



INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS
UNION GEODESIQUE ET GEOPHYSIQUE INTERNATIONALE

The IUGG Electronic Journal

Volume 12 No. 7 (1 July 2012)

This informal newsletter is intended to keep IUGG Member National Committees informed about the activities of the IUGG Associations, and actions of the IUGG Secretariat. Past issues are posted on the IUGG Web site (<http://www.iugg.org/publications/ejournals/>). Please forward this message to those who will benefit from the information. Your comments are welcome.

Contents

1. Future Earth: New global platform for sustainability research launched at Rio+20
2. Highlights of the State of the Planet Declaration
3. EMSEV Workshop on Electromagnetic Studies of Earthquakes and Volcanoes
4. EuroScience Open Forum 2012
5. CTBTO Research Awards for Young Scientists and Engineers
6. IRDR Visiting Professorship for Senior International Scientists
7. Jubilees
8. IUGG-related meetings occurring during July - September

1. Future Earth: New global platform for sustainability research launched at Rio+20



An alliance of international partners from global science, research funding and UN bodies launched a new ten-year initiative on global environmental change research for sustainability at the Forum on Science and Technology and Innovation for Sustainable Development on 14 June in Rio de Janeiro, Brazil. Future Earth – research for global sustainability – will provide a cutting-edge platform to coordinate scientific research which is designed and produced in partnership with governments, business and, more broadly, society. “We need a new approach to address the critical challenges of global environmental change and sustainable development which is more interdisciplinary, more international, more collaborative and more responsive to the users of research”, said Diana Liverman, co-Director of the Institute of the Environment at the University of Arizona and co-Chair of the Future Earth design team. Future Earth will bring together natural scientists, social scientists, engineers and the humanities with funders and policy makers to align research agendas, understand and anticipate environmental change, and develop innovative solutions.

The initiative will embody an inter- and trans-disciplinary approach to provide early warning signals of environmental risk and change, and stimulate new research to support the transition of societies towards sustainability. At the simplest level Future Earth must answer fundamental questions about how and why the global environment is changing, what are likely future changes, what the implications are for the wellbeing of humans and other species, what choices can be made to enhance resilience, create positive futures, and to reduce harmful risks and vulnerabilities, and how this knowledge can support decisions and sustainable development. Future Earth will have a new global governance body and secretariat, building on the strengths of the existing core global environmental change programme, which are co-sponsored by ICSU and other members of the Alliance. Starting in the coming months, a series of consultations on how to frame the research questions will engage researchers, policy makers and practitioners. These initial consultations will involve an online survey and regional workshops in Asia, Africa, Latin America and the Middle East, beginning in the second half of 2012. “We are very excited that Future Earth has made regional consultations a priority of its initial design phase”, said Tanya Abrahamse, CEO of the South African Biodiversity Research Institute and member of the Transition Team. “Future Earth will make the vital link between the global and regional levels by scaling up international collaboration on research to inform solutions and transformations towards sustainability” added Carlos Henrique de Brito Cruz, Scientific Director of the São Paulo Research Foundation and Brazilian representative of the Belmont Forum of environmental research funding agencies, which is a member of the alliance establishing Future Earth. “One of the keys to the success of Future Earth will be transnational funding to support international research projects. For example, the funding agencies of the Belmont Forum have established joint calls that will bring together new international partnerships of social and natural scientists working on specific themes, such as freshwater security and coastal vulnerability.”

This interdisciplinary initiative is jointly established and scientifically sponsored by an alliance that includes the International Council for Science (ICSU), the International Social Science Council (ISSC), the Belmont Forum, the United Nations Environment Programme (UNEP), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations University (UNU), and is strongly supported by the World Meteorological Organization (WMO). “Through its broad and strong partnership, Future Earth will connect scientific research, policy development and action, and enhance the interface between science and policy to support sustainability”, said Yuan T Lee, winner of the 1986 Nobel Prize in Chemistry and ICSU President. Lee added: “We are delighted to launch the initiative here, as Rio+20 is all about pathways for a sustainable future, and Future Earth will represent one concrete step towards it.”

