

2008 Annual Report on the Activities of the IUGG GeoRisk Commission (GRC)

1. Introduction The year 2008 was a year of major disasters. On the 12th May a major earthquake of the magnitude 8 hit the Sichuan region (China). The events left almost 5 million people homeless, the material damage exceeds \$100 billion. Only little than two weeks earlier the tropical cyclone Nargis devastated the Irrawaddi delta area in Myanmar and left more than 75000 people dead, severely affecting about 1.5 million. These two events underline the necessity for the GRC to not only improve on scientific knowledge, but also to make it more widely and effectively used to reduce disasters. The latter part is a cross cutting issue and is duly reflected in the networking activities of the members of GRC.
2. The GRC held its major business meeting on 10th August in Oslo within the framework of the 33rd International Geological Congress chaired by the president Kuniyoshi Takeuchi and the presence of 10 commissioners and two invited guests. The main points on the agenda were the new ICSU-GeoHazard program (Integrated Research on Disaster Risk), and the discussion of the ICSU Regional Office for Africa projects. GRC commissioners contributed substantially to both programs. The two GRC guests (Konare Abdourahmane, Genene Mulugeta) presented the available projects on geohazards and on hydro-meteorological hazards. The further implementation will be accompanied by members of GRC (Harsh Gupta, Gerd Tetzlaff). The final program implementation of IRDR happened on the 29th General Assembly of ICSU in Maputo on 22nd October. Reports on other activities and programs were delivered, including the ICSU regional offices.
3. Scientific meetings : GRC-members participated actively in a wealth of scientific conferences and meetings all related to GRC topics. The following list can represent only a selection of these activities.

Sessions in conferences were organized by Yevgeniy Kontar (American Geophysical Union 2008 Fall Meeting in San Francisco, USA, from 15-19 December : “Uncertainty in Geophysical Data interpretation : Implication and Developments”, “Groundwater inputs to Lakes and Oceans II”), Ramesh Singh (“International Seminars on Deserts to Monsoons”, Crete, Greece, 01-06 June), Tom Beer, Kuniyoshi Takeuchi and R.K. Chadha (33rd International Geological Conference in Oslo, 06-15 August, “Minimizing Risks, Maximizing Awareness” within the “Hazards-Theme” of the International Year of the Planet Earth), Alik Ismail-Zadeh (“Earth Science for Society”-Conference, Karlsruhe, Germany, 04 August), Gerd Tetzlaff (International Disaster and Risk Conference, Davos, Switzerland, 24-29 August, “Extreme Events and Climate Change”, “Early Warning Systems for Natural Hazards”).

The number of memberships and participations in scientific and management meetings was numerous and multifold, according to the cross cutting nature of georisk research. Each one of the commissioners actively contributed to several organizations, meetings, workshops and conferences, both in more national and in international events. The individual contributions are best found via the individual members of GRC. Outstanding

activities were connected to the Regional Offices of ICSU, namely ROAP and ROA. The contacts to the Asia and Pacific Office was kept by Harsh Gupta, who contributed to the science plan on Hazard and Disasters and the the plan on Special Vulnerability of Islands. The contact to Africa was kept by Harsh Gupta and Gerd Tetzlaff, trying to support development of the science plan on Georisks and on Hydrometeorological Risks. GRC commissioners Harsh Gupta and Tom Beer were members of the planning group preparing the 10 year science plan for Integrated Research on Disaster Risk (IRDR) of ICSU (see business meeting). From GRC, Kuniyoshi Takeuchi was appointed as a member of the Scientific Committee of IRDR.

The GRC commissioners actively published or edited scientific articles and papers. Tom Beer is the editor of the reviewed conference contribution presented in Oslo. Springer Publishers have agreed to publish the proceedings a part of the International Year of the Planet Earth Series. Gerd Tetzlaff coedited a volume on “Severe Storms over Europe” Second International Workshop, Hohenkammer, Germany, DKKV Volume 36, 55 p.).

There is quite a number of publications by GRC members in the year 2008. The following examples give an impression of the spectrum :

--Gupta; Purnachandra, Shashidar and Mallika : “The disastrous M 7.9 Sichuan earthquake Of 12 May 2008”, J. Geological Soc. India, 72, 325-330.

--Gupta : India’s initiative in mitigating tsunami and storm surge hazards; J. Earthquake and Tsunami, 3, 1-9, in press.

--Singh, Prasad, Kavetha, and Kafatos : Enhancement of oceanic parameters associated with dust storms using satellite data, J.Geophys. Res. 113, C11.

Tang, Zhao, Zheng and Singh, Enhancement of oceanic chlorophyll-a in the northeastern Indian Ocean after the 2004 south Asian Tsunami, Internat. J. Remote Sensing, in press.

--Kürbis, Mudelsee, Tetzlaff, Brazil : Trends in extremes of temperature, dew point and precipitation from long instrumental series from central Europe, Theor..Appl. Climatol. 2008

-- K. Takeuchi, H. Ishidaira, H. Sawada and T. Masumoto (guest eds) (2008.4) Studies on the Mekong River Basin - Modelling of Hydrology and Water Resources, Hydrological Processes, Special Issue, 22(9), 1243-1406

Participations, representations and networking : There were many contacts between GRC commissioners and national and international organizations. The contact to UNISDR is secured by Harsh Gupta, who is a member of the science committee. The contact to UNISDR Europe is kept by Gerd Tetzlaff. Tom Beer was actively involved in the international coordination IYPE activities, in particular on the theme “Hazards” (see Oslo conference). Gerd Tetzlaff is a contact to the UN Climate Change Secretariat (UNFCCC) on the adaptation to climate change (Nairobi work program), representing this topic also on the conference of the parties (COP 14) in Poznan in December 2008 and to a WMO regional conference in Chisinau (Moldova) in October.

4. Planned future activities : GRC (Jayawardena with a series of lectures and Tetzlaff with some lectures) will support the Spring School on Fluid Mechanics and Geophysics of

Environmental Hazards (Singapore 20 April to 02 May 2009). GRC started preparation of a Geo-Unions Open Forum during the 25th IUGG General Assembly to be held in Melbourne 2011. This is to vitalize the communication and collaboration among geo-related unions in and around ICSU.

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Secretary General