (University of Guelph, 2023). For infrastructure financing and property ownership, Murphy states that “linking property to water and sanitation services is a policy choice that disadvantages groups including migrants, people living in poverty and people experiencing homelessness or in unstable housing” (University of Guelph, 2023).

# EXECUTIVE OF THE MONTH

## CONGRATS

### Puneet Khaira

Hello! My name is Puneet and I'm a grade 9 student in British Columbia. My interests include swimming, tennis, cooking, and coding. I joined HNP because I want to raise awareness about climate change and the importance of sustainability! I'm so excited to work with like-minded peers and to contribute to the fight against climate change!



# SOCIAL MEDIA

STAY CONNECTED WITH US!



[@hnpontario](#)



[www.hnpontario.org](http://www.hnpontario.org)



[hnp ontario](#)



[@hnpontario](#)



[@hnpontario](#)



[HNP Ontario](#)



<https://discord.gg/2rfG9SyBNW>



# CREDITS

## COMMUNICATIONS TEAM



Neelaksha Srisangar

**CO-DIRECTOR**



Uyanda Mntambo

**CO-DIRECTOR**



Tarani Esparam

**CO-DIRECTOR**



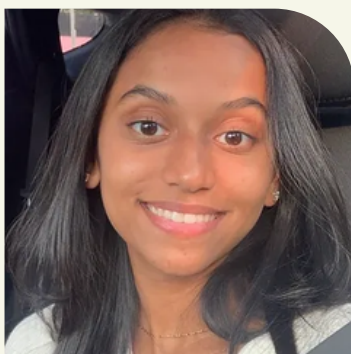
Vlishurdeey Sivakumar

**ASSOCIATE**



Tracy Lin

**ASSOCIATE**



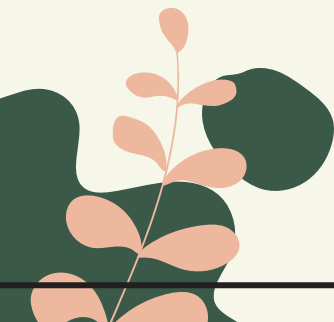
Tanisha Patel

**ASSOCIATE**



Sadra Ghaderpanah

**ASSOCIATE**





# BIBLIOGRAPHY

## Increased Permafrost Degradation in Canadian Indigenous Communities

D'Amore, R. (2019, June 26). *What is permafrost and what does it mean for Canada as it thaws*. Global News. <https://globalnews.ca/news/5408373/what-is-permafrost-canada-climate/>

Firelight Research Inc. (2022, June). *The impacts of permafrost thaw on Northern Indigenous communities*. <https://climateinstitute.ca/wp-content/uploads/2022/06/Impacts-permafrost-thaw-Climate-Institute-Firelight-Report.pdf>

Phillips, L., Bleau, N., Chow, K., Curry, C., Fyke, J., Lepage, R., Murdock, T., O'Sullivan, S., Sandink, D., Smith, R., & Tyler, K. (n.d.). *Permafrost in the Northwest Territories — Climate Data Canada*. ClimateData.ca. <https://climatedata.ca/case-study/permafrost-in-the-northwest-territories/>

*The Impacts of Permafrost Thaw on Northern Indigenous Communities*. (n.d.). Canadian Climate Institute. <https://climateinstitute.ca/reports/the-impacts-of-permafrost-thaw-on-northern-indigenous-communities/>



# BIBLIOGRAPHY

## Inadequate Sewage and Waste Management in Canadian Indigenous Communities

Assuah, A. (2023, June 21). *How Indigenous cultural practices can improve waste management in communities*. The Conversation. <https://theconversation.com/how-indigenous-cultural-practices-can-improve-waste-management-in-communities-206918>

Black, E. (2021, April 1). Waste management a problem across the north, report states. NUNAVUT NEWS. <https://www.nunavutnews.com/kivalliq-news/waste-management-a-problem-across-the-north-report-states/>

Bharadwaj, L., Nilson, S., Judd-Henrey, I., Ouellette, G., Parenteau, L., Tournier, C., Watson, D., Bear, D., Ledoux, G., & Bear, A. (2006). Waste disposal in first-nations communities: the issues and steps toward the future. *Journal of environmental health*, 68(7), 35–39.

*Drinking Water, Sanitation Inequities Rooted in Racism, Social Exclusion, Says U of G Researcher*. (2023, May 16). U of G News. <https://news.uoguelph.ca/2023/05/drinking-water-sanitation-inequities-rooted-in-racism-social-exclusion-says-u-of-g-researcher/>

Gounden, Z. (2023, June 27). *Hotspots H2O: Proposed Nuclear Waste Site in Canada Draws First Nations Concern*. Circle of Blue. <https://www.google.com/url?q=https://www.circleofblue.org/2023/hotspots/hotspots-h2o-proposed-nuclear-waste-site-in-canada-draws-first-nations-concern/&sa=D&source=docs&ust=1690676010187700&usg=AOvVaw1HCxynahYZOzQ0crwFPh6J>

Government of Canada; Indigenous and Northern Affairs Canada. (2016). *First Nations Waste Management Initiative*. Sac-isc.gc.ca. <https://www.sac-isc.gc.ca/eng/1491490781609/1533647730166>

United Nations. (2022, October 14). *Indigenous peoples face growing challenges to access safe water*. OHCHR. <https://www.ohchr.org/en/stories/2022/10/indigenous-peoples-face-growing-challenges-access-safe-water>