

Proposal Information:

Proposal Title: Enhancing Our People Our Climate - Building Resilience through organizational capacity building with Northern Communities

Overall Objective: To build resilience in northern communities while fostering reconciliation, improving defence and security capabilities, and addressing environmental concerns, with a particular emphasis on Arctic infrastructure. This proposal for funding will support Canadian participation and collaboration along with capacity building for youth, Indigenous businesses and other organizations such as boards, staff members and volunteers. This project is an experimental pilot project.

High-Level Description:

Location, Date, and Duration: Manitoba, Kivalliq Nunavut and Northwestern Ontario; April 2024 to March 31, 2025. Presentation of research at the 2024 Arctic Congress Bodø in Norway, taking place from May 29 to June 3, 2024 for which additional funding is being sought.

List of Participants from Canada and the United States: Lt. Dorothy Atuat Tootoo, CD, O.Nu (Retired), Tony Eetak, Dr. Olaf Kuhlke, PhD, Jamie Bell, Kami Norland, MA, ATR in addition to students and community members from participating communities (Dyment, Borups Corners, Rankin Inlet, Minneapolis, Winnipeg, Headingley, Lac du Bonnet, Churchill) and non-profit organization Niriqatiginnga.

Agenda and Stages of Development: Relationship Development and Engagement Activities are needed to support organizational capacity building. Comprehensive project involving research, policy development, community engagement, and strategic collaboration.

This proposal has been specifically co-designed to align with Shared Priority Action Item 45 from the Government of Canada's United Nations Declaration on the Rights of Indigenous Peoples Act Action Plan. Item 45 is to: Co-develop frameworks, mechanisms, processes and policy approaches that assist the Department of National Defence and the Canadian Armed Forces in aligning its programs and activities with article 30 and other relevant articles of the UN Declaration. (**Department of National Defence and Canadian Armed Forces**)

List of DND/CAF Partner(s): Not yet confirmed;

Identification of Intended Indigenous Group: The project works across the Kivalliq Region of Nunavut, Manitoba and Northwestern Ontario and will be co-developed and

delivered by Inuit, Métis, and First Nations communities using Winnipeg Manitoba as a central “hub.”

Methods for Accessibility and Inclusivity: Virtual platforms, community consultations, engagement with Indigenous knowledge holders and participatory, arts-based organizational development and capacity building for northern organizations, boards, staff and volunteers. This proposed project will build directly on the contributions of collaborating team members to the ArcticNet Equity Diversity and Inclusion strategy in 2020 and 2021. Impact Measurement and Key Performance Indicators that will be adapted on this new program for reference can be found at:

<https://arcticnet.ulaval.ca/about-us/equity-diversity-inclusion/>

Plans to Leverage Technology and Innovation: Integration of technological advancements, collaboration with U.S. Army research initiatives; participatory relationship development and engagement with academia, government, industry associations/chambers of commerce and communities. This project will work with the Kivalliq Chamber of Commerce to explore opportunities for Manitoba and Nunavut businesses, particularly those led by to participate in opportunities associated with Canada’s Arctic defense strategy.

This proposed project also aims to explore improved access to best practices, policies and additional investment to support strategic thinking and technology that contribute to the development and implementation of new and innovative ways of working.

Other Relevant Information: This proposed program builds on engagement with NATO 2030 process in 2021, involvement of Indigenous scholars and researchers from 2019-2024; a strong focus on climate change awareness and adaptation; the Permafrost Pathways Project supported by the Minneapolis College of Art and Design and Niriqatiginnga, a non-profit organization developed with support from the Canada Council for the Arts and @1860 Winnipeg Arts Collective. The project will be co-led by Inuit youth with support from a steering committee of Elders, entrepreneurs, students from multiple communities and backgrounds and subject matter experts. A special series of international dialogues will take place from April - June 2024 to co-design future relationship building for collaborative research and related scientific activities.

Introduction:

The original "Our People Our Climate" project, funded in 2019 by Environment and Climate Change Canada, initiated essential work to raise climate change awareness and support climate action. This collaborative initiative has been piloted with funding from the Canada Council for the Arts and Manitoba Arts Council.

