



REPORT OF THE PRESIDENT

I took office as a President of the IUGG GeoRisk Commission at the business meeting in Hyderabad, 2 December 2004. Below is my report, which covers the period between December 2004 and May 2007.

The IUGG Commission on Geophysical Risk and Sustainability (IUGG GeoRisk Commission) was established by the IUGG Bureau in August 2000, and Tom Beer, a founder of the Commission, became the first President. The Commission dedicated to promoting scientific studies applied to the reduction of risk from natural hazards in an increasingly urbanized world and sustainability and 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. 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.

Statement of the Commission

In a response to the humanitarian tragedy due to the great earthquake and tsunami in the Indian Ocean on 26th December 2004, the IUGG GeoRisk Commission adopted on 7th January 2005 the Statement on the *Greatest Earthquake and Tsunami of the Early XXI Century and the Need for Urgent Action to Reduce Natural Disasters in the Indian Ocean Region and Elsewhere*. Among major recommendations of the Commission were the following:

1. The countries around the Indian Ocean to set up a Disaster Management Center in order to monitor land, ocean and atmosphere in relation to all kinds of natural hazards, especially those related to coastal regions. Such Centers should be established in any disaster-prone coastal regions where they do not already exist (e.g., Mediterranean Sea and Atlantic Ocean).
2. A Tsunami Warning System to be set up in the region. Before such systems are in operation in the region, the Pacific Tsunami Warning Center in Hawaii should extend its warnings to cover all vulnerable areas in the Indian Ocean.
3. Multidisciplinary and multinational research programs and research networks on geophysical hazards and risks to be developed in the Indian Ocean countries in order to integrate diverse data streams, to improve understanding of the natural phenomena associated with the disasters, to develop predictive modeling capability, and to generate and to disseminate timely and accurate information needed by decision makers and the public

Based on the Statement of the GeoRisk Commission, on 10th January 2005 IUGG issued a Resolution on the Sumatra earthquake and tsunami (<http://www.iugg.org/tsunamiresolution05.pdf>). On 17th January 2005 International Council for Science (ICSU) produced a Position Statement based on the materials of the IUGG GeoRisk Commission's Statement.

Scientific Meetings

During the report period on behalf of the Commission I organized/co-organized and attended several research workshops and symposium on the topic of natural hazards, risks, and sustainability:

- 4th IUGG GeoRisk Commission Workshop on Recent Geodynamics, Georisk and Sustainable Development of the Black Sea to Caspian Sea Region, 3-6 July 2005, Baku, Azerbaijan ¹
- Special Session "Mathematical Aspects of Geohazard Research", IUGG Conference on Mathematical Geophysics, 5th June 2006, Sea of Galilee, Israel ²
- 5th IUGG GeoRisk Commission Symposium "Riding the storm: Can science keep us in the saddle?", 16th July 2006, Munich, Germany ²
- Union Symposia "High-Performance Computations in Geosciences" at the IUGG General Assembly, July 6, 2007, Perugia, Italy. ²

- ICSU Workshop “Natural and Human-induced Hazards and Disasters in Africa”, Kampala, Uganda, 21-23 July 2007.
- Third International Geohazards Workshop, 6-9 November 2007, Frascati, Rome, Italy.

I presented the Commission and gave lectures at several scientific meeting:

- 2nd International Geohazards Workshop, Orléans, France, 27-29 June 2005. ³
- 2nd International Conference of The Nigerian Union of Planetary and Radio Sciences, Port Arthur, Nigeria, 24-26 August 2005.
- University of Yamanashi 21st Century COE Invited Lecture, 24 November 2005, Kofu, Japan. ⁴
- 8th Workshop on Nonlinear Dynamics and Earthquake Prediction, Trieste, Italy, 3-15 October 2005. ⁵
- OECD Global Science Forum Workshop on Earthquake Science and its Contribution to Society, Potsdam, Germany, 1–2 June 2006. ⁶
- General Assembly of the Asian Seismological Commission and Symposium "Earthquake and Tsunami Disaster Preparedness and Mitigation", Bangkok, Thailand, 7-10 November 2006. ⁷
- International Conference on Climate Change and Earthquakes, Islamabad, Pakistan, 13-17 November 2006. ⁸
- General Assembly of the European Geoscience Union, Vienna, Austria, 15-21 April, 2007. ²

Travel expenses were covered

- ¹ by UNESCO and Heidelberg Academy of Sciences (Germany);
- ² from own travel funds;
- ³ by the IGOS-Geohazards Team;
- ⁴ by the University of Yamanashi;
- ⁵ by the Abdus Salam International Centre for Theoretical Physics, Trieste, Italy;
- ⁶ by OECD;
- ⁷ by the Asian Seismological Commission and from own funds;
- ⁸ by the Government of Pakistan.

Commission Projects

I was involved in the following Commission’s project activities:

- Dark Nature, co-partner, funded by ICSU (2004).
- Workshop in Stockholm (Sweden), funded by NATO and IUGG (2004)
- Workshop in Baku (Azerbaijan), funded by IHP/UNESCO, IUGG, ExxonMobil, and Heidelberg Academy of Sciences (2005).
- Symposium in Munich (Germany), funded by IUGG (2006).
- Workshop in Kampala (Uganda), funded by IUGG (2007).

