



# Foreword

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Modern instrumental observations, including the registered  $0.74 \pm 0.18$  °C increase in global average surface temperatures over the last century and an even larger warming trend over the last 50 years, underscore the influence of human activities on the climate system. Climate change is widely recognized today as a key societal issue, while the growing awareness of its mounting impacts on countless sectors is increasingly driving decision-makers to focus on the anticipated constraints which the issue will impose upon sustainable development.

While the broader notion of sustainable development can encompass various ecological, economic and social perspectives, a more focused view is often preferable in considering global climate change impacts, particularly within the perspective of assisting the affected countries to manage their climate-related risks even more efficiently and to strengthen their capacities to prosper in the future.

Some of the recent efforts by the World Meteorological Organisation (WMO) and its partners to increasingly engage all user communities have included the Technical Conference on 'Climate as a resource' (Beijing, China, November 2005), the International Workshop on 'Living with climate variability and change: understanding the uncertainties and managing the risks' (Espoo, Finland, July 2006), the Madrid Conference on 'Secure and sustainable living: social and economic benefits of weather, climate and water services' (Madrid, Spain, March 2007) and the 'Workshop on analysis of extremes in a changing climate in support of informed decisions for adaptation' (De Bilt, The Netherlands, May 2008).

These key efforts culminated in the organization by the WMO of the World Climate Conference-3 (WCC-3) in Geneva, Switzerland, from 31 August to 4 September 2009, in collaboration with WMO Members, other United Nations System agencies, various scientific partners,

academia and the private sector. The WCC-3 unanimously agreed to establish a Global Framework for Climate Services (GFCS), as an international structure to guide the development of climate services linking science-based climate predictions and information with decision making in climate risk management and adaptation to climate variability and change. Furthermore, the GFCS will help advance many globally coordinated actions in climate change mitigation being undertaken by WMO Members through the United Nations Framework Convention on Climate Change (UNFCCC).

In this context, and in conjunction with the 15th session of WMO's Commission for Climatology (CCI), in February 2010 the WMO organized the Technical Conference on 'Changing climate and demands for climate services for sustainable development' (Antalya, Turkey), through its World Climate Programme and its co-sponsored World Climate Research Programme (WCRP), in collaboration with the Turkish State Meteorological Service.

The conference agenda included a one-day joint meeting of CCI and the WCRP Joint Scientific Committee (JSC), which gathered more than 180 participants from 75 WMO Members and eight international organizations. The conference focused, in particular, on the role of partnerships and the climate research community in advancing the WMO response to societal needs in the face of escalating impacts from climate variability and change, and their effects on sustainable development.

This Special Issue of Climate Research includes 14 papers presented at the Antalya conference, which—I am indeed confident—will henceforth serve as a key information resource in the area of climate services for sustainable development. I therefore express my appreciation to all those who contributed to this publication, and in particular the former and present presidents of CCI, P. Bessemoulin and T. Peterson.