Elements of this highly collaborative, international pilot project were originally funded by the US National Science Foundation and continue as part of the U.S. Army Corps of Engineers-funded Defense Resiliency Platform Against Extreme Cold Weather. Elements of this proposed program overlap with activities currently funded by the Sustainable Canadian Agriculture Partnership, the Manitoba Arts Council and the Canada Council for the Arts Digital Greenhouse. Building on the success of Our People Our Climate, this proposed project outlines a comprehensive capacity building project aimed at building resilience in northern communities while advancing economic reconciliation, improving understanding of defence and security capabilities, and addressing environmental concerns with a particular emphasis on Arctic infrastructure.

Unlike previous iterations primarily focused on community engagement, this new initiative prioritizes internal and external ecosystem capacity building, aiming to address organizational health, knowledge gaps, and significant communication deficiencies identified by numerous northern non-profit organizations.

As part of efforts to establish a comprehensive training program modeled after traditional newsroom, agency or communications department internship structures, the project seeks to empower organizations to communicate effectively, engage stakeholders, and rejuvenate their overall capacity. Additionally, introducing emerging technologies such as AI and machine learning, the project aims to further support organizational development efforts, particularly within Indigenous communities, by co-designing AI-supported interventions rooted in traditional values. Through a Community-Based Participatory AI Research approach, the initiative aspires to foster cultural sensitivity, inclusivity, and empowerment, ultimately contributing to broader discussions on ethical AI development and Indigenous data sovereignty.

In partnership with the Kivalliq Chamber of Commerce, this project will explore opportunities for Kivalliq businesses to participate in opportunities associated with Canada's Arctic defense strategy. In partnership with the Sustainable Canadian Agricultural Partnership and the non-profit organization Niriqatiginnga, arts-based and participatory approaches piloted and tested through Our People Our Climate will be employed to assess future supply chain opportunities associated with regional defense initiatives. An intended outcome of this collaborative effort includes improving organizational capacity to respond to and communicate impacts and findings to support the Government of Canada to better understand regional capabilities.

Prior research has shown that there is a need for knowledge syntheses to provide insight into climate change, pollution and biodiversity in the Arctic and these efforts must be continued. This project will seek to make this information from our work readily

available and encourage its use. Local and traditional knowledge will continue to constitute an important element of this knowledge base.

High-Level Description:

The project, using Winnipeg, Manitoba as a central hub is scheduled to take place from April 2024 to April 2025 and will be carried out in collaboration with various stakeholders, including Lt. Dorothy Atuat Tootoo, CD, O.Nu (Retired) and Dr. Olaf Kuhlke, PhD, Professor and Chair of Creative Entrepreneurship at the Minneapolis College of Art and Design. It will include Tony Eetak, Jamie Bell and Kami Norland from the Canadian non-profit organization Niriqatiginnga and students from the University of Minnesota Duluth and Minneapolis College of Art and Design.

The project highlights the need to strike a balance between advancing technology that can serve both civilian and military purposes (dual-use technology), engaging in organizational capacity building to support ongoing international research and development efforts. This project works to ensure that these endeavors align with national security interests and support domestic research into climate change adaptation and mitigation. It emphasizes the potential for and importance of aligning U.S. Army and DND-sponsored research and development activities with specific military capability gaps. It underscores the need to make strategic investments in technology and innovation that address real and pressing defence needs.

The project acknowledges a need to explore and further engage the Department of National Defence and Canadian Armed Forces' (DND/CAF) role in advancing whole-of-government priorities in the North. This recognition of the interconnectedness of various government objectives underscores the importance of a coordinated approach to addressing the multifaceted challenges in the region, particularly emphasizing the impacts of climate change on Arctic and military infrastructure.

A crucial strategic element of the proposal is its commitment to contributing to Indigenous and territorial priorities in the North, including infrastructure improvements. By aligning defence and security efforts with the needs and aspirations of local communities, this approach not only fosters cooperation but also promotes mutual benefits.

This proposed project also recognizes the critical importance of sharing knowledge and supporting Indigenous academics, researchers, and students engaged in the study of climate infrastructure-related issues and reconciliation. As an initiative with strategic value, it seeks to foster an environment where Indigenous voices and perspectives are not only heard but actively promoted. By sharing views and knowledge in support of

Indigenous scholars, this approach contributes to the development of a diverse and informed research community that is instrumental in advancing reconciliation and addressing security challenges in the Arctic.