For more information on Future Earth, see: <http://www.icsu.org/future-earth/>

2. Highlights of the State of the Planet Declaration

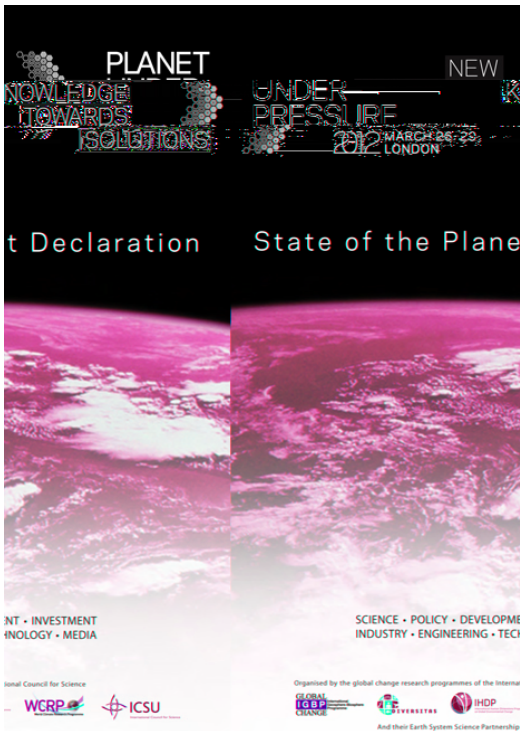
The International Council for Science was a sponsor of “Planet Under Pressure”, a four-day conference in London, which brought together more than 3,000 experts to assess the state of the planet and explore solutions to impending social and environmental crises. At the close of the conference, a final declaration was issued, with a view to informing the United Nations Conference on Sustainable Development in Rio de Janeiro in June 2012. Highlights of the declaration:

New Knowledge

- The defining challenge of our age is to safeguard natural resources of the Earth;

- Consensus is growing that we have driven the planet into a new epoch, the Anthropocene, in which many Earth-system processes are dominated by human activities;
- The Earth system is a complex, interconnected system that includes the global economy and society. Such systems are susceptible to abrupt and rapid changes and crises, such as global financial meltdowns or food price volatility;
- Existing governance mechanisms for global environmental change are not keeping pace with climate change and biodiversity loss, and should make way for a polycentric approach to planetary stewardship, such as diverse partnerships among local, national and regional governments, business and civil society.

New Solutions



- Interconnected issues require interconnected solutions;
- A new contract between science and society which comprises a framework for regular global sustainability analyses to bring coherence to the science-policy interface, a new approach to research which is integrative, international and solutions-oriented and new mechanisms to facilitate interactive dialogue on global sustainability;
- The challenges facing a planet under pressure demand a new approach to research that is more integrative, international and solutions-oriented. We need to link high quality focused scientific research to new policy-relevant interdisciplinary efforts for global sustainability. This research must integrate across existing research programmes and disciplines, across all domains of research as well as local knowledge systems, across the North and South, and must be co-designed and implemented with input from governments, civil society, research funding agencies, and the private sector.

Society is taking substantial risks by delaying urgent and large-scale action. We must show leadership at all levels. We must all play our parts. A strong contribution from all stakeholders should make the UN's Rio+20 conference a defining moment that sparks global innovation to move us towards a sustainable future. We urge the world to grasp this moment and make history.

