

## **Keewatin Tribal Council, Thompson Manitoba**

Keewatin Tribal Council (KTC) is home to eleven First Nations located in Northern Manitoba where the effects of climate change are being felt at a greater level than in southern Manitoba. There are many factors (related to lifestyles and community realities) that create unique vulnerabilities for those First Nations such as location, poor socio-economic conditions, poor health status, and inadequate infrastructure. Eight of these communities are remote and depend on winter roads for the majority of the transportation of goods, produce, equipment, fuel, and people. The impacts of climate change on winter roads leave many of these communities socially vulnerable (e.g. impacts to infrastructure, transportation, health, economy). With permafrost being the foundation material for all of these communities, the threat of permafrost degradation as a result of climate change is also leaving community infrastructure and transportation routes in a highly vulnerable state. As a result of these compounding factors, climate change impacts can exacerbate, in many cases, the already stressed health, wellbeing and cultural life of these First Nations.

# Community Based Climate Monitoring in Three Communities

## Water Quality Monitoring;

- Temperature
- Turbidity

## Fish Monitoring;

- Relationship between fish health and water quality
- Locally important fish species, fish identification, fisheries data entry

## Introduction to Wild Life monitoring;

- How to monitor wildlife and what are important safety considerations?
- How to collect data on wildlife and enter into spreadsheet

## Vegetation Monitoring;

- Introduction and measuring of species richness /relative abundance
- Locally important species and invasive species
- Set up quadrant sampling grid, collection of data from quadrants and enter into a spreadsheet

# Community Based Climate Monitoring in Three Communities

## Permafrost Monitoring;

- What is permafrost and how it is monitored?  
Visited Thompson Airport to observe the impact of permafrost and one outside location in bushes to observe and do practice exercises using auger
- Installation of equipment at 3 different locations in Oxford House and trained 2 youths to collect and store data by weekly and transfer it to Dr. Larry Dyke for analysis

## Indigenous Knowledge and Teaching:

- Indigenous Knowledge holder/ elder Teaching – water quality, wildlife, fish, vegetation. Culturally important species, local species
- Community coordinators need to contact local elders to get tradition knowledge

# Community Based Climate Monitoring

- Water Quality Monitoring



# Community Based Climate Monitoring



# Community Based Climate Monitoring

## Permafrost Monitoring Oxford House



# Community Based Climate Monitoring

Permafrost Monitoring Oxford House



# Community Based Climate Monitoring

Permafrost Monitoring Oxford House





# Community Based Climate Monitoring

## Vegetation and Traditional Knowledge



# Community Based Climate Monitoring

## Vegetation and Traditional Knowledge



# Community Based Climate Monitoring

## Vegetation Monitoring



# Community Based Climate Monitoring

## Vegetation Monitoring



# Community Based Climate Monitoring

Elder Talking about Medicinal plants



# National Conference CBM

CBM Conference at Regina



# National Conference CBM at First Nation University Regina



# Community Based Climate Monitoring

Community Meeting Oxford House





# Conclusion

- Water quality degraded in the last 30-40 years according elders and knowledge keepers
- Fish quality affected by degraded quality of water and other climatic factors
- Natural vegetation degraded, growth of berries and medicinal plants is affected
- Permafrost monitoring activities and data collection by youths since 2018 to date
- Youth were connected with elders and knowledge keepers
- Elders and knowledge keepers were encouraged to transfer traditional knowledge and values to youth including caring for Mother Earth

## **KTC Proactive Measures/ Actions**

- To reduce the degradation of environment KTC take some active measure
- End of Life Vehicle(ELV) and white good safe recycling
- Training youth in solid waste management planning with the support from ECO-Canada and ISC
- Training youth in green energy, land use planning, climate change adaptation with support from ECO-Canada and ISC.
- Other projects like green building, assets management, circuit riders programs etc. to reduce environmental degradation
- Awareness, mitigation and adaptation measures for reduction of negative impacts

THANK YOU VERY MUCH