Additionally, the proposal places significant emphasis on supporting the publication process for Indigenous-led research. This includes extending support for heritage and archaeological research, as well as other research activities aligned with the department's interests in advancing reconciliation while actively mitigating the impacts of climate change. Providing resources and assistance in the publication of research findings, the proposal reinforces its commitment to amplifying Indigenous contributions and knowledge in the broader discourse on Arctic security, infrastructure, economic development and climate change.

Funding Request:

- Stream of Funding Being Requested: Research Support and Policy Development
- Annual or Multi-year Funding (for Contributions Only): 2024-2025
- Total Amount of Funding Requested, by Fiscal Year (April 1 to March 31): \$45,000

Project Description:

The project will be implemented over the course of one year, from April 2024 to April 2025, with the participation of key mentors and collaborators.

Just as partnerships at the domestic level are critical to ensuring the safety and security of Canada's Arctic, it is equally important to work with other Arctic states and international partners in the broader region.

This project also builds on consultations and engagement for NATO 2030, a forward-looking reflection process, which sought to enhance the political dimension of the organization. In December 2019, NATO leaders, including Canada's representatives, entrusted NATO Secretary General Jens Stoltenberg with leading this critical undertaking. To bolster this effort, the Secretary General assembled a group of ten experts, with Canada's representative being Greta Bossenmaier. Our project's Elder Advisor, Lt. Dorothy Atuat Tootoo, CD, O.Nu (Retired) was one of those consulted in 2021. Beyond these expert perspectives, NATO engaged in a broader dialogue with experts from the public and private sectors, civil society, and young leaders, fostering innovative and fresh insights. The recommendations put forth by the Secretary General served as a guiding compass for NATO leaders when they convened in 2022. Our project intends to revisit those conversations and their relevance to current and proposed research on the impacts of climate change on civilian and military infrastructure.

Recognizing the importance of women's voices in shaping security analysis, discourse, and practice, a series of round tables were planned, set to unfold in NATO and partner nations. The central objective was to facilitate discussions on various facets, including women's perceptions of NATO, the identification of risks and threats, and the critical aspects of security, safety, and protection.

Conducted via virtual platforms, these round tables were facilitated by Ms. Susan Pond, a former senior NATO executive. The consultations were structured into two parts, the first being an informal discussion addressing fundamental questions related to security, protection, and NATO's role in addressing security concerns from a women's perspective. The second part incorporated a picture association exercise, where participants commented on their sense of security or insecurity in relation to a set of images. Conversations during these engagement sessions focused on infrastructure such as the Rankin Inlet Forward Operating Location, the Port of Churchill, as well as the impacts of climate change on operational readiness among other related topics.

Regarding Policy Development Contributions, the proposal seeks to support longer-term relationship-building and policy development projects related to Canada's Defence Policy. It involves attending conferences and workshops, reporting on outcomes, and engaging in community outreach events to develop policy recommendations and address a wide range of topics associated with DND/CAF activities in the Arctic region. The project's emphasis on collaboration with various stakeholders, including Indigenous communities, aligns with the objective of fostering partnerships and advancing strategic goals in defence and security.

Activities and Components:

The proposal for "Our People Our Climate - Building Resilience in Northern Communities" addresses critical strategic considerations related to the impacts of climate change on Arctic communities and military infrastructure. This proposed project aims to demonstrate a strategic perspective that recognizes the interconnectedness of climate change, climate entrepreneurship, community engagement, and technological innovation. By addressing these components comprehensively, the project aligns with the strategic goals of better understanding the impacts of climate change on Arctic communities and military infrastructure while promoting national interests and advancing opportunities for economic reconciliation with Indigenous peoples.

From a strategic perspective, the proposal presents several strengths and potential benefits:

1. Climate Change Awareness and Community Engagement: The project emphasizes the importance of raising awareness about climate change in Indigenous communities, including youth, elders, and business owners. This aligns with a strategic objective of ensuring that local communities are well-informed about climate-related challenges and opportunities.

2. Indigenous Traditional Knowledge: By strengthening Indigenous traditional knowledge and cultural components, the project recognizes the importance of incorporating local expertise and insights into climate action strategies. This approach supports resilience-building and aligns with Canada's commitment to reconciliation with Indigenous peoples.

