Climate Change
Impacts and Adaptation Program

Programme sur les impacts et l'adaptation liés aux changements climatiques

Community Adaptation to Climate Change in BC

UNBC UNIVERSITY OF NORTHERN BRITISH COLUMBIA

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Project Goal:

To work with the City of Prince George to develop a climate change adaptation strategy that can be incorporated into long term community plans.

Methods:

- Partner with the Pacific Climate Impacts Consortium (PCIC) to provide climate projections that can be used to assess the potential changes to Prince George.
- Organize a workshop at the 2008 Planning Institute of BC (PIBC) conference on community adaptation to climate change, with a focus on the case study municipality of Prince George. I will use the feedback and results of the workshop to develop the strategy.

Prince George is already encountering problems that are partially attributable to climate change such as flooding & increased forest fire risk.

Figure 1: Effects of recent ice jam flooding on Nechako River [1]

Figure 2: Home surrounded by pine beetle affected forest[1]

The Changing Climate in BC and Prince George:

- Over the last 100 years, precipitation has been increasing throughout BC (Figure 3). In 2050, mean annual precipitation in Prince George is expected to increase by 15 to 20 % over current levels (Figure 5). More precipitation will fall as rain than snow. There will also be more extreme precipitation events.[4]
- Over the past 100 years, temperatures have been rising in BC (Figure 4). In 2050, the mean annual temperature in Prince George is predicted to be 2.0 to 2.5℃ warmer then current levels (Figure 6). Winter temperatures will increase more than summer temperatures. Minimum temperatures will also rise more than maximum temperatures; thus making Prince George 'less cold' rather then warmer. [4]

Figure 3: Change in mean precipitation in BC from 1900 to 2004, expressed in% per decade[2]

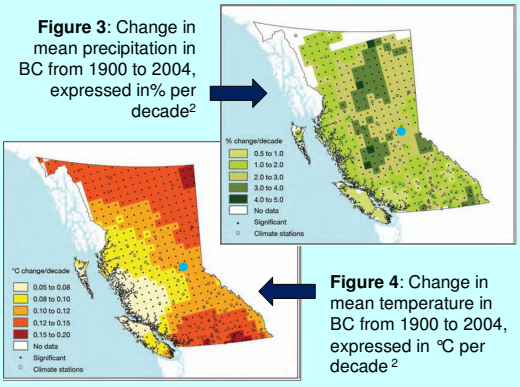


Figure 4: Change in mean temperature in BC from 1900 to 2004, expressed in ℃ per decade [2]

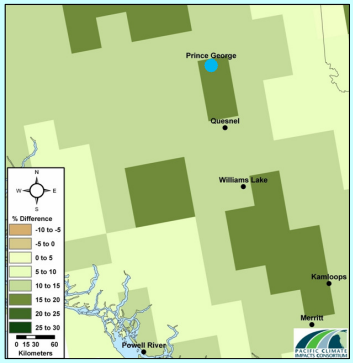


Figure 5: Projected % change in precipitation in central BC: 2050 [3]

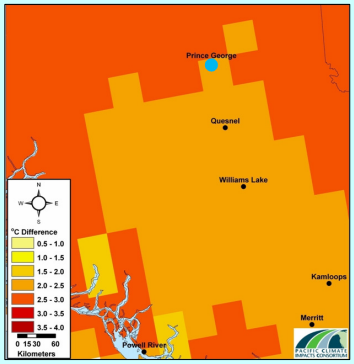
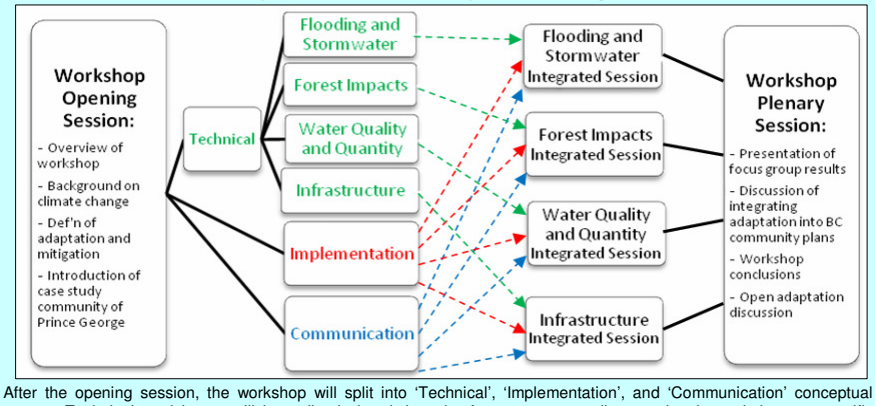


Figure 6: Projected ℃ change in temperature in central BC: 2050 [3]

Planning for Climate Change Workshop Structure:



After the opening session, the workshop will split into 'Technical', 'Implementation', and 'Communication' conceptual groups. Technical participants will immediately break into the focus groups to discuss planning solutions to specific changes and modeling requirements. The Implementation and Communication participants will have separate sessions to discuss key ideas, and will then split up and join the focus groups. These groups will craft integrated solutions to help Prince George adapt to climate changes, and will present conclusions to the entire conference in the plenary session.

Outcomes: The results of the workshop and modeling exercise will be used as I work with the City of Prince George on a Climate change adaptation strategy. The City plans to incorporate this strategy into the upcoming revision of its OCP.

References:

1-Courtesy of the City of Prince George.

2-Walker I.J., Sydneysmith, R. 2008. British Columbia in From Impacts to Adaptation: Canada in a Changing Climate 2007, edited by D.S. Lemmen F.J. Warren, K. Lacroix and E. Bush; Government of Canada, Ottawa ON. P. 329-286

3-Courtesy of the Pacific Climate Impacts Consortium

4- IPCC, 2007: Rosenzweig, C., G. Casassa, D.J. Karoly, A. Imeson, C. Liu, A. Menzel, S. Rawlins, T.L. Root, B. Seguin, P. Tryjanowski, 2007: Assessment of observed changes and responses in natural and managed systems. Climate Change 2007: Impacts, Adaptation and Vulnerability. Cambridge University Press, Cambridge, UK..

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