



CLIMATE CHANGE RESILIENCE IN THE CANADIAN ARCTIC

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01

SETTING

02

REGIONAL
IMPACTS

03

CURRENT ACTION

04

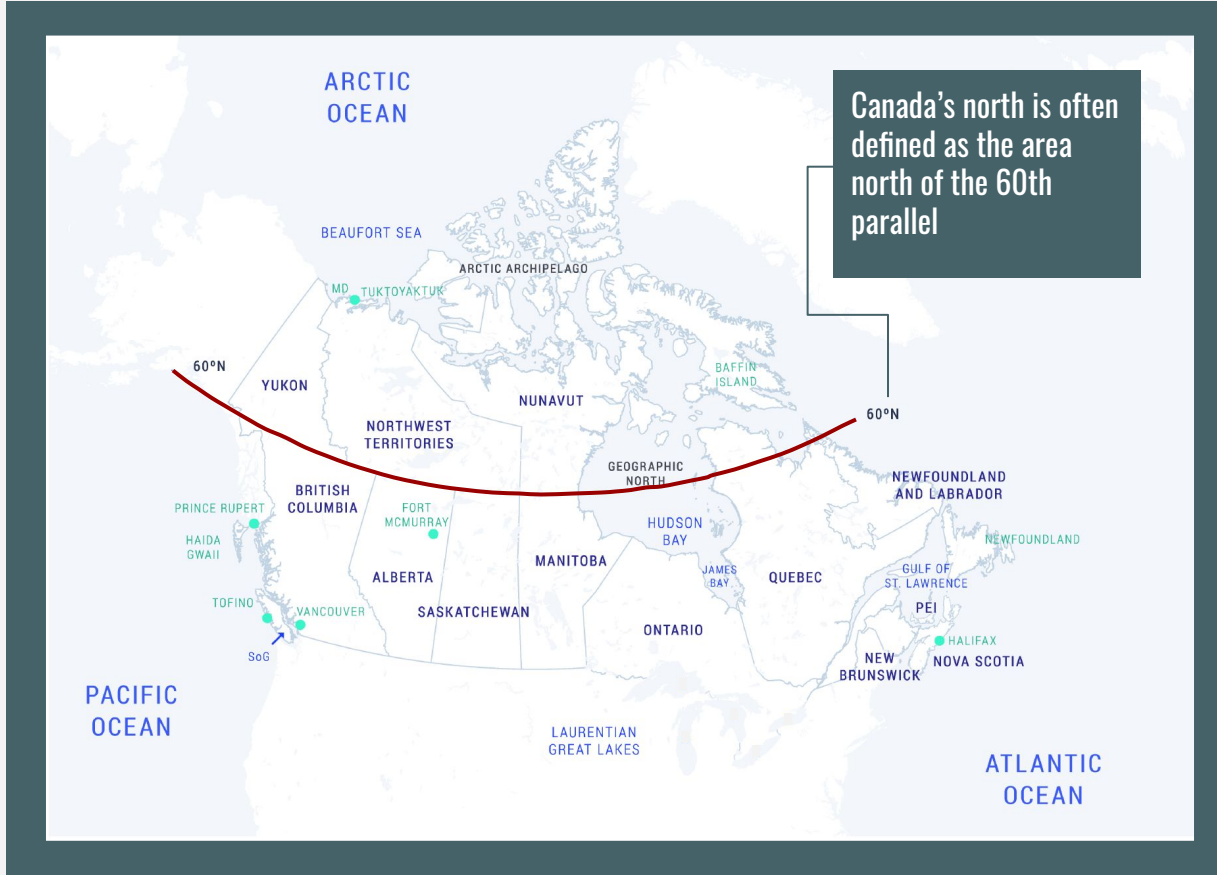
TUKTOYAKTUK, NWT

05

COLLABORATIVE APPROACHES
TO RESILIENCE

06

CONCLUSION





REGIONAL IMPACTS

Physical Impacts

Social Impacts

PHYSICAL IMPACTS

- Increasing seasonal temperature variation
- Melting permafrost
- Changing sea ice conditions
- Sea level rise and storm surges
- Coastal erosion





