



**INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS**  
**UNION GEODESIQUE ET GEOPHYSIQUE INTERNATIONALE**

## **The IUGG Electronic Journal**

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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.

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### **1. IUGG Secretary General meets the ICSU Executive Director**

*On 4 July 2012, IUGG Secretary General Dr. Alik Ismail-Zadeh met the ICSU Executive Director Dr. Steven Wilson in the ICSU Secretariat in Paris. The topics of the meeting agenda included an introduction to IUGG and its Union Scientific Associations; the relationship of IUGG with ICSU; the GeoUnions Joint Board and the GeoUnions Joint programs; the ICSU Grant Programme; specific ICSU programs of interest to IUGG, namely disaster risk research (IRDR), climate research (WCRP), data and information (WDS), and sustainability (Future Earth); the International Year of Deltas; visa problems; and some other topics.*

After a brief introduction to IUGG and its eight scientific associations, it was stated that IUGG considers that the strength of ICSU is in its scientific unions and in its interdisciplinary bodies (created because of active involvements of the unions). We value ICSU because the Council (i) promotes a multi- and trans-disciplinarily approach to science, (ii) provides a platform for cooperation with other Scientific Unions and National Members, Interdisciplinary bodies and Associates of ICSU, which would be more difficult otherwise; and (iii) on behalf of its members, speaks about topics related to global science, sustainability and society. Since 2008 the IUGG relationship with the ICSU Secretariat has developed very well. Information from the ICSU Secretariat reaches IUGG and its Associations: we are informed about the ICSU calls, nominations, new programs and initiatives. IUGG's relationship with several ICSU Interdisciplinary bodies is also well developing, although sometimes there is a lack of scientific communication between IUGG and some of the bodies. IUGG would appreciate more transparency in the work of the ICSU

regional committees and offices. The ICSU Grant Programme is of great importance to IUGG as it provides a possibility to initiate new truly inter- and trans-disciplinary research initiatives. As an example, the recent ICSU co-sponsored ENHANS project was a big success.

The IUGG Secretary General expressed a concern regarding ICSU's deliberation on the IUGG proposal on disaster risk assessment (*see E-Journal, vol. 11, no. 10A, 17 October 2011; Section 6. IRDR and Assessment of Disaster Risk*). So far, there has been no action reported about the decision of the ICSU General Assembly on this topic. It was mentioned that IUGG expects more involvements of geoscientists in the Future Earth programme. Dr. Ismail-Zadeh highlighted a new scientific initiative called the "International Year of Deltas" supported by several ICSU Scientific Unions and interdisciplinary bodies (<http://www.iyds-2013.org/content/sponsors>). IUGG proposes ICSU to introduce a recognition program to honor eminent scientists who contributed to international research cooperation. Recent refusals of visa applications of scientists to attend scientific meetings were also discussed along with the IUGG proposal on how ICSU could contribute to resolving visa problems. Both Dr. Wilson and Dr. Ismail-Zadeh expressed their readiness to continue the open dialog in future. Dr. Ismail-Zadeh also met Dr. Carthage Smith (Deputy Executive Director), Dr. Howard Moore and Dr. Gisbert Glaser (Senior Advisers), Ms. Tish Bahmani Fard (Assistant Executive Director), and Ms. Rohini Rao (Administrative Officer).

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## 2. News from the International Council for Science (ICSU)



### *Forum on Science, Technology and Innovation for Sustainable Development*

The Forum on Science, Technology and Innovation for Sustainable Development in Rio de Janeiro, Brazil, was a great success and had a big impact on the outcomes for science at Rio+20 and beyond. Over 1,000 people attended the event from June 11-15, with another 1,000 watching the live web-cast and many more interacting via social media. The forum brought together scientists, policymakers, industry, NGOs, journalists and youth from all over the world to exchange ideas, solutions and policy recommendations in Rio de Janeiro while the final negotiations on the "Future We Want" document were still underway. It was a very exciting and inspiring week for all. Alongside the main plenary sessions, the forum provided smaller spaces for learning, exchange and networking via 25 side events, which ran throughout the week.