Two project proposals were submitted to ICSU in 2005 , but unfortunately were not funded because of ICSU financial problems:

- Geohazards: Extreme Natural Events and Societal Implications (led by IUGG GeoRisk Commission). Sponsoring partners: ICSU GeoUnions.
- The Role of Science and Data in Disaster Risk Management (led by ICSU CODATA). Supporting partner: IUGG GeoRisk Commission

Webcyclopedia of Natural Hazards, Risks and Sustainability

The web-page of the Commission is maintained at the site: <http://www.iugg-georisk.org> (web-master: D. Krupsky. The Webcyclopedia at: <http://www.iugg-georisk.org/webcyclopedia/index.html> continues to collate information. The Webcyclopedia is a matrix, ordered in terms of cities, hazards and risks, and authors. The hazards is determined by the scientific skill base, as determined by the IUGG Associations - hydrological, meteorological, marine, tsunamis, volcanoes, seismic, geodetic (landslides), geomagnetic. The risks are determined by the sustainability issues such as infrastructure issues (building vulnerability, robustness of infrastructure), and health issues (air quality, water quality, contaminated land). The

Webcyclopedia entities are varied, ranging from the traditional scientific paper through to interactive hazard maps, real time data, models of the phenomena, or merely hyperlinks to other sites providing information on the topic. The presentations, given at the meetings organized by the Commission or endorsed by the Commission, have been incorporated into the Webcyclopedia. The Commission continues to search for an editor for the project.

Business Meetings

My intention as a President was to link the IUGG Commission with various institutions dealing with natural hazards and risks.

- On 29 March 2005 I met in Paris A. Szollosi-Nagy, Secretary General, International Hydrological Program, UNESCO and discussed topics related to Webcyclopedia and international GeoRisk workshop in Baku.
- On 19 June I together with T. Beer met in Paris H. Modaressi, S. Hosford, and G. Le Cozannet of the IGOS GeoHazards Bureau to discuss cooperation between IUGG GeoRisk Commission, IGOS Geohazards Team, and GeoUnion Hazards Initiative.
- On 21 June 2006 I together with T. Beer met in Paris P. Dube (Botswana), a member of the ICSU Planning Group on Natural and Human Induced Environmental Hazards and Disasters, to discuss possibilities of cooperation on the topic of natural hazards in Africa.
- On 10 July 2006, I in Paris A. Gvishiani, Vice President of ICSU CODATA, to discuss cooperation between IUGG GeoRisk Commission and ICSU CODATA on the development of Webcyclopedia.
- On 15 January 2007 I met in Kyoto K. Sassa, President of the International Consortium on Landslides (ICL), Kyoto to discuss ways of cooperation between the GeoRisk Commission and ICL.
- At the invitation of International Consortium on Landslides, I attended the First Session of the International Program on Landslides (IPL) held in United Nations University, Tokyo, Japan, January 22-25, 2007. The IUGG and GeoRisk Commission are invited to co-sponsor the First World Landslide Forum to be held 18-21 November 2008, Tokyo, Japan.
- On 30 January 2007 I together with T. Beer met in Tokyo Dr. Haruyama of the International Geographical Union (IGU) and discussed the topics related to cooperation between the IGU Commission on Hazards and Risks and IUGG GeoRisk Commission.

Relevant Publications

- Beer, T. and Ismail-Zadeh, A.T. (Eds.) Risk Science and Sustainability, Kluwer Academic Publishers, Dordrecht, 2003. 256 p. (peer-reviewed articles based on the Budapest workshop of the IUGG GeoRisk Commission).
- Ell, R., Riding the storm: can science keep us in the saddle? *ESOF Newsletter*, No. 10, Feature article, http://www.esof2006.org/blog_article.php4?ID=24&what=Feature, 24 May 2006.
- Ismail-Zadeh, A.T., Science for mitigation of natural disasters, *EuroScience News*, 30, 1, 2005.
- Ismail-Zadeh, A. T. (Ed.) *Recent Geodynamics, Georisk and Sustainable Development in the Black Sea to Caspian Sea Region*, American Institute of Physics Conference Proceedings, vol. 825, Melville, New York, 2006. 162 p. (peer-reviewed articles based on the Baku workshop of the IUGG GeoRisk Commission)
- Ismail-Zadeh, A., and Beer, T., A focus on risk science and sustainable development, *EOS, Transactions of the American Geophysical Union*, vol. 85, No. 44, 453, 2004.
- Ismail-Zadeh, A. T., and T. Beer (Eds.) *Georisk: Interactions between Science and Society*, special issue of *Natural Hazards*, Springer, 2007 (peer-reviewed articles based on the Stockholm and Hyderabad workshops of the IUGG GeoRisk Commission).

Acknowledgements

The end of the IUGG GeoRisk Commission's Business Meeting in Perugia will mark the end of seven-year period during which I served on the Commission as Vice President (2001-2004) and President (2004-2007). This has been a challenge and a privilege to serve on the Commission, and it would be nearly impossible to work without help and encouragement of GeoRisk Commissioners. I am very thankful to all you who made my task easier and pleasurable. First among them is a founder of the

Commission and current IUGG Vice-President, Tom Beer, who was my constant and wise adviser on various topics of the Commission's work. Vice-Presidents Kuni Takeuchi and Ramesh Singh helped with their constructive comments and wise advices. Secretary General Gerd Tetzlaff helped with routine activity of the Commission. Treasurer Paula Dunbar kept our finances in an excellent shape. Special thanks go to the Commissioners Uri Shamir (IUGG President), Harsh Gupta (IUGG Bureau Member), Volodya Kossobokov, Evgeny Kontar, and Zhongliang Wu for their persistent help and advice. I wish to acknowledge the financial support provided to the Commission by IUGG, UNESCO, Exxon Mobil Company, and the Heidelberg Academy of Sciences and Humanities. I was happy to serve the commission and do not consider that this formal end will bring to the end my deep involvement into the Commission's activity.

Alik Ismail-Zadeh

23 May 2007, Paris