

## **Report on the workshop of the IUGG Commission on Climatic and Environmental Change**

The second workshop of the IUGG Commission on Climatic and Environmental Change (CCEC) took place at the Université du Luxembourg in Belval, Luxembourg, from 21-22 October 2016. The workshop was conducted as a meeting of chapter authors of a forthcoming edited monograph “Global Change and Future Earth: The Geodetic and Geophysical Perspective” to be produced by the Cambridge University Press in October 2017. The monograph, which will be the third in the IUGG Series, seeks to deal with both aspects of the meaning of the term ‘future earth’. In title case, Future Earth refers to the recent international scientific research programme<sup>1</sup> launched by the International Council for Science (ICSU), the International Social Science Council (ISSC), the Belmont Forum and a number of UN agencies. In lower case, it refers to the future of our planet, Earth.

The monograph thus seeks to expound how the geoscience community can assist Future Earth so as to improve the future of the Earth. It will comprise international and interdisciplinary contributions around the subject of climate change and its impacts on natural disasters and food security around the globe. The roles of the established scientific unions (e.g., IUGG) as well as new collaboration initiatives (e.g., Future Earth) in the advancement of multidisciplinary research will be highlighted throughout the monograph. Sixteen authors from Austria, Australia, Canada, China, Denmark, England, Germany, India, Japan, Luxembourg, New Zealand, Turkey, and USA presented, discussed, and finalized the content and structure of their chapters and the monograph’s eight key sections: 1) Future Earth and Planetary Issues, 2) Future Earth and Geodetic Issues, 3) Future Earth and the Earth’s Fluid Environment, 4) Future Earth and Regions, 5) Future Earth and Urban Environments, 6) Future Earth and Food Security, 7) Future Earth, Risk, Safety and Security, 8) Future Earth, Climate Change and Global Change.

Fumiko Kasuga, Future Earth Global Hub Director, Japan, attended the meeting and gave an overview of Future Earth as an international global change research activity. Other contributions on the first day of the workshop included an overview of *Climatic and Environmental Change* by Tom Beer, CCEC Chair, as well as contributions from Alik Ismail-Zadeh, IUGG Secretary-General, and CCEC Members Eigil Friis-Christensen, Serhat Sensoy, Tonie Van Dam, Jianping Li and Harry Bryden (who presented jointly with Lawrence Mysak).

Contributions discussed during the second day of the workshop concentrated on the work of cognate scientific unions and included contributions from Ram Babu Singh (the International Geographical Union); Albert McGill (the International Union of Food Science and Technology), Ibrahim Elmadfa (the International Union of Nutritional Sciences), Jane Rovins (a former Executive Director of the Integrated Research on Disaster Risk (IRDR) Scientific Programme of ICSU, ISSC and UN Office for Disaster Risk Reduction), as well as those from Yekaterina Kontar (University of Alaska, USA) and Anke Schneider (GEOMAR, Germany). The meeting invited a social scientist Catherine Wong (University of Luxembourg), to provide a social science perspective on the proposed monograph, the work programme, the meeting, and the organization.

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<sup>1</sup> <http://www.futureearth.org/>

The workshop was facilitated by the local host, CCEC Member Tonie van Dam, Vice Rector of the University of Luxembourg, whose hard work and organizational capacities were greatly appreciated by all participants.

Submitted by T. Beer on behalf of the reporters: Y. Kontar, J. Li, and L. Mysak