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PCIC presentation at CCCma Lunchtime Seminar series

Title: PCIC and BC Climate Overview -- How to meet the urgent need for climate information for social and economic applications?

Presenter: Dave Rodenhuis and Arelia Werner

Location: University of Victoria, ISC 370 <http://www.uvic.ca/buildings/isc.html>

Date: 15 November 2007

Time: 12:00-1:00

Abstract:

To mitigate global climate change is very difficult. If so, can we learn to adapt? If so, methods of adaptation should be based on knowledge from the physical sciences: estimates of future climate impacts that are reinforced by an awareness of historical trends. How can this information be reliably assembled from a diverse research community, and how can it be applied on a regional scale? Several centres and panels have demonstrated success in identifying climate changes, impacts and applying climate information to social (government) planning and commercial decision-making. What about western Canada?

The Pacific Climate Impacts Consortium was formed to address these questions in British Columbia and Pacific North America. Recent results from a climate overview of BC are the foundation for future work in hydrologic modeling and diagnostics of regional climate models. For example, Murdock and Bennett seminar (18 October) indicates up to 3.5 oC increase in minimum daily temperature, but large uncertainty in changes of precipitation. In a complex environment containing several hydro-climatic zones, estimates of current trends and future projections of accumulated snowpack, glacier area, and streamflow are presented. For example, a decrease in snowpack that was prevalent over a period of more than 50 years became less clear in the last 30 years. Glacier area has decreased over much of the province, most dramatically since 1977. Finally, streamflow shows significant responses to modes of climate variability and trends in minimum and maximum daily flows reflect changes to water sources such as increased winter precipitation, decreased snowpack, and reduced glacier area. Future projections of streamflow show changes to the seasonal timing of streamflow, such as earlier streamflow maxima and extended dry seasons. These results are neither certain nor homogeneous within BC, and they present a challenge to water managers and investors in hydropower.