

## News at a Glance

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IUGS Executive Committee President Hassina Mouri, Secretary General Ludwig Stroink, and Treasurer David Cohen visited German University of Technology in Oman.

## 1. IUGS Bureau members attended the General Assembly of the International Science Council and a Series of Events in Muscat, Oman and Dammam, Saudi Arabia, from January 26 to February 3, 2025

The IUGS Bureau members, President Prof. Hassina Mouri, Secretary General Dr. Ludwig Stroink, and Treasurer Prof. David Cohen, visited Muscat, Oman, from January 26 to February 3, 2025, to attend the ISC General Assembly and a series of side events. Additionally, they met with high-level representatives from ministries, universities, and innovation hubs in Oman and Saudi Arabia. During their stay, the Bureau members fulfilled IUGS's obligations and membership rights in ISC, strengthened collaboration with other GeoUnions, initiated communication with the science and research community in Oman, and explored potential IUGS memberships of Oman and Saudi Arabia. Major events include:



Left: IUGS Bureau members at the ISC General Assembly.

Right: IUGS Bureau members and the minister and undersecretary of higher education and innovation in Oman.

### GeoUnions meeting, January 26

For the first time, the new IUGS Bureau members attended a face-to-face meeting of the Geo-Unions organized by the International Science Council (ISC). One of IUGS's main goals for this term is to promote synergies and encourage collaborative activities among the Geo-Unions.

### International Decade of Sciences for Sustainability IDSSD event, January 28

The UN Decade of Sciences for Sustainable Development (2024-2033) provides an opportunity to sharpen the focus on how actionable science can contribute to the sustainability agenda. It also bridges the 2015 Sustainable Development Goals and any subsequent expression of the development agenda. This session explored how the



breadth of the ISC Membership will contribute to the Decade and how it has the potential to shape thinking and goals around the role of science in future sustainability agendas. This event invited speakers from UNESCO, the International Union for Pure and Applied Physics (IUPAP), etc.

### **Union Membership Issues: Retention, recruitment, and geographic representation, January 29**

At the meeting, questions were raised about the comparative value and effectiveness of traditional disciplinary scientific unions instead of international organizations established around topics (e.g. climate, sea level rise, health, hazards). IUGS President Hassina Mouri and Treasurer David Cohen presented at the meeting about the membership policy and status of IUGS. IUGS Executive Committee members joined in the meeting discussion and exchanged ideas on promoting the scientific union's membership across the globe, especially in underdeveloped countries.

### **Rethinking Higher Education and Research Excellence in Africa for Impact, January 29**

The African Union's Agenda 2063 underscores the importance of science and technology education as a central pillar in the continent's long-term vision for a more prosperous and unified Africa, driving forward the aspirations for inclusive growth and sustainable development for all. IUGS Secretary General Ludwig Stroink participated in the meeting to explore ideas on operationalizing the IUGS' Ten Action Plan for Africa “ - TAP for Africa.

### **Meeting with H.E Prof. Rahma Bint Ibrahim Al Mahrouqi, Minister of Higher Education, Research, and Innovation Sultanate of Oman, Thursday, January 29, 2025.**

Due to Ludwig Stroink's long-standing connections in Oman, a one-hour meeting was organized on January 29 between the IUGS Executive Committee and Prof. Rahma Bint Ibrahim Al Mahrouqi, Minister of Higher Education, Research, and Innovation for the Sultanate of Oman, along with Dr. Saif Al-Hiddabi, Undersecretary of MOHERI. The purpose of the meeting was to explore the possibility of Oman becoming a member of the IUGS and discuss further potential cooperation on various relevant topics in geoscience. The discussions took place in a very constructive and relaxed atmosphere, with the Ministry requesting that the Executive Committee submit a proposal for IUGS membership.