SOCIAL IMPACTS

- Loss of homes and livelihood
- Traditional harvesting practices
 - Ice safety
 - Changing animal migration patterns



CURRENT ACTION



CANADA

Pan-Canadian Framework on
clean growth and climate
change



YUKON TERRITORIES

Our Clean Future: A Yukon
strategy for climate change,
energy and a green economy



NORTHWEST TERRITORIES

2030 NWT Climate Change
Strategic Framework



NUNAVUT

Upagiatavut
Climate Change Centre



TUKTOYAKTUK, NWT

A community in crisis



TUKTOYAKTUK, NWT



Tuktoyaktuk and Climate Change



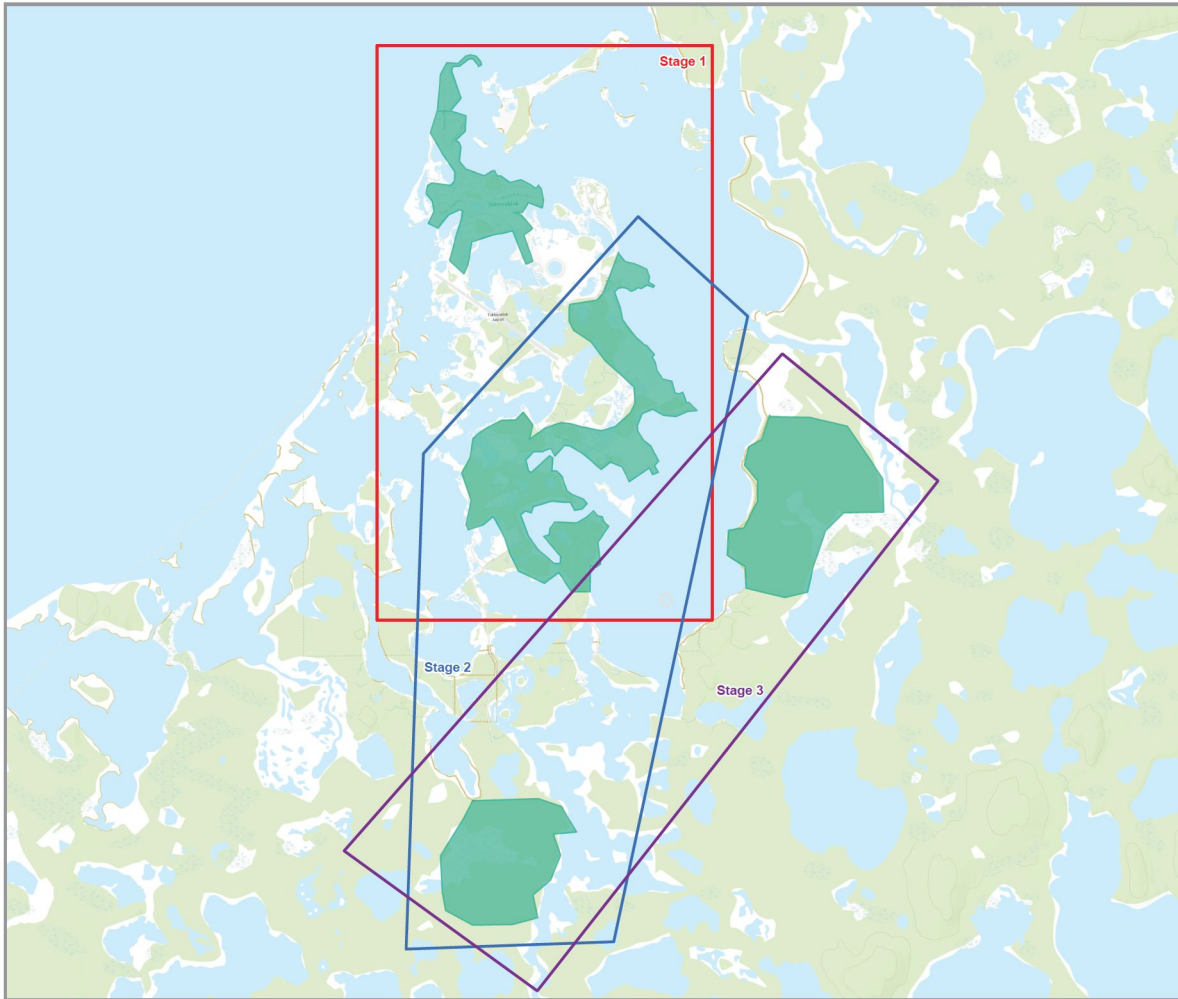
898 residents, 90% identify as Indigenous



