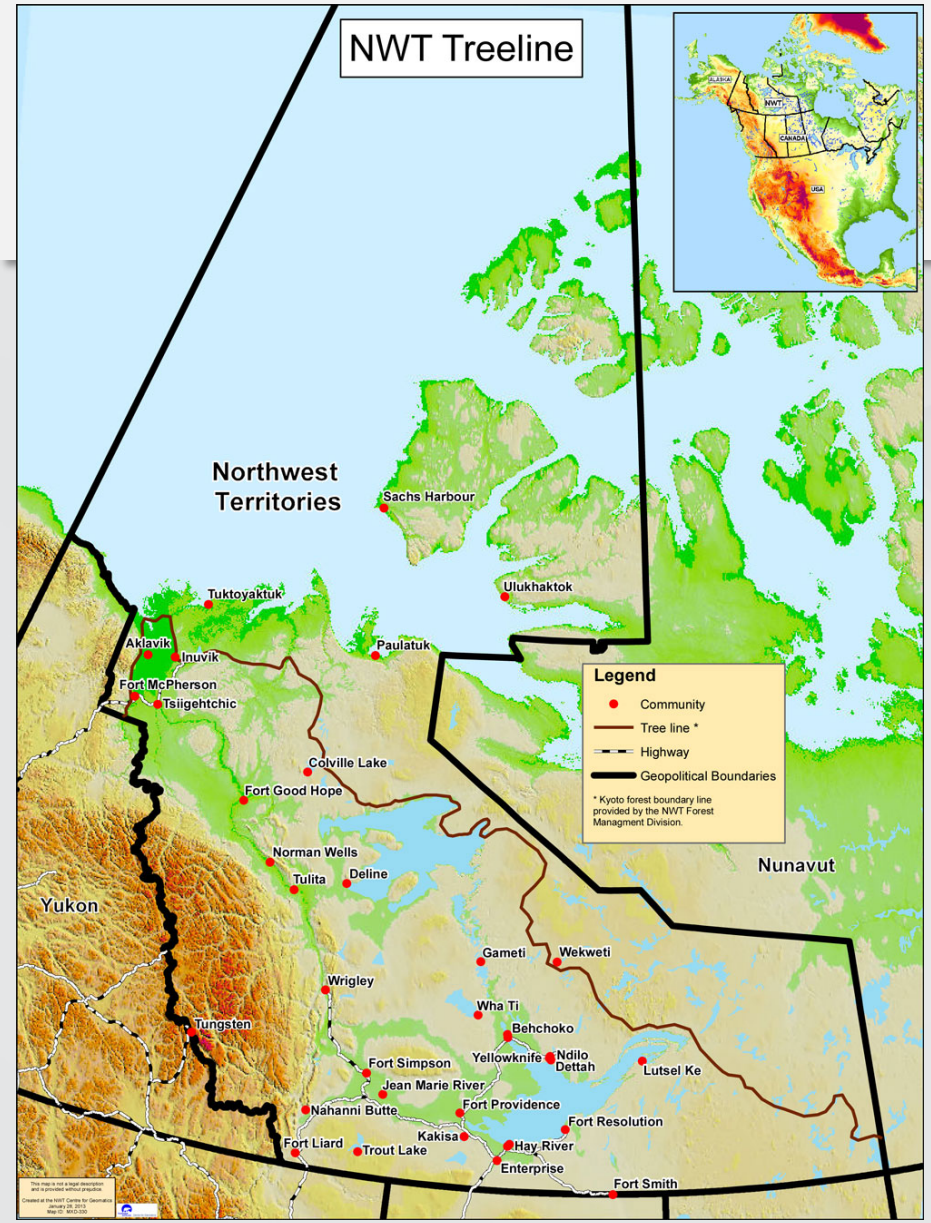
Government of the Northwest Territories Research Priorities

ABoVE Science Meeting January 25 2018

Northwest Territories
Environment and Natural Resources



Northwest Territories
Environment and Natural Resources

GNWT Knowledge Agenda

- Introduced in June 2017
- Provides overarching guidance for science funders and practitioners
- Established pillars
  - Cultural sustainability
  - Human health
  - Environmental stewardship
  - Natural resources
  - Sustainable communities
- Cross cutting themes
  - Changing climate
  - Technological change

