

## Preface

Achieving sustainable development is a consensus of the international community, as declared by the Rio+ 20 Outcome Document. How to accomplish this task is a big challenge facing the government, academia and private sector. Nowadays the United Nations (UN) are exerting great efforts in mobilizing the world to come up with a post-2015 development agenda based on inputs from all walks of life. From the global point of view, border regions are special areas with specific sustainable development requirement and deserve more attention. It is the moral obligation of the borderland-related research community to have our thought and say, thus making our due contribution.

Border regions refer in general to the land space adjoining and outside state boundary lines, or the ocean area among maritime neighbors. They are geographic units with unique characteristics in terms of geography, natural resources, demography, economy, and culture. In most cases, they unite as a continuum with the same ethnicity, economic pattern and natural resource, and share more common features with the neighboring country instead of the inner land of the mother country. These similar and identical phenomena do no respect and cannot be divided by the artificial boundary lines which are politically dictated. People, goods, services and ideas flow across boundaries from state to state in a very easy manner. These border regions are becoming more and more important in the context of global sustainable development and regional cooperation.

A better understanding of borderlands can be advanced through an integrated multi-disciplinary researches and the utilization of new technologies. During the past few years, we have witnessed recent scientific achievements and technological development in earth observation, global geographic information, geopolitics, geographic modelling, international relations and many other related subjects. This makes it possible to conduct more comprehensive research of the borderlands areas in our planet through multi-disciplinary collaboration. New concepts and theories, methods and algorithms, as well as the advanced geo-computing tools/ platform need to be developed to support the planning, monitoring, and management of borderlands. Scientific innovation and excellency in this domain will not only contribute to the socio-economic development and human well-being in border regions, but will also benefit global understanding and sustainability.

To promote scientific research and academic exchange on digital modelling, advanced analysis and comprehensive understanding of borderlands, an ISPRS/ IGU/ICA joint international workshop on Borderlands Modelling and Understanding for Global Sustainability has been organized on the 5<sup>th</sup> and 6<sup>th</sup> of December in 2013 in Beijing, China, by the School of Geography at Beijing Normal University (BNU) and National Geomatics Center of China (NGCC). This ISPRS archive collects more than twenty

overview and research papers from this workshop. The five sub-topics addressed are scientific challenges and perspectives in borderlands studies, analytical and quantitative methods for borderlands, understanding of borderlands features, understanding cross-border communication and security, and modelling and representation of digital borderlands. We hope it will shed light on future research on borderlands modelling and understanding.

On behalf of the organizing committee of this workshop, we would like to take this opportunity to acknowledge the contributions of all participants to this workshop, and the supports from National Natural Science Foundation of China (NSFC), BNU, and NGCC. We would also thank International Society for Photogrammetry and Remote Sensing (ISPRS), International Geographical Union (IGU), International Cartographic Association (ICA), Geographical Society of China (GSC), and Association of American Geographers (AAG) for their sponsorship.