Contents

1 Paths to the New Arctic ................................................................. 1
   Birgitta Evengård, Øyvind Paasche, and Joan Nymand Larsen

2 Indigenous Peoples in the New Arctic ........................................ 7
   Gail Fondahl, Viktoriya Filippova, and Liza Mack

3 Pioneering Nation: New Narratives About
   Greenland and Greenlanders Launched Through
   Arts and Branding ....................................................................... 23
   Kirsten Thisted

4 Perpetual Adaption? Challenges for the Sami
   and Reindeer Husbandry in Sweden .......................................... 39
   Peter Sköld

5 On Past, Present and Future Arctic Expeditions ....................... 57
   Peder Roberts and Lize-Marié van der Watt

6 Arctopias: The Arctic as No Place and New Place in Fiction ........ 69
   Heidi Hansson

7 The Fleeting Glaciers of the Arctic ............................................. 79
   Øyvind Paasche and Jostein Bakke

8 Arctic Carbon Cycle: Patterns, Impacts
   and Possible Changes ................................................................ 95
   Are Olsen, Leif G. Anderson, and Christoph Heinze

9 Arctic Vegetation Cover: Patterns, Processes
   and Expected Change ................................................................. 117
   Bruce C. Forbes

10 Human Development in the New Arctic ................................. 133
    Joan Nymand Larsen and Andrey Petrov
11 Issues in Arctic Tourism .............................................................. 147
   Dieter K. Müller

12 The Arctic Economy in a Global Context ..................................... 159
   Joan Nymand Larsen and Lee Huskey

13 Globalization of the “Arctic” ..................................................... 175
   E. Carina H. Keskitalo and Mark Nuttall

14 Race to Resources in the Arctic: Have We Progressed
   in Our Understanding of What Takes Place in the Arctic? ............ 189
   Timo Koivurova

15 Comparing the Health of Circumpolar Populations:
   Patterns, Determinants, and Systems ............................................ 203
   Kue Young and Susan Chatwood

16 Food Security or Food Sovereignty: What Is the Main
   Issue in the Arctic? ..................................................................... 213
   Lena Maria Nilsson and Birgitta Evengård

17 Water Information and Water Security in the Arctic .................... 225
   Arvid Bring, Jerker Jarsjö, and Georgia Destouni

18 Infectious Disease in the Arctic: A Panorama in Transition .......... 239
   Alan Parkinson, Anders Koch, and Birgitta Evengård

19 Environmental Health in the Changing Arctic ............................. 259
   Arja Rautio

20 Scientific Cooperation Throughout the Arctic:
   The INTERACT Experience ....................................................... 269
   Terry V. Callaghan, Margareta Johansson, Yana Pchelintseva,
   and Sergey N. Kirpotin

21 The Assessed Arctic: How Monitoring
   Can Be Silently Normative ....................................................... 291
   Nina Wormbs

22 The Challenge of Governance in the Arctic:
   Now and in the Future .............................................................. 303
   Douglas C. Nord

23 New Knowledge a Pathway to Responsible
   Development of the Arctic ....................................................... 315
   Gunnel Gustafsson and Marianne Røgeberg

24 Cryo-History: Narratives of Ice and the Emerging
   Arctic Humanities ....................................................................... 327
   Sverker Sörlin

Index ............................................................................................. 341
Authors’ Biography

About the Editors

**Birgitta Evengard** is a professor in infectious diseases and senior consultant at Umea University in Sweden with a long-term interest in the effects of climate change on health. She is chair of the first Arctic research centre in Sweden, ARCUM, and the author or editor of 10 previous books and 20 book chapters apart from an extensive scientific production. She was the chair of the Arctic Human Health Expert Group, AHHEG, during the Swedish chairmanship of the Arctic Council 2011–2013 when food security and infectious diseases in the North were priorities. Gender equality has also been a major interest for her, both in academic research and in working environment issues.

**Dr. Joan Nymand Larsen** is an economist, senior scientist and research director with the Stefansson Arctic Institute, Akureyri, Iceland. She has more than 20 years of experience in Arctic research, with specialisation in economic development processes, natural resources and northern sustainability. She has published extensively on the Arctic economy, Arctic human development and quality of life and the socioeconomic impacts of climate change. She is editor of notable publications such as the Arctic Human Development Report: Regional Processes and Global Linkages (2014) and Arctic Social Indicators (2010, 2014) and is coordinating lead author of the polar regions’ chapter in the AR5 of the Intergovernmental Panel on Climate Change, Climate Change 2014: Impacts, Adaptation, and Vulnerability.
Oyvind Paasche is the leader of Bergen Marine Research Cluster since 2011 and also the chair of research with the University of the Arctic (UArctic). He has a PhD in Earth Science from the University of Bergen and has been a visiting scientist at the Swiss Federal Institute of Technology (ETH), in Zürich, Switzerland, and also at the Institute for the Study of Planet Earth, University of Arizona. He has worked as a scientist with the Bjerknes Centre of Climate Research for many years and was an author on the International Panel of Climate Change (IPCC) report WG-1 (the Physical Science Basis) in 2007. Paasche has published a number of scientific papers on glaciers, floods, weathering and palaeoclimate as well as co-authored a book about the climate system. He is also devoted to popularising science and writes frequently for the national and international press.

About the Authors

Leif G. Anderson is a professor in hydrosphere sciences at the University of Gothenburg, Sweden. His research interests focus around the oceanic carbon cycle, which includes the transformation of carbon, the fluxes within the ocean, the air-sea fluxes and the oceanic sequestering of anthropogenic carbon dioxide. These studies have largely involved high-latitude oceans, at both hemispheres, but also investigations of the Baltic Sea. His experience includes being the first vice president of the Swedish Royal Academy of Sciences, including among other things chairing their environmental committee. He has also been heavily engaged in international Arctic organisations like the Arctic Ocean Sciences Board and the Marine Group of the International Arctic Science Committee and was instrumental in starting up the International Study of Arctic Change.

Jostein Bakke is a professor in quaternary geology at the Department of Earth Science and at the Bjerknes Centre for Climate Research at the University of Bergen, Norway. During his post-doc and early career period, he was a visiting scientist at St. Andrews University, GFZ, Poznan, Germany, and at ETH, Switzerland. His research interests are within palaeoclimatology, glacial history, geomorphology and lake sediments. He has taken part in many projects both nationally and internationally and has invested a lot of time on fieldwork in polar areas such as South Georgia, Svalbard, Ural Mountains, Scandinavia and Arctic Norway. In 2011 he was awarded the Fulbright Arctic Chair Award and went to UMASS to build a collaboration and network with US polar researchers. Currently he is the principal investigator on the SHIFTS project looking into the shifting climate states of the polar regions, and he is building a new national infrastructure for earth surface sediment analyses called EARTHLAB and is chairing the Quaternary Earth System group at his department in addition to chairing the PAGES Arctic2K network group.
The New Arctic
Evengård, B.; Nymand Larsen, J.; Paasche, Ø. (Eds.)
2015, XXII, 352 p. 44 illus., 39 illus. in color., Hardcover
ISBN: 978-3-319-17601-7