



**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 website (<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 at the WMO Executive Council Meeting**

The 69th Session of the World Meteorological Organization (WMO)'s Executive Council (EC) meeting was held in WMO Headquarters in Geneva, Switzerland, from 10 to 17 May 2017. IUGG was represented at the meeting by Arthur Askew (IUGG Principal Liaison to WMO) as well as Charles Fierz (IUGG Liaison to WMO on issues related to cryosphere), who travelled to Geneva to follow the discussion of polar and cryospheric matters within EC and to participate in a series of discussions and side events relating to the Launch of the Year of Polar Prediction.

WMO President David Grimes (Canada) chaired the EC meeting. Sessions of EC used to be eight days long. Now they are only seven days long and nearly one whole day is devoted to a Special Dialogue, which means that there is a lot of pressure to complete the agenda in the time available. Last year's Special Dialogue was on public private engagement (note: not public-private-partnership). The document reporting on the follow-up to this was presented in the form of a draft policy framework for eventual adoption by WMO Congress in two years time. 30 minutes was allotted for its discussion but the debate ran for a lively and at times quite emotional three hours. Those from developed countries accepted the need for such collaboration and were seeking win-win options, while those from developing countries were clearly worried about their vulnerability in the face of aggressive marketing by private operators. Following helpful remarks by the World Bank, the head of the US National Weather Service, and the WMO President himself, Arthur Askew intervened to encourage WMO to produce a clear policy on public-private engagement, as this would facilitate the cooperation of the academic/scientific community with all parties concerned.

The Special Dialogue this year was on aeronautical meteorology and was addressed by senior expert staff from the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA), the President of the WMO Commission for Aeronautical Meteorology (CAeM),

The European Organization for the Safety of Air Navigation (Eurocontrol) as well as the head of a private airline briefing company and Cathy Pacific's senior pilot (the real end user, as he pointed out). The Dialogue led to some serious discussion about the challenges for the future, much of them related again to the role of private companies. IATA reported a forecast of 6.3 billion passengers per year by 2030, which they said would be equivalent to one flight per year for everyone on Earth! It was pointed out that, while ICAO/WMO rules oblige countries to provide meteorological briefings for pilots, the pilots are not obliged to use them. Pilots now receive all their information through their iPads and, according to some speakers, they are too easily "seduced" into using apps of private companies to provide meteorological advice. The Special Dialogue next year will be on "water". IUGG offered that IAHS could provide expertise on the current state of hydrological science, in particular, as regards its links with atmospheric science, oceanography and climate studies.

Congress had asked the EC to review the structure and operations of WMO. The last twelve months have seen a lot of debate inside WMO, especially because those leading the study seem to be starting from the assumption that there are too many Technical Commissions, Regional Associations and working groups and that the number should be reduced. It seems that the impact of such changes would be far reaching and much more complex than the proponents realize. The WMO Commission on Atmospheric Science (CAS) has stated that it sees no reason why research needs to be overseen by an intergovernmental body and so it is very likely that CAS will not continue beyond next Congress in 2019. What will replace it is unclear. Presumably some sort of science advisory panel under EC and the internal structure of the Secretariat could see a major reshuffle, possibly operating under a "Senior Scientist" appointed by the WMO Secretary General. The IUGG Principal Liaison pointed out that the work of the Commissions was undertaken by a large number of dedicated scientists who often worked in their own time, and that, by terminating the Commissions, there was a real risk that the loyalty of these persons would not necessarily transfer to any new bodies established. He also asked that any changes be widely discussed and advertised so that the multitude of linkages between existing bodies and organizations external to WMO could be reviewed and replaced with new agreements. The final report reflected some of IUGG's concerns.

There is a strong push for a seamless development of meteorology: research-operations-services. Where this is coming from is unclear, but the WMO Secretary General is clearly in favor of it. This is driving a call for re-structuring the research activities within the Organization, which are at present scattered throughout a whole series of programs and divisions within the Secretariat. A "review panel" is studying the question and, as WCRP is within their remit, WCRP was not discussed at this session of the EC. Arthur Askew intervened to welcome any move to clarify research activities within WMO, which would make it easier for IUGG and other partner organizations to collaborate in common efforts.

In summary, some major changes in the governance of WMO and in the structure of the WMO Secretariat should be expected. It is clear that the WMO Secretary General wants to see change, but there are many who will resist this for a variety of reasons. Important meetings will be held in October 2017 and February 2018 to move ahead with these plans. Three inter-linked propositions will be prepared: one on the Executive Council itself, one on the Technical Commissions; and one on the Regional Associations. All will be presented to EC when it next meets in May 2018 and then finally to WMO Congress in 2019.