### **Meeting with Prof. Dr. Wilfried Bauer, Deputy Rector for Academic Affairs, German University of Technology, GuTech, on Saturday, February 1, 2025, and Dr. Maryam Al Lawati, Deputy Director, Institute for Advanced Technology Integration (EJAAD), on Sunday, February 2, 2025.**

The meetings focused on potential collaborations between IUGS, universities, and the geoscientific “Start-up Scene” in Oman. The Bureau Members were impressed by the various opportunities the Oman scientific and innovation landscape offers for joint projects in the Middle East.

### **Visit to the College of Petroleum Engineering and Geosciences at King Fahd University of Petroleum and Minerals in Dammam, Saudi Arabia, on Monday, February 3, 2025.**

While in the Middle East, President Hassina Mouri and Secretary General Ludwig Stroink visited the King Fahd University of Petroleum and Minerals. They met with Dr. Ali Alyousef, Dean of the College of Petroleum Engineering & Geosciences; Prof. John D. Humphrey, Chairman of the Department of Geoscience; and Prof. Khalid A. H. Al-Ramadan, Professor of Geosystems at the Department of Geosciences and current Council member of the UNESCO/IUGS-IGCP, to discuss Saudi Arabia's possible membership in IUGS and potential collaboration under the IGCP umbrella.




IUGS President Hassina Mouri with female geology students at the King Fahd University in Dammam, Saudi Arabia.

During their visit to the College of Petroleum Engineering and Geosciences, Hassina Mouri was invited to give a presentation on Medical Geology to the female undergraduate and postgraduate students.





*Medical*  
**GEOLOGY**


With Prof. Hassina Mouri

 Prof. Hassina Mouri, (UNESCO Chair - Medical Geology in Africa, President of the international Union of Geological Sciences)

**Female Graduate and Undergraduate Students Only!**

 Monday, 3 February

 2:00 - 3:30 pm

 Building 76, Room 1238



Left: Poster of Hassina Mouri's presentation at the King Fahd University of Petroleum and Minerals, Saudi Arabia.

Right: President Hassina Mouri with a female geology student at the King Fahd University in Dammam, Saudi Arabia.



## 2. News from the Commission on Global Geochemical Baselines (CGGB)

### Applied Geochemistry publication for university teachers and young researchers

In the [IUGS e-Bulletin No. 203](#) (February- March 2024), the following pre-publication chapter was announced. At that time, it was in Volume 7 of the 3<sup>rd</sup> edition of the [Treatise on Geochemistry](#):

Volume 8, How we Know, In: A. Anbar and D. Weis (Editors-in-Chief), *Treatise on Geochemistry*, 3<sup>rd</sup> Edition, Elsevier, 8, 1–72; <https://doi.org/10.1016/B978-0-323-99762-1.00004-8>.

The new publication extensively refers to the chapters of the “[International Union of Geological Sciences Manual of Standard Methods for Establishing the Global Geochemical Reference Network](#)”. These two publications provide university teachers and early-career researchers in applied geochemistry with important tools to plan their studies and surveys effectively.

David B. Smith (United States Geological Survey and Commission Steering Committee member) reviewed the chapter, and his expert comments are: “*Alecos Demetriades has undertaken a very difficult task. In less than 100 pages, he outlines principles of applied geochemistry that other authors have used entire textbooks to explain and discuss. The chapter is well-written, well-organized, and well-referenced. The figures are all very good, and the captions describe the figures adequately. I think the chapter will be useful, in particular, to early-career applied geochemists who are undertaking geochemical surveys in support of mineral exploration or environmental investigations.*”

The pre-publication chapter, together with the supplementary material, was given to [Professor Ariadne Argyraki](#), who is a professor of geochemistry at the National and Kapodistrian University of Athens, for use in her teaching. Below are her comments after using the chapter during 2024:

“*Dr. Alecos Demetriades’ chapter on the ‘How and Why of Applied Geochemistry’ in the Treatise on Geochemistry has been an invaluable resource for my teaching as a professor of [Geochemistry at the National and Kapodistrian University of Athens](#). By providing a comprehensive framework for planning and implementing geochemical surveys, this chapter equips educators with practical examples and hands-on exercises from the supplementary material to enhance student learning. The structured approach outlined in the chapter—ranging from orientation surveys to large-scale geochemical mapping—enabled my teaching about mineral exploration and environmental investigations effectively in multiple courses that I teach at both first-degree and post-graduate studies, i.e., environmental geochemistry, analytical geochemistry, and geochemical exploration methods. The emphasis on quality assurance, data analysis techniques, and 2D/3D map plotting is particularly beneficial for designing advanced coursework and research projects. Moreover, the chapter’s guidelines for organizing geochemical projects offer a practical roadmap for students aiming to apply these methods in real-world scenarios, making it an essential teaching tool in applied geochemistry education.*

*I hope that other professors will also consider it. However, it is a pity that our university does not provide access to the Treatise anymore. I hope this will change in the future.*”

### 3. News from the IUGS Initiative on Forensic Geology (IFG)

#### Training in Search, College of Policing, Police National Search Centre (PNSC), UK

On 7-8 January 2025, Dr. Laurance Donnelly (Chair, IUGS-IFG) was invited to provide search training for the UK College of Policing, PNSC. The training focused on environmental factors whilst searching for clandestine graves and human remains. The training delivered by Laurance was on, *'Searching for Clandestine Graves and Human Remains, Environmental Factors: The Geoforensic Search Strategy (GSS)'*. Other subject matter experts focused on, (i) operational police searches, (ii) forensic archeology, (iii) forensic oceanography and water searches, (iv) forensic botany, and (v) forensic anthropology. The training was attended by the UK police and military. For further details, please contact: [laurance.donnelly@ahkgroup.com](mailto:laurance.donnelly@ahkgroup.com) or [geologist@hotmail.co.uk](mailto:geologist@hotmail.co.uk).



Police National Search Centre Ryton  
Searching for Clandestine Graves and Human Remains  
CPD Event 7<sup>th</sup> – 8<sup>th</sup> January 2025



IUGS-IFG supported search training, College of Policing, Police National Search Centre (PNSC), UK, (Photo: PNSC).

#### INTERPOL Illegal Mining Team. Press Release

#### Operation highlights the human and environmental impact of illegal mining in Western Africa: Four-country operation seizes chemicals, explosives, drugs and pain relief medication used by illegal miners

Dr. Laurance Donnelly has been collaborating with INTERPOL's illegal mining team. Please find below a press release issued by INTERPOL on 14 January 2025, 11:00 am.



INTERPOL | MEDIA RELEASE

LYON, France – An operation targeting illegal mining in Burkina Faso, the Gambia, Guinea and Senegal has led to the arrest of 200 people.



Operation Sanu (July–October 2024) brought together experts from INTERPOL and national law enforcement agencies to combat illegal mining and associated crimes, with hundreds of officers deployed to identify criminal routes and modus operandi in remote and isolated areas of the four countries.

The cross-border collaboration led to the seizure of significant amounts of chemicals and equipment used in illegal mining: 150 kgs of cyanide, 325 kgs of active charcoal, 14 cylinders of mercury with an estimated value of over USD 100,000, 20 litres of nitrite acid, and two 57-litre containers of sulfuric acid. 10 kilogrammes of cocaine and almost 7,000 explosive devices were also seized.

Underlining the human cost of illegal mining, the operation team also seized large quantities of opioid pain relief tablets, commonly used by miners in the region to alleviate the pain caused by the use of chemicals such as mercury and cyanide in illicit small-scale gold mining. These chemicals can have serious toxic effects on the human nervous system.

The operation also gave INTERPOL and the law enforcement officers and prosecutors involved new insights into the wider damage caused by illegal mining in the region – from deforestation to landslides and the deviation of river flows leading to drought or flooding – as well as its impact on economies and communities in the region.