Sea level rise and increased storm severity are causing coastal erosion at a rate of approximately 1 to 2 m per year



Estimated costs of \$20-50 million to protect the hamlet from erosion



HAMLET OF TUKTOYAKTUK

LAND USE CONCEPT MAP
Overview

 Development Areas

See detailed maps for each Stage

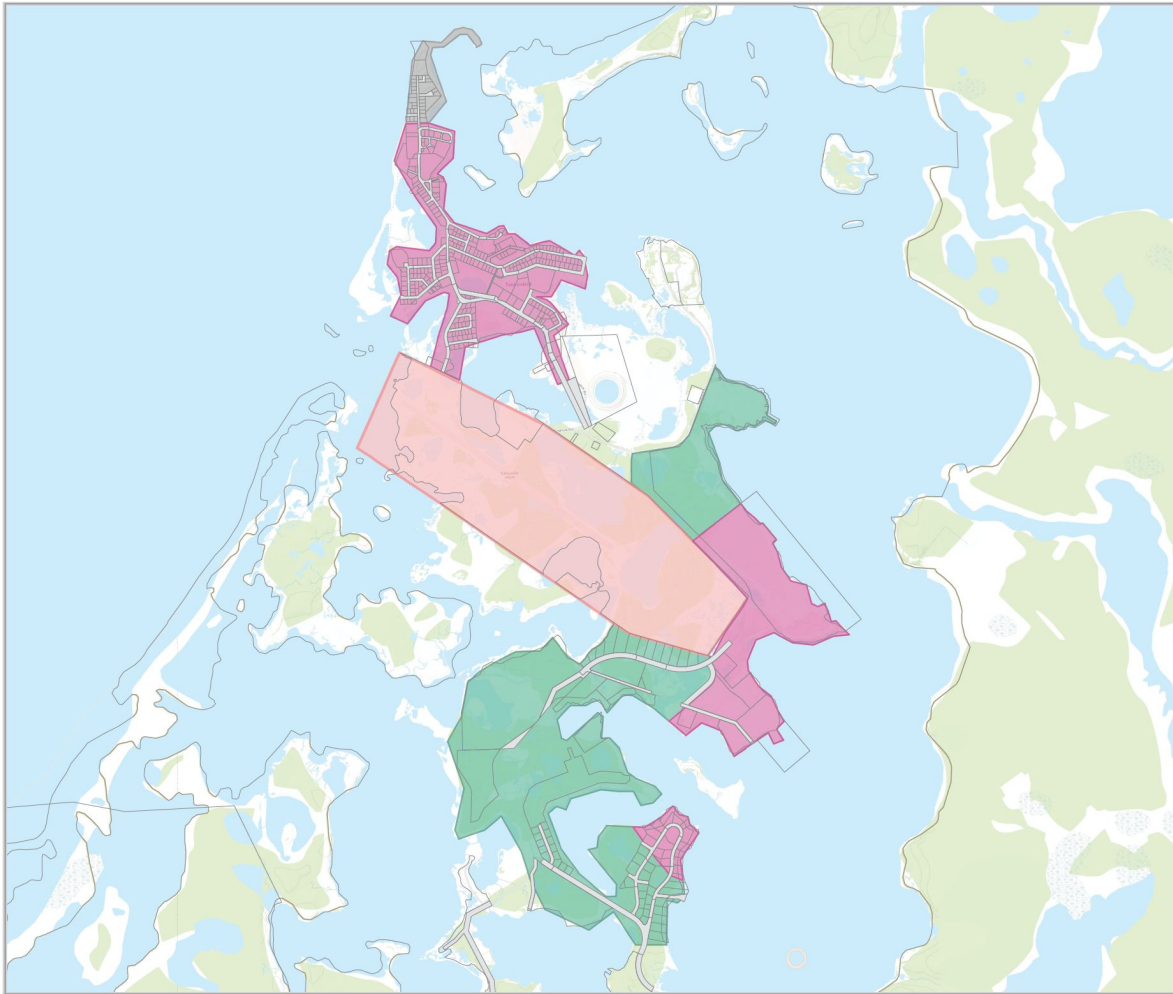


MAP DRAWING INFORMATION:
DATA PROVIDED BY GNWT

MAP CREATED BY: SCM
MAP CHECKED BY: MK
MAP PROJECTION: NAD 1983 UTM Zone 8N



PROJECT: 16-4098
STATUS: DRAFT
Date: 11/24/2016



HAMLET OF TUKTOYAKTUK

