

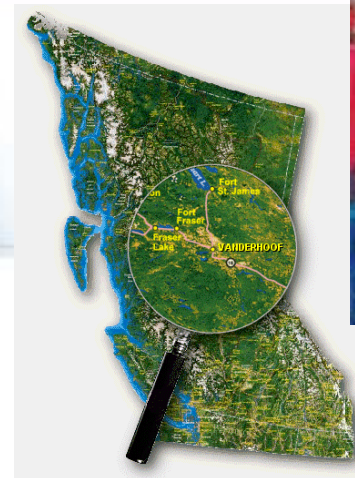


Climate change and forest-based communities: The case of Vanderhoof



B. Frenkel: District of Vanderhoof

T. Williamson: Canadian Forest Service



Natural Resources
Canada

Ressources naturelles
Canada

Canada

Purposes



- Potential sources of vulnerability in resource based communities based on the Vanderhoof case study
- Issues in linking the science of climate change impact assessment to planning and decision making at community scales.
- Community adaptation

Reasons for concern in BC forest-based communities



- Strong economic ties to climate sensitive forests (timber supply)
- Potential for increase in harvest and management costs
- Potential for market impacts due to increased global supply of forest products
- Potential for increased exposure to wildfires

Logical steps for forest-based communities



- Determine sources of vulnerability
- Decide on a strategy for adaptation to mitigate impacts
- Build adaptive capacity

Challenges



- Need for predictions or projections of the future
- Complexity and uncertainty
- Cross cutting and interrelated impacts
- Dynamic change

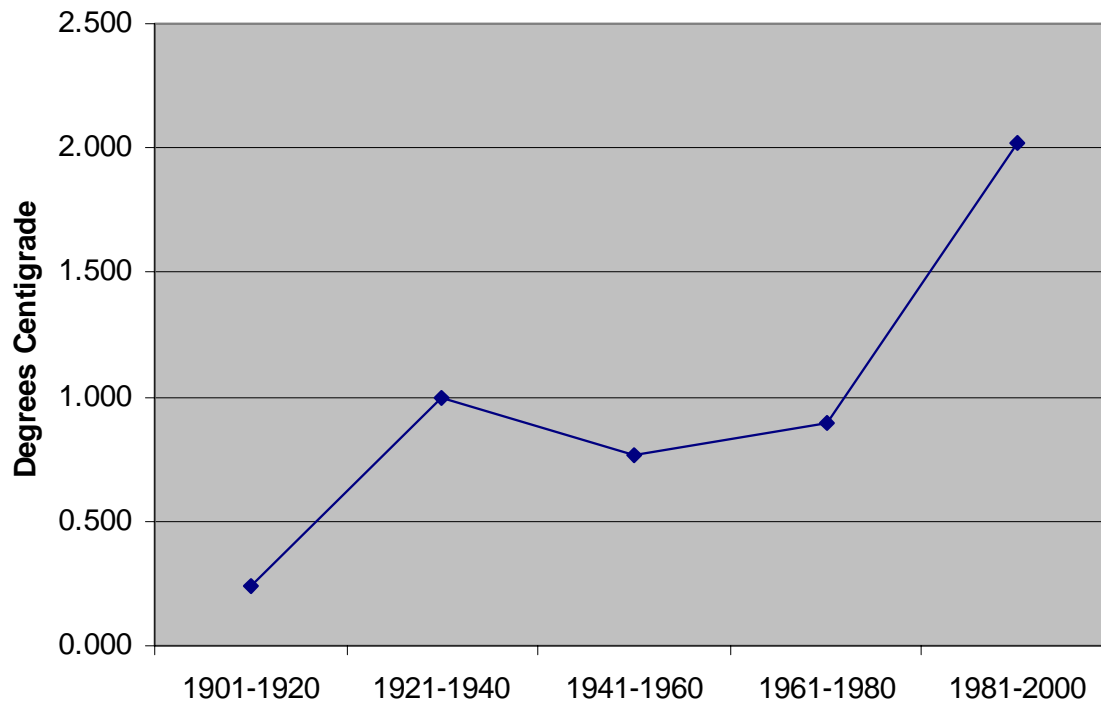


“Its tough to make predictions. Especially about the future!”