For Research Support Contributions, the proposal aims to encourage participation and collaboration between Indigenous communities and military establishments by engaging Indigenous scholars, researchers, and students in researching defence issues and advancing reconciliation. The project supports the publication process for Indigenous-led research, aligning with the objective of promoting Indigenous knowledge

and perspectives in the discourse on Arctic security, infrastructure, economic development, and climate change.

Involving artists, Elders, youth and Indigenous-owned businesses (ie: through regional chambers of commerce) in defense and related (ie: procurement) and capacity building initiatives contributes to supporting the preservation of cultural heritage, passing down traditional knowledge related to land and historical interactions.

Exploring how we can better Bring together Elders and youth, industry, government and academia fosters intergenerational learning, empowering both groups and enriching dialogue with fresh perspectives. Community engagement, co-design and co-delivery of these kinds of defense and climate change-related initiatives promotes ownership and collaboration, leading to more inclusive decision-making processes.

Enhancing engagement with Elders and youth can provide insight into community concerns and priorities, informing effective decision-making. Additionally, this involvement contributes primarily to capacity building within Indigenous and northern communities, with Elders and subject matter experts mentoring youth and youth bringing technological proficiency, strengthening community resilience for future engagement and opportunities for advancing economic reconciliation.

3. Defence and Security Capabilities: The proposal acknowledges the strategic need to identify and address the modernized force structures, capabilities, infrastructure, and technologies required for enhanced defence and security capabilities in the Arctic. This is crucial in light of the evolving security challenges associated with climate change and its potential impact on military operations.

4. Collaboration with Allies and Partners: The project's focus on operational and strategic collaboration with like-minded Arctic allies and partners aligns with broader national security objectives. It recognizes that international cooperation is essential for addressing the complex security implications of climate change in the Arctic. Canadian and American youth researchers and their collaborators in this project will be presenting two separate, but related sessions during the 2024 Arctic Congress in Bodø, Norway.

5. Environmental Sustainability: Climate change's impact on military infrastructure is a pressing concern. The proposal's emphasis on assessing the environmental and geopolitical changes and their implications for future defence requirements reflects a strategic approach to safeguarding military assets in the Arctic. Supporting engagements through international collaboration will contribute to fostering safe, secure, and environmentally responsible activities in the and with the Arctic, and provide a venue for information sharing on issues including climate change and health adaptation, supply chain and infrastructure dialogues and even to other areas like search and

rescue and environmental response. There is a need and many opportunities for rejuvenating cross-sectoral collaboration, conversation and dialogue.

6. Whole-of-Government Priorities: The project aligns with the need for engagement and relationship development regarding several whole-of-government priorities, in this case, DND/CAF's role in advancing objectives in the North. This includes collaboration with other government departments and support for Indigenous and territorial priorities. This approach reflects a strategic commitment to coordinated and efficient government action. For example, climate change, its potential impacts on supply chain infrastructure and its impacts on food insecurity are key defense issues that all parties can unite behind.

7. Engagement with Northern Communities and Indigenous Peoples: Engaging with Northern communities, provinces, and Indigenous Peoples, particularly Inuit treaty partners, is strategically essential for fulfilling Canada's commitments towards reconciliation. Meaningful consultation is vital to building trust and cooperation, which, in turn, enhances domestic defence and security capabilities.

8. Technological Advancements: Recognizing the rapid pace of technological change, the proposal emphasizes the importance of translating technological advancements into military capabilities. This is strategic for maintaining Canada's technological edge alongside key allies while addressing emerging security challenges related to climate change.

9. Collaboration with researchers funded by the U.S. Army Corps of Engineers: A partnership with researchers funded by the U.S. Army Corps of Engineers' Cold Regions Research and Engineering Lab represents a strategic opportunity to leverage research and expertise from the United States. It allows Canada to benefit from existing research on extreme cold weather impacts on military and civilian infrastructure.

10. Opportunities for Canadian Resilience through Defence Resiliency Integration: Ensure the project's outputs align with the Defense resiliency platform against extreme cold weather, funded by the U.S. Army Corps of Engineers' Cold Regions Research and Engineering Lab. Building on the original Our People Our Climate project, and the U.S. Army's research, the project has potential to strategically enhance Canada's resilience in extreme cold conditions and better prepare for climate change impacts in the Arctic. This approach supports Canada's broader security and climate objectives.