The declaration can be found at: http://www.icsu.org/news-centre/news/state_of_planet_declaration.pdf

3. EMSEV Workshop on Electromagnetic Studies of Earthquakes and Volcanoes

EMSEV is the IUGG Inter-Associations Working Group on Electromagnetic Studies of Earthquake and Volcanoes. The International EMSEV workshop will be held in Gotemba, Shizuoka, Japan, from September 30 to October 4, 2012 (<http://www.emsev-iugg.org/emsevJAPAN/>). This biennial meeting is supported by IUGG and by the co-sponsoring bodies: IAGA, IASPEI and IAVCEI. The workshop focus will be on electromagnetic and other geophysical observations of earthquakes and volcanic eruptions, and on the understanding of the physical processes leading to the generation and propagation of signals from the crust to the ionosphere. The workshop will attract a large

international community of researchers from many different disciplines including electro-magnetism, ionospheric and space physics, radio wave science, seismology and geodesy, rock physics, fluids and thermal transfers, as well as geochemistry. About a hundred participants are expected, and EMSEV will, in particular, encourage researchers from developing countries.

Topics will be discussed in detail during 5 union sessions. Session I will consider electric, magnetic, and electromagnetic phenomena associated with active processes: earthquakes, tsunamis, volcanoes, active fault movements, landslides, and geothermal activities. Session II will discuss electromagnetic imaging based on land and space monitoring techniques. Session III will analyze pre-seismic, co-seismic and post-seismic phenomena related to lithosphere-atmosphere-ionosphere coupling using multi-parametric observations to ensure reliable interpretations. Session IV will be devoted to the generation mechanisms of electromagnetic signals related to active processes, based on theoretical and laboratory studies. Finally, Session V will be centered on the seismic, geodetic and electromagnetic studies related to the off Tohoku M9 Earthquake and Tsunami on March 11, 2011 (Japan).

Received from Jacques Zlotnicki, EMSEV Chair

4. Euroscience Open Forum 2012



This July, people from the world of science, society and policy will assemble in Dublin for the EuroScience Open Forum (ESOF 2012), the largest open forum of its kind. This important gathering will provide a platform for debate, for influencing policy and strengthening the links between science and society. Join this global gathering of Nobel laureates, leading researchers, policy makers, business leaders and international media. IUGG and Euroscience have cooperated and organized several scientific events at the ESOFs since 2002. For more information please visit www.esof2012.org

5. CTBTO Research Awards for Young Scientists and Engineers



The Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization with its Headquarters in Vienna is the international organization setting up the global verification system foreseen under the Comprehensive Nuclear-Test-Ban Treaty (CTBT), which is the Treaty banning any nuclear-weapon-test explosion or any other nuclear explosion. IUGG via IASPEI, and most recently via IAPSO, IAMAS and other Union bodies have been assisting CTBTO for many years in scientific issues related to the scope of the organization.

The Commission invites science and engineering university students and recent graduates to participate in an award program aimed at generating new and innovative solutions to problems in areas related to nuclear-test-ban treaty monitoring using data from the International Monitoring System (IMS) network of seismic, hydro-acoustic, infrasound, and radio-nuclide stations. Interested individuals are invited to submit a proposal to fund short research projects on topics specifically

directed to nuclear-test-ban verification or more generally related to civil and scientific applications. The result will be presented at the CTBTO Science and Technology Conference (S&T 2013) in Vienna, 17-21 June 2013. Potential applicants are encouraged to ensure that their proposals and supporting documentation are received by the Commission before the closing date (**11 July 2012**) to guarantee inclusion in the evaluation of proposals. However subject to availability of funds, late proposals may be considered. For more information, please refer to

<https://jobs.ctbto.org/ERecruitmentPublicWeb/employmentVacancy.do?mode=view&postNumber=VAC-0040-2012>

Received from Martin Kalinowski, CTBTO

6. IRDR Visiting Professorship for Senior International Scientists

The Integrated Research on Disaster Risk Programme (IRDR) announced a call for applications for Visiting Professorships for Senior International Scientists for 2013, supported by the Chinese Academy of Sciences (CAS). Visiting Professorships for Senior International Scientists are open to international scientists with distinguished scholarly accomplishments and who have the same or similar research interests as IRDR. The call aims to identify a senior scientist to work with the IRDR International Programme Office (IRDR IPO), the IRDR Science Committee, and the IRDR Working Groups to:

- contribute to IRDR's strategic work plan development;
- identify and organize integrated research projects on disaster risk;
- expand IRDR's collaboration network at the global level;
- generate research findings to support IRDR's objectives;
- make other contributions beneficial to promoting science development and cooperation between IRDR, CAS institutes and collaborating agencies.

