

Preface

This volume includes a selection of peer-reviewed papers presented at the *Hydro-climatology – Variability and Change* symposium as part of the XXVth International Union of Geodesy and Geophysics (IUGG) General Assembly held in Melbourne, Australia, in July 2011. The symposium was jointly sponsored by the International Association of Hydrological Sciences (IAHS) international commissions and working groups: ICCLAS, ICSW, HYDROMET) and the International Association of Meteorology and Atmospheric Sciences (IAMAS).

The aim of the symposium was to collate studies on the role of climate variability and change on the land surface hydrology, as well as the role of hydrological dynamics in affecting climate system processes. Hence, the symposium documents the multiple interactions and feedbacks between land surface hydrology and climatology.

Approximately half of the papers presented here deal with understanding aspects of hydrological systems given historic observed climate variability and/or change. Conversely, a number of papers utilise climate models to project future climate scenarios and then assess the resultant hydrological consequences.

By necessity, study of land surface hydrology often includes human intervention in hydrological processes – water storages, extraction, irrigation, land-use change, etc. As such, the study of hydrology and climate at the land surface interface provides a human societal context for climate variability and change.

It is hoped that the hydro-climatological approach taken by many papers in this volume illustrates the scientific and practical value of considering hydrological phenomena and processes in a climate context to improve understanding of controls, process interaction and past and future variability/change. We believe such an interdisciplinary approach reveals new information and perspectives that go beyond the study of climate and hydrology alone.

We hope that the diverse range of case studies (in terms of geographical location, methodologies and hydrologically-relevant variables) presented herein provides a useful sharing of insight and experience.

The editors would like to thank all symposium participants for their scientific contributions. We express special thanks to Cate Gardner, Penny Perrins and Frances Watkins of IAHS Press for their professional approach and help with the processing of the manuscripts.

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