Initial Research Themes:

Some of the research themes to be explored within the project include but are not limited to:

- Geopolitical and security implications of climate change, using storytelling and communications/media skills training for Indigenous youth and Arctic Cultural Entrepreneurs.
- Collaboration with provinces (Manitoba), territories (Nunavut), government departments, and international partners (USA, Norway) on climate change adaptation and mitigation.
- Building climate resilience into existing force generation and support activities.
- Translating climate science into threat assessments and capability requirements.
- Leveraging emerging technologies, including ground-based measurements, geospatial mapping, and intelligent prediction capabilities, for military and political decision-making.

Challenges:

The rapid pace of technological change requires DND/CAF to quickly translate advancements into military capabilities, limit the exploitation by adversaries, partner with academia and industry, and retain a necessary technological edge alongside key allies.

The vast reach and impact of climate change present immediate and long-term security challenges to Canada both at home and abroad. Climate change is a complex and multi-faceted security challenge, as militaries are increasingly called upon to assist with its consequences, including extreme weather events and natural disasters. This often requires complex responses, while still concurrently supporting the full spectrum of more traditional military operations domestically and overseas. DND/CAF must adapt its planning and activities in accordance with the Government of Canada's greening objectives, while striving to maintain an agile and resilient force that is responsive to the impacts of climate change.

Learning from the U.S. Army Corps of Engineers' Cold Regions Research and Engineering Lab and its academic partnerships:

American research on this program is currently funded by the Defense Resiliency Platform against Extreme Cold Weather, administered by the U.S. Army Corps of

Engineers' Cold Regions Research and Engineering Lab. In 2020, the Senate Committee on Armed Services noted the impact of extreme cold weather on military infrastructure and the challenges it poses for U.S. military operations. The committee recognized the value of research in developing advanced capabilities for extreme cold regions, with a focus on mapping remote extreme cold regions, ensuring the superiority of the U.S. Army in extreme cold regions, and reducing infrastructure deterioration due to freeze-thaw cycles. This research involves risk assessment, ground-based measurements, bio-inspired innovative sensors, geospatial mapping, and intelligent prediction capabilities. There is a need for Canadian research support and to engage Inuit youth and Elders from Nunavut as well as those in Manitoba to better participate in this initiative in Inuktitut. This project and its initial relationship development and engagement activities were piloted with strategic innovation funding from the Canada Council for the Arts.

There are significant opportunities to build on these approaches to collaborative research on the Canadian side, leveraging the outcomes to enhance Canada's resilience in extreme cold conditions and address climate change impacts in the Arctic region. There are also opportunities for technology adoption, innovation and procurement activities conducive to advancing economic reconciliation with Indigenous peoples.

Next Steps:

The project "Our People Our Climate - Building Resilience in Northern Communities" is a comprehensive initiative that aims to address climate change challenges, foster reconciliation, enhance defence and security capabilities, and promote sustainability. By building on the foundations of the original "Our People Our Climate" project and aligning with the U.S. Army Corps of Engineers' Cold Regions Research and Engineering Lab's objectives, this initiative supports Canada's national interests and security goals while advancing reconciliation with Indigenous peoples.

Collaborators and Affiliation:

Tony Eetak is an Emerging Inuk Youth Artist, Cultural Connector and Founding Member of Niriqatiginnga and the @1860 Winnipeg Arts Collective. Originally from Arviat, Nunavut, Tony has been a dedicated volunteer for arts and research projects for more than five years with organizations and projects including the Arviat Film Society, [Global Dignity Canada](#), the ArcticNet-supported [Inclusion in Northern Research](#), Creativity for Entrepreneurship and the Winnipeg-based hub of the [Our People, Our Climate](#) art project with the Minneapolis College of Art and Design. As a founding member of [@1860 Winnipeg Arts](#), Tony's work has been funded by the Canada Council

for the Arts and the Manitoba Arts Council. He is also a founding member of the Manitoba-based non-profit organization [Niriqatiginnga](#). In 2023 Tony was named a National Role Model by the organization [Global Dignity Canada](#).

