

## Changing Cold Environments. A Canadian perspective

Hugh French, Olav Slaymaker (eds.)

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The book was written by 17 authors co-ordinated by two experienced editors. The author's team consisted of specialists dealing systematically with numerous topics forming a rich mosaic of recent polar ecology. In spite of the fact that the book presents results of Canadian research in majority of cases, it brings an excellent background for understanding the specificities of both northern polar region and global environmental issues.

The book is divided into three parts which include

- spatio-temporal variability of cryosphere in Canada
- Canadian Subarctic and Arctic environments as changing dynamically under external factors
- Recent changes ongoing there and information on the likely future development.

The first part provides general information about Canadian Arctic including physical geography of Canada. Particular chapters forming the first part are devoted to past and recent processes involved into the development of Canadian territory. Individual topics are presented in logical order. Introductory chapters deal with late quaternary glaciation of Northern Canada followed by the part devoted to glaciation effects on relief formation and vegetation cover formation dynamics. Then, after such *introduction to basic environmental situation*, the part describing methods and approaches of climate data collection is presented. The exploitation of the approaches in environmental studies is described in the book part as well.

Following two book parts are interconnected by common topic, *i.e.* changes in cryosphere. At the beginning, changes in environmental factors are described from late Pliocene to present. Then snow cover, thawing water flow, spatial structure of permafrost, freezing of lakes, rivers and sea water are described into details. Individual topics related to cryosphere are interconnected by the description of their individual responses to climate change. Also their likely future development is mentioned and generally described.

In the last part of the book, the above-specified topics are characterized from regional point of view, *i.e.* in relation to ongoing or expected processes in Canadian territory. The emphasis is given primarily to global change effects on movements of tree line and geomorphological processes in two typical regions: Northern Canada and mountainous ecosystems of temperate regions. Potential threat of Canadian Cordillera caused by extreme climate, social aspects of climate change in polar and subpolar regions, effects of global climate change on the processes ongoing in Canadian cryosphere are reviewed as well in this part.

Both editors of the book succeeded in creation a comprehensive, well-arranged monography with a wide spectrum of information from Canadian Arctic and Subarctic. All data and information are presented in very clear way, each topic in relation to the others which provides comprehensive view. Plentiful information presented in the book represent an overall view on past development, recent status and the prospective of Canadian Arctic from the global to regional point of view. Therefore, the book could be recommended to specialist in the field and also university students interested in climate change impact on polar ecosystems.

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