Recent climate change around Vanderhoof

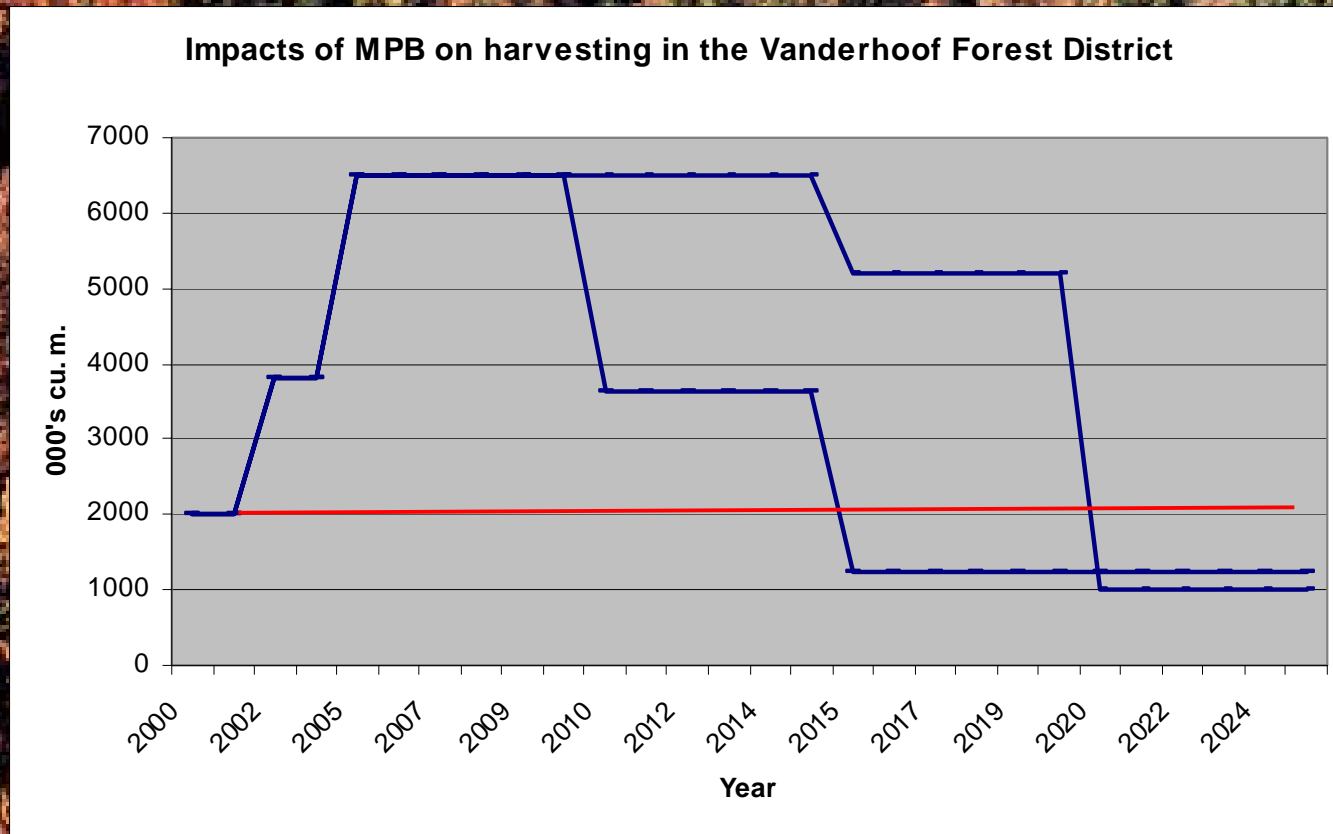


Trend in 20 year average temperature between 1900 and 2000 in the Vanderhoof area



