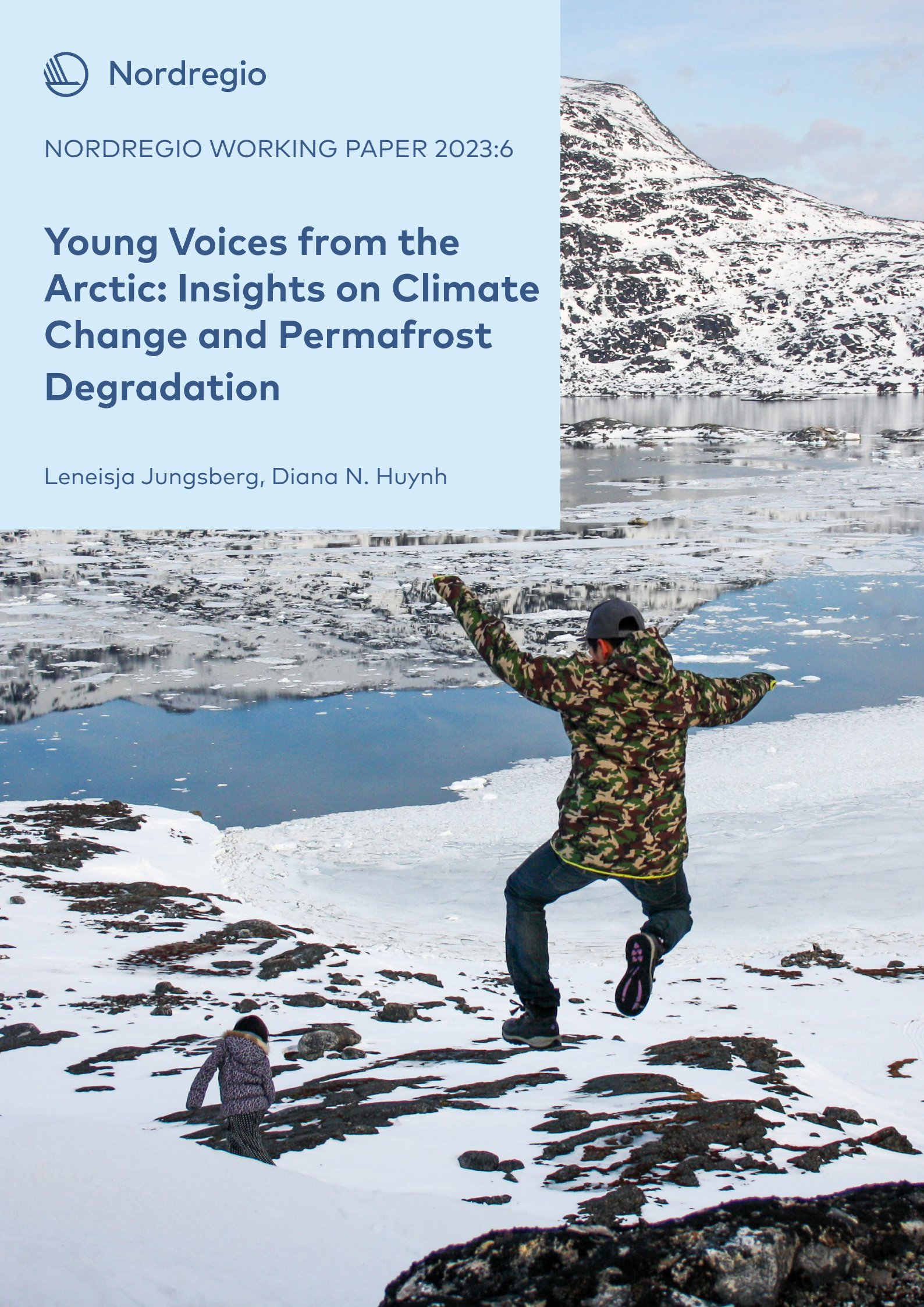


Young Voices from the Arctic: Insights on Climate Change and Permafrost Degradation

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Introduction

The Arctic region is warming almost four times as fast as the global average. Snow and ice are thawing at an increasing rate, and the rapid environmental shifts have a disproportionate effect on communities across the Northern Hemisphere. Thawing permafrost raises global attention because it contributes to the release of greenhouse gases. Frozen soils are melting for the first time in thousands of years. The degradation also causes many negative consequences for Arctic communities. Permafrost disrupts community infrastructure, cultural heritage, and the Arctic landscape. The growing seasons lengthen, greening the Arctic throughout the year, which changes animal migration. Communities in several Arctic regions have reported on the impact on subsistence activities. Scientists have observed changes in hydrology where modifications in drainage pathways have led to drying parts of the rivers, which in turn affects travel routes[1].