INTERPOL Secretary General Valdecy Urquiza said: “*Transnational criminal networks exploit mineral resources around the world, harming the environment, hurting national economies, weakening fragile communities, and endangering public health and safety. The operation’s success highlights the effectiveness of law enforcement when they join forces to tackle these threats.*”

### **A first in the fight against illegal sand mining**

Although the central focus of the operation was illegal gold mining, it also targeted illegal sand mining in the Gambia, with raids in several locations in the Kombo and south coastal belt region, leading to seven arrests and the seizure of mining equipment and trucks loaded with sand and gravel. The operation was a first for this type of action in the Gambia and was also an opportunity for the authorities to gain a clearer understanding of how this illegal extraction and trade are organized. Illegal sand mining has been recorded at unprecedented levels in recent years and is a major threat to the environment, the livelihoods, and living conditions of local communities.

Operation Sanu is part of a pilot project designed to support law enforcement agencies in their efforts to tackle the complex and multifaceted issues arising from illegal mining activities in Western and Central Africa.

Operation Sanu was carried out by INTERPOL’s Environmental Security Programme, funded by the United Kingdom’s Home Office.

Participating countries: Burkina Faso, the Gambia, Guinea, Senegal.



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### **The Organization of Scientific Area (OSAC) Updates**

**OSAC** for Forensic Science is a United States Government-sponsored organization that aims to strengthen the use of forensic science by facilitating the development of technically sound standards, expanding the [OSAC Registry](#) with standards that have completed a technical assessment, and promoting the implementation of those standards by OSAC's stakeholders and the forensic science community. The following two items of interest to the forensic geology community were announced in the [January 2025 OSAC Standards Bulletin](#).

- (1) OSAC is seeking public comments on a draft standard [OSAC 2025-S-0011, Standard Practice for Polarized Light Microscopy in the Forensic Examination and Comparison of Soils](#). This draft is being considered for submission to the Standards Development Organization (SDO), ASTM International. At this time, OSAC seeks comments to revise this document and may, if approved, be placed on the OSAC Registry as an "OSAC Proposed Standard." OSAC welcomes comments on whether the current drafts are suitable for release to the SDO and suggestions for improvements in content and wording.
- (2) "[OSAC 2024-S-0012, Standard Practice for the Forensic Analysis of Geological Materials by Scanning Electron Microscopy and Energy Dispersive X-Ray Spectrometry](#)" has been posted to the [OSAC Registry](#) as an "OSAC Proposed Standard." This document will now be sent to ASTM International for further review and refinement. If you have any comments or suggestions about this proposed standard, please reach out to Libby Stern at [LStern@fbi.gov](mailto:LStern@fbi.gov), or to other members of ASTM International E30 committee on forensic sciences.

### **The European Association of Geoscientists and Engineers (EAGE), Near Surface Geophysics conference, Naples, Italy, 7-11 September 2025**

Prof. Pier Matteo Barone (Crime Scene Advisor, IUGS-IFG) will represent IUGS-IFG at the EAGE conference in Naples in September 2025. Supportive information will be provided by Rosa Maria Di Maggio (Regional Representative for Europe, IUGS-IFG) and Dr. Laurance Donnelly (Chair, IUGS-IFG). For further details, please visit the website: <https://eagensg.org/location-venue/>.

### **IUGS-IFG, 'Investigating the After Death', MSc in Human Taphonomy, University of Lausanne, Switzerland**

Three members of IUGS-IFG, Dr. Laurance Donnelly (IUGS-IFG, Chair), Dr. Alastair Ruffell (IUGS-IFG, Training Officer) and Prof. Lorna Dawson (IUGS-IFG Treasurer) have been invited to support the MSc in Human Taphonomy, University of Lausanne, Switzerland, 25-28 March 2025. The MSc is aimed at understanding the mechanisms and challenges related to human decomposition and the associated biological, ethical and environmental matters, post-mortem management of human remains and public health risks. IUGS-IFG will provide expertise and a series of lectures on forensic geology, search and forensic soil science. For further details, please visit the website: <https://www.unil.ch/eb-ht>.