Global temp
increase = 0.76°C
IPCC, Fourth
Assessment Report

The Vanderhoof economy



Large fires in beetle killed stands



Photo Credit

Dave Marek

BCMOF

2003

At Tweedsmuir
Park

Vanderhoof flood threat during the summer of 2007



Photo credit: Alcan Primary Metal



Local stakeholder observations



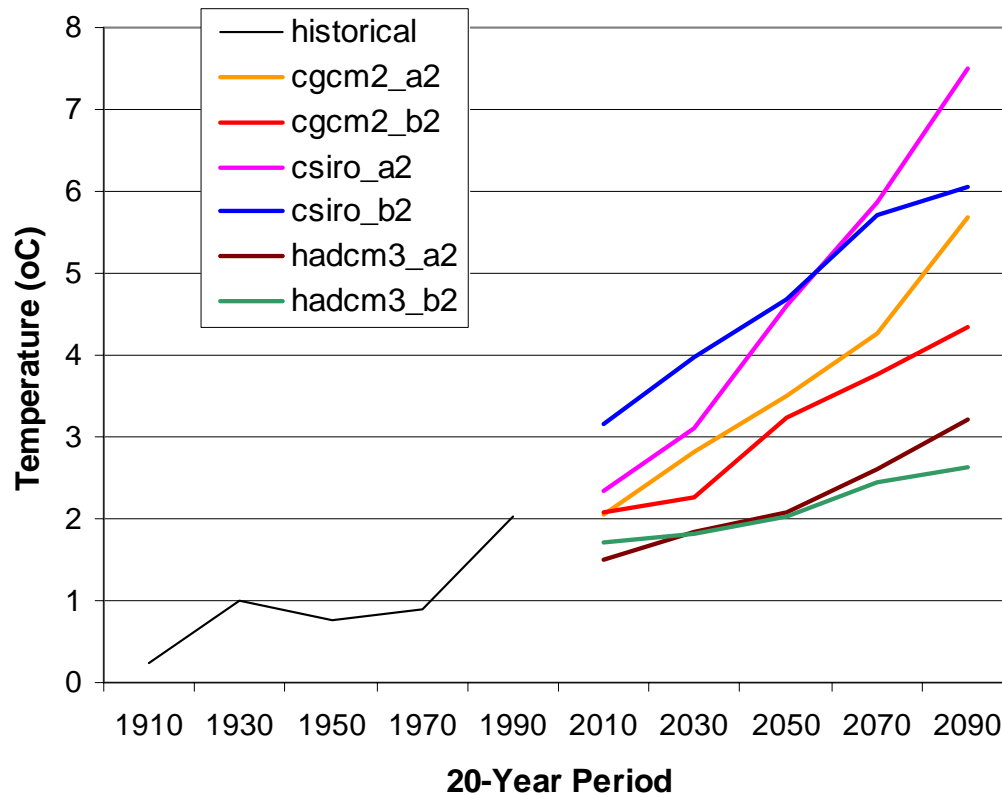
- 89% of respondents are concerned about climate change.
- 58 % felt that there would be long-term environmental impacts that would have impacts on the economy.
- Local stakeholder observations
 - Easier winters
 - New bird species
 - Hydrology (more water / faster runoff)
 - More winter kill of agricultural products
 - Streams and lakes not freezing thick enough

