

1. Record Nr.	UNINA9910457183903321
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Titolo	Changing Cold Environments [[electronic resource]] : A Canadian Perspective
Pubbl/distr/stampa	Hoboken, : Wiley, 2011
ISBN	1-283-30677-8 9786613306777 1-119-95016-3
Descrizione fisica	1 online resource (358 p.)
Altri autori (Persone)	SlaymakerOlav
Disciplina	363.738740971 551.310971
Soggetti	Cold regions Natural history - Canada Natural history - Canada, Northern Natural history -- Canada, Northern Natural history -- Canada Physical geography - Canada Physical geography - Canada, Northern Physical geography -- Canada, Northern Physical geography -- Canada Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Changing Cold Environments: A Canadian Perspective; Contents; List of Contributors; Preface; Glossary; PART ONE: SPATIAL AND TEMPORAL VARIABILITY OF CANADA'S COLD ENVIRONMENTS; 1 Cold Canada and the Changing Cryosphere; 1.1 Introduction; 1.2 The Cryosphere; 1.3 Cold Canada; 1.4 Cold Climates; 1.5 Arctic and Alpine Considerations; 1.6 Canada's Physical Geography; References; Discussion Questions; Some Useful Internet Sources; 2 The Late Quaternary Glaciation of Northern Canada; 2.1 Introduction; 2.2 Landforms and the Late Quaternary Glaciations 2.3 Late Quaternary Sea level Change and its Relationship to Glaciation

History2.4 Late Quaternary Glaciation and Deglacial History; 2.5 Wider Implications of Canadian Arctic Ice Sheet Dynamics; 2.6 Holocene Glacial Events; References; Discussion Questions; Some Useful Internet Sources; 3 The Evolution of Polar Desert and Tundra Ecosystems; 3.1 Introduction; 3.2 The Nature of the Environment; 3.3 Ecology of Arctic Plants; 3.4 Vegetation Zonation; 3.5 Arctic Oases; 3.6 Long term Evolution of Canadian Arctic Ecosystems; 3.7 The Quaternary 3.8 Postglacial Climate and Vegetation Change in Arctic CanadaReferences; Discussion Questions; Some Useful Internet Sources; 4 Remote Sensing and Canadian Snow Climatology; 4.1 Introduction; 4.2 The Importance of Snow in the Earth System; 4.3 Snow Measurements in Canada; 4.4 Remote Sensing of Snow; 4.5 Snow Variations Inferred from Remote Sensing Observations; 4.6 Discussion; 4.7 Conclusion; References; Discussion Questions; Some Useful Internet Sources; PART TWO: THE CHANGING CRYOSPHERE; 5 The Changing Climates; 5.1 Introduction; 5.2 Late Pliocene; 5.3 Quaternary History 5.4 Postglacial Conditions5.5 The Last Two Millennia; 5.6 Recent Changes; 5.7 The Future; References; Discussion Questions; Some Useful Internet Sources; 6 Snow and Runoff: Processes, Sensitivity and Vulnerability; 6.1 Introduction; 6.2 Snow Accumulation; 6.3 Land Cover; 6.4 Snow Ablation; 6.5 Snowmelt Runoff Processes; 6.6 Streamflow; 6.7 Snowmelt Floods in Large Basins; 6.8 Snow Vulnerability; References; Discussion Questions; Some Useful Internet Sources; 7 Permafrost Distribution and Stability; 7.1 Introduction; 7.2 Distribution of Permafrost; 7.3 Thermal Regime of Permafrost 7.4 Permafrost and Climate Change7.5 Conclusions; References; Discussion Questions; Some Useful Internet Sources; 8 Sea Ice in Canada; 8.1 Introduction; 8.2 What is Sea Ice?; 8.3 The Physical Nature of Sea Ice; 8.4 Spatial and Temporal Distribution of Sea Ice; 8.5 Sea Ice and Climate Change; 8.6 Implications for Northern Communities, Economic Development and the Environment; References; Discussion Questions; Some Useful Internet Sources; 9 Lake and River Ice in Canada; 9.1 Introduction; 9.2 Role in the Climate System; 9.3 Climatic Controls; 9.4 Historical Trends and Linkages to Climate 9.5 Future Ice Regime Projections

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Changing Cold Environments; Implications for Global Climate Change is a comprehensive overview of the changing nature of the physical attributes of Canada's cold environments and the implications of these changes to cold environments on a global scale. The book places particular emphasis on the broader environmental science and sustainability issues that are of increasing concern to all cold regions if present global climate trends continue. Clearly structured throughout, the book focuses on those elements of Canada's cold environments that will be most affected by global climate change