### **Dark Heritage Prospection, Human Evolution and Archaeological Sciences (HAES), University of Vienna, Austria**

The YouTube link (<https://www.youtube.com/watch?v=HO1AOmbNLXo&t=4s>) provides information on 'Dark Heritage Prospection' at the Human Evolution and Archaeological Sciences (HAES) University of Vienna, in January 2025, by Dr. Michael Pisz, (Department of Forensic Archaeology, University of Bradford, UK), who has

been collaborating with IUGS-IFG and Dr. Laurance Donnelly (Chair, IUGS-IFG) regarding the use of geophysics and the Geoforensic Search Strategy (GSS) at Nazi death camps in Poland.

Photographs of fieldwork conducted by students at a UK cemetery, searching for burials, can also be viewed on the Instagram link: <https://www.instagram.com/geophys.bradford>.



‘Investigating the After Death’, MSc in Human Taphonomy (Source: University of Lausanne, Switzerland).

#### **Dr. Mark Harrison, PhD, MBE**

Many congratulations to Mark Harrison (IUGS-IFG, Law Enforcement Advisor), who has been awarded a PhD entitled, ‘*Missing Body Searches: Developing Integrative Investigative, Geoforensic, and Intelligence Practices*’. This is dedicated to no-body homicide searches and explores how detective practice and intelligence tradecraft can be aligned with geoforensics. This integrative approach reduces time, resources, and costs while improving the likelihood of successful victim recovery.

#### **IUGS Initiative on Forensic Geology Conference, Rome, Italy, May 2025**

Registration is now officially open for the IUGS Initiative on Forensic Geology Conference, 21-23 May 2025, in Rome, at Spazio Europa, the conference hall managed by the European Parliament Office in Italy. We invite you to take part in this important event dedicated to Forensic Geosciences! This international conference will bring together experts, researchers, and professionals in the field to discuss the latest developments, methodologies, and applications of geosciences in investigative and legal contexts. It will be a great opportunity to share knowledge, foster international collaborations, and advance the scientific understanding of geo-scientific evidence in forensic settings. The event will also celebrate the 15<sup>th</sup> anniversary of the establishment of IUGS-IFG. The Call for Abstracts is open until 14 April 2025. Don't miss the opportunity to present your work and contribute to the scientific discussion! Register now: Secure your spot by registering no later than May 11, 2025. For further details, please visit the website: <https://www.iugs-ifg2025.com>.

#### **4. News from the Commission on Geoscience Information (CGI)**

**Status of Geoscience Information in Africa Workshop, 11- 13 February 2025, Queen’s University Belfast, Belfast, UK**

Following the IUGS 79<sup>th</sup> EC Meeting and Geoscience in Africa event in Nairobi on 19-23 February, 2024, where [the IUGS Ten Action Plan for Africa \(TAP for Africa\)](#) was discussed and produced, the IUGS Geodata working group in collaboration with the [Geological Society of Africa \(GSAf\)](#), partnered with [Queen's University Belfast \(QUB\)](#) and the IUGS [Commission for the Management and Application of Geoscience Information \(CGI\)](#) to host the hybrid 'Status of Geoscience Information in Africa' workshop, 11- 13 February 2025 in Riddel Hall, Queen's University Belfast, UK.

The workshop aimed to synthesize our current understanding of this field and to support coming actions by Africa-based colleagues. The hybrid workshop included welcomes by Prof. John Ludden, IUGS President 2020-2024, on behalf of Prof. Hassina Mouri, IUGS President 2024-2028; Prof. Olugbenga Okunlola, GSAf President; and Dr. Rokhaya Samba and Mr Gabriel Data, Organization of the African Geological Surveys (OAGS). Presentation highlighting the priorities for African Geological Surveys were presented for Nigeria, Namibia, Senegal, Cape Verde, Gambia, Zambia, Uganda, Botswana and Kenya. Collaborative international activities were presented by the UNESCO in Africa and Global Geoparks, [British Geological Survey](#), [BGRM](#), [Geological Survey of Northern Ireland](#), the [IUGS Initiative on Forensic Geology](#), the [International Medical Geology Association](#), [PanAfGeo](#) and [Amira Global](#).



