

PREFACE

It is now more than 40 years since the International Committee on Snow and Ice (ICSI) established a number of working groups to draft guidelines for measuring various aspects of the cryosphere for the International Hydrological Decade (1965–1974). With water the focus, the emphasis was on snow and ice as part of the hydrological system. Instructions were prepared on glacier variations (UNESCO/IASH, 1969b), the seasonal snow cover (UNESCO/IASH/WMO, 1970), Antarctic glaciology (UNESCO/IASH, 1969a), glacier mass balance (UNESCO/IASH, 1970a), floating ice (UNESCO/IASH, 1972), remote sensing of snow and ice (Meier, 1979) and perennial snow and ice masses (UNESCO/IASH, 1970b). In the intervening years all but the latter, which came to be known as the world glacier inventory (WGI), received a lot of attention and were the object of special symposia and thematic volumes of the *Annals of Glaciology* and other journals; apart from a meeting sponsored by ICSI in 1978 (Müller, 1980).

In 2006, Atsumu Ohmura, President of the International Glaciological Society, concluded, with respect to the WGI, that remote-sensing technology had significantly changed the methodology, that global concerns about melting glaciers and their impact on sea level had raised awareness of the need for a comprehensive catalogue, and that sufficient progress had been made over the intervening four decades for it to be appropriate to dedicate an issue of the *Annals of Glaciology* to the World Glacier Inventory. We were fortunate that Qin Dahe and the Cold and Arid Regions Environmental and Engineering Research Institute (CAREERI) of the Chinese Academy of Sciences enthusiastically supported this idea and facilitated a meeting of some of those who wished to contribute to this volume.

The papers accepted for publication in this volume provide an indication of how far inventory activities and data processing have progressed from the early days of air-photo interpretation, printed maps and computer punched cards. We were able to attract a good selection of papers from Europe, Asia, North America, South America and Greenland.

As Chief Editors we were assisted by Graham Cogley (Canada), Bruce Raup (USA), Liu Shiyin (China) and Wang Ninglian (China). We thank these editors and all reviewers and authors for their work in ensuring a high-quality publication that not only serves as a benchmark for the WGI, but also points the way forward for those committed to the completion of a comprehensive inventory of the world's glaciers. We also thank the IGS Secretary General and the IGS production staff for their work in preparing and publishing the papers.

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REFERENCES

- Meier, M.F. 1979. *Remote sensing of snow and ice*. Paris, UNESCO/IASH. (Technical Papers in Hydrology 19.)
- Müller, F., ed. 1980. *World Glacier Inventory Workshop, Proceedings of the Workshop at Riederalp, Switzerland, 17–22 September 1978, organized by the Temporary Technical Secretariat for the World Glacier Inventory*. Wallingford, Oxon, IUGG. International Association of Hydrological Sciences. (IASH Publ. 126.)

- UNESCO/IASH. 1969a. *Antarctic glaciology in the International Hydrological Decade*. Paris, UNESCO/IASH. (Technical Papers in Hydrology 4.)
- UNESCO/IASH. 1969b. *Variations of existing glaciers; a guide to international practices for their measurement*. Paris, UNESCO/IASH. (Technical Papers in Hydrology 3.)
- UNESCO/IASH. 1970a. *Combined heat, ice and water balances at selected glacier basins: a guide for compilation and assemblage of data for glacier mass balance measurements*. Paris, UNESCO/IASH. (Technical Papers in Hydrology 5.)
- UNESCO/IASH. 1970b. *Perennial ice and snow masses: a guide for compilation and assemblage of data for a world inventory*. Paris, UNESCO/IASH. (Technical Papers in Hydrology 1, A2486.)
- UNESCO/IASH. 1972. *Guide to world inventory of sea, lake and river ice*. Paris, UNESCO/IASH. (Technical Papers in Hydrology 9.)
- UNESCO/IASH/WMO. 1970. *Seasonal snow cover: a guide for measurement compilation and assemblage of data*. Paris, UNESCO/IASH/WMO. International Hydrological Decade. (Technical Papers in Hydrology 2.)