"Ensuring a sustainable future in the face of inter-connected, human-induced challenges facing the Earth system urgently requires new knowledge and a new relationship between science and society," said the final communiqué from the Forum. Scientists and policymakers from more than 75 countries debated themes ranging from energy, food and water security to indigenous knowledge and the green economy, and two important conclusions stood out: the necessity for social and natural scientists to work closely together, and the need for integrated policy approaches.

Future Earth, a new 10-year interdisciplinary initiative on research for global sustainability that will bring together natural and social scientists, was launched at the Forum. For more information:

<http://www.icsu.org/future-earth>. The final outcome document on “The Future We Want” contained several important references to science. These included: (i) references to the need to strengthen the science-policy interface; (ii) the decision to develop a set of Sustainable Development Goals; (iii) the role and functions of a new High-Level Political Forum (including strengthening the science-policy interface, among others through the preparation of global sustainable development reports). The Forum website: [www.icsu.org/rio20/science-and-technology-forum](http://www.icsu.org/rio20/science-and-technology-forum)

Received from Vivien Lee, ICSU Secretariat

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### **3. News from the World Meteorological Organization (WMO)**

#### *Sixty-fourth Session of WMO's Executive Council*

The Session of the Executive Council (EC-64) was held in Geneva, Switzerland, from 25 June to 3 July 2012. IUGG was represented at the session by its Liaisons Dr. Arthur Askew of IAHS, Dr. Arnau Folch of IAVCEI, and Dr. Hans Volkert of IAMAS. Dr. Askew was able to attend the meeting every day, and Dr. Folch and Dr. Volkert attended for a couple of days each so as to follow items that were of particular interest to their respective Associations.

Progress with the World Weather Research Programme (WWRP) was reported, which was of interest to IAMAS, but there was no requirement to intervene in the debate. Dr. Volkert took advantage of being at the EC-64 to meet Michel Béland (President of WMO's Commission of Atmospheric Sciences), Deon Terblanche (Director of WMO's Department of Atmospheric Research), and Geir Braathen (WMO officer overseeing the Global Atmospheric Watch - GAW) and discussed the planning of scientific meetings of mutual interest such as DACA-13 (scheduled for July 2013 in Davos, Switzerland) and the WWRP/THORPEX Open Science Conference (scheduled for August 2014 in Montréal, Canada).

There were a number of references to items such as the Antarctic Treaty, the Global Cryosphere Watch, a new WWRP Polar Prediction Project and the Antarctic Observing Network. It was noted that, after the 2010 Eyjafjallajökull eruption in Iceland, atmospheric physicists have made substantial progress on scientific aspects surrounding the monitoring and forecasting of volcanic ash clouds and that the Meteorological Services are co-operating very actively with local volcanologists and volcano observatories. The ash concentration thresholds for flight safety have been a matter of debate within the ICAO International Volcanic Ash Task Force (IVATF), which has delivered its final recommendations after the 4<sup>th</sup> IVATF meeting (Montréal, Canada, 13-15 June 2012).

Under the item on aeronautical meteorology, the main interest for Dr. Folch was the proposal to amend the terms of reference of the WMO/IUGG Volcanic Ash Scientific Advisory Group (VASAG). The approved terms of reference, as revised, are presented below. The VASAG was created during the 5<sup>th</sup> WMO Volcanic Ash Workshop (Chile, 22-26 March 2010), shortly before the Eyjafjallajökull crisis. From 18 May 2010 on, the VASAG was integrated within the Atmospheric Science Sub-group of the IVATF. Following from IVATF's last meeting, the VASAG will continue its activity in close collaboration with the ICAO International Airways Volcano Watch Operations Group (IAVWOPSG) and will form the scientific committee of the 6<sup>th</sup> WMO Workshop on Volcanic Ash (Indonesia, 25-29 March 2013). New ICAO regulations require that all meteorologists who brief airline pilots must be certified as being competent for the task, which requires that experts be trained to conduct certification procedures. The deadline for such procedures to be completed is drawing near and many Meteorological Services, particularly in

Africa, have yet to be checked. There is considerable concern as to what will happen if ICAO's regulations are not fulfilled in time and steps are being taken to find a temporary solution to this problem.