The Secretariat of the Global Framework for Climate Services (GFCS) organized an informal meeting of the Management Committee of the Framework. IUGG was invited as a member of the GFCS PAC. It was well attended, and there was some useful discussion. We learnt that the next formal meeting of the Management Committee will be hosted by the European Centre for Medium-Range Weather Forecasts (ECMWF) in Reading, UK, on 19 and 20 October 2017. We were also informed that the

GFCS Office had been absorbed into the Climate and Water Department of the WMO Secretariat, which could be seen as compromising its status as a truly inter-agency initiative, but the change is probably just a matter of administrative convenience. We were shown the plans that had been laid for the review of the effectiveness of the GFCS that is being undertaken by a team from the University of Arizona consisting of a climate scientist, a geographer and a sociologist.

Weather modification is still a live issue. It was reported that some 44 members of WMO undertook weather modification activities. However, there were also complaints that some private companies, which had no scientific credibility, were lobbying governments even in Europe to invest in their activities behind the backs of the Met Services. 2023 will mark the 150<sup>th</sup> anniversary of the founding of the International Meteorological Organization (IMO), the direct precursor of WMO. Plans for the celebration will be drawn up for Congress to see in a couple of years time. Gordon McBean, the current President of ICSU and former IUGG Bureau Member, has been awarded the 2018 IMO Prize.

Arthur Askew, IUGG Principal Liaison to WMO

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## 2. IUGG at the GFCS Scoping Workshop

The Scoping Workshop for the design and development of a Help Desk for the Global Framework of Climate Services (GFCS) of the Intergovernmental Board on Climate Services was held in the headquarters of Deutscher Wetterdienst (DWD) in Offenbach, Germany, on 19 and 20 June 2017. IUGG was invited to attend the meeting as GFCS Partner organization. The IUGG Secretary General Alik Ismail-Zadeh attended the meeting on 19 June.



*Workshop participants (Photo: GFCS Secretariat)*

Some 20 people from international institutions and national agencies attended the meeting. The objectives of the workshop were to (i) discuss the scope, purpose and function of the GFCS HelpDesk; (ii) review a selection of existing climate service HelpDesks to define the niche; (iii) review and refine the GFCS HelpDesk content and prototype architecture and develop an action plan for designing and populating the HelpDesk; (iv) discuss the content management strategy to continually refresh/refine resources available on the HelpDesk to ensure the information is relevant and supports the needs of

the climate service community; (v) address GFCS HelpDesk governance issues and define the process for coherent and coordinated community input; (vi) discuss lessons learned from other knowledge management platforms to design an interactive interface that facilitates use; and (vii) agree on performance evaluation strategy to track use and usefulness and the business case for the long-term sustainability of the HelpDesk. The agenda of the workshop can be downloaded here: <http://www.wmo.int/gfcs/node/1045>.

The morning part of the workshop on 19 June was held in a very interactive way. Initially, participants were asked to present each other and their organization, and to propose a verb, which will characterize their potential involvement into the HelpDesk. IUGG verb was “to advise”. Ismail-Zadeh mentioned a history of fruitful cooperation between the International Meteorological Organization / WMO / IUGG and its Scientific Associations, and the fact that IUGG was always considered by WMO as a scientific advisory body. Later during the meeting, all participants were split into four groups, and each group tried to answer specified questions, namely: (i) whom (target communities) the HelpDesk should address (e.g., hydro-met-offices, policymakers, farmers, citizens, scholars, students); (ii) which categories of the end-users should be considered as the main users or interested users; (iii) how the HelpDesk should be organized and governed; and other questions. The second (afternoon) part of the workshop was more formal and related to presentations of participants: those who attended and those, who participated remotely (DWD provided very good video/audio/web connectivity). By the end of the day, Ismail-Zadeh presented IUGG’s recent activities in general and in the area of climatic and environmental changes, and highlighted potential contributions to the development of the HelpDesk. IUGG could participate in the development of the GFCS Helpdesk providing a scientifically solid and politically neutral information. Particularly, IUGG could (i) participate in the GFCS HelpDesk advisory committee; (ii) coordinate specific topics, organize literature survey / syntheses; (iii) participate in a review of key scientific concepts and tools with which the HelpDesk is to be designed; (iv) work on knowledge-innovation-service pilots; (v) assist in developing technical tools and advisory material, e.g., a website tool presenting existing climate observation databases, tools for numerical climate modelling, and socio-economic modeling databases including engineering selection modeling and emission inventory reduction scenario; (vi) provide links to sites, where measurements and assimilated data are held; and (vii) provide links to educational material, etc. It would be appreciated to establish comprehensive yet flexible database for these contents to be accepted by intergovernmental and non-governmental organizations as well as business sector. The future HelpDesk may need a mechanism (e.g., an Engagement Committee) to make a bridge between the research and business sectors.