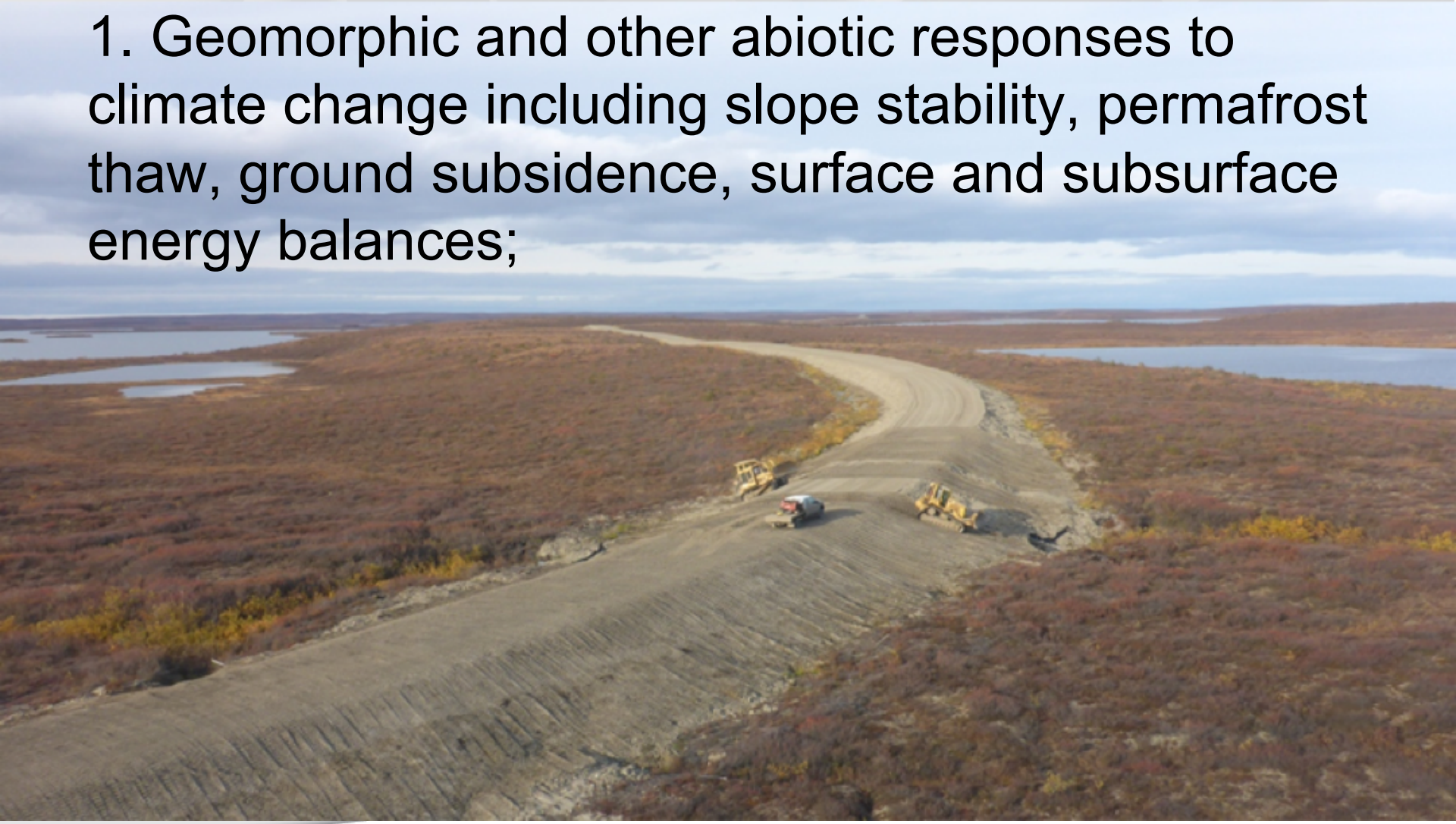
Climate Change as a Cross-Cutting Theme

"The north is experiencing rapid and extensive changes often linked to climate change. This phenomenon has far reaching effects. These effects are altering northern ecosystems and all aspects of life in the NWT, from the man made to the natural and physical environment and from the health of the residents to NWT's governance and socio-economic future".

