



**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. Office of the IUGG Secretariat moves to GFZ-Potsdam**

The office of the IUGG Secretariat will be moving from Karlsruhe to Potsdam starting from the beginning of October 2012. On the request of the IUGG officers, in June 2011 the German Research Centre for Geosciences in Potsdam (GFZ-Potsdam) expressed willingness to host the office of the IUGG Secretariat and to provide a position for the IUGG Executive Secretary. The new office of the IUGG Secretariat in Potsdam will be fully functioning from 1 January 2013. During the transition period, the Assistant Secretary General of IUGG Ms. Simone Oswald (till 31 December 2012) will work together with the newly appointed Executive Secretary (see below) to provide a smooth transition from one office to another. IUGG thanks the GFZ-Potsdam for the arrangement and financial support of the Secretariat.

Since 2007 the office of the IUGG Secretariat was located in the Karlsruhe Institute of Technology (KIT; former Karlsruhe University) at the Geophysical Institute. The German Research Foundation (DFG) funded the position of the Assistant Secretary General for 4 years (2008-2012) and will continue to support an assistant for the next two years. IUGG is very grateful to KIT for providing the office for the Secretariat and to DFG for the financial support of the Secretariat.

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### **2. New Executive Secretary of IUGG appointed**

The IUGG Bureau appointed Dr. Franz Kuglitsch new Executive Secretary (ES) of the Union. Dr. Kuglitsch will manage the IUGG Secretariat in GFZ-Potsdam and work under a supervision of the

IUGG Secretary General and the IUGG Bureau implementing decisions of the IUGG Council and Executive Committee.



Franz Kuglitsch studied geography in the University of Vienna, Austria, and worked later as a Research Scientist at the Max-Planck-Institute for Biogeochemistry in Jena, Germany. He moved to Switzerland and received his Ph.D. in Climate Sciences at the Oeschger Centre for Climate Change Research at the University of Bern. His doctoral research focused on climate data quality and extreme weather events. He continued as a post-doc at the University of Bern. His research contributed to the success of several international (EU, UN) scientific projects resulting in multiple high-profile peer-reviewed publications. Anticipating taking up the position of ES, Dr. Kuglitsch said: “I am very excited and honored to join the IUGG as the first

Executive Secretary, the Union, which is one of the world’s foremost international organizations for Earth and space sciences. I look forward to working with IUGG members and experts and helping to promote geophysics and geodesy worldwide.”

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### **3. IUGG support for scientific meetings to be held in 2013**

IUGG calls for applications to support scientific meetings in 2013. The number of co-sponsored meetings ranges from 10 to 15 (ceiling of US\$3,000 is imposed on all applications). Please note that not all meeting proposals worthy of support can be awarded IUGG sponsorship. The program of IUGG support for scientific meetings (e.g. workshops, advanced schools, symposia) is one of the important means by which the Union and its Associations pursue the goal of promoting geophysics and geodesy through international collaboration. The IUGG Executive Committee places great emphasis on maintaining high scientific standards, coverage of a balanced spectrum of topics, and an appropriately broad and international flavour for the scientific programme of the meetings. In that respect, the ICSU rules on non-discrimination in the access of qualified scientists from all parts of the world to any IUGG-sponsored meeting apply.

The Guidelines for Application to IUGG support of scientific meetings can be found at the web page: <http://www.iugg.org/meetings/guidelines.php>. The Association Secretaries General should communicate their recommendation for selection to the IUGG Secretary General as soon as possible after receiving the requests from organizers of scientific meetings, but not later than **31 October 2012**. The decision on the IUGG support will be communicated to the Association Secretaries General by the IUGG Secretary General in a letter of award as soon as possible but not later than 1 December 2012. The IUGG support should be acknowledged in all documents related to a sponsored meeting (e.g. in the scientific programme, at the web-page, brochures, publications of proceedings etc.)

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### **4. Report on the meeting of the Indonesian National Committee of Geodesy and Geophysics**

The meeting of the Indonesian National Committee of the IUGG (NCI) took place recently at the Indonesia Institute of Science (LIPI) in Jakarta. The meeting was hosted by the Indonesian Geospatial Information Agency (BIG) (the former Bakosurtanal) and was held on Wednesday, 25 July 2012. The Committee reviewed the past activities and progress in terms of the NCI-IUGG

strategic plan and looked closely at current and future challenges via a mix of interactive working groups, task force meetings, projects and networking opportunities.