Alik Ismail-Zadeh, IUGG Secretary General

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

#### ***SDG Interactions, gender, science-policy interface: ICSU at the High Level Political Forum***

This year’s High Level Political Forum at the United Nations was the first-ever in-depth review of selected Sustainable Development Goals: poverty, food and agriculture, health, gender, oceans, resilient infrastructure, and means of implementation. The Forum took place on 10-19 July 2017 under the auspices of the UN Economic and Social Council (ECOSOC).

The Council convened a side event on July 12 to present its latest report, launched earlier this year: “Guide to SDG Interactions: From Science to Implementation”. Moderated by ICSU’s Executive Director, Heide Hackmann, the panel comprised Claudia Ringler, Deputy Division Director of the



International Food Policy Research Institute's (IFPRI) Environment and Production Technology Division, David McCollum, Research Scholar Energy Program IIASA, and Diana Nova, SDGs Coordinator of the SDGs Working Group at the National Administrative Department for Statistics, Government of Colombia. Heide Hackmann, who is also co-chair of the 10-Member Group of High-Level Representatives in Support of the Technology Facilitation Mechanism, highlighted the need for enhanced collaboration within the scientific community, new forms of engagement with policy and public action and stepped-up efforts on the potential of big data and machine learning. The Scientific and Technological Community – co-organized by the International Council for Science (ICSU), the International Social Science Council (ISSC) and the World Federation of Engineering Organizations (WFEO) – delivered a statement on 14 July calling for an inclusive definition of “science” and for more engagement of early career scientists.

### ***What do members have to say about the proposed ICSU-ISSC draft strategy?***

Following a call for review, the memberships of both the International Council for Science (ICSU) and the International Social Science Council (ISSC) provided instructive and considered feedback on the draft high-level strategy proposals for a new merged organization representing all the sciences. Feedback was received from 27 members representing 16 countries in response to the publication of the draft strategy in March 2017. The draft strategy was prepared under the guidance of the Strategy Working Group (SWG) and reviewed by the ICSU Executive Board and ISSC Executive Committee. It lays out proposals for a statement of purpose for a new organization that would result from the merger between the two councils, and key elements deemed necessary for its achievement. In the feedback, members voiced support for the proposed merger as a way of consolidating the strengths of a broader range of scientific disciplines, along with reservations about how to effectively implement the broad scope of themes and activities proposed for the new organization. At a Town Hall meeting of 35 stakeholders convened by the *Royal Society* in the United Kingdom, many expressed a belief that when it came to policy engagement, particularly for tackling major global challenges, “few, if any, effective interventions were possible that did not include both natural and social scientists.” This view was also echoed by feedback from the *United States National Academy of Sciences* that “both the natural and social sciences are necessary to address the complex challenges facing the world today, and both inform and influence each other.” Within the feedback there was also thoughtful commentary on how to utilize the relationship between members and the new council to build effective new programs and have impact at local, national, and regional levels. In their document, the *International Union of Geodesy and Geophysics* (IUGG) echoed others in arguing that the merger should strengthen cooperation between members between and within both councils, “emphasizing a bottom-up rather than top-down cooperation mechanism.” One of the recurring reservations, expressed particularly by the ISSC membership, is how the merger will integrate both councils as equal partners. The *Royal Society Te Aparangi, New Zealand*, relayed the concerns of some social scientists in their network that “there is the potential for social science voices to be overly subsumed under the larger science project ... serving as commentators on big science ideas rather than as a leader of key themes.” The vote will take place during a joint meeting of both councils at the ICSU General Assembly in Taipei in October 2017. Members from both councils will receive the final versions of the strategy and governance proposals by the end of July. The full responses about the merger process could be found on the dedicated webpage: <https://icsu-issc.gitbooks.io/documentation-on-the-icsu-issc-merger-process/content/draft-strategy.html>. IUGG's response can be downloaded from: [https://www.jotform.com/uploads/ISSC\\_ICSU/70862263695364/3705769025316128647/IUGG\\_response\\_Strategy\\_NewCouncil.pdf](https://www.jotform.com/uploads/ISSC_ICSU/70862263695364/3705769025316128647/IUGG_response_Strategy_NewCouncil.pdf)

Source: ICSU website

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#### 4. Awards and Honors

**Emma Douma** (New Zealand), **Katarzyna Dudzisz** (Poland) and **Federico Gasperini** (USA) were awarded *2017 IAGA Young Scientists Award*.