The consequences of climate change and permafrost degradation can profoundly affect the lives of young people, both in the present and the future. It is crucial to address this issue and take action to mitigate and adapt to the impacts of climate change. Effective climate adaptation strategies for the Circumpolar North must encompass and prepare everyone, with a particular focus on youth. The voices of younger generations are crucial, as they are the ones who will form society in the coming decades. This knowledge brief draws attention to examples of practices where Arctic youths' perspectives on climate change and permafrost degradation are highlighted. The age range of the youth addressed here includes young people of legal age who are actively engaged in studies and/or work, and we also include early-career experts up to the age of 35.

[1] M. Turetsky et. al. (2019) <https://media.nature.com/original/magazine-assets/d41586-019-01313-4/d41586-019-01313-4.pdf>



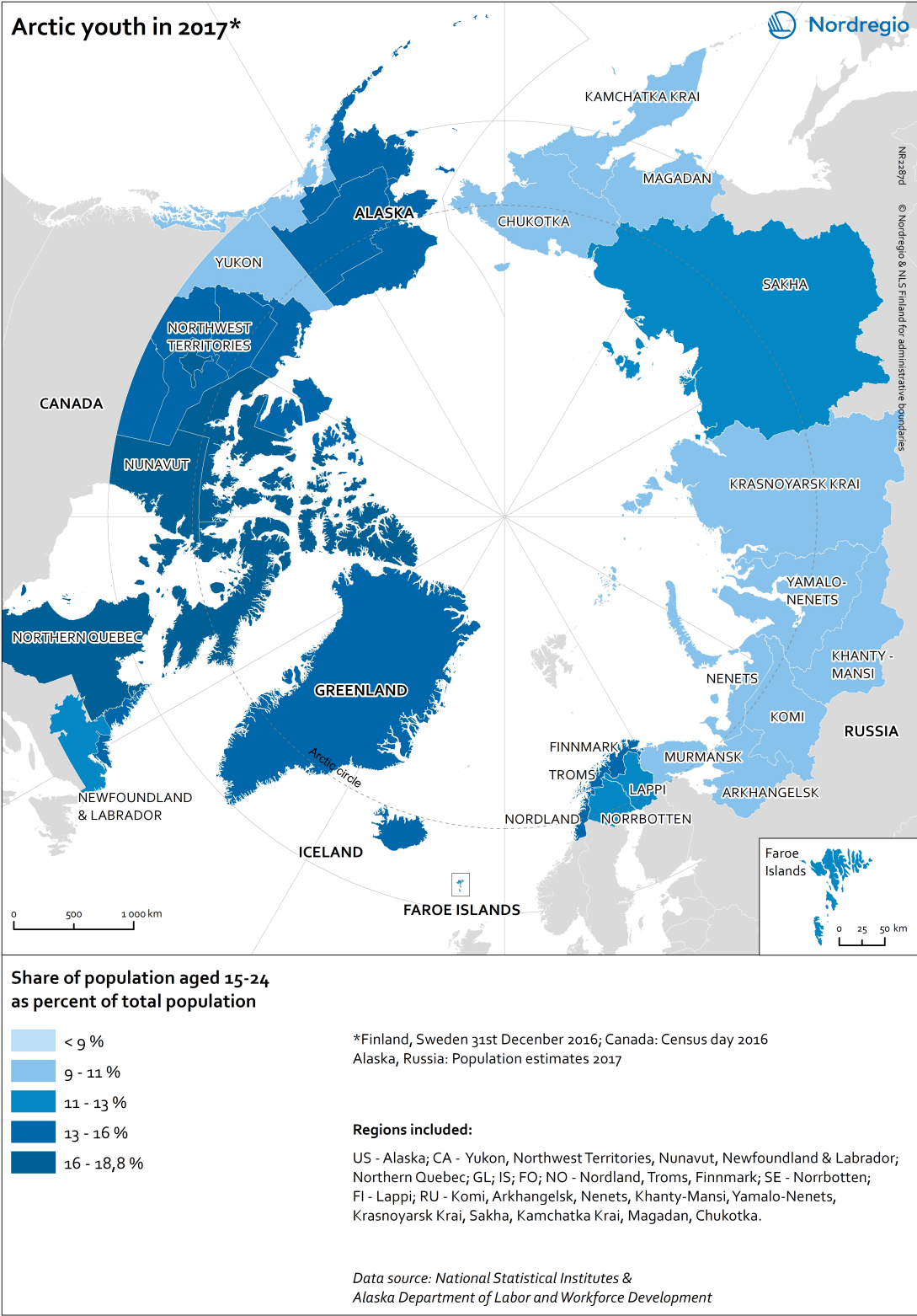
Young people living in permafrost regions