Dorothy Atuat Tootoo, CD, O.Nu Inuit Elder and Cultural Advisor Founding Member, @1860 Winnipeg Arts Collective Dorothy Atuat Tootoo, CD, ON, is a highly respected Elder known for her extensive experience and dedication to education in Nunavut and beyond. With twelve years of service as a commanding officer for the 3019 Royal Canadian Army Cadet Corps (RCACC) in Rankin Inlet and years as a student counsellor, she has been a tireless advocate for youth, helping them achieve their educational goals and persist in their pursuit of knowledge. As an Elder Advisor, she has initiated mentoring programs for various initiatives, including the @1860 Winnipeg Arts Incubator pilot, the University of Minnesota Duluth-supported Creativity for Entrepreneurship collective pilot, Our People Our Climate with the Minneapolis College of Art and Design and the ArcticNet-supported Inclusion in Northern Research Initiative. She is a recipient of the prestigious Polar Medal and the Queen's Diamond Jubilee Medal. In 2022 she received the Order of Nunavut for her contributions to Inuit culture and community.

Jamie Bell is a skilled media and interdisciplinary arts professional with extensive experience in journalism, public affairs and media. He is a long-time arts administrator, community-based participatory research advocate and founding member of the Arviat Film Society. Jamie's career spans almost three decades, during which he has developed an expertise in arts, media and communications, primarily focused on community development through participatory arts and research initiatives. Since 2017, Jamie has long been active supporting community outreach and arts-based [projects](#) in Winnipeg, Manitoba. In 2022, Jamie was a founding member and lead for the Canada Council for the Arts-funded [@1860 Winnipeg Arts](#) Collective pilot program. He is an active member of the [Global Dignity Canada](#) national steering committee and an annual organizer of events for National Kindness Week. His collaborative projects merge arts, research and community engagement, emphasizing Community-Based Participatory Research (CBPR) and arts-based initiatives. Jamie works with community organizations and projects, blending traditional art forms with digital skills and new technologies. He has worked for organizations ranging from the Department of National Defence to the Government of Nunavut Economic Development and Nunavut Research Institute. His research has been funded by the Social Sciences and Humanities Research Council of Canada (SSHRC), the Canada Council for the Arts, Manitoba Arts Council, Innovation Science and Economic Development (ISED) Canada and the ArcticNet Network Centre of Excellence.

Kami Norland, MA, ATR, is a trailblazing advocate for human-centered leadership and mental wellbeing. As CEO of Integrative Re-Resources, LLC, co-founder of the

Elevate Compassion Coalition and the Journey Guide Project, LLC, Norland's impact resonates globally. With 20+ years spanning local clinics to national healthcare leadership, she champions mental wellbeing as a necessity for fulfilled lives. Through dynamic keynotes and workshops, Norland weaves science and relatable stories to reshape workplace experiences. Her transformative work mirrors the essence of social prescribing, emphasizing compassion and balance. Norland's legacy lies in reshaping leadership perceptions, highlighting the profound link between mental wellbeing and a fulfilling life.

Dr. Marie-José Naud, PhD works with the Vice Rectorate of Research at Université Laval and brings a demonstrated history of working in higher education and collaborating with other sectors such as governments and the industry in Quebec and around the world. As a key collaborator on the ArcticNet supported Inclusion in Northern Research Project, and the ArcticNet strategic process for Equity, Diversity and Inclusion, she is an expert in building community and cross-cultural connections, specializing in environmental sciences research, developing partnerships and research management. She has a Doctor of Philosophy (Ph.D.) focused in Biology and a growing interest and experience in equity, diversity and inclusion issues in academic institutions, especially in research and working groups leveraging artificial intelligence with organizations such as IVADO and their GTPP project. She has been a key advisor and mentor to the youth media and research team for this proposed project, in particular developing relationships with other research institutions and programs working in the field of inclusive AI development and social-neuro artificial intelligence.

Dr. Wenqing Zhang, PhD is Associate Professor in Operations and Supply Chain Management at Labovitz School of Business and Economics, University of Minnesota Duluth. He received his PhD in Management Science/Operations Management from McGill University in 2012. Dr. Zhang's research interests lie in contemporary operations and supply chain issues, with a particular focus on strategies to promote Diversity, Equity, and Inclusion (DEI) in supply chains. His research endeavors also encompass the advancement of equitable development for indigenous communities, as he seeks to enhance our understanding of how individuals and organizations interpret social responsibility and sustainability when making operational or supply chain decisions for these communities. Dr. Zhang is a key collaborator on this initiative and a mentor to the community based participatory research supported by the non-profit group Niriqatiginnga and the @1860 Winnipeg Arts collective and is a Director for the Minnesota Indigenous Business Alliance (MNIBA).