**Bob Engdahl** (USA), Former President of IASPEI and IUGG Fellow, was awarded the *2017 IASPEI Medal*.

**Jeffrey Forbes** (USA) was awarded the *2017 IAGA Shen Kuo Award for Interdisciplinary Achievements*, and **Jean Rasson** (Belgium) the *2017 IAGA Long Service Medal*.

**Corinna Hoose** (Germany) was awarded the *2017 IAMAS Early Career Scientist Medal*.

**Lynne Talley** (USA) was awarded the *2017 Prince Albert I Medal*.

The American Geophysical Union (AGU) announced its Union, Section and Focus Group awardees and named lecturers who will be honored at the 2017 AGU Fall Meeting in New Orleans, LA, USA. Among the honorees are those scientists, who have been active in IUGG/Associations for years:

**Robert A. Duce** (USA), Former President of IAMAS and IUGG Fellow, was awarded the *2017 Ambassador Award*.

**Brian Kennett** (Australia), Former President of IASPEI and IUGG Fellow, was awarded the *2017 Inge Lehmann Medal*.

**Hubert Savenije** (The Netherlands), Immediate Past President of IAHS, was awarded the *2017 International Award*.

**Tonie M. van Dam** (Luxembourg), Member of the IUGG Union Commission on Climatic and Environmental Change, who will deliver the *William Bowie Lecture* (Geodesy Section);

**John L. LaBrecque** (USA), Vice Chair of the IUGG Union Commission on Geophysical Risk and Sustainability, who will deliver the *Gilbert F. White Distinguished Lecture* (Natural Hazards Focus Group);

**Paola Malanotte-Rizzoli** (USA), Former President of IAPSO and IUGG Fellow, who will deliver the *Rachel Carson Lecture* (Ocean Science Section);

**Teruyuki Nakajima** (Japan), Secretary General of IAMAS, who will receive the *Yoram J. Kaufman Unselfish Cooperation in Research Award* (Atmospheric Science Section); and

**Thorsten Wagener** (UK), Former Vice President of IAHS, who will deliver the *Paul Witherspoon Lecture* (Hydrology Section).

**Congratulations to all awardees and honorees!**

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#### 5. Meeting calendar

A calendar of meetings of interest to IUGG disciplines (especially those organized by IUGG Associations) is posted on the IUGG website (<http://www.iugg.org/calendar.php>). Individual Associations also list more meetings on their websites according to their disciplines.

## **August**

- 1-2, IACS, Lanzhou, China, International Workshop on Cryosphere Change and Sustainable Development.  
Web: <http://www.nieer.cas.cn/tzgg/ywtz/201612/P020161226414382929083.pdf>
- 6-11, AOGS, Singapore, Asia Oceania Geosciences Society Annual Meeting. Web: <http://www.asiaoceania.org/aogs2017/public.asp?page=home.htm>
- 14-18, IAVCEI, Portland, USA, IAVCEI Scientific Assembly 2017.  
Web: <http://iavcei2017.org/>
- 15-18, IAG, Shanghai, China, Asia-Pacific Space Geodynamics (APSG) 2017 Symposium.  
Web: <http://apsg2017.csp.escience.cn/dct/page/1>
- 19-26, URSI, Montreal, Canada, 32nd URSI General Assembly & Scientific Symposium.  
Web: <http://www.ursi2017.org/>
- 27-30, YES, Tehran, Iran, 4th YES Congress. Web: <http://conf.yesnetwork.ir/index.php>
- August 27 - September 1, IAPSO, IAMAS, IAGA, Cape Town, South Africa, Joint Scientific Assembly 2017. Web: <http://www.iapso-iamas-iaga2017.com/>
- August 30 - September 1, CODATA, Berlin, Germany, DCH 2017 - Interdisciplinary Conference on Digital Cultural Heritage. Web: <http://dch2017.net/scope.shtml>

