COMING TOGETHER
IS A BEGINNING;
KEEPING TOGETHER
IS PROGRESS;
WORKING TOGETHER IS
SUCCESS!

- Henry Ford -

Risk Based Partnership Tables

A new approach to tackling Climate Change Adaptation in the Northwest Territories

MY COMMUNITY MATTERS

nwtac
NWT Association of Communities

Tackling Climate Change Through Risk-Based Partnerships

1) INTRODUCTION

The effects of climate change are felt the most at a community level. Although many agencies, NGOs and government departments focus on climate change in the North, it is incredibly ad-hoc and arbitrary where various resources get applied. Although many of these players want to support community governments, the traditional approach of creating tools or working with one community is not enough. So how do we take much of the burden off community governments while maintaining an appropriate level of engagement?

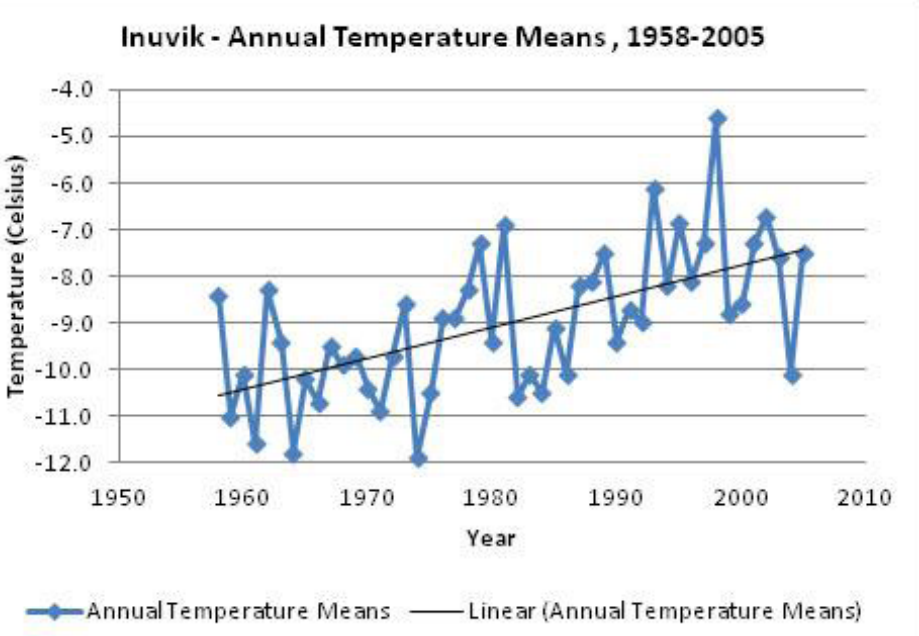
This paper proposes a paradigm shift in prioritizing and organizing the resources and partners to have the most significant impact – Risk-Based Partnership Tables.

We all anxiously await for the National Adaptation Strategy to be released and, hopefully, associated implementation dollars. The proposed Risk-Based Partnership Tables will leave the NWT communities ready to take advantage of these funding opportunities.

Although this paper is from the perspective of community governments, this model could apply to Risks that do not apply to community governments, i.e./ wildlife, On-the-Land Safety, etc.

2) CLIMATE CHANGE IMPACTS IN THE NORTH AND AT A COMMUNITY LEVEL

In arctic and subarctic regions, average surface temperatures have increased much faster (due to a phenomenon referred to as Arctic amplification) than in the southern regions. As a result, in the NWT, communities are experiencing unprecedented change. In recent decades, the average annual air temperature in the southern NWT has warmed by about 2°C, and the northern NWT has warmed by about 4°C. Without significant global action to reduce greenhouse gas emissions, future projections suggest that the average annual air temperatures in the NWT will continue to rise dramatically. The projected increase is from 4°C to 6°C in the southern NWT and 8°C to 10°C in the Beaufort Delta by the year 2100 (*see Figure 1*).



While we cannot predict future temperature increases with certainty, it is clear the NWT is warming up and that this trend will continue. The numerous detrimental effects already being experienced in the NWT due to climate change will persist and increase in severity in future years as the warming progresses[1].

The nature of the risk in each community varies based on so many factors, such as:

- Location (North v. South) in the Territory
- Impacts of ground thaw (subsidence, groundwater flow, permafrost thaw etc.)

[1] Reference the NWTAC Report on municipal planning and climate change and illustration.

- Reliance on permafrost as part of the foundation systems
- Proximity to Rivers/Lakes/Ocean
- Forests
- Reliance on Winter Roads/Bridges
- Changing Snow Loads
- Increased Storm Severity

This list is by no means exhaustive but provides a sense of the various factors affecting the risks in the NWT.