LAND USE CONCEPT MAP

Stage 1

Stage 1 Scenario

- No Development
- Developed Area
- Future Growth Area
- Airport

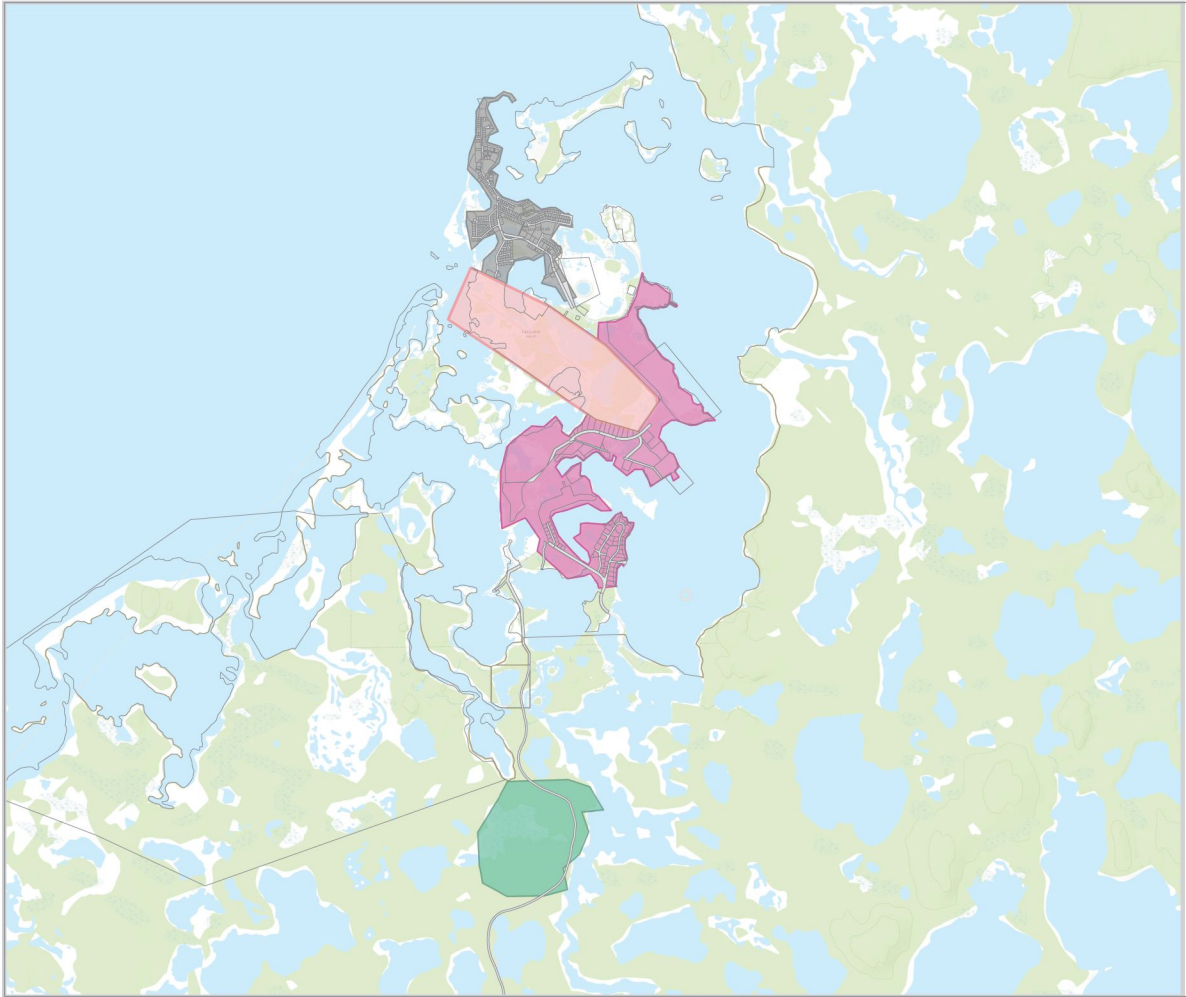


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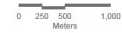
HAMLET OF TUKTOYAKTUK

LAND USE CONCEPT MAP
Stage 2

- No Development
- Developed Area
- Future Growth Area
- Airport

Note:

If the predicted erosion or flooding makes the grey area undevelopable, or increased demand because of population growth or economic activity, then Future Growth Areas will be developed.

