

Commission on Geophysical Risk and Sustainability (GRC)

<http://www.iugg-georisk.org/>

1. Introduction

The IUGG Commission on Geophysical Risk and Sustainability (IUGG GeoRisk Commission) established by the IUGG Bureau in August 2000 is dedicated (i) to promoting scientific studies applied to the reduction of risk from natural hazards in an increasingly urbanized world and sustainability and (ii) to reducing death and destruction from natural and technological hazards by providing hazards data and information to emergency managers, policy-makers, scientists and the general public in the most timely and effective manner as possible. This includes the integration of knowledge concerning environmental, social and economic processes. The fundamental scope of this Commission is to facilitate communications – between scientists via meetings, workshops and publications, as well as between scientists and decision makers, between scientists and the public, and between scientists and schools.

2. Administration

2.1 Meetings

A Business Meeting of the GRC was held on 30th June 2011 at the Melbourne Convention Centre, during the IUGG General Assembly in Melbourne, Australia. 16 members were present. Minutes of the meeting will be available on the GRC website.

2.2 Terms of Reference

New Terms of Reference (ToR) for the GRC had been endorsed by the IUGG in 2010 and were put into action during 2011. New aspects of the ToR include election of an Executive Committee, Advisory Board Members and limited terms of office. Some ambiguities remain in the current ToR and these will be resolved during 2012.

2.3 Membership

New GRC members, including an Executive Committee, 1 new Honorary Member and 4 Advisory Board members were elected during 2011. The membership list for the period 2011 – 2015 is summarized below. Note that Paula Dunbar remains as Treasurer despite having completed 2 terms in this role. This is because a new Treasurer could not be found, despite the best efforts of the Executive Committee. Ms Dunbar has agreed to remain in the role until a new Treasurer can be found.

Kuniyoshi Takeuchi	IAHS	President	kuni.t@pwri.go.jp
Vladimir Kossobokov	IASPEI	Vice-President	volodya@mitp.ru
David Jackson	IASPEI	Vice-President	djackson@ucla.edu
Diana Greenslade	IAPSO	Secretary-General	d.greenslade@bom.gov.au
Paula Dunbar	IAPSO	Treasurer	Paula.Dunbar@noaa.gov
John Labrecque	IAG	Executive Committee Member	john.labrecque@nasa.gov
David Boteler	IAGA	Executive Committee Member	David.Boteler@NRCan-RNCan.gc.ca
Joan Marti	IAVCEI	Executive Committee Member	joan.marti@ija.csic.es
Servando de la Cruz Reina	IAVCEI	Executive Committee Member	sdelacrr@geofisica.unam.mx
Alan Thomson	IAGA	Executive Committee Member	awpt@bgs.ac.uk
Ramesh Singh	IASPEI	Member	rsingh@chapman.edu
Gerd Tetzlaff	IAMAS	Member	tetzlaff@rz.uni-leipzig.de
Hermann Drewes	IAG	Member	drewes@dgfi.badw.de
A. W. Jayawardena	IAHS	Member	hrecjaw@hkucc.hku.hk
Yevgeniy Kontar	IAPSO	Member	kontar@isgs.uiuc.edu
Susan McLean	IAGA	Member	Susan.Mclean@noaa.gov
Steve McNutt	IAVCEI	Member	steve@giseis.alaska.edu
Martin Funk	IACS	Member	Funk@vaw.baug.ethz.ch
Tom Beer	IAMAS	Honorary Member	tom.beer@csiro.au
Alik Ismail-Zadeh	IASPEI	Honorary Member	Alik.Ismail-Zadeh@kit.edu
Harsh Gupta	IASPEI	Advisory Board Member	harshgupta@nic.in
Viacheslav Gusiakov	IAPSO	Advisory Board Member	gvk@sscc.ru
Uri Shamir	IAHS	Advisory Board Member	shamir@tx.technion.ac.il
Gordon McBean		Advisory Board Member	gmcbear@uwo.ca

3. Activities

3.1 The GRC proposed the IUGG statement on Great East Japan Earthquake and Tsunami and this was adopted by the IUGG Bureau on 18 April 2011. The statement can be found at:

http://www.iugg.org/resolutions/IUGG_Statement_GreatEastJapan_Eq_Tsu.pdf

3.2 The GRC jointly organised an Extreme Natural Hazards and Societal Implications (ENHANS) session: “Natural Hazards and Disaster Risks in the Middle East Region” on 7 May 2011 in Antalya, Turkey. The Chairs were Alik Ismail-Zadeh and Kuniyoshi Takeuchi. The scientific session as a part of the ICSU ENHANS project (<http://www.enhans.org>) provided an opportunity to discuss and to analyse topics related to extreme natural events and disaster risk management in the Middle East region and to present methodologies and technologies suitable for hazard and risk analysis and disaster management. The invited speakers were:

Jane Rovins, IRDR IPO, Beijing, China: Integrated Research on Disaster Risk: A New

