

A CHANGING CLIMATE

Communities are experiencing impacts due to a changing climate.

Parts of the Northwest Territories are warming four times faster than global averages and are experiencing considerable changes to the natural environment.

What do these changes in climate mean for communities?

Permafrost Changes – Capacity (e.g. expertise, budget, staff, training, etc.) is needed to repair or replace buildings, municipal infrastructure (wastewater and drinking water systems), and airports and roads (e.g. potholes, sinking, heaving) impacted by permafrost changes.

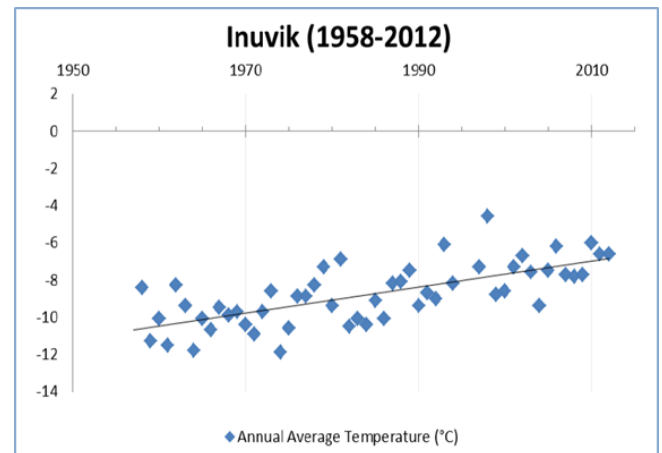
Warmer Air Temperatures – Safety and the reliability of transportation systems (e.g. shorter ice and winter road seasons) and travelling on the land (e.g. shorter winter travel season) are impacted; heating costs could decrease.

Wildland Fires – Investments will need to be made in fire smarting, modifying facilities to create respiratory respite areas, and protection of people and assets due to increase frequency and intensity of wildland fires.

Increased Precipitation – Capacity is needed to address increased pressures on drainage systems and increased structural loads (e.g. snow, wind) on buildings and infrastructure due to increased precipitation.

Food Security – Changes in wildlife and fish populations (as water temperature, seasonal flow, water chemistry and open water seasons change); food prices could go up as winter season shortens; a longer, warmer growing season could improve conditions for agriculture.

Coastal Erosion – Investments will need to be made to move structures and protect eroding shorelines due to impacts of higher water levels and thinner ice coverage.



Source: "NWT Climate Observations - Temperature and Precipitation Observations in the NWT - 1957-2012". Government of Northwest Territories, 2018, enr.gov.nt.ca/sites/enr/files/page_3_nwt-climate-observations_06-13-2015_vf_1_0.pdf



Photo credit: NWT Association of Communities

What can communities do?

Taking action now to make plans and implement adaptation measures will better prepare communities to meet the challenges of climate change, and take advantage of new opportunities.

Climate Change Adaptation Actions:

- ✓ **Monitor** – learn more about the changes occurring by monitoring indicators such as climate data, wildlife, vegetation, land and water. Incorporate traditional knowledge and science-based climate information.
- ✓ **Risk Assessment** – identify and assess climate change related risks (e.g. permafrost degradation risks to buildings and infrastructure, increased wildland fire risks, increased risk of flooding, etc.)
- ✓ **Hazard Mapping** – identify climate change related hazard areas (e.g. permafrost hazard mapping – active layer depth, permafrost depth, depth to bedrock).
- ✓ **Planning and Decision Making** – bring elders together with youth and community to discuss changes being observed on the land; and develop a Climate Change Adaptation Plan.
- ✓ **Implement** – reduce impacts and take advantage of opportunities (e.g. Pass on Traditional Knowledge from elders to youth, make infrastructure improvements, etc.).

Community Climate Change Adaptation Support is Available!

Tara and Miki can help your community project ideas happen. We can offer assistance with.....

- **Funding** – connecting your community to funding opportunities.
- **Proposal Writing** – developing and strengthening your community’s proposal or application.
- **Partnerships** – linking your community with partners in government, universities, or non-profit organizations.
- **Resources, Tools and Expertise** – accessing other resources: climate data, hazard mapping information, and various expertise.

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What is climate change adaption?

Adaptation involves taking actions to avoid the negative impacts of climate change and/ or to take advantage of new opportunities.