Deadline for the submission of applications is **30 July 2012**. For more information on IRDR please visit www.irdrinternational.org or contact Ms. Anna Rudashko (anna.rudashko@irdrinternational.org).

7. Jubilees



Peter John Wyllie, former President of IUGG (1995-1999), was honoured by a Special Symposium at the Goldschmidt Conference in Davos (June 2009), followed by a Special Issue of the Journal of Petrology (July-August, 2011). These were formally devoted to: "Magma generation and evolution and global tectonics: A Symposium/issue in honour of Peter J. Wyllie for his life-long contributions by means of experimental petrology to understanding how the Earth works".

The 50th Anniversary of the Journal of Petrology in 2010, coincident with Wyllie's 80th birthday, was also celebrated at the Goldschmidt Conference. This marked another coincidence, the publication by Wyllie (with O.F. Tuttle) of the first paper in the first 1960 issue of the Journal. Five years later he was briefly Managing Editor of the Journal (1965-1967), before becoming Editor of the Journal of Geology (1967-1983). Peter J. Wyllie is an eminent geoscientist and professor emeritus of the California Institute of Technology (CalTech), who contributed significantly to international cooperation in Earth sciences. He was Chairman (1976-1980) of the Commission on Experimental Petrology of the International Union of Geological Sciences (IUGS), President (1986-

1990) of the International Mineralogical Association (Vice-President, 1978-86), and Vice President of IUGG (1991-95).



Vladimir (Volodya) Isaakovich Keilis-Borok, former President of IUGG (1987-1991), was honoured by a Union session “Predicting Extreme Events in Natural and Socio-Economic Systems” at the 2011 Fall Meeting of the American Geophysical Union for his outstanding contribution to understanding complexity and nonlinear dynamics of the lithosphere and to prediction of natural and socio-economic extremes. This session was a part of the ENHANS project activity (<http://www.enhans.org>) and coincided with Volodya Keilis-Borok’s 90th birthday.

Keilis-Borok is an eminent theoretical geophysicist, distinguished professor of the University of California at Los Angeles (UCLA), and the Founding Director of the Institute of Earthquake Prediction Theory and Mathematical Geophysics at the Russian Academy of Sciences (RAS) in Moscow. He served as Founding Chairman of the IUGG Union Commission on Mathematical Geophysics (1964–1979), Vice President of IASPEI (1983–1987), IUGG Bureau Member (1983–1987), Executive Board Member of ICSU (1988–1991), Member of the Scientific Committee for the UN Decade for Natural Disasters Reduction (1990–1999), Member of the International Working Group on the Geological Safety of Nuclear Waste Depositories (1994–1997), and Member of the RAS Committee for International Security and Disarmament (1998–2000).



On 15 June **Karl Fuchs**, former President of the International Lithosphere Program (ILP, 1985-1990), was honoured by a colloquium at the Karlsruhe Institute of Technology (KIT, Germany) for his outstanding contribution to seismology and study of the Earth’s lithosphere on the occasion of his 80th birthday. ILP is charged with promoting multidisciplinary research projects of interest to both the geological (IUGS) and geophysical/geodetic (IUGG) communities.

Karl Fuchs is professor emeritus of the Karlsruhe University (now KIT), directed the Geophysical Institute of the university (1970–1997), and chaired the World Stress Map Project (1995-2002). He served as President of the German Geophysical Society (1976-1978), Vice-President of the European Union of Geosciences (1983–1985), and member of the Advisory Board of the International Continental Drilling Program (ICDP, 1998–2003).

