

MINUTES



INTERNATIONAL UNION OF GEOLOGICAL SCIENCES OPEN SESSION OF 81st EXECUTIVE COMMITTEE MEETING

March 17th-18th, 2025

Geological Society of France

Paris, France

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Participants

IUGS Executive Committee:

Hassina MOURI (HM, Vice President), Ludwig STROINK (LS, Secretary General), David COHEN (DC, Treasurer), John LUDDEN (JL, Past President), Yamirka ROJAS-AGRAMONTE (YRA, Councilor) Maria ROSE (MRP, Vice President), Marko KOMAC (MK, Vice President), Weijun ZHAO (WZ, Councilor), Dolores PEREIRA (DP, Councilor), Weijun ZHAO (WZ, Councilor)

Attended virtually:

Farnoosh FARJANDI (FF, Councilor)

Observers (attending parts of the meeting):

Qiuming CHENG (Past President, Chair of Nominating Committee), Sung Keun Lee (Editor-in-Chief, *Episodes*), Gurmeet KAUR (Editor, E-bulletin), Silvia PEPPOLONI (Chair, Commission on Geoethics & Tasks Group on Diversity, Equity and Inclusion), Giuseppe DI CAPUA (Secretary General, Commission on Geoethics / International Association for Promoting Geoethics / IUGS Webmaster), Alecos DEMETRIADES (Chair, Commission on Global Geochemical Baselines), Maria Joao BATISTA (Deputy Chair, Commission on Global Geochemical Baselines), Anna LADENBERGER (Advisory Panel Member, Commission on Global Geochemical Baselines), Gloria PRIETO (Advisory Panel Member, Commission on Global Geochemical Baselines), Leonard Harvey THORLEIFSON (Chair, Commission for Geoscience Information), Martina KÖLBL-EBERT (Secretary General, International Commission on History of Geological Sciences), Murray HITZMAN (Chairperson, IGCP Council), Özlem ADIYAMAN LOPES (UNESCO Representative, International Geoscience Programme), Eunhee LEE (UNESCO Representative, International Geoscience Programme), Hans THYBO (President, International Lithosphere Program), Kiichiro KAWAMURA (Chair, Task Group on Submarine Geohazards), Shinji SASSA (Vice Chair, Task Group on Submarine Geohazards), Yasukuni OKUBO (Secretary General, Task Group on Submarine Geohazards), Michele LUSTRINO (Chair, Task Group on Igneous Rocks), Donnelly LAURANCE (Chair, Initiative on Forensic Geology), Natarajan ISHWARAN (Representative, Deep-time Digital Earth), Mikhail FEDONKIN (Executive Committee Counsellor, Deep-time Digital Earth), Nadine MATTIELLI (President, National Committee of Geological Sciences from Belgium), Katherine BOGGS (Chair, Canadian National Committee for IUGS), Lijuan HUA (Representative, Geological Society of China), Sandra Paula VILLACORTA CHAMBI (Chair, Commission on Geoscience

