



# Variability and trends in the short-wave albedo over Canadian Rocky Mountains detected from coarse resolution satellite data



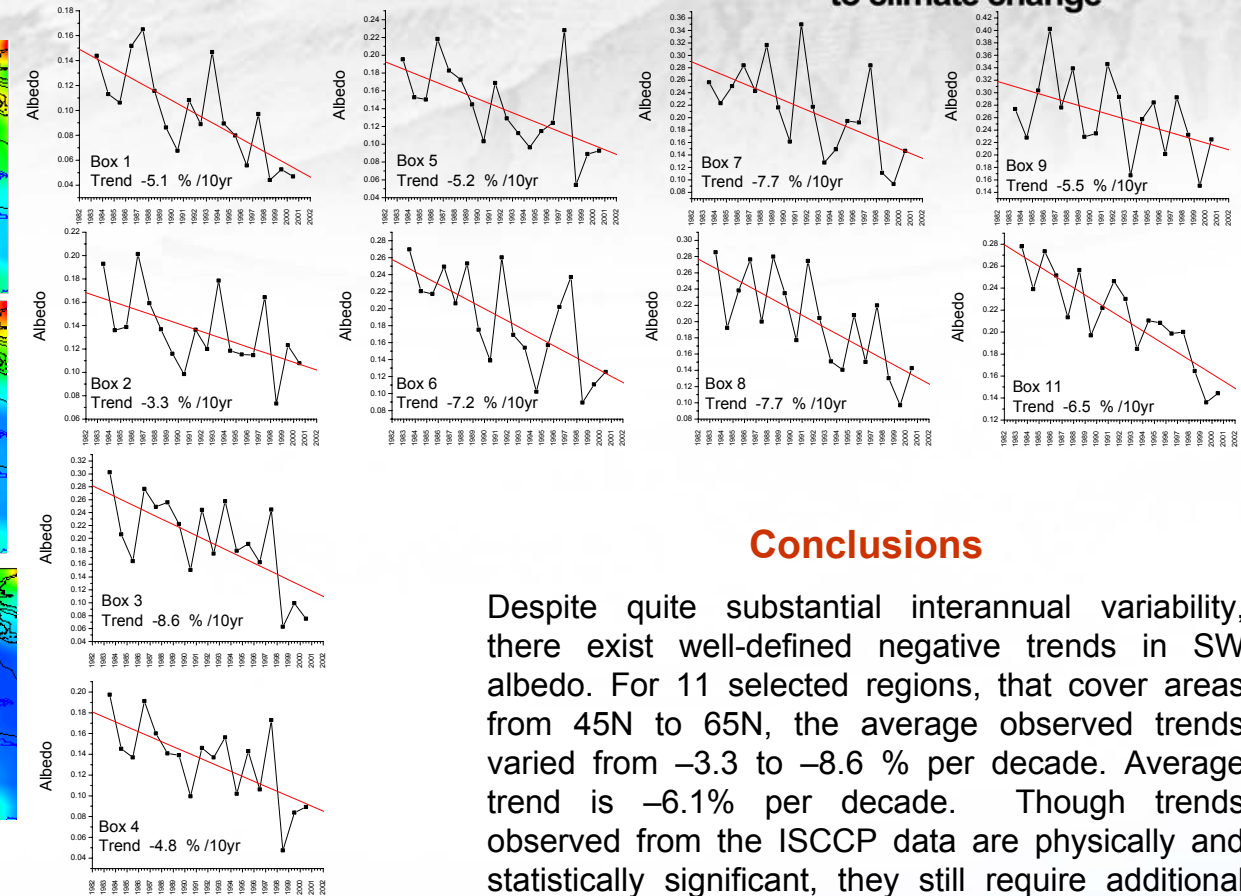
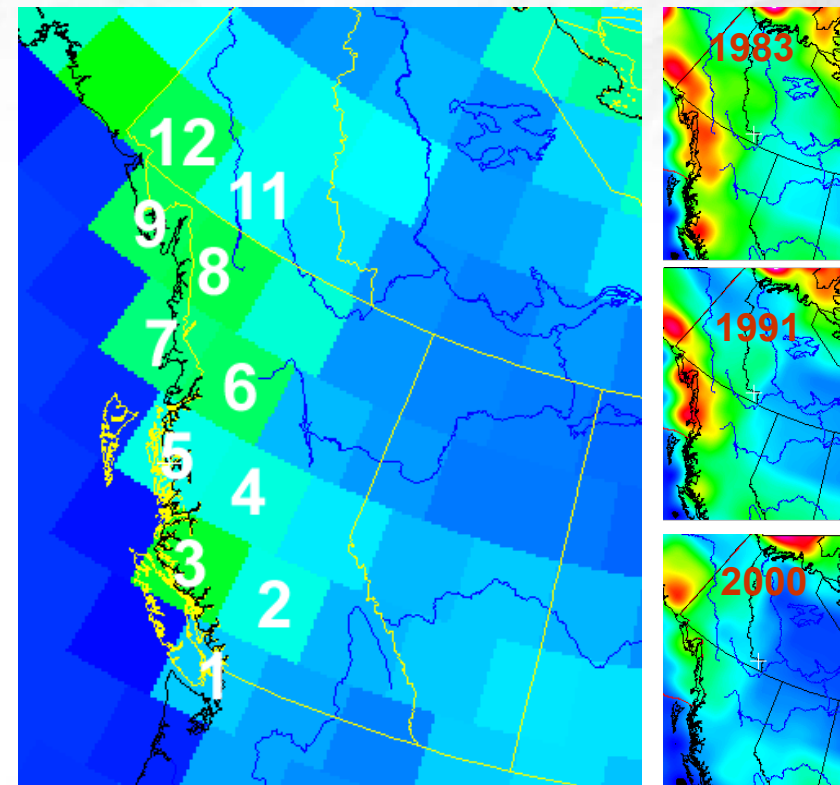
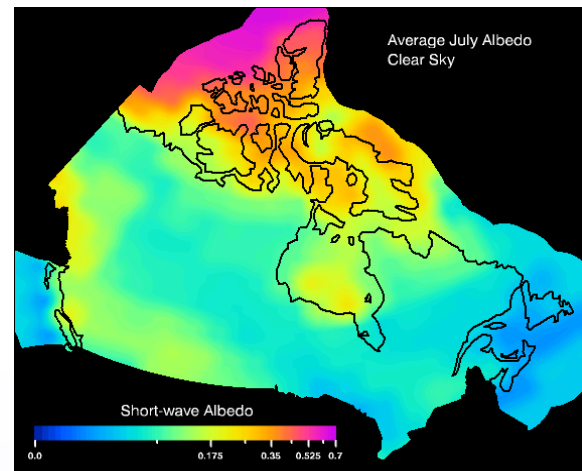
A. P. Trishchenko, M. Demuth, A. Jevtic

## Introduction

Shortwave albedo (SW) of mountainous regions serves as good indicator of climate change. SW albedo for relatively low altitudes may reduce due to shrinking of snow/ice pack in the warming climate. For high elevations, albedo may change depending on the amount of precipitation (snow). We analysed coarse resolution satellite data available from International Cloud Climatology Project (ISCCP FD) to detect variations and trends of shortwave (SW) albedo over Canadian Rocky Mountains from 1983 to 2000.

## Reducing Canada's vulnerability to climate change

### Average SW albedo for July 1983-2000



## Conclusions

Despite quite substantial interannual variability, there exist well-defined negative trends in SW albedo. For 11 selected regions, that cover areas from 45N to 65N, the average observed trends varied from  $-3.3$  to  $-8.6$  % per decade. Average trend is  $-6.1\%$  per decade. Though trends observed from the ISCCP data are physically and statistically significant, they still require additional verification from detailed satellite imagery analysis.

National-wide maps of short-wave albedo anomalies for July from 1983 to 2000