Various issues were addressed during the meeting, including (i) revitalization of IUGG activities in Indonesia; (ii) discussion on an initiative to write a “grand design“ in terms of a new NCI-IUGG program (conducted partially and directed by each institute’s policy and interest); (iii) improvement of the scientific communication and discussions among scientists from different fields of Earth sciences; and (iv) facing new challenges in the future such as an operational tsunami warning system. In the past, Indonesian research activities reported by the NCI to the IUGG General Assembly were usually limited to *science aspects* but were not reaching the *problem solving* status, which is important for the society. Thus, a better coordination and collaboration is required between the different disciplines of IUGG. Most of the activities are designed to produce publications at national and international levels. However, it was also considered that there is still lack of attention paid to attack issues on policy recommendations and to tackle the impact of environmental changes.



Three lectures were delivered at the meeting. Dr. Asep Karsidi, BIG Chairman, expressed his message about the existing needs to revitalize the activities of the NCI-IUGG. Asep Karsidi emphasized the role of BIG to become an institution in charge of the provision of national spatial data and the Indonesian Geoport (Ina-Geoport) to support the provision of various thematic maps, including those of hazard monitoring and geophysics. Dr. Iskandar Zulkarnain stressed that the NCI-IUGG does not have so far a “grand design“ related to geodetic and geophysical research. He emphasized that there must be a strong commitment by all related institutions for joint research and the necessity to initiate regional meetings at regular intervals. Prof. Dr. Harald Schuh, Vice-President of the International Association of Geodesy (IAG), talked about Global Geodetic Observing System (GGOS) of the IAG and on its impact on national and regional reference frames. Also he discussed the problems related to geodetic very long baseline interferometry (VLBI) and its future perspectives. GGOS is a main activity conducted by the IAG to provide the infrastructure needed to do geodetic monitoring of the Earth system and global change. A global geodetic observing system is necessary, because we live on a dynamic planet and everything is moving constantly; this requires monitoring and modeling the shape of the Earth continuously with respect to a stable reference frame. VLBI is one of the geodetic space techniques and is using radio telescopes that observe very distant radio sources; the VLBI technique is indispensable to realize and maintain the International Terrestrial Reference Frame (ITRF) and to connect it to the International Celestial Reference Frame (ICRF). Harald Schuh strongly conveyed his message that

it is of great importance for Indonesia to participate in the international VLBI program as part of the Global Geodetic Observing System, GGOS.

Received from Parluhutan Manurung, Indonesian Geospatial Information Agency

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## **5. Report on the XXXII SCAR Delegates Meeting**

The Scientific Committee on Antarctic Research (SCAR) is an ICSU Interdisciplinary Body. As of March 2012, it had 31 Full National Members, 5 Associate National Members and 9 ICSU Union Members, including IUGG. Delegates' Meetings are held every 2 years. As the IUGG Delegate Ian Allison (President, IACS) attended the SCAR meeting, which was held in Portland, Oregon, USA, 23-25 July 2012. Other ICSU Unions that were represented by Delegates were IAU (astronomy), INQUA (Quaternary sciences), IUBS (biological sciences), IUGS (geological sciences), and IUPS (physiological sciences). The Delegates' Meeting was held over 3 days, with documents and working papers for most agenda items provided via the SCAR members' website well in advance of the meeting. The first and last days were plenary sessions: the second day broke into two sessions considering science, and administration and finance issues. The Delegates' meeting was held following business and planning meetings of SCAR disciplinary Scientific Standing Groups (SSGs) [on Life Sciences, Physical Sciences and Geosciences] (13-15 and 20 July) and their subsidiary groups (13-15 July) and the SCAR Open Science Conference (16-19 July). These are discussed below. Science project reports and proposals originating from the meetings were submitted to the Delegates for discussion, decision and approval.

The highest level of collaborative science supported by SCAR is the "SCAR Research Programme (SRP)". These programmes advance scientific questions that are expected to require sustained efforts by international teams of researchers for six to eight years, and thus define SCAR activities well into the future. SRP proposals are developed within the subsidiary groups (see Appendix A) after wide consultation within the community, and are subject to extensive external review. SCAR can only financially support a limited number of SRPs. At this meeting, 5 new SRPs were submitted for approval, replacing two former SRPs that have concluded and two that will soon finish. All 5 new proposals were approved, although this will necessarily limit the funding available to each. The new programmes of most relevance to IUGG are *Antarctic Climate Change in the 21<sup>st</sup> Century (AntClim21)*, *Past Antarctic Ice Sheet Dynamics (PAIS)*, and *Solid Earth Responses and Influences on Cryospheric Evolution (SERCE)*. Details of these, and two further SRPs dealing with ecosystems, are available on the SCAR website (<http://www.scar.org>). Reports from the SRPs that have concluded (or soon will do so), were reviewed by Delegates. Reports of the broader scientific activities of the disciplinary SSGs were also reviewed by Delegates.