Source: Frenkel, B. 2005. Vanderhoof stakeholders study. Avison Management

Future climate change in the Vanderhoof area



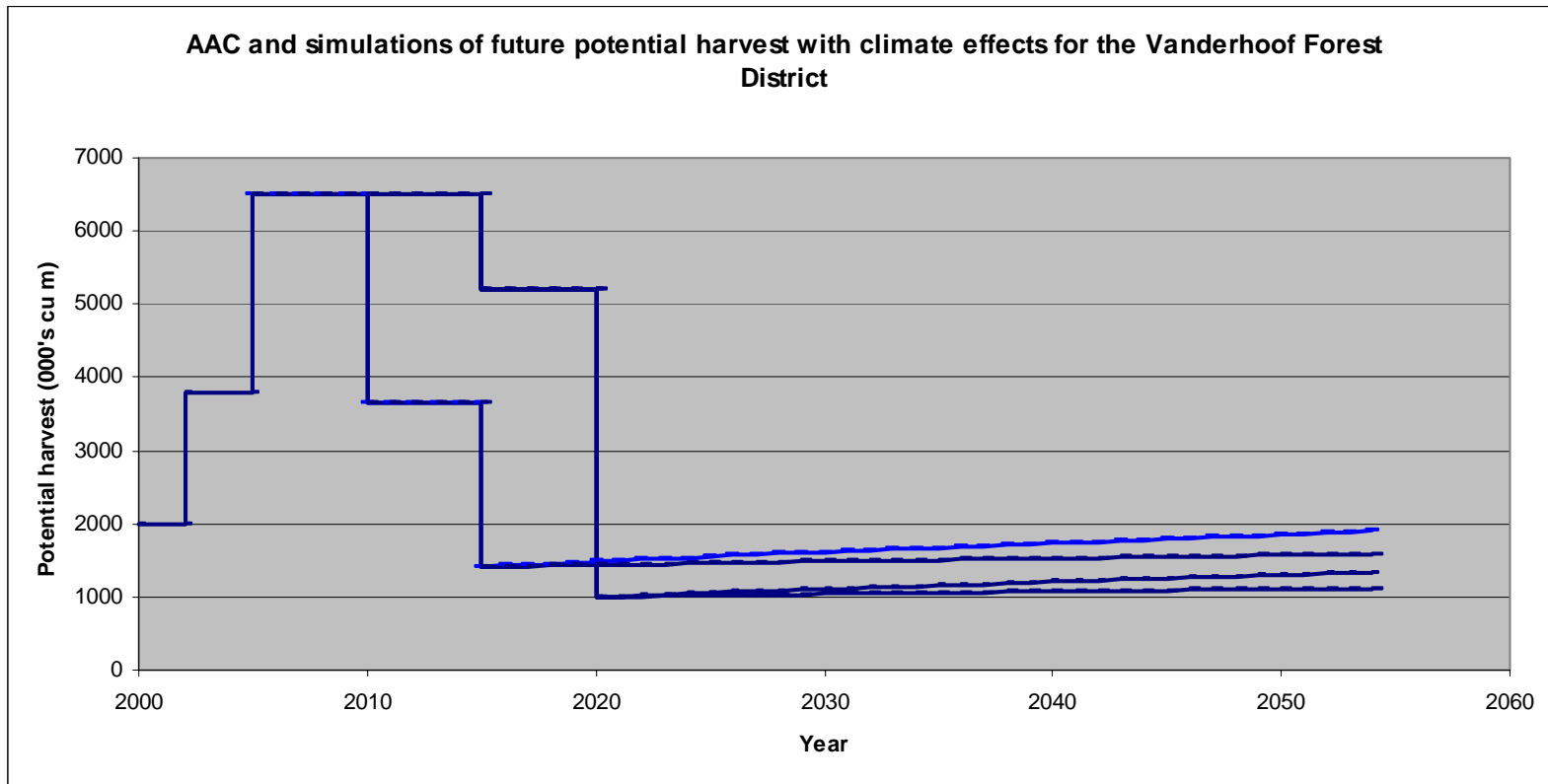
Annual Mean Daily Temperature
20-Year Periods, Vanderhoof Study Area



5.5 C

Analysis conducted by Dr. David Price: Natural Resources Canada, Canadian Forest Service

Effects of climate change on local forests and timber supply



Source of data for 2000 – 2020: Peterson, L. 2004. Prince George TSA: Rationale for AAC determination. BCMOF

Projections for 2055 are based on biophysical modeling of climate impacts on forests in the study area by Dr. David Price, Natural Resources Canada, Canadian Forest Service

Summary of future forest related impacts



- A smaller forest sector after the beetle salvage is finished
- Continuation of forest cover and increases in forest productivity over time but harvest do not recover to 2000 levels
- Increased competition in global markets and higher harvest costs
- Increased wildfire activity in the area

Vanderhoof's adaptive capacity

- Strengths
 - Strong and dedicated leadership – entrepreneurial
 - Active community - engaged
 - Strong social networks
 - Residents are aware and concerned about climate change
- Needs
 - Access to sources of capital to rebuild asset base
 - Continue to be a participant in land use planning and land use decisions
 - Access to tools, technologies, and resources for economic development and diversification
 - Job training in response to anticipated economic restructuring
 - The flexibility and authority to adapt

What is needed by communities?



- Baseline Data
- Capacity Building
- Provincial and Federal Incentives
- Best Practices / Sharing Successes

Community responses to current impacts



- Understand the Climate Change Pulse within your community
- Reactive Response
- Proactive Response

Planning for the future



- Strive to reduce greenhouse gas emissions and reduce our communities vulnerability to future changes in climate and extreme weather events
- Improve energy efficiency and help businesses prepare for potential climate impacts
- Ensure our community interests are protected in the implementation of any national or provincial climate change policies

Thank You

