

Glacier-Climate Processes and Glacier Response to Climate Change

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Abstract:

Even seasoned glaciologists have been surprised by the rate and extent of global glacier response to climate change. Glacial environments in both alpine and polar regions are witnessing increased melt and accelerated dynamical ice discharge. This is driving up global sea level and altering the hydrology, ecology, and landscape of mountain regions. Several aspects of glacier-climate interactions make glaciers particularly sensitive to climate change. I will discuss some of these processes and examine their effects on glaciers and water resources in western Canada. I will also introduce potential modelling strategies for capturing these effects in climate models and climate change impact studies.

Shawn will be spending four months at PCIC to work on writing up his research results. His stay at PCIC will foster collaboration with PCIC hydrologist and downscaling specialists who are working to evaluate the impact of climate change on streamflow in BC, including the influence of glacier change on streamflow.