The interaction between SCAR and the ICSU Union Members was briefly discussed. It was generally agreed that these have improved over the last few years; and IUGG, IAU, INQUA, IUBS and IUPS each highlighted possible areas of future cooperation with SCAR. IUGG has one of the stronger Union interactions with SCAR, although there is scope for closer links. The present collaboration is mostly at an Association level (e.g. IACS has a 3-party MoU on collaboration with SCAR and IASC [International Arctic Science Committee] and there is a draft multi-party MoU to co-ordinate the organization and planning of symposia, conferences and workshops of several cryospheric organizations [including IACS and SCAR]). The new IUGG Union Commission on Climatic and Environmental Change is one area where broader collaboration could be fruitful. The SCAR relationship with ICSU has also improved considerably over the last few years. Jointly with

IASC, SCAR highlighted the importance of the poles in Earth System Science at the last ICSU General Assembly.

There has been considerable progress with the Southern Ocean Observing System (SOOS), an initiative evolving from the International Polar Year 2007-2008 (IPY), sponsored and supported by SCAR and SCOR, and of relevance to IAPSO. The Southern Ocean forms a vital connection between the major ocean basins and the upper and lower layers of the global ocean; and strongly influences global climate, biogeochemical cycles and the functioning of the ecosystem. A SOOS International Project Office has been hosted by Australia (with additional funding by Antarctic New Zealand), and an Initial Science and Implementation Strategy has been published. Also evolving from IPY, SCAR and IASC established a Bipolar Action Group (2008-20102) that has considered scientific opportunities common in the Arctic and Antarctic. This group considers not only science ideas but also opportunities for developing the next generation of polar scientists, suggestions for more effective science coordination and data management and ideas for better communicating the importance of the Polar Regions for Planet Earth. Delegates recommended that these activities should be continued, but in a more advisory role utilizing teleconferencing and email communication.

The SCAR Executive Director presented the concept of an International Polar Initiative (IPI) to Delegates. This developed from a proposal for an International Polar Decade that would sustain the legacy of IPY 2007-2008. Discussions within the scientific community and funding agencies indicated that the Polar Decade concept needed to be rethought and redrafted. To facilitate this, a Concept Note Steering Group was formed with representatives from ICSU (represented by Ian Allison), SCAR, IASC, ESF European Polar Board, Arctic Monitoring and Assessment Programme, Association of Polar Early Career Scientists, International Arctic Social Science Association, IOC, WMO, University of the Arctic and UNEP. The resultant IPI discussion draft is at <http://www.iasc.info/index.php/home/initiatives/22>. The SCAR Sub-Committee on Antarctic Data Management (SCADM) has developed the SCAR Data and Information Management Strategy (DIMS) and developed the Antarctic Master Directory (AMD). The Antarctic Data Management System consists of a network of National Antarctic Data Centres and the AMD, coordinated by SCADM. It is the world's largest repository of Antarctic data set descriptions and is hosted by NASA's Global Change Master Directory.

SCAR continues to actively re-establish its role as primary source of scientific advice to the Antarctic Treaty System. SCAR provided five Working Papers, seven Information Papers and one Background Paper on subjects such as alien species in Antarctica, Tsunami risks, Antarctic Conservation Biogeographic Regions, Anthropogenic sound in the Southern Ocean, SOOS and climate and environmental change in the Antarctic to the 2012 Antarctic Treaty Consultative Meeting and the Meeting of the ATS Committee for Environmental Protection. The SCAR/COMNAP (Council of Managers of National Antarctic Programmes) Fellowship programme provides modest funding (US\$ 7,000-12,000) to enable early career Antarctic scientists to work in institutions outside their home country. This is a key capacity building activity of SCAR. In 2012, 3 SCAR Fellowships, one Joint SCAR-COMNAP Fellowship, and one COMNAP Fellowship were awarded.

J. López-Martínez (Spain) was elected as the new SCAR President and K. Lochte (Germany) and B. Storey (New Zealand) were elected as the two new Vice Presidents. Y.-D. Kim (Korea) and S. Marensi (Argentina) continue as the other Vice Presidents. M. C. Kennicutt II remains on the Executive Committee for two years as Past President and was awarded Honorary Membership of SCAR by unanimous agreement of the Delegates. The 33rd SCAR Delegates' Meeting will be held



in Auckland New Zealand in August-September 2014. Malaysia was selected to host the 2016 meetings.

