PREFACE

From the Guest Editor's Desk

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Climate change is one of the most important global topical issues to day, with implications on food production, water supply, ecosystem health, biodiversity etc. Understanding the climate change process, prediction uncertainties and simulating impact on various natural resources are some of the thrust areas of research. In this context, the space based observations have very significant role to play. Earth observation data provides information for climate change studies in four different aspects, namely, (i) Improving the soundness of climate change predictive models by providing critical input parameters (i) capturing the indicators of climate change (ii) assessment of agents of climate change, such as greenhouse gases and aerosol in terms of their sources and distribution pattern and (iii) Simulating the impact of climate change in various fields and natural resources that would be of help in planning towards adaptation measures and preparedness.

Considering the importance of climate change studies using earth observation data, especially in the field of agriculture—an activity that is highly dependent upon weather and climate, an International Workshop on Impact of Climate Change on Agriculture was organized in Ahmedabad, India during December 17–18, 2009.

This was organized by International Society of Photogrammetry and Remote Sensing (ISPRS) Working Group VIII/6 (Agriculture, Ecosystem and Biodiversity), Group on Earth Observations (GEO) Task AG-07-03 (Global Agricultural Monitoring System of Systems) and the Indian Society of Remote Sensing and hosted by Space Applications Centre (ISRO) and Indian Society of Remote Sensing—Ahmedabad Chapter. A proceeding in the form ISPRS Archives (Volume 38, Part 8/W3) was brought out during the workshop, containing seventy-six papers.

This current issue of the Journal of Indian Society of Remote Sensing includes fifteen papers, selected from this workshop, which have been peer reviewed. The papers cover wide range of topics, related to **“Earth Observation for Climate Change Studies”**, with special emphasis on agriculture. Starting with a review article on potential of earth observation data, the papers deal with EO data as input to climate models; methane inventory; creation of spatial database; long-term studies; impact assessment; and agricultural mapping.

I wish to thank the Indian Society of Remote Sensing for giving me the opportunity to edit this special issue. It has been quite a wonderful experience of editing the papers. I thank the authors and the reviewers of this special issue for providing their inputs in a very short time. I am sure this special issue will be a very good technical document for the researchers involved in the climate change studies.

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