In 2017, 4.9 million people were reported to be living in areas with permafrost. However, 3.3 million of these people currently live in Northern settlements where permafrost will degrade and ultimately disappear by 2050[1]. So far, no circumpolar studies have assessed the exact number of young people living in these localities nor the experienced impact.

The share of young people 15-24 years old living in the Arctic Regions in 2017 is illustrated in Map 1. Northern Quebec and Nunavut in Arctic Canada are the regions with the highest share, with more than 16 percent youth population. The age group between 25-35 is also important to consider for maintaining a balanced population structure, especially since numerous smaller settlements with less than 5000 inhabitants in the Arctic rural areas are struggling to retain and attract young adults. Many of them move to urban areas for work or education and may not return at a later stage in life[2]. Without a younger population, the capacity of these areas to address climate change locally could be compromised and the outmigration of many arctic rural settlements leads to resource drain and skills shortage.

Climate-driven projections for the Arctic suggest that 42 percent of the permafrost settlements will thaw entirely in a couple of decades. Among the settlements remaining on permafrost, 42 percent are in high hazard zones, where the consequences of permafrost thaw will be most severe. Young people between the ages of 10 to 24 currently constitute the largest generation of youth in history[3]. In the last decades, youth across the world have been paving the way, taking action to reverse climate change. The world witnessed this engagement in 2019 when more than 46 million young people and children from over 150 countries around the world went on a climate strike. Indeed, youth involvement in tackling climate

change has been around for quite a few years[4]. and much speaks to the urgent need to pay attention to the effects of permafrost thaw and degradation in this context as well.



[1] <https://link.springer.com/article/10.1007/s11111-020-00370-6>

[2] <https://sdwg.org/what-we-do/projects/arctic-demography-index/>

[3] <https://www.coe.int/en/web/world-forum-democracy/12-months-1-question-june-2021>

[4] <https://www.coe.int/en/web/world-forum-democracy/12-months-1-question-june-2021>



Involvement of Arctic youth in mitigating climate change

In response to the growing number of engaged youths in the intergovernmental climate change process, the United Nations Framework Convention on Climate Change (UNFCCC) extended constituency status in 2009 to admitted youth-led non-governmental organizations (NGOs). This allowed them to receive official information, participate in meetings, request speaking slots, and receive logistical support at UNFCCC conferences (UN Youth, 2013). Participation is a fundamental right, and the UN has long recognized that young people are a major human resource for development and key agents for social change, economic growth, and technological innovation[1].

"Arctic youth is not just the future but also the present"

Arctic Leaders' Youth Summit, Rovaniemi 2019[2]

In the context of the Circumpolar North, the Sustainable Development Program of the Arctic Council has included efforts to engage youth since 2017 as part of their work to advance sustainable development in the region. Working groups such as the Conservation of Arctic Flora and Fauna (CAFF) and the Sustainable Development Working Group (SDWG) have not only been examining how youth are affected by a changing Arctic but also actively involving them in their projects. One example is the Indigenous Youth, Food Knowledge, and Arctic Change (EAULU) II project that builds competence among reindeer herding youth in different regions. Bringing young indigenous people together across different Arctic regions is critical for the maintenance of Arctic biodiversity and the sustainable development of Arctic indigenous societies[3].

