

THE ISSUE

THE “PERMAFROST POLICY PROBLEM.” The best available science confirms that the Arctic is warming three to four times faster than the rest of the world, but due to complex geopolitical dynamics and conflicting national priorities, the most serious consequences and drivers of environmental change in the region remain unresolved. Permafrost thaw represents one of the detrimental impacts of a warming Arctic; this once-frozen soil underlies 15% of the global exposed land surface in the Northern Hemisphere (and roughly 85% of the Alaska land area). As it thaws, permafrost has the potential to destabilize local ecosystems, causing major damage to critical infrastructure, permanently altering the natural landscape, and contributing to greenhouse gas emissions at an unprecedented rate. Nevertheless, permafrost remains nearly absent from legal and policy frameworks. Due to scientific uncertainty and lack of meaningful circumpolar cooperation, government decision-makers are not adequately addressing permafrost thaw as a major threat to climate mitigation and adaptation, and as such are failing to adequately protect human health, economic resilience, and fundamental rights of Indigenous and Arctic communities.

THE GOALS

RECOGNITION: Integrate permafrost thaw processes and impacts into climate policy frameworks at the international, pan-Arctic, national, and sub-national level.

COORDINATION: Improved coordination among policymakers to better understand, quantify, and consider permafrost thaw in decision-making processes.

RESPONSE: Advancement of adaptation and resilience policy frameworks that more adequately respond to local, pan-Arctic, and global risks from permafrost thaw.

THE EXPECTED OUTCOMES

KNOWLEDGE & VISIBILITY: Increasing recognition of permafrost thaw, scientific experts, Arctic communities, and thought leaders among key decision makers.

STRATEGIC FUNDING: Addressing resource shortages for affected Arctic communities, field research scientific observing and monitoring networks, and climate models.

LAW & GOVERNANCE: Formal safeguards for adaptation to and mitigation of permafrost thaw.

ACCOUNTABILITY: Ensuring responsible and just action by those with power to make decisions about permafrost thaw.

ABOUT US Permafrost Pathways was launched in 2022 with funding through the TED Audacious Project—a collaborative funding initiative catalyzing big, bold solutions to the world’s most urgent challenges. Through a joint effort of Woodwell Climate Research Center, research institutions, and Arctic communities, Permafrost Pathways harnesses the combined expertise of leading research institutions and on-the-ground organizations specializing in climate science, policy, and environmental justice to inform and develop adaptation and mitigation strategies to address permafrost thaw.



Photo: Sue Natali, Amautluak,

THE WORKSTREAMS

ARENAS FOR POLICY ACTION

NATIONAL POLICY AND LEGISLATIVE RESPONSE

- Strengthen national policy frameworks that support climate change mitigation and adaptation responses that incorporate permafrost thaw impacts and processes.
- Support national leadership and funding for equitable Arctic research and adaptation solutions, including protection in place, managed retreat, and community-led relocation for the most affected Arctic communities.

US REGULATORY INTERPRETATION AND IMPLEMENTATION

- Advance the application of federal rules and programs dedicated to disaster response (short- and medium-term) and recovery (short- and long-term) in a manner that is sufficient and accessible to Alaskan communities affected by permafrost thaw and compounding events.
- Support interagency coordination and collaboration with respect to supporting, facilitating, and funding Alaska Native community-led adaptation responses.

ARCTIC INDIGENOUS & COMMUNITY-LED ADAPTATION AND RESILIENCE

- Engage with (and help strengthen) the network of community-based organizations, research and academic institutions, climate-change analysts, philanthropic organizations, Arctic youth, and other experts that are advancing adaptation and mitigation responses to permafrost thaw and other natural disturbances across the Arctic.
- Amplify efforts of Arctic Indigenous communities to expand co-management, co-stewardship, and Tribal governance consistent with subsistence rights, tribal sovereignty, and self-determination.

PAN ARCTIC AND INTERNATIONAL CLIMATE NEGOTIATIONS

- Inform pan-Arctic cooperation on Arctic research and response of priority issue areas, process improvements on data sharing, and information gaps pertaining to permafrost thaw.
- Support the achievement of temperature goals set forth under the Paris Agreement and progress of climate and adaptation workstreams established under the UNFCCC.
- Strengthen the scientific record used by global scientists and policymakers to design climate change policy and set emission reduction targets at the international and national levels.
- Further integrate Indigenous knowledge in Arctic research and governance and establish concrete processes for co-producing knowledge with Northern Communities.

PERMAFROST RESEARCHER COMMUNITY OF PRACTICE

- Contribute to a self-sustaining "community of practice" among Arctic permafrost researchers and modelers that promotes engagement in national and global climate policy and decision-making processes.

INTERGENERATIONAL CLIMATE JUSTICE

- Support voices of youth advocates calling upon governments to address permafrost thaw as an issue of human rights, climate justice, and equity that impacts future generations--not only in the Arctic but worldwide.

PHILANTHROPY AND PUBLIC-PRIVATE PARTNERSHIPS

- Contribute to emerging collaborations among private sector innovators, independent researchers, and governments to identify and scale appropriate solutions to address permafrost thaw and its impacts.

THE TACTICS

ACTIVITIES, ENGAGEMENT, OUTPUTS

- ✓ Meetings with Congressional representatives and delivery of expert witness testimony at briefings.
- ✓ Appropriation requests for federal programs and congressionally directed spending.
- ✓ Responses to Public Comments and Requests for Information.
- ✓ Representation on federal advisory committees, and at inter-agency working groups and convenings.
- ✓ Organization of specialized Arctic workshops bringing together national and sub-national policymakers, scientific researchers, Indigenous Knowledge-holders, and community leaders.
- ✓ Presentations at US national and pan-Arctic conferences and workshops relevant to climate mitigation, adaptation, and resilience.
- ✓ Capacity-building and training on environmental monitoring, geospatial tools, and other technical skills for environmentally-threatened Arctic communities.
- ✓ Expert inputs to UNFCCC negotiations, work programmes, conferences, and advice for high-level negotiating groups.
- ✓ Participation in IPCC scientific reports to improve representation of permafrost thaw and other missing Arctic processes.
- ✓ Guidance for scientific experts on integration of Indigenous Knowledge, coproduction of knowledge and opportunities in science-policy interfaces.
- ✓ Submissions to Human Rights bodies, including UN Office of the High Commission for Human Rights.
- ✓ Dedication of high-visibility platforms for youth climate and Arctic advocates.
- ✓ Identification of funding and investment opportunities to support improve climate models and other Arctic research needs.