Left: Giant's Causeway group in the field.

Right: Group workshop.

In collaboration with Prof. Olugbenga Okunlola, President of the Geological Society of Africa (GSAf), the workshop was convened on behalf of the IUGS Geodata working group by Mrs Anna Nguno, Vice-President Geological Society of Africa, for Southern Africa, IUGS Nomination Committee (2020-2024), Dr. Lesego Ramaabya, Botswana Geoscience Institute (BGI), Lobatse, Botswana, Mr Data Gabriel, Geological Survey of Uganda; Prof. Jennifer McKinley, Queen's University Belfast, IUGS Executive Committee Councillor (2020-2024), Mr Patrick Moss, QUB; Prof. Harvey Thorleifson, IUGS Commission on Geoscience Information (CGI) and Ms Kombada Mhopjeni, National Programme Officer Windhoek, Natural sciences, UNESCO.

The IUGS-IFG participants attended this event, which was hosted by Prof. Jennifer McKinley (IUGS-IFG Officer for Communications and member). Dr. Alastair Ruffell (IUGS-IFG, Training Officer) presented on the work of the IUGS-IFG in Africa, including data and information provided by Dr. Laurance Donnelly (IUGS-IFG, Chair) on

illegal mining and the illicit trade in minerals and metals. The presentation was well received with a discussion on potential opportunities for future collaboration.

The workshop was funded by the QUB International Strategic Partnerships Fund Overseas Development Assistance (ODA) Funding and The International Union of Geological Sciences Commission for the Management and Application of Geoscience Information.

In addition to continuing discussions, key outcomes from the workshop include workshop proceedings and proposed presentations at the [Geoscience Information Consortium](#) in Denmark in June 2025 and [CAG30 in September 2025 in Nairobi, Kenya](#).



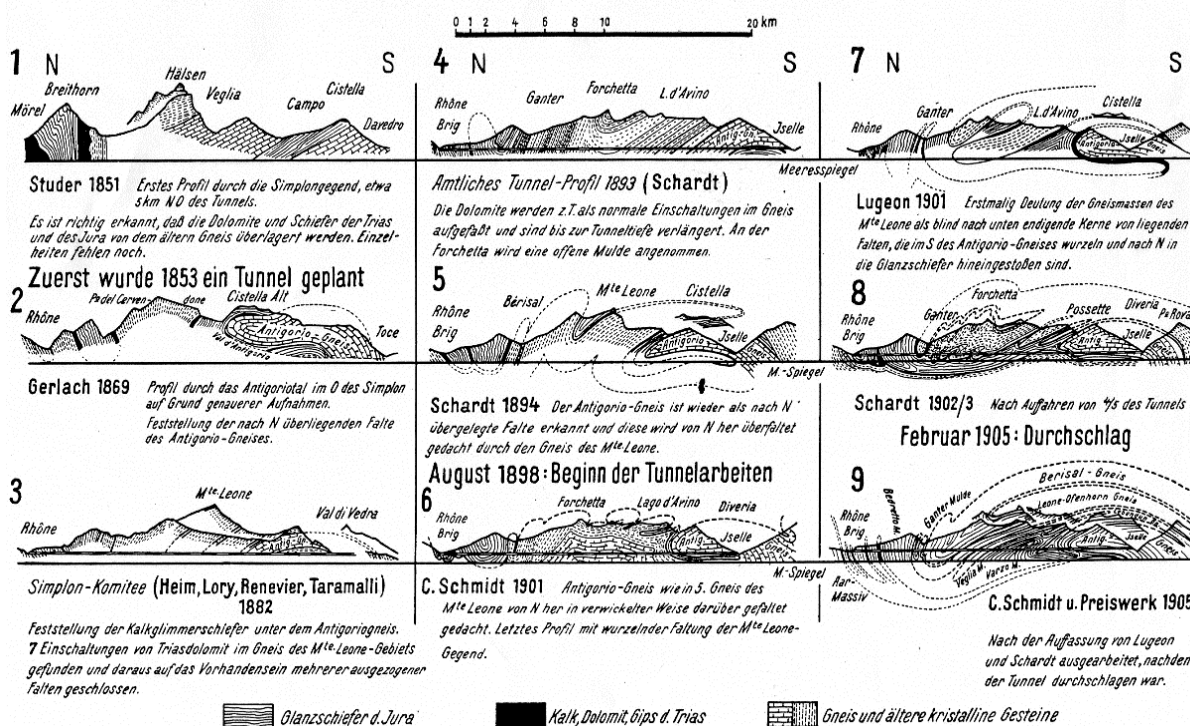
Dr. Jennifer McKinley and Dr. Alastair Ruffell at the Geoscience Information in Africa Workshop, QUB, Belfast, Northern Ireland (Photo: Jenifer McKinley).