3) MAINSTREAMING CLIMATE CHALLENGES AT THE COMMUNITY LEVEL

As outlined in the NWTAC Report on climate change and municipal planning[2], NWT communities have numerous challenges before adding climate change to the mix. The small size of communities, the remoteness, transportation issues, a harsh physical environment, lack of human capacity, high turnover, and financial constraints are all challenges that make running a northern community a challenging task.

When dealing with climate change specifically, one of the most significant barriers NWT community governments face is the repeated classification of climate change as a special issue. This classification limits its integration into routine decision-making. In addition, the required learning, investment of resources and policy development present an additional burden to local governments, which are already struggling to fulfill a diverse range of existing responsibilities. This burden leaves climate change adaptation competing for space on the policy agenda as well as within the budgets of local governments.

Yet so substantial and cross-cutting are the implications of northern climate change that community governments must now apply the climate change lens to all municipal planning and decision-making. Even though the development of Climate Change Adaptation Plans is vital to the resilience of NWT communities, communities can begin mainstreaming climate change perspectives without a completed stand-alone adaptation plan. Mainstreaming requires a paradigm shift in the considerations applied to all planning and decision-making.

[2] Reference the NWTAC Report on municipal planning.

4) CURRENT APPROACH

The current approach to climate change in the Territory leads to the following questions:

- Why are communities assumed to need to be struggling on their own with their respective community risks?
- Why are they expected to become experts on ALL of the risks in their communities?
- Why is one community getting assistance from researchers or government departments and another is not? Where are the economies of scale? Are they learning from each other?
- How are communities supposed to move the agenda forward on each risk, given the high turnover of staff and elected officials?
- The scale of many of the risks is so far outside of the community's abilities to manage. It will ultimately become the Territories' problem if they don't assist communities now. (Tuktoyaktuk is an example) (Inuvik has estimates for $250M damage alone due to permafrost decay on buildings which is far outside their ability to manage)
- It will cost much more if we stand back until communities fail. Numerous studies and practical experience on the ground have demonstrated this cost.
- Human nature is to ignore the slow-moving risk. So how do we move Climate Change from the important to the urgent pile?
- Communities are typically assumed to be responsible for 60% of assets, which is a considerable amount of assets on the shoulders of many small communities. Is this realistic, given the limited ability to raise funds? Especially when many communities are underfunded.

- Most decisions concerning Infrastructure will resonate for roughly 50 years. So even if Climate Change is not a factor now, it will be part way through the asset's life cycle.

- Silos are distinctly evident in the Federal and Territorial governments and other agencies, as well as a scattergun approach to projects and research not serving the NWT well. So how do we overcome these obstacles and get everyone who needs to be at the table?

- There are many players in the adaptation field, from a Territorial and a Federal perspective. How do we ensure they are coordinated and meet the needs of our communities?

5) WHY THE RISK-BASED PARTNERSHIP TABLES APPROACH

NWT climate change partners need to come together to consider how to pool resources and focus on what really matters. Every organization must look through a climate change lens at their work – the issues need to be mainstreamed and entrenched in thinking. At this point, the NWT needs a territorial strategy for adapting to climate change – all partner organizations that will be affected would benefit from being involved in this critical undertaking. If done effectively, the climate change adaptation measures will be in the order of billions of dollars. It is time for action, and the North needs much more funding and capacity first.

The research carried out from now into the future must be relevant to the NWT and the communities. Northerners have a significant opportunity to be leaders and to pilot solutions for the rest of Canada[3].

Pulling together and in the same direction on climate change means:

- Formalizing roles and responsibilities, partnerships and increased organizational capacity;
- Maintaining momentum on advocacy, to be completed in collaboration;
- Increasing our shared understanding of climate change impacts;
- Providing education and outreach to communities and members of the public;
- Building capacity to increase resilience and adapt to climate change; and,
- Considering ways that climate change and switching to a greener economy can create a sustainable economy for the North.
- Creating an environment for accountability and reporting
- Functioning in a way that will develop and foster Northern Capability
- Sharing of innovation/best management/experience
- Recognizing that coordination requires dedicated time, money and skilled staff – both technical and administrative
- Clearly communicating how to collaborate – define the process of collaboration
- Includes the staff to support
- Recognize that partnership projects are much more likely to be successful in securing funding.

[3] 2019 "*NWTAC Climate Change Adaptation Strategy and Action Plan"*, and 2017, Ecology North. "*NWT Climate Change Adaptation Needs Assessmen*t".