CAFF has developed an 'Arctic Youth Engagement Strategy: 2021-2026,' which,

over the next years, will collaborate with Arctic states, youth organizations, and other partners to expand opportunities for youth and support emerging youth leaders from the Arctic (CAFF, 2021). An important motivation for this strategy is to enhance youth access to policy and development. When Arctic youth are provided with diverse learning opportunities in which they feel that their perspectives and expertise are valued and respected, they can utilize their individual and collective power to help shape a better future for the Arctic. More specifically focused on permafrost, the Permafrost Researchers Young Network (PYRN) was founded in 2005 to create a platform for education and outreach activities. The network supports young researchers in the field, and it was led and managed by young researchers. By 2010, it had grown to encompass 800 members from 40 countries.

[1] [Microsoft Word - YOUTH Participation 2013-11-12.docx \(un.org\)](#)

[2] Indigenous youth leaders at the first Arctic Leaders' Youth Summit, 2019, <https://www.arctic-council.org/news/stepping-up-youth-engagement-in-the-arctic-council/>

[3] <https://sdwg.org/what-we-do/projects/indigenous-youth-food-knowledge-arctic-change-eallu-i/>



Youth inclusion methodologies

The Arctic Youth Network (AYN) engages youth from across the Arctic and beyond to connect and collaborate on Arctic issues. AYN aims to democratize access to opportunities, create a platform to amplify youth voices, and empower a community of young change-makers in the North. Engaging and including youth perspectives is important to strengthen human capacity for the future. The following methodologies can serve as inspiration for future orientations on youth inclusion in decision-making concerning climate change and permafrost degradation. Active participation can be enhanced by involving youth in the design, implementation, monitoring, reporting, and evaluation of instruments, strategies, and programs related to permafrost degradation.

A recent example of active youth engagement in the Arctic context is the UNLEASH Innovation Lab in Nuuk, Greenland. The week-long conference gathered young people from around the world to work on scalable solutions for the UN Sustainable Development Goals (SDGs). One of the three topics was connected to climate (SDG13), with the other two focusing on health (SDG3) and education (SDG4). The UNLEASH methodology follows a five-step process (Figure 1), beginning with framing the problem. Afterward, brainstorming sessions take place to select the best ideas for solving the problem. The third and fourth steps involve prototyping simple versions to understand how they would work in real life and then testing the solutions with users to learn and improve. The fifth and final step is implementation, which includes planning and launching the proposed solutions.

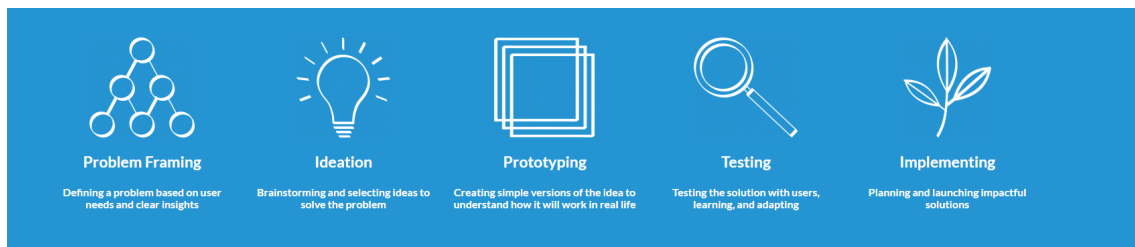


Figure 1: Innovation process: <https://unleash.org/what-we-do/>

The UNLEASH Innovation Lab in Nuuk demonstrated that by encouraging youth to participate in co-creation initiatives, it can create a positive impact on a personal level and for the overall development of societies and economies. In this event, 25 percent of the participants originated from or were based in various locations across Greenland, including Ilulissat, Maniitsoq, Narsarsuaq, Nuuk, Paamiut, Qaanaaq, Qaqortoq, Sisimiut, Tasiilaq, and Upernavik. Given the large distances between cities and settlements in Greenland, there was a strong focus on recruitment from all five municipalities in the selection process. This was done to mitigate the risk of the youth capacity-building project being centered only around the main cities (UNLEASH, 2022: 12).