There were no major items of importance to note as regards the Hydrology and Water Resources Programme, except that plans are still in hand to convene the session of the WMO Commission for Hydrology in Geneva, Switzerland, from 6 to 14 November 2012.

The EC-64 coincided with the 20<sup>th</sup> anniversary of the Global Climate Observing System, of which ICSU is a sponsor. Dr. Steven Wilson, the Executive Director of ICSU, was unable to participate in the celebrations, and so Dr. Askew took his place and made a couple of brief statements on his behalf. The Global Framework for Climate Services (GFCS) will take center stage for all meetings of the EC and Congress for the next few years. It was by far the major item under discussion at this EC meeting. It is being planned as an international multi-agency program with inputs from every existing program of WMO, with the possible exception of aeronautical meteorology. The whole program is an effort to focus attention and resources on the day-to-day provision of climate data, analyses and projections in support of disaster risk reduction and socio-economic development. Most of the contents are not new, but the packaging is, and that is an important distinction. It is proposed that the GFCS be overseen by an Intergovernmental Board for Climate Services having the same status as a WMO Technical Commission. Only the Congress can establish such a body and so the first ever Extraordinary Congress will be held in Geneva, Switzerland, from 29 to 31 October 2012 for this purpose.

Dr. Michel Jarraud, WMO Secretary-General, reported on his visit to the Rio+20 Conference in Brazil. He noted that the Millennium Development Goals (MDGs) are to be replaced by a set of Sustainable Development Goals (SDGs), which must now be developed. He also mentioned that UNEP has once again tried - and failed - to obtain independent status as a full UN agency instead of just a UN Programme under the General Assembly.

The theme for next year's World Meteorological Day - 23 March 2013 - will be "Watching the Weather – celebrating 50 years of the World Weather Watch".



*Plenary hall during the WMO EC-64, 28 June 2012*



*Arnau Folch & Arthur Askew in the IUGG seat*

*(photos: Hans Volkert)*

### ***Terms of Reference of the WMO-IUGG Volcanic Ash Scientific Advisory Group (VASAG)***

1. The Volcanic Ash (VA) Scientific Advisory Group (VASAG) established under the auspices of the WMO and IUGG, shall comprise geophysical and meteorological scientists. The VASAG shall confirm or elect two co-chairs at each meeting and will be supported by the WMO

Secretariat. Requests for membership or observer status on the VASAG will be decided upon by the co-chairs in consultation with the Secretariat.

2. The task of the VASAG shall be to address requests for specific advice or assistance from the ICAO IAVWOPSG and/or other relevant stakeholders.
3. The VASAG shall use appropriate scientific groups, networks, contacts and other opportunities to gather and document scientific advice from the international science community. Responsibilities and delivery deadlines will be set and documented in line with IAVWOPSG requirements.
4. The VASAG shall meet at the discretion of the co-chairs in consultation with the Secretariat (preferably at least every 18 months) but in any case in conjunction with the WMO International Scientific Workshop on Volcanic Ash (currently held every 3 years.).
5. The VASAG shall provide a report to each IAVWOPSG meeting.