## 5. News from the International Commission on the History of Geological Sciences (INHIGEO)

### **INHIGEO Anniversaries – a new contribution Deep Alpine Tunnel confirms nappe theory**

The Simplon Tunnel is a 19.8 km long railway tunnel through the Simplon Massif in the Alps, connecting valleys in Switzerland and Italy. Construction work on the tunnel started in 1898, however, the geological profile that would be revealed was very different to that outlined in the original building plans. The findings would provide support to a major paradigm shift taking place in the understanding of Alpine geology and tectonics – Nappe Theory. Please open the link to learn more: <https://inhigeo.org/anniversaries>.

## Die Geschichte des Simplonprofils



Nach einer Wandtafel im Geologischen Institut der Universität Bonn

History of the Simplon geological profile.

### Contributions to the IUGS news publication:

Contributions to the IUGS's various social media platforms ([Facebook](#), [LinkedIn](#), [Twitter](#), [Instagram](#), and [YouTube](#)), E-Bulletin, or website are welcome. The contribution should be marked as to which target medium/media it should be published in.

Please submit your contributions as a concise one-page text (not exceeding 500 words) with relevant illustrations and URL links where possible to the IUGS Executive Committee members responsible for various publications:

- E-Bulletin: Dr. Farnoosh Farjandi (email: [f.farjandi@gsi.ir](mailto:f.farjandi@gsi.ir)) and Dr. Weijun Zhao (email: [wilsonwjz@outlook.com](mailto:wilsonwjz@outlook.com))
- Social media: Prof. Yamirka Rojas-Agramonte (email: [yamirka.rojas@geow.uni-heidelberg.de](mailto:yamirka.rojas@geow.uni-heidelberg.de))
- Website: Please note that the IUGS website is temporarily unavailable due to scheduled maintenance. We apologise for any inconvenience, and we thank you for your understanding and patience.

### Process and Time Frame for Submissions to the E-Bulletin:

- (1) The IUGS routinely issues a reminder to the designated representatives of constituent groups in the middle of each month.



- (2) Contributions should be submitted no later than the end of each month.
- (3) The IUGS will verify their compliance with IUGS publication policies and ethics, evaluate the urgency of all submissions, and schedule them for publication in either the next monthly issue or a later one.
- (4) The IUGS Executive Members responsible for the E-Bulletin will compile the monthly E-Bulletin by the end of each month and submit it to the IUGS Secretariat;
- (5) The IUGS Secretariat will distribute the E-Bulletin to the IUGS community during the first week of each month.

This time frame may vary due to public holidays that affect the E-Bulletin editors and IUGS secretariat such as Christmas and Chinese New Year.

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#### NOTES

- Please check the IUGS [Calendar of Events](#) for upcoming scientific meetings. If you require information on international conferences, meetings, etc. to be considered for inclusion in this Calendar please mail to: [webmaster](mailto:webmaster)
- To be added to or removed from the IUGS *E-Bulletin* distribution list, please mail to: [secretariat@iugs.org](mailto:secretariat@iugs.org)
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