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Cover illustration Haupapa/Tasman Glacier, with its rapidly-expanding proglacial lake, is fed ice and debris from the highest mountains in Kā Tiritiri o te Moana/the Southern Alps of Aotearoa/New Zealand. Photo credit: Huw Horgan.

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PREFACE

This issue of *Annals of Glaciology* contains 19 papers addressing the theme of the responses of ice and snow to changes in Earth's climate. The papers here have a focus on physical processes within the cryosphere and interactions between the cryosphere and the climate system. The decrease in the extent of ice and snow on land, and on the ocean, is one of the more profound and visible changes resulting from climate warming. The last two Assessment Reports from Working Group I (the physical science basis) of the Intergovernmental Panel on Climate Change have included dedicated chapters reviewing and summarizing observed changes to the cryosphere, and projections of future changes and their impact (IPCC WGI AR4, 2007; IPCC WG1 AR5, 2013). This issue of *Annals of Glaciology* presents additional studies since those assessments, progressing and improving knowledge of how seasonally snow-covered and glacierized land regions, and the oceanic sea ice zone, are affected by climate change.

Annals of Glaciology is a peer-reviewed, thematic journal published by Cambridge University Press on behalf of the International Glaciological Society. A team of 12 Scientific Editors (listed above), with expertise across the broad range of topics covered by the theme, were responsible for assessing the papers in this issue. They acknowledge and are grateful for the work of a large number of peer-reviewers who contributed to improving the quality of many of the papers.

The papers published here are presented in two separately bound parts, split firstly by cryospheric component. Part 1 covers the shorter time-scale components of snow, hydrology of ice- and snow-covered regions and sea ice on the ocean. It additionally includes papers on perennial ice shelves, also on the ocean. Part 2 covers the perennial ice masses originating on the land surface: glaciers, ice caps and ice sheets. Within each of these categories the papers are ordered by the subjects of basic processes and modelling, cryospheric change, and impacts and feedbacks. Finally, they are sorted by geographical scale, from local through regional to global.

The cryosphere in a changing climate was also the topic of a recent international symposium attended by 228 delegates in Wellington, New Zealand (22-28 February 2016). This important theme, which is global in scope, brought together for the first time three of the leading international organizations in the field of cryospheric research: the International Glaciological Society (IGS), the International Association of Cryospheric Sciences (IACS), and Climate and Cryosphere (CliC), a core project of the World Climate Research Programme.

Ian Allison

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