Received from Arthur Askew, Hand Volkert and Arnau Folch, IUGG Liaisons to WMO

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#### 4. Awards and Honors

**Ian Allison**, IACS President, was awarded the 2012 SCAR Medal for International Scientific Coordination. “Dr. Ian Allison has been working in the area of Antarctic cryosphere for more than 40 years and participated in or led 25 research expeditions to the Antarctic. The focus of his research centres on understanding the role of Antarctica in the global climate system, and its response to climate change. His research interests cover a broad field, including sea ice; ice shelf ocean interaction; the mass budget of the Antarctic ice sheet; and Antarctic surface weather and climate. He has been an active member of the SCAR community, serving as previous co-chair of the Antarctic Sea Ice Processes and Climate (ASPeCt) group and as a member of the Group of Specialists on Antarctica and Global Change. He is also the current chair of the Martha T Muse Selection Committee. Ian has played a lead role for 30 years in international collaboration in climate science through bodies such as SCAR, the World Climate Research Programme, the International Union of Geodesy and Geophysics, and most notably as co-Chair of the ICSU/WMO Joint Committee for the International Polar Year 2007-2008. The award of the 2012 SCAR Medal for International Coordination is well-deserved recognition of Dr. Allison’s distinguished career of service and leadership in Antarctic science” (*Mahlon Kennicutt II*, SCAR President).

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#### 5. Jubilees



The Executive Committee of IUGG congratulates President **Harsh Gupta** on the occasion of his 70<sup>th</sup> Birthday! The life of Professor Gupta is a wonderful example of the extraordinary service for geoscience and society. He has been playing unique leadership roles in national and international scientific organizations (e.g., the Asian-Oceanic Geosciences Society, the Asian Seismological Commission, IASPEI, ICSU, ILP, IUGG, IUGS and several Indian scientific bodies), in education (as a Vice Chancellor of the Cochin University of Science and Technology), and in research management (as a Director of the Indian National Geophysical Research Institute in Hyderabad).

As the Leader of the Third Indian Scientific Expedition to Antarctica, Harsh and his colleagues succeeded in establishing a permanent base station for scientific research in a record time of one Antarctic Summer. As Secretary to the Government of India, at the Department of Ocean

Development, Dr. Gupta contributed to detailed Indian Ocean surveys for submitting India's claim for Legal Continental Shelf and to the foundation of the Indian Tsunami and Storm Surge Warning Center. Now as Member of the National Disaster Management Authority of the Government of India, he coordinates and administers the work in the areas falling under the zone of high earthquake vulnerability. His scientific achievements are broad. Dr. Gupta provided the first geophysical evidences of an enormously thick crust below the Himalaya and the Tibet Plateau region. He significantly contributed to understand the impact of artificial water reservoirs on triggered seismicity and to comprehend the genesis of earthquakes in stable continental regions. He worked on spectral magnitudes and showed its application in learning about the characteristics of seismic sources using broadband recordings (one of the latest applications has been in characterizing nuclear explosions).

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## **6. IUGG-related meetings occurring during August – October**

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.

### ***August***

- 1-10, ICTP, IUGG, Trieste, Italy, El Nino Southern Oscillation Monsoon in the Current and Future Climate
- 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
- 13-15, IAHS, Oulu, Finland, Nordic Water 2012, XXXVII Nordic Hydrological Conference
- 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, 4<sup>th</sup> 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

**October**

- 1-2, IAHS, IUGG, Tunis, Tunisia, 3rd STAHY International Workshop
- 3-5, IASPEI, Luxembourg City, Luxembourg, 2012 ECGS workshop: Earthquake source physics on various scales
- 11-15, IAHS, Chengdu, China, International Symposium of IAHS-ICCE
- 17-18, IAHS, Baghdad, Iraq, First International Conference on Water Resources Engineering technology in Iraq and its Obligation for Technical Potential to Satisfy the Future Demand
- 21-27, IAVCEI, Winslow, Arizona, USA, Hopi Butte Maar-Diatreme Field Workshop
- 23-25, IAHS, IUGG, Delft, The Netherlands Symposium "Completion of the IAHS decade on Prediction in Ungauged Basins"
- 29 October - 3 November, ICTP, IUGG, Trieste, Italy, Workshop on Geophysical Data Analysis & Assimilation

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**Note: Contributions to the 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.**