GNWT Science Agenda

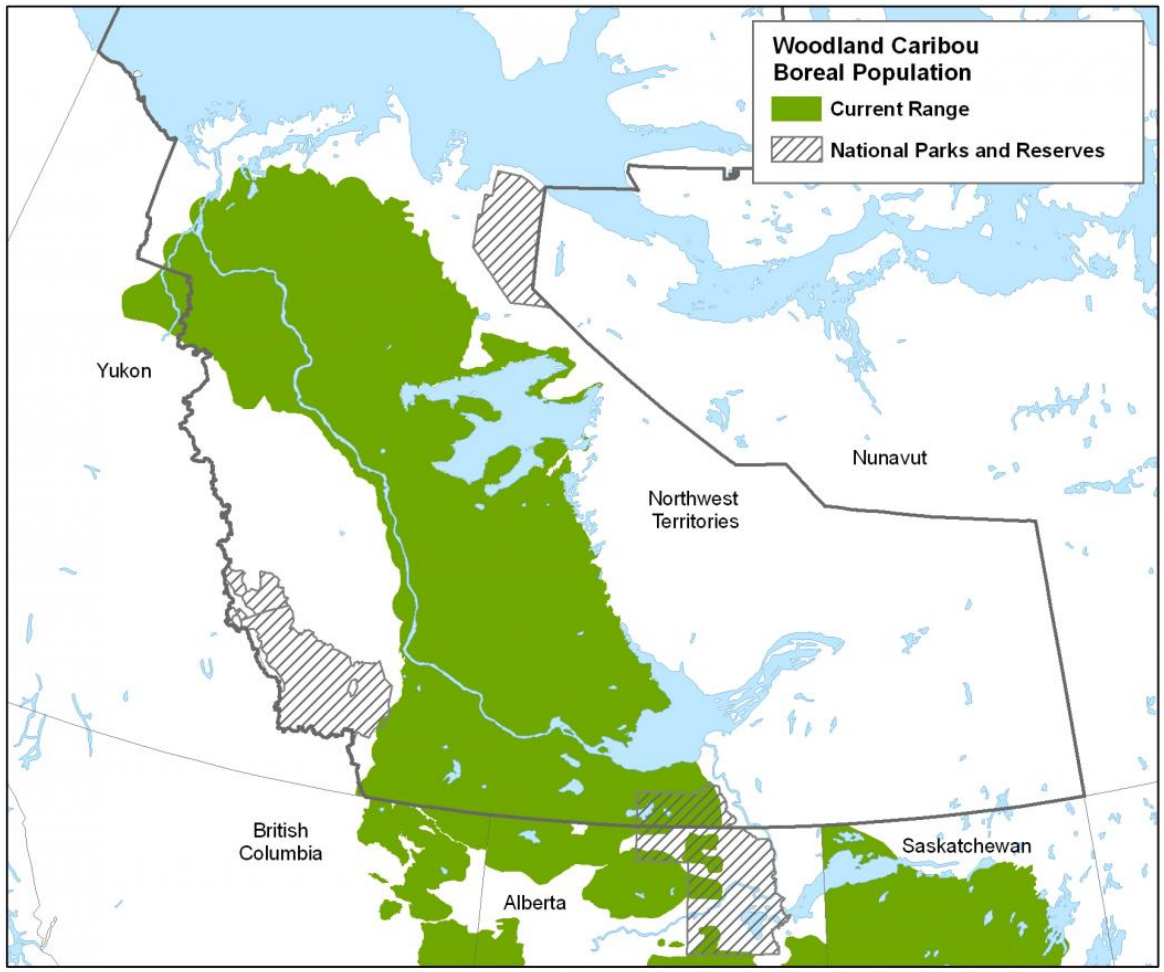
General Research Priorities

1. Geomorphic and other abiotic responses to climate change including slope stability, permafrost thaw, ground subsidence, surface and subsurface energy balances;