## **September**

- 4-8, ICTP, IUGG, Kigali, Rwanda, ICTP-Rwanda Joint School on Subseasonal to Seasonal Weather and Climate Prediction. Web: <http://indico.ictp.it/event/7984/>
- 4-13, GFZ, Potsdam, Germany, Potsdam Summer School. Human Environments in a Changing World. Web: <http://potsdam-summer-school.org/>
- 5-7, IAG, Reykjavik, Iceland, Workshop on Glacial Isostatic Adjustment and elastic deformation. Web: <http://www.polar.dtu.dk/english/Workshop-on-Glacial-isostatic-adjustment-and-elastic-deformation-2017>
- 10-15, IUGG, IACS, IAPSO, SCAR Trieste, Italy, Past Antarctic Ice Sheet Dynamics (PAIS) Conference. Web: <http://pais-conference-2017.inogs.it/>
- 11-15, GFZ, Potsdam, Germany, EGSIM Autumn School for Satellite Gravimetry Applications. Web: <http://www.egsim.eu/autumn-school>
- 11-15, IGU, IUSS, WMO, Prague, Czech Republic, WMESS 2017. World Multidisciplinary Earth Sciences Symposium. Web: <http://www.mess-earth.org/>
- 18-22, COSPAR, Jeju Island, Republic of Korea, 3rd COSPAR Symposium.  
Web: <http://cospar2017.org/>
- 18-22, ISPRS, Wuhan, China, ISPRS Geospatial Week 2017.  
Web: <http://gsw2017.3snews.net/>
- 18-23, IUGG, IAGA, L'Aquila, Italy, International School of Space Science. Advanced Course on Complexity and Turbulence in Space Plasmas.  
Web: <http://www.cifs-iss.org/futurecourses.asp>
- 19-21, IAG, Bonn, Germany, IAG Workshop: Satellite Geodesy for Climate Studies.  
Web: <http://www.igg.uni-bonn.de/apmg/index.php?id=ws2017>
- 21-22, IAHS, Warsaw, Poland, STAHY 2017. Web: <http://www.stahy2017.org/>
- 23-24, Italian National Committee for IUGG, Dhaka, Bangladesh, ICDRM 2017 - International Conference on Disaster Risk Mitigation.  
Web: <http://www.buetdr.com/index.php/rcdrm2017/conference-brochure#>
- September 24 - October 3, IAVCEI, Ecuador, 13th Gas Workshop.  
Web: <http://www.iavcei-ccvg.org/workshops/>
- 25-27, IAG, IAU, Alicante, Spain, Journées des Systèmes de Référence et de la Rotation Terrestre. Furthering our knowledge of Earth Rotation.  
Web: <https://web.ua.es/journees2017/>

- 25-29, UNESCO/IGCP, Ibadan, Nigeria, Second Workshop and Field Trip "Long and short-term geodynamic interaction in tropical Africa". Contact: [igcp646sec@yahoo.fr](mailto:igcp646sec@yahoo.fr)
- 30 September - 7 October, IUGG, IAGA, Hekla, Iceland, 8th Nordic Workshop - Paleography, Paleoclimate and the Geomagnetic Field.

### **October**

- 2-6, IASPEI, Cargèse, Corsica, France, Earthquakes: nucleation, triggering, rupture and relationship with aseismic processes. Web: <https://earthquakes2.sciencesconf.org/>
- 2-5, IAG, Riga, Latvia, ILRS Technical Workshop 2017. Web: <http://www.ilrstw2017.lu.lv/>
- 8-13, CODATA, IUGG, Saint Petersburg, Russia, CODATA 2017 Conference – "Global Challenges and Data-Driven Science". Web: <http://codata2017.gcras.ru/>
- 10-11, IAG, Monaco, 9th ABLOS Conference. Web: <http://www.ablosconference.com/>
- 10-13, ICTP, IUGG, Trieste, Italy, Workshop-Conference on Near-Fault Observations and Models for Earthquake Hazard Assessment. Web: <http://indico.ictp.it/event/7997/>
- 16-18, IAG, Strasbourg, France, International workshop on the inter-comparison of space and ground gravity and geometric spatial measurements.  
Web: <https://geodesy.sciencesconf.org/>
- 18-22, NC VIETNAM, Hanoi, Vietnam, VIET-GEOPHYS-2017. The International Conference on Research Development and Cooperation in Geophysics.  
Web: <http://www.igp-vast.vn/vgp17/>
- 23-29, IUGG, IAMAS, Camaguey, Cuba, Aerosol Training School as part of the Caribbean Aerosol-Health Network (CAHN). Web: <http://www.igacproject.org/working-groups/AmericasWG/2017School>

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