8. IUGG-related meetings occurring during July – September

A calendar of meetings of interest to IUGG disciplines (especially those organized by IUGG Associations) is posted on the IUGG web site (<http://www.IUGG.org/calendar>). Specific information about these meetings can be found there. Individual Associations also list more meetings on their web sites according to their disciplines.

July

- 1-6, IUGG SEDI, Leeds, UK, SEDI Conference 2012
- 9-11, IACS, IUGG, Tarfala, Sweden, Workshop on measurement and uncertainty assessment of glacier mass balance
- 13-25, SCAR, Portland, Oregon, USA, XXXII Open Science Conference

- 14, SCAR, IASC, WMO, Portland, Oregon, USA, Ice-Sheet Mass Balance and Sea Level (ISMASS) Kick-off Workshop
- 14-22, COSPAR, IUGG, Mysore, India, 39th COSPAR Scientific Assembly
- 23-27, IAG, International GNSS Service (IGS) Workshop, Olsztyn, Poland
- 25-31, IAGA, IUGG, Darwin, Australia, 21st Electromagnetic Induction Workshop
- 28 July – 3 August, IAMAS, IUGG, WMO, Leipzig, Germany, International Conference on Clouds and Precipitation

August

- 5-15, IUGS, Brisbane, Australia, 34th International Geological Congress
- 6-9, IAMAS, IUGG, WMO, Kunming, China, ICDM Workshop 2012 “Dynamics and Predictability of High-impact weather and Climate Events”
- 6-10, IAMAS, IUGG, Berlin, Germany, International Radiation Symposium (IRS) 2012
- 13-17, AOGS, AGU, Singapore, Joint Assembly
- 19-20, IAG, International Symposium on Space Geodesy and Earth System, Shanghai, China
- 19-24, IASPEI, IUGG, Moscow, Russia. 33rd General Assembly of the European Seismological Commission and Young Seismologists Training Course
- 26-30, GRF, IRDR, Davos, Switzerland, 4th International Disaster and Risk Conference
- 28-31, GEOSS, IUGG, Bonn, Germany, Workshop “GEOSS: Supporting Science for the Millennium Development Goals and Beyond”

September

- 16-23, IAHS, Niagara Falls, Canada. 39th IAH Congress
- 17-20, IASPEI, IUGG, Ulaanbaatar, Mongolia, 9th General Assembly of the Asian Seismological Commission
- 17-20, IAG, WEGENER 2012: Earthquake Geodesy and Geodynamics, Strasbourg, France
- 23-26, IASPEI, Lima, Peru, XVI Peruvian Geological Congress and SEG 2012 Conference
- 23-29, IAVCEI, Vulcini, Italy, 4th International Workshop on Collapse Calderas
- 24-27, IAHS, Vienna, Austria, HydroPredict’2012 - 3rd International Interdisciplinary Conference on Predictions for Hydrology, Ecology, and Water Resources: Water Resources and Changing Global Environment
- 24-29, ESA, 20 Years of Progress in Radar Altimetry
- 25-26, IAG, International DORIS Service (IDS) Workshop, Venice, Italy
- September 30 - October 4, IAGA, IASPEI, IAVCEI, IUGG, Shizuoka, Japan, 2012 International EMSEV workshop

End of IUGG Electronic Journal Volume 12 Number 7 (1 July 2012)

A.T. Ismail-Zadeh, Secretary General (<http://www.IUGG.org>)

E-mail: Alik.Ismail-Zadeh@kit.edu

Note: Contributions to IUGG E-Journal are welcome from members of the IUGG family. Please send your contributions to Alik Ismail-Zadeh by e-mail (insert in Subject line: *contribution to E-Journal*). The contributions will be reviewed and may be shortened by the Editor.