### ***Meetings of SCAR subsidiary groups***

The disciplinary Scientific Standing Groups - on Life Sciences, Physical Sciences and Geosciences - are the principal planning and collaborative committees within SCAR. SCAR Scientific Research Programmes are developed by Programme Planning Groups fostered by one or more SSGs. But the SSGs also oversee a considerable number of other subsidiary groups that deal with *ad hoc* and ongoing Antarctic science projects. The SSGs, and many of the subsidiary groups, met in Portland before the Delegates' Meeting. Ian Allison attended the Workshop of the Ice-Sheet Mass Balance and Sea Level project (ISMASS; 14 July), which was co-sponsored by IACS. ISMASS, an Expert Group of the SCAR Physical Sciences SSG, was originally established in 1993, with a focus on determining the best techniques and required measurements for estimating the status of the Antarctic Ice Sheet. It is now clear, from several independent satellite techniques that both the Antarctic and Greenland ice sheets have lost mass and contributed to sea level rise over the last 20 years. A number of papers presented at the Workshop highlighted these changes. The focus of ISMASS has thus shifted to improving prognostic ice sheet models (including processes and boundary conditions), and the project is now co-hosted by IASC to include Greenland. The Workshop concluded that the ISMASS project should continue, but with new Terms of Reference (ToR) and a new Steering Committee. Limited SCAR funding for this activity will be provided through the Physical Sciences SSG. The workshop determined that ISMASS should have stronger links with the community studying the present and future contribution to sea level change from glaciers outside the ice sheets, although the ISMASS activities should not directly include glacier work. IACS undertook to provide this connection through its links with the glacier community, and its lead role in the Steering Group of the Global Terrestrial Network for Glaciers (GTN-G).

Also Ian Allison attended a planning meeting of the Antarctic Sea Ice Processes and Climate (ASPeCt) project (13-14 July), another long-time Expert Group of the Physical Sciences SSG. The focus of this project is shifting to include interactions between sea ice physical processes and marine ecosystems.

### ***SCAR Open Science Conference***

The fifth SCAR Open Science Conference on “*Antarctic Science and Policy Advice in a Changing World*” was held in Portland over 4 days (16-19 July), with over 1000 participants. It covered a broad and multi-disciplinary range of scientific sessions, with plenary sessions each morning focusing on high level overarching themes: Antarctic Conservation Challenges in a Century of Change; Past, Present and Future Climate Evolution; and Evolution and Biodiversity in Antarctica. More information can be found at the conference web page: <http://scar2012.geol.pdx.edu>

Received from Ian Allison, IUGG Liaison to SCAR

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

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.

### **October**

- 1-2, IAHS, IUGG, Tunis, Tunisia, 3rd STAHY International Workshop
- 3-5, IAG/IHO, Monaco, 7th ABLOS Conference
- 3-5, IASPEI, Luxembourg City, Luxembourg, 2012 ECGS workshop: Earthquake source physics on various scales
- 8-12, SCOR/IAPSO/WCRP Working Group 136 “On the Climatic Importance of the Greater Agulhas System”, IAPSO, IAMAS, IUGG, Stellenbosch, South Africa, AGU Chapman Conference “The Agulhas System and its Role in Changing Ocean Circulation, Climate, and Marine Ecosystems”
- 9-12, IAG, Bordeaux, France, 11th European VLBI Network Symposium and European VLBI Network Users Meeting
- 9-12, IAG, Venice, Italy, International Symposium on Gravity, Geoid and Height Systems (GGHS)
- 11-15, IAHS, Chengdu, China, IAHS-ICCE International Symposium
- 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
- 22-24, IAG, Haystack, USA, International VLBI Technology Workshop
- 23-25, IAHS, IUGG, Delft, The Netherlands Symposium “Completion of the IAHS decade on Prediction in Ungauged Basins and the Way Ahead” and the IAHS 90th Anniversary
- 29-31, IAG/PAIGH, Concepción, Chile, SIRGAS Meeting 2012
- 29 October - 3 November, ICTP, IUGG, Trieste, Italy, Workshop on Geophysical Data Analysis & Assimilation

### **November**

- 5-7, UN-OOSA, Beijing, China, 7th Meeting of the International Committee on Global Navigation Satellite Systems (ICG)
- 10-12, IACS, Sanya, China, International Conference on Cryosphere: Changes, Impacts and Adaptation
- 13-14, IACS, Sanya, China, Bureau Meeting
- 14-16, EGU, IAHS, Torino, Italy, EGU Leonardo Conference 2012: Hydrology and Society
- 14-18, IGU, Santiago, Chile, UGI 2011 Regional Geographic
- 18-23, IAVCEI, Colima, Mexico, Cities on Volcanoes 7

### **December**

- 2-14, IAG, IUGG, PAIGH, Bogota, Colombia, Workshop on Vertical Datum Unification
- 3-7, AGU, San Francisco, USA, Fall Meeting
- 8-12, GRC/IUGG, AGU, IRDR, Orange, California, USA, First IUGG GRC Conference “Extreme Natural Hazards and Their Impacts”
- 13-15, ISPRS, IUGG, Enschede, The Netherlands, 8th International Conference on Geo-information for Disaster Management

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