Engaged young people can provide the public and private sectors with innovative ideas that can stimulate the development of new industries, collaboration platforms, and policy agreements. Youth participation can be encouraged through innovation labs and other co-creative initiatives, such as involving young people in chairing board activities, strengthening youth associations, ensuring mentorship and opportunities for growth and development as part of the involvement process. These initiatives are an essential element in strengthening a culture of participation[1].

Youth inclusion in the public sector can be illustrated with examples from countries like Norway (Nordland region)[2] and Iceland (Arborg municipality)[3], where youth committees are actively engaged in providing input on local decisions related to spatial plans and regulations including environmental matters. In Nordland, the Youth Parliament convenes annually, extending invitations to two representatives from municipal youth councils to participate in debates and negotiations concerning youth policy strategies. Additionally, they elect 9 members to the Nordland Youth Council.

In the context of permafrost, the international Permafrost Association (IPA) made efforts to reach out and include the younger generation. One initiative has been the popular Frozen Ground Cartoon (see figure 2) [4] which makes understanding permafrost and thaw easily accessible to people of all age groups. The IPA also has a dedicated Standing Committee on Outreach and Education that seeks to develop educational products for non-specialist audiences, including youth, teachers, journalists, and policymakers[5].

- [1] http://www.gov.pe.ca/photos/original/eecd_YETOOL_E.pdf
- [2] <https://www.nfk.no/om-fylkeskommunen/engelsk-informasjon/#youth>
- [3] <https://archive.nordregio.se/Global/About%20Nordregio/Arctic%20working%20group/Foresightresultscotland.pdf>
- [4] <https://frozengroundcartoon.com/cartoons/>
- [5] <https://ipa.arcticportal.org/about-the-ipa/working-parties/standing-committee-on-education-and-outreach>

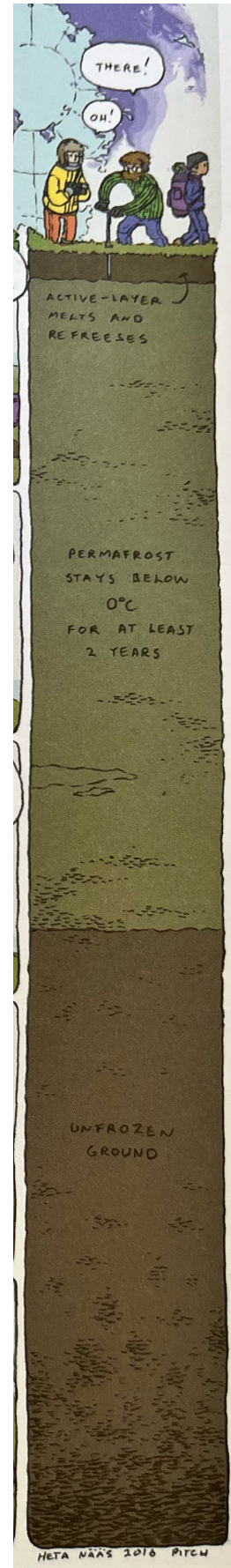


Figure 2: Illustration of active layer in permafrost



Permafrost thaw and a rapidly changing climate: Amplifying youth voices

About half of the student group had noticed changes in permafrost in their community, while the other half replied that they 'didn't know' of such changes. The community where the students live faces some challenges related to permafrost thaw, including issues with roads and certain houses. Once the permafrost thaws, the foundation can sink and damage the built structures it supports.

As part of the questionnaire, the students replied with an average of 6.6, indicating that they did experience an impact from the changing climate and permafrost thaw on their ability to engage in traditional activities such as dogsledding and hunting. These responses indicate that young people are indeed experiencing how the increasing temperatures are changing the Arctic, lending support to scientists' findings that the Arctic is warming up to four times faster than the rest of the globe. Young hunters also encounter this impact when engaging in subsistence activities, as explained by a young man from Arctic Canada who described how changes in the landscape have resulted in longer travel routes during hunting.

"Erosion in rivers changes travelling routes; travel times are getting longer. Parts of river which were deep before, now they are almost dried out, making traditional hunting grounds harder to get to. Can't really do anything about it but take the longer route." (*Young hunter in Arctic Canada, 35 years old*).