6) POTENTIAL PARTNERS

Some of the potential partners for the Partnership Tables will vary from table to table but could start from this list:

Crown Partners	*Government of Northwest Territories* ○ Climate Change and Air Quality Unit, Environment and Natural Resources ○ Forestry Division, ENR ○ Municipal and Community Affairs ○ Department of Infrastructure ○ Health and Social Services ○ Geomatics ○ Lands ○ Various other GNWT Departments, including NWT Geoscience Centre and ENR Water Stewardship Group *Government of Canada* ○ Environment and Climate Change Canada ○ Crown-Indigenous Relations and Northern Affairs Canada ○ Polar Knowledge Canada, including Canadian High Arctic Research Station (CHARS) ○ NRCAN
Municipal Partners	○ Community governments ○ NWTAC ○ LGANT ○ FCM
Indigenous Partners	Regional Modern Treaty and Self-governing Indigenous Governments including but not limited to: ○ Tłı̨chǫ Government, ○ Inuvialuit Regional Corporation, ○ Gwich'in Tribal Council, ○ Sahtu Secretariat Inc. and Sahtu Land Corporations. ○ Délı̨nę Got'ı̨nę Government

	Other Indigenous governments, including: ○ Akaitcho Territory Government, ○ Northwest Territory Métis Nation, ○ North Slave Métis Alliance, ○ Dehcho First Nations and other Dehcho Indigenous Governments.
Non-government organizations	○ Ecology North ○ Conference Board of Canada ○ Arctic Energy Alliance ○ Standards Council of Canada (CSA & BNQ) ○ Hotìì ts'eeda
Academic Institutions	○ Yukon Research Centre, Yukon University ○ Natural Sciences and Engineering Research Council of Canada (NSERC) ○ Social Sciences and Humanities Research Council of Canada (SSHRC) ○ International Centre for Northern Governance and Development, University Arctic ○ Aurora College / Aurora Research Institute ○ Future NWT Polytechnique ○ Southern Researchers ○ Permafrost Networks ○ Institute for Circumpolar Health Research ○ Wilfrid Laurier University ○ Mitacs ○ Dechinta Centre for Research and Learning
Industry/Industry Associations	○ NWT Chamber of Mines ○ Canadian Association of Petroleum Producers (CAPP) ○ Adaptation Practitioners (Planners, Engineers, Architects) ○ Insurance Bureau of Canada ○ Western Arctic Geomatics ○ Canadian Permafrost Association ○ NT Waste and Water Associations ○ Chambers of Commerce

	○ NAPEG ○ NWT Association of Architects ○ Territorial Agriculture Association ○ Consultants

There may well be other partners depending on the risk in question. We would anticipate that this list may expand as the projects evolve.

7) PROCESS MODEL

Although not an absolute process, depending on the risk and where the work to date is, phases may overlap and may inform each other.

1. Inception

    a. Defining and scoping the Risk and Impacts
        i. Scope what might be completed communally as project inception. However, be prepared for it to evolve.
        ii. List of Key Impacts, current and potential adaptation measures in place, and limits/barriers/challenges to adaptation from communities
        iii. Scoping Partners - Articulate who the partners might be for that particular risk, including identifying potential lead partners (administrative and technical).

    b. Organize a Primary Partners Meeting including the following:
        i. Articulate the work completed to date and the current state of the risk in each community
        ii. Initiate discussions about what partners can achieve communally
        iii. Figure out potential administrative leads and technical leads
        iv. Define roles as much as possible for the partners
        v. Examine Best Management Practices
        vi. Complete a process model or GANTT chart for the project

2. Data Collection

    a. Define the current data collected or what they are collecting
    b. Scope the data needed
    c. Develop a work plan, methodology, and budget for data collection
    d. Secure funding for data collection
    e. Complete the Data Collection needed to proceed to the feasibility stage
    f. Define if there are monitoring and data collection requirements through other Process phases

3. Feasibility Study

    a. Confirm partners' willingness to proceed to the feasibility phase
    b. Define the needs and budget of the Communal Feasibility Study
    c. Secure Funding for the Communal Feasibility Study
    d. Issue RFP for the Communal Feasibility Study
    e. Award and Manage the Communal Feasibility Study
    f. Communicate the findings of the Feasibility Study to partners, including participating communities
    g. Identification of the need for additional Northern Infrastructure Standards Development to the Standards Council of Canada if the feasibility study identifies gaps

4. Engineering Phase

    a. Confirm partners' willingness to proceed to the engineering phase
    b. Select the preferred option(s) from the feasibility study
    c. Define the needs and budget of the Engineering Design
    d. Secure Funding for the Engineering Design
    e. Issue RFP for the Engineering Design, including Grant Application materials development
    f. Award and Manage the Engineering Design
    g. Communicate the findings of the Engineering Design to partners, including participating communities

