

35 chapters spanning the circumpolar North, from international experts including:

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Aevar Petersen | Arctic Biodiversity and Ecosystem Services
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Educational, Scientific and
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Culture Sector
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Climate Change and ARCTIC Sustainable Development

*scientific, social, cultural and
educational challenges*

This book brings together the knowledge, concerns and visions of leading Arctic experts in the natural and social sciences, and of prominent indigenous leaders from across the circumpolar North

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The Arctic is undergoing rapid and dramatic environmental and social transformations due to climate change. This has ramifications for the entire planet, as change spreads through interconnected global networks that are environmental, cultural, economic and political. Today, with the major thrust of research shifting away from deciphering causes and monitoring trends, the central preoccupation of a growing circle of actors has become the exploration of strategies for responding and adapting to climate change. But to understand the far-reaching impacts of climate change and the complexities of adaptation, a truly interdisciplinary approach is required.

Unique in the UN system, UNESCO combines the domains of natural sciences, social sciences, culture, education and communication. Given this broad mandate, UNESCO favours integrated approaches for monitoring and adapting to climate change in the Arctic, fostering dialogue among scientists, circumpolar communities and decision-makers.

This book brings together the knowledge, concerns and visions of leading Arctic scientists in the natural and social sciences, prominent Chukchi, Even, Inuit and Saami leaders from across the circumpolar North, and international experts in education, health and ethics. They highlight the urgent need for a sustained interdisciplinary and multi-actor approach to monitoring, managing and responding to climate change in the Arctic, and explore avenues by which this can be achieved.

Themes:

- Ice, Oceans and Atmosphere
- Biodiversity and Ecosystem Services
- Community-Level Impacts and Adaptation
- Health and Well-Being
- Economic Development and Social Transformations
- Education
- Ethics, Responsibility and Sustainability
- Monitoring Systems

... We are currently witnessing a major change in the Arctic climate system...

Jean-Claude Gascard, Coordinator, EU DAMOCLES Project, France

... Any development in the Arctic must be carried out on a sustainable basis. This includes cultural sustainability...

James Stotts, Chair of the Inuit Circumpolar Council

... regular Arctic shipping is not just a 'future' thing, but a 'now' thing...

Mead Treadwell, Chair, US Arctic Research Commission

... There is a need for well coordinated and sustained Arctic observations that meet scientific and societal needs...

Odd Rogne, Senior Advisor, AMAP

... we are opposed to offshore oil and gas activity, as we do not believe it can be done safely. Yet, we recognise that we cannot just say no...

Edward Itta, member of the Barrow Whaling Captains Association

... the traditional Saami fishing economy depends on the diversity of fish stocks, giving them the flexibility to adapt...

Gunn-Britt Retter, Head of the Arctic and Environmental Unit, Saami Council, Norway