In addition to the excerpt above concerning changes in traveling routes, there are also several other excerpts from interviews with young people from Greenland and the Nordic Arctic that illustrate young people's perspectives on their future, their access to opportunities, and how they deal with the complexities of multicultural

identities and cultural histories. Throughout the work of the Arctic Youth project, the focus has been on interviewing people across the circumpolar Arctic about the issues and challenges they face. Among the important issues raised by the youth are the impacts of climate change and the consequences for their future and livelihoods. In an interview, a female master's student in Northern Norway shared her thoughts on the complexity of finding ways to mitigate climate impacts:

"I think environmental things are preoccupying many people – we need to find solutions. We are given all these problems - the world is weighing on our shoulders – and we don't know where to begin or how to look for something that looks like a solution. I am thinking about my master thesis, and I would really like to do something that is helpful." (*Female master student, 25 years-old*).

In addition to the warming climate, young people in the Arctic are also concerned about other issues in their lives such as what life choices to make. For example, in an interview a Greenlandic girl explains:

"Young people in Greenland also face difficulties managing the feeling of uncertainty for their future hopes and dreams. Young people are proud of their Greenlandic identity and cultural heritage, however, there is also a concern for future possibilities to combine a traditional lifestyle with family members in the villages while also living an urban life with education and a promising career". (*Female 21-year-old*).

This adds another layer of complexity. It illustrates that in addition to experiencing climate change there is also the challenge of balancing an urban life that includes education and career with the more traditional lifestyle that exists in the villages. The urge to make a difference is also present in other interviews. In Greenland a young man shares that:

"I had always believed since I was a child that I should accomplish something big - I had this energy to make a difference, but I just remember in high school where we had these history classes, we were very much into Greenland and some other countries and my dream was destroyed a lot - I just remember - it was so hard - I cried - I found out it's not easy - how much work it takes to accomplish something big" (*Young male, 22 years old*).

In learning about these historic events, this young male expresses how part of his hope is shattered, since the information leads to feeling a sense of hopelessness in terms of how to make a positive change for the future. The sense of uncertainty about the magnitude of the challenges and the impact of an individual effort is heartfelt and makes the young man cry. In contrast, past suppression also brings courage and a sense of being proud and today there is a wave of young people in Greenland who really want to make a statement regarding their cultural belonging. As one young female expresses:

"It is great that many people are proud of their national identity, e.g., women who get tattoos on their faces. It probably takes a lot of courage to get a tattoo on your face. After all, we have just come out of the mindset where you had to be ashamed of your identity, and then suddenly there are some individuals who turn around to show themselves" (*Female 21 years old*).

This sense of empowerment from facial tattoos is one symbolic action that inspires not only those who carry the tattoo but also other young people in the community. Alongside this, something that was also mentioned was the need for role models. Often, public figures such as politicians are exposed in the media, which lowers their credibility. Therefore, having someone in your community whom you trust and who can provide support in discouraging situations is something that young people emphasize as important. By supporting young people in the community, it can strengthen youth participation, which in a long-term perspective is critical for local resilience.

Summary

This knowledge brief addresses the severe effects of permafrost degradation on youth and their future outlook. This is an issue that has not received enough widespread attention in the context of rapid climate change in the Circumpolar North. While youth and youth-led initiatives are advocating for drastic climate change adaptation and mitigation today, it is important to enhance and strengthen the voices of young communities in the Arctic, where permafrost thaw is altering longstanding traditions, landscapes, and ways of living, potentially reaching a point of no return for many. More research and activities will, therefore, benefit from exploring some of the youth engagement methodologies and networks highlighted in this brief working paper.

About this publication

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About the study

This knowledge brief has been produced as part of research conducted during three fieldwork visits in Greenland and the Nordic Arctic. The interview data is based on four qualitative interviews and one group questionnaire with young people in the age group 18-35 years old. We chose this age range as it encompasses different phases of education, work, and settling for this group, all of which have relevance for community planning. The underlying hypothesis for this brief is that youth participation is critical for long-term resilience and mitigation efforts in Arctic communities.

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