International Programme

Mohsen Ghafory-Ashtiani, International Institute of Earthquake Engineering and Seismology, Tehran, Iran: Risk of Natural Hazard in Iran and Experience on Risk Reduction Capacity Building

Cuneyt Tuzun, Mustafa Erdik (Turkey), Domenico Giardini, Karin Sesetyan, Bogazici University, Istanbul, Turkey; ETH Zurich, Switzerland: A Regional Program of GEM: Earthquake Model of Middle East (EMME)

Abdulaziz Al-Bassam, King Saud University, Riyadh, Saudi Arabia: Natural Hazards in Saudi Arabia

Tarek Merabtene, University of Sharjah, Dubai, United Arab Emirates: Flood Risk Management in the Middle East: Challenges and Opportunities

3.3 Union session U02

At the 25th IUGG General Assembly from 27 June – 8 July 2011, Melbourne, Australia, the Union Symposium U-02 “Grand Challenges in Natural Hazards Research and Risk Analysis” and Open Forum “Natural Hazards: From Risk to Opportunity by Partnership of Science and Society” were held on Wednesday, 29 June 2011 and the Union Symposium U-02 extension “Earth on the Edge - Recent Pacific Rim Disasters” was held on Saturday, 2 July 2011. They were co-organized by the IUGG GRC and the ENHANS Project, co-sponsored by AGU, GOOS, ICSU, IGU, IRDR, ISPRS, IUGG, IUGS, IUTAM, UNESCO.

The lead conveners were Kuniyoshi Takeuchi (Japan) and Alik Ismail-Zadeh (Germany/Russia) and the co-conveners were Tom Beer (Australia), David Boteler (Canada), Shigeko Haruyama (Japan), David Jackson (USA), Fumihiko Imamura (Japan), Vladimir Kossobokov (Russia), John LaBreque (USA), Uri Shamir (Israel), Ramesh Singh (India), Gerd Tetzlaff (Germany).

The session U-02 extension was later added as a response to the Great East Japan Earthquake and Tsunami and other recent devastating disasters in the Pacific Rim. They were held in big rooms and very well attended. In addition, 31 posters were presented. Lively discussions were held in all the sessions and the Forum. Pdf files of almost all presentations are available via the GRC [Webencyclopedia of Natural Hazards, Risks and Sustainability](http://www.iugg-georisk.org/) at <http://www.iugg-georisk.org/> with kind agreement of the speakers.

PROGRAM

29 JUNE 2011 Union Symposium U-02

G. McBean: The Grand Challenges of Integrated Research on Disaster Risk

J. Schneider, J. Sexton: Natural Hazard Risk Assessment in the Australasian Region:

Informing Disaster Risk Reduction and Building Community Resilience

S. Sorooshian: Satellite-based remote sensing estimation of precipitation for early warning systems: Strengths and Limitations

A. Kitoh: High Resolution 20-km Mesh Global Climate Model and Projected

P. Linden, C. Nasci: Hydro-meteorological Extremes in the Future Sustainability of the Venice Lagoon in the face of climate change

S. Dovers, J. Handmer: Disaster policy and climate change: how much more of the same?

J. Eichelberger: Mitigating Volcanic Risk in the United States and Adjacent Pacific Region

H. Gupta: India's Tsunami Warning System: A Success Story

S. Zlatanova: Challenges in Data management during disasters

OPEN FORUM

Moderators: A. Ismail-Zadeh & K. Takeuchi

Address from Tom Beer, IUGG President

Video message from Salvano Briceno, former UNISDR Director

R. Kuroda: Partnership of Science and Society: A Grand Challenge

S. Khan: Enhancing Social Resilience through Participatory Integrated Floods and Droughts Management - An Example from Pakistan

Panelists: Tom Beer (IUGG), Reiko Kuroda (ICSU)

2 JULY 2011 Union Symposium U-02 extension

K. Takeuchi: Chain Reactions Happened in Great East Japan Earthquake and Tsunami

K. Satake: The Great Off Tohoku Earthquake of 11 March 2011

F. Imamura: Tsunami disaster and impact due to the 2011 Tohoku earthquake

S. Kieffer, J. Colberg, J. Flowers: Flow regime transformations in the March 11, 2011 tsunami, Northern Honshu, Japan

K. Irikura: Accidents at Fukushima No.1 Nuclear Power Plant caused by the 2011 Tohoku earthquake

K.P. Furlong, G.P. Hayes, M. Quigley, H. Benz: Tectonic Context and Implications of the Canterbury, New Zealand Earthquake Sequence

N. Nicholls: Weather & Climate Prediction and the Brisbane 2011 Floods

4. Planned Future Activities

4.1 The GRC is currently organising the First IUGG GRC Conference on “Extreme Natural Hazards and Their Impacts”. This will be held from December 11-14, 2012 at

Chapman University, Orange, California, USA, and sponsored by the IUGG, AGU and Chapman University.

4.2 In 2012, the GRC will focus on updating and refurbishing the Commission's webpage at <http://iugg-georisk.org/> to encourage improved awareness and communication of the Commission's activities.