Trends in Annual Temperature
1950-2002

Daily Minimum

Daily Maximum

Change (°C)

0 to 0.5
0.5 to 1
1 to 1.5
1.5 to 2
2 to 2.5
2.5 to 3
3 to 3.5

Meteorological Service of Canada
Bars show the range in 2100 produced by several models.
Changes in Southern Interior forests

As climate warms, some plant species in British Columbia's Interior will extend their ranges northward and to higher elevations. Drought...
CHARACTERISTICS OF CLIMATE CHANGE

- Large amplitude
- Extremely rapid
- Oscillating between extremes
- Global extent
- Highly disturbed landscape
Two Strategies

- Prepare for opportunities and challenges: realistic rate of emissions reduction inadequate to prevent major change
- Reduce CO2 emissions markedly: otherwise risk catastrophic transformation, a collective and individual responsibility
Considerations

• Prepare for **extremes and surprises**: floods, droughts, pest out-breaks, impacts outside BC

• Foster **bold experiments**: forestry plantings, policies, incentives

• **Inaction carries** extreme **risk** of negative impacts

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**Carbon Stewardship**

Adaptation and Mitigation

Balanced values for the future

• **Living carbon**: organisms and ecosystems: sustain humans, ecological processes; future insurance, scrub CO2

• **Dead carbon**: organic matter in soils, wastes; sustains living carbon, stored carbon, energy source

• **Ancient Carbon**: fossil fuels; ready and reliable energy source; predominant cause of climate change
Knowledge and Skills

• **Capacity to think, innovate and plan:**
  – Pacific Climate Impacts Consortium at UVIC
  – Restoration of Natural Systems Program
  – RBCM exhibit

• **Capacity to act:** policies land, decision making, land and resource management

• **Economic commodity:** skills and knowledge marketable globally
Rivers, Lakes, Wetlands
Watershed Resilience

- Holistic, not element specific
- Ecological: keep and regenerate complex natural ecosystems; reverse/end disturbance; eliminate stress (exotics, pollutants)
- Hydrological: Detention, infiltration porosity, accommodate extremes; limit simple engineered solutions

Restoration is Mandatory