2.Terrestrial ecosystems changes, including forest composition change, fire behaviour and dynamics, conversion of one cover type to another type (e.g. forests to wetland or open tundra to shrub dominated taiga);

3. Implications of changing vegetation and water conditions for wildlife habitat, and for those communities whose traditional economies are dependent on harvest of potentially impacted species such as caribou;


Woodland Caribou
Boreal Population
Current Range
National Parks and Reserves
Yukon
Nunavut
Northwest
Territories
British
Columbia
Alberta
Saskatchewan

Bathurst Caribou Range Planning

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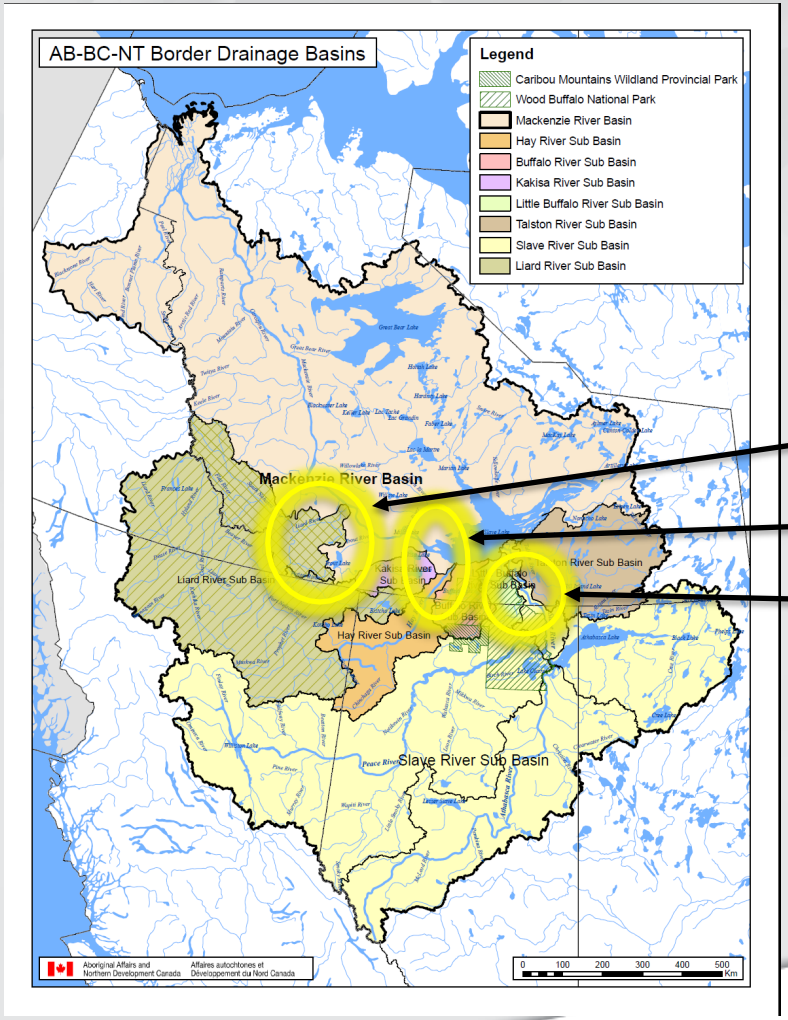
Environment and Natural Resources

4. Hydrological changes, including changes to runoff and storage processes, rates and timing of river flows;



Liard River

Hay River

Slave River

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Environment and Natural Resources

5. Greenhouse gas flux changes and potential changes to air in quality in response to both changing climate and to induced changes in ecology and hydrology;

6. Feedbacks, linkages and interactions among the abiotic, ecological, hydrological, and geochemical processes and changes listed above;

7. The impact of all of these changes on Human and community health;

8. The impact of all of these changes to cultural and heritage resources within the NWT;

9. The development of applied research to support integrated mitigation and adaptation strategies related to these changes.