Collaborating and participating non-profit organizations and groups:

The **Kivalliq Chamber of Commerce** (KCC) acknowledges challenges in organizational development post-pandemic, emphasizing its need to strengthen

capacity for supporting member and community programs, hosting events and addressing gaps in economic development. The KCC has also expressed a need for board and governance training, and capacity building; we can jointly contribute to overcoming organizational capacity-related obstacles. This partnership signifies a shared commitment to fostering economic growth, entrepreneurship, and building a resilient business community in the Kivalliq region. The Kivalliq Chamber of Commerce will be a key contributor and collaborator in this project, co-leading the administration of the project and supporting program delivery and capacity building activities.

Manitoba-based non-profit organization **Niriqatiginnga** and the **@1860 Winnipeg Arts** project are dedicated to advancing food security through arts, cultural and food sector entrepreneurship research and participatory organizational development. Niriqatiginnga, and the Youth Media Arts Team from @1860 are key collaborators and contributors to this project, and its prior programs have been delivered and supported by the ArcticNet Network Centre of Excellence, the Canada Council for the Arts, Manitoba Arts Council, the United Nations Environment Program and the Canadian Sustainable Agricultural Partnership. This research-intensive, grassroots arts and community research collective will be a key collaborating partner and co-founder of this initiative. The Youth Media Team will be the ultimate recipients of training and development experience in support of building organizational capacity with partners.

Current Research Collaboration: Permafrost Pathways and the Defense Resiliency Platform Against Extreme Cold Weather

Dr. Olaf Kuhlke is Chair and Professor for the Creative Entrepreneurship Program and a leading researcher at the Minneapolis College of Art and Design. Specializing in the emerging field of Arctic Climate Entrepreneurship and a longtime collaborator with our project team, Dr. Kuhlke has been instrumental in developing two significant projects focused on addressing the challenges posed by permafrost thaw in Arctic regions. The Permafrost Pathways project, co-led by Dr. Kuhlke and experts in climate science, policy development, and environmental justice, investigates the immediate consequences of permafrost thaw on infrastructure, particularly in Indigenous villages in Alaska. Conducting field research during the summer of 2023, the project aims to advance scientific understanding and develop adaptation strategies while prioritizing collaboration with Alaska Native communities. That project is a component of the Defense Resiliency Platform against Extreme Cold Weather, conducted in collaboration with the U.S. Army Corps of Engineers' Cold Regions Research and Engineering Lab. The program aims to develop advanced capabilities for extreme cold regions. By integrating various research approaches, including risk assessment and innovative sensor technologies, both projects represent critical efforts to address the challenges posed by climate change. Dr. Kuhlke's leadership has been pivotal in advancing these initiatives, offering significant promise for enhancing resilience and sustainability in

extreme cold regions. He will be supporting the co-design and testing of the Community-Based Artificial Intelligence Research (CBAIR) and Arts-Based participatory research approaches and methodologies. This work will build on prior research supported by our team and is attached as an appendix. Niriqatiginnga and the Permafrost Pathways projects will both be convening sessions for the 2024 Arctic Congress in Bodø, Norway.

Additional collaborators are expected to join this project in early 2024. Youth and project team members are also engaging with various stakeholders, including retired military personnel, Indigenous scholars, and researchers, and will build on confirmed international events events and meetings related to climate change, defence, and Indigenous issues. These efforts, coupled with virtual platforms and community consultations will be emergent, focusing on fostering partnerships, trust, and collaboration among these diverse stakeholders, with the key goal of advancing reconciliation, enhancing defence capabilities, and addressing environmental concerns.

For inquiries and further information, please contact Jamie Bell at niriqatiginnga@gmail.com or Dr. Olaf Kuhlke, PhD at the Minneapolis College of Art and Design (okuhlke@mcad.edu). For the Youth Media and Evaluation Team, please contact Tony Eetak with Niriqatiginnga (tony@niriqatiginnga.ca). We look forward to advancing our shared goals in addressing climate change and its implications on civilian, military and traditional infrastructures and supply chains.