Preface

In recent years, China has been increasingly exposed to water-related problems such as flood, drought, water shortage, water pollution and soil loss. These problems have already become a major constraint to China’s economic development and a big challenge for the protection of natural ecosystems and environments, especially in western China, centred on Sichuan, Yunnan and Guizhou provinces, where high mountains and plateaus are located and many rivers originate. Water resources and hydro-power in these regions are therefore very rich and many hydraulic projects have been developed. During the implementation of the National Strategies of China Western Development in recent years, and also under the pressure of the increasing population, water-related problems have become even worse due to complex natural changes and human activities in these mountainous watersheds, where ground observations are almost unavailable. In addition, China is now changing from traditional water resources development to water resources management for sustainable development. It is against such a background that hydrological modelling and integrated water resources management strongly call for new innovations in approaches, techniques and theories. The key issue is how to make predictions in ungauged or poorly-gauged mountainous basins with a major reduction in predictive uncertainties.

The China PUB organization was formed in 2004 and focuses on the new methodology of hydrological simulation and prediction under natural and human-induced global changes. To promote exchanges between China and IAHS, and with help from the international IAHS-PUB Scientific Steering Group (SSG), the China PUB National Steering Committee organized the first International Symposium on Flood Forecasting and Water Resources Assessment for IAHS-PUB in September 2006*. The second International Symposium on Hydrological Modelling and Integrated Water Resources Management in Ungauged Mountainous Watersheds for IAHS-PUB was successfully held in November 2008. The Symposium organizers would like to express their heartfelt thanks to Prof. Pierre Hubert, the Secretary General of IAHS, Prof. Kuniyoshi Takeuchi (ICHARM, Japan), Prof. Jeffrey McDonnell (Oregon State University, USA), and Prof. E. Foufoula-Georgiou (University of Minnesota, USA) for their enthusiastic and valuable assistance.

We received a huge response to the second Symposium; more than 170 abstracts were submitted. After an initial review, we accepted 125 papers and invited the authors to attend the Symposium. After the Symposium and a further peer-review process, we accepted 101 papers in total, of which 41 papers are published in this IAHS volume and 60 papers were published in a special issue of the Journal of Sichuan University (Engineering Science Edition).

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