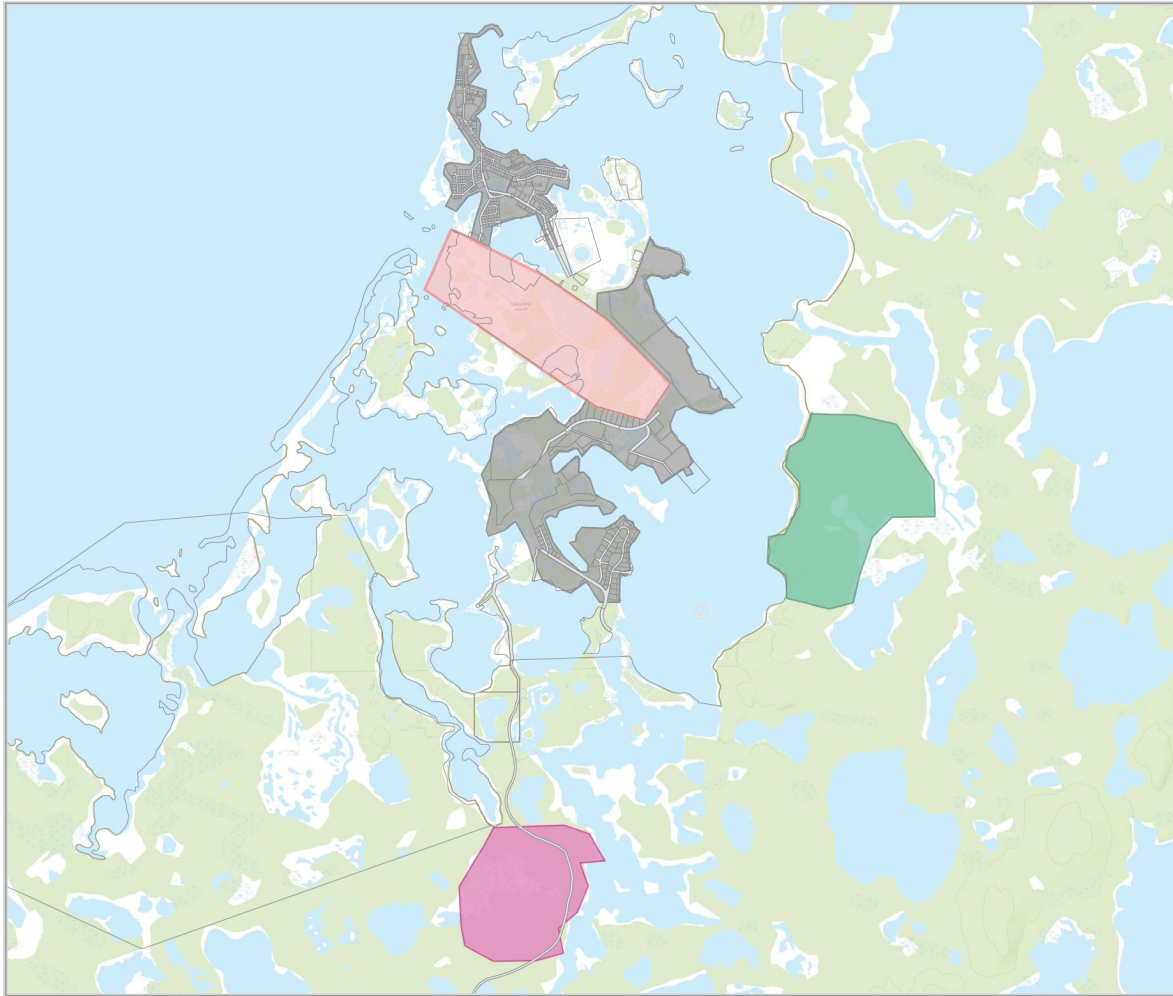


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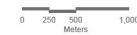
HAMLET OF TUKTOYAKTUK

LAND USE CONCEPT MAP Stage 3

- No Development
- Developed Area
- Future Growth Area
- Airport

Note:

If the predicted erosion or flooding makes the grey area undevelopable, or increased demand because of population growth or economic activity, then Future Growth Areas will be developed.



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MAP CREATED BY: SCM
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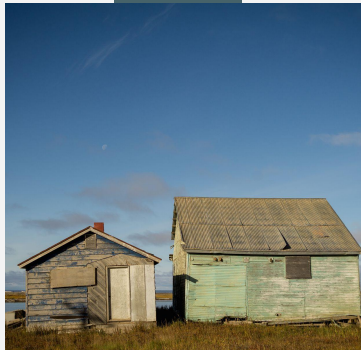
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COLLABORATIVE APPROACHES TO RESILIENCE BUILDING

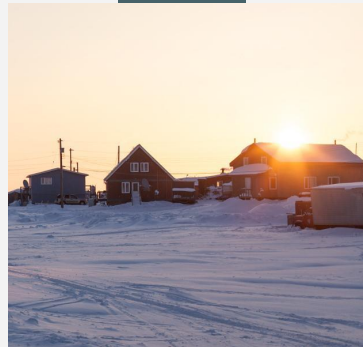
VERTICAL COLLABORATION

Limited resources at the
local scale



PROACTIVE vs REACTIVE

Access to resources can
impact whether action is
proactive or reactive



MAINSTREAMING

Mainstreaming climate
adaptation action within
existing local policies





TRADITIONAL KNOWLEDGE

AKA Quajimajatuqangit

Local knowledge of the landscape and climate bring perspectives often overlooked by “experts”

Indigenous peoples have historically had a high adaptive capacity

CONCLUSIONS

113,000 people

live in the Canadian North

Small isolated communities across the Canadian North experiencing significant physical and social impacts.

Time for Canada to approach climate change in the Arctic with a more collaborative mindset.



THANK YOU!

QUESTIONS?

For further discussion please
contact Seghan at:

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