5. Construction Phase

    a. Confirm partners' willingness to proceed to the construction phase
    b. Define the needs and budget of the Construction Phase
    c. Secure Funding for the Construction
    d. Issue Tender for the Construction
    e. Award and Manage the various projects
    f. Communicate updates to partners, including participating communities

8) PARTNERSHIP MODELS – SOME RECENT EXAMPLES

The NWTAC has recently applied the Partnership Model in several cases, and the model has worked very well. These projects include:

a) Foundation Review of Community Buildings in 7 highest Risk Communities

NWTAC reports to community governments on the preventative maintenance required for their insured building assets on a 25-year cycle. These reports include details right down to building components. The one thing it does not contain is a foundation review. The NWTAC first targeted communities within the Beaufort Delta (Inuvik, Tuktoyaktuk, Aklavik, Tsiigehtchic and Fort McPherson) and, second, the highest-risk communities in the Sahtu (Fort Good Hope and Norman Wells.)

- NWTAC secured the funding to complete the Geotechnical Evaluation of the buildings owned by the community governments. The NWTAC manages this contribution with CIRNAC.
- NWTAC hired the Geotechnical Expert, provided them with instructions, secured permissions, and facilitated introductions.
- The NWTAC owns the insurance program, so it was able to provide the building inventories to the consultant.
- Community Government Staff escorted the Geotechnical Engineer to the various facilities, and they had the opportunity to ask questions.
- Staff from MACA also accompanied the Geotechnical Expert on community visits.
- The Geotechnical Experts will produce reports for each community and return to present their findings to each community.
- Data from the investigations can be aggregated and used to inform other communal programming and the next steps.

b) DMAF Application for Wildfire Break Construction

Environment and Natural Resources, Forestry Management (Wildfire) have done so much work, as experts in this field, by preparing Wildfire Protection Plans (with funding from the Climate Change Preparedness in the North) for all communities that have Wildfire Risk in the NWT (29 of 33 communities). It was only because these plans were in place that the NWTAC and the Division

could apply for Disaster Mitigation Funding, including hiring a consultant to assist with the application. As a result, the detailed project is as follows:

- Very partnership-focused approach. All partners bring strengths and resources to the table.
- The Forestry Division (Wildfire) completed the front end of the proposed Risk Based Process and left us in a great position in terms of applying for funding – essentially shovel-ready.
- We successfully secured nearly $20M and will complete firebreaks for all 29 communities with a Wildfire Risk in the NWT.
- In roughly eight years, all communities will be complete compared to 83 years at current GNWT funding levels
- NWTAC and the Department will manage filings and overall project management along with a consultant/expert
- We will be working with various academics and agriculture groups to explore options for using wildfire break lands such as crops/berries etc.
- Community Governments will issue tenders for the construction of the firebreaks with advice and support from the Project Team. In addition, they will be responsible for managing the relationship with local Indigenous Governments surrounding this project.
- This project is large and vital for the communities of the NWT and one that is only possible by working collaboratively around one risk.

9) POTENTIAL PARTNERSHIP RISK TABLES

Although there may be many more risks, the readily identified ones include the following:

Risk
Coastal Erosion & Submersion/Sea Level Rise
Storm Surges
River Erosion
Lake Erosion
Flooding – Freshette vs. Ice jam
Wildfire – Fire Breaks Wildfire – Firesmarting/Firefighting Infrastructure
Permafrost Decay – Foundation Impacts (Northern NWT) Permafrost Decay – Subsidence (Southern NWT)
Snow loads
Clean Air/Cooling Shelters
Winter Roads/Ice Bridges/Ferries
Severe Storms
Hydrological Impacts
Ice Safety – Ocean Ice Safety - Freshwater
Food Security – Agricultural Food Security – Traditional Harvest

Although we have written this from the perspective of community governments, others could still utilize this model for items that do not apply to community governments, i.e./ wildlife, on-the-land travel, etc.

10) **CONCLUSION**

Only by making the paradigm shift to Risk-Based Partnership Tables will we most effectively ensure the most proactive and robust approach to preparing for the impacts of climate change. Moreover, it will guarantee a move away from the scattergun approach and help to ultimately take the burden off of community governments to become experts in all of the community risks.

With the exception of the Territorial Government, most other organizations are managing their participation on the Climate Change file off the corner of their desk. This is not sustainable. These organizations will require funding to increase capacity if they are to continue to participate effectively.

Funds will also need to be allocated to helping to establish the partnership tables and to provide secretariat functions, whether these positions are located with various GNWT departments or as we propose with other groups like NGO's like the NWTAC.

By taking this approach, the NWT will be better prepared to take advantage of funding that will likely fall out of the Action Plan of the National Adaptation Strategy by changing to a more collaborative model in redeploying our resources.

Let's talk about how, together, we can get ready to take a proactive approach to climate change!

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