

NRES / CSAM RESEARCH COLLOQUIUM SERIES

FRIDAY

MAR. 24, 2006

3:30 - 4:30 pm

**ROOM
NUMBER
6-205/211
(Conference Centre)**

**LIGHT
REFRESHMENTS
SERVED AT 3:20 PM**

Dr. Martin Sharp
Professor and Chair
Department of Earth
and Atmospheric Sciences
University of Alberta



40 Years of Glacier Change in Canada's Arctic

This presentation will describe the changes in extent and volume of glaciers and ice caps in the Canadian Arctic Archipelago that have taken place since 1960, and evaluate the consequences of these changes for global sea level. The relative contributions of surface mass balance and iceberg calving to mass loss will be evaluated and the relationships between mass balance changes, observed trends in climate and atmospheric circulation, and the combined forcing from atmospheric greenhouse gases and stratospheric ozone depletion will be discussed. Possible mechanisms for a non-linear response of ice caps to climate forcing involving interactions between surface mass balance, the hydrology and flow dynamics of major outlet glaciers and iceberg calving fluxes will be outlined.