FOREWORD

Our environment has changed dramatically, even in the past few decades, and the effects are apparent at the local, regional and even global scale. Water is our most precious resource, yet we face looming crisis in the availability of water for every living being. The main factors for these changes can be attributed to population growth and migration; climate change and changes in land use. The legacy of these factors will not only be less water but also more degraded water, especially for poor people. Unless we find better ways to protect and improve our water supplies, the future looks dire for billions of people. Therefore, proper water resources management is the need of the hour.

Water resources management requires a holistic and integrated view that considers the surface water and groundwater together and also the direct/indirect human needs. The sustainable management of water resources should be based on an integrated approach linking development and protection of the natural environment, on the participation of all actors and concerned people, and on the recognition of the economic and social value of water. We must promote the integration of all aspects of planning, management and protection of water resources by developing plans which aim to satisfy basic needs and promote equitable and effective distribution of water resources, ecosystem protection and maintenance of the water cycle. Water management plans should consider the best existing practices and the most advanced scientific breakthroughs.

Keeping this in view, a National Symposium on "Water Resources Management in Changing Environment (WARMICE-2012)" is being organized by Indian Association of Hydrologists (IAH) at National Institute of Hydrology (NIH), Roorkee during 8-9 February 2012. The objectives of the IAH are to advance the knowledge of hydrology and related subjects and promote their applications, to publish relevant literature and latest developments in the field of Hydrology and water resources through a journal on Hydrology and organization of symposium / workshops / training courses etc. This Symposium is being organized to foster objectives of the Association. The symposium's objective is to discuss the innovative ideas for the growth, protection and management of water resources. A large number of researchers, academicians, engineers, professionals, policy makers, planners, managers and Non-Governmental Organisations (NGOs) shall present their original work, case studies, modeling and experimental work and share their experiences and views on various aspects during the symposium.

The editors of the proceedings Dr. Sudhir Kumar, Dr. Sanjay K. Jain and Er. R.D. Singh have worked with great enthusiasm, dedication and sincerity to make possible the publication of this volume in time. Their efforts are highly appreciated. In the end, I would like to acknowledge the efforts of the Organizing Committees of the Symposium for their hard work reflected in the successful organization of the symposium.

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