Education), Susanna OCCHINPINTI (Vice-Chair, Commission on Geoscience Education), Asier HILARIO (Chair, International Commission on Geoheritage), Elisabetta ERBA (Chair, International Commission on Stratigraphy), Ezio VACCARI (President, International Commission on History of Geological Sciences), Yaqi XU (Representative, Geological Society of China), Aliou JAWO (Director, Geological Department of The Gambia), Abdoulie M. CHAM (Representative, Geological Department of The Gambia), Jurga LAZAUSKIENĖ (Representative, Lithuanian Geological Survey), Rasa RADIENE (Representative, Lithuanian Geological Survey), Daekyo CHEONG (Ex-President, Geological Society of Korea), Young-Seog KIM (Representative, Geological Society of Korea), Matevž NOVAK (Representative, Geological Survey of Slovenia), Santiago MARTIN ALFAGEME (Representative, Instituto Geológico y Minero de España), Allison DALEY (President, Switzerland National Committee for IUGS), Simon THOMPSON (Executive Secretary, The Geological Society of London), Natasha STEPHEN (Representative, The Geological Society of London), Bradley CRAMER (Chair, US National Committee for IUGS), Jonathan ARTHUR (Executive Director, American Geosciences Institute), Manuel PUBELLIER (President, Commission for the Geological Map of the World), Anita STEIN (Representative, European Federation of Geologists), Julie HOLLIS (Secretary General, European Geological Surveys), Courtney JERMYN (Executive Director, Earth Science Matters Foundation), Olugbenga Akindeji OKUNLOLA (President, Geological Society of Africa), Hema ACHYUTHAN (Foreign Secretary, Geological Society of India), Wei JIAN (Executive Secretary, International Association on the Genesis of Ore Deposits), Manish MAMTANI (President, International Association for Structural Geology & Tectonics), Nir ORION (Chair, International Geoscience Education Organisation), Qukan LUO (Deputy Secretary General, International Research Center on Karst), Roger D.K. THOMAS (Interim-President, International Palaeontological Association), Chaosheng ZHANG (Chair, International Medical Geology Association), Akinade Shadrach OLATUNJI (President, Nigerian Mining and Geosciences Society), Rose NDONG (Vice President, Nigerian Mining and Geosciences Society), Ariadne ARGYRAKI (President, Society for Environmental Geochemistry and Health), Beate ORBERGER (Representative, Society for Geology Applied to Mineral Deposits)

IUGS Secretariat:

MA Yongzheng (Director), GU Yanfei (Secretary), YUAN Peng (Secretary)

1. Opening of Meeting

HM, President of IUGS, opened the session by welcoming attendees, both in-person and online. She emphasized the significance of the meeting as the first gathering of the newly elected EC after six months in office. HM acknowledged the Geological Society of France for hosting the 81st IUGS EC Meeting and thanked the organizing team for their logistical support.

Laurent Jolivet, the President of GSF, welcomed all participants to the Meeting in France. He expressed pride in hosting the EC Meeting of IUGS and highlighted the nearly 200-year history of GSF. LJ also shared their ongoing efforts to reshape the GSF's functioning, improve connections with other domestic and international societies, and emphasize the importance of being open to the public when geology is at the core of political decisions regarding climate change.

2. Discussion and Approval of Agenda

Motion to approve the Agenda.

Approved.

3. Approval of Minutes

Motion to approve minutes of the 80th Executive Committee Meeting on August 25, 2024, and Virtual Progress Meeting on December 4, 2024.

Approved.

4. Executive Committee Reports

4.a. Bureau Report on EC's Activities over the Past 6 Months

LS, Secretary General, extended a special welcome to online participants and highlighted the EC's commitment to fostering collaboration and inclusivity. LS presented the Bureau/EC activities of the new executive after six months in office for the period September 2024–March 2025. Since taking office, EC members have been active over the past six months, holding internal and external meetings and joining international conferences/workshops/committees. Key activities and engagements included:

Meetings

1) Internal meetings

A total of 2 EC meetings (the 80th IUGS EC Meeting in Busan on Aug 25 2024 and the Virtual Progress Meeting on Dec 04 2024) and 7 monthly bureau meetings for daily work and decision-making were held.

- 2) External meetings
A total of 6 meetings were held by the International Science Council (ISC) and 4 IGCP meetings, a flagship IUGS-UNESCO collaborative initiative.
- 3) Various international conferences, workshops, and committees
For example, HM represented IUGS in 4 international virtual meetings. MRP and MK also participated 2 international meetings virtually and in person, respectively. FF took part in 2 meetings to represent IUGS.
- 4) Other international events
For example, HM visited the African Union (AU) in Addis Ababa during the UNESCO Chairs Forum on Higher Education in Africa, where she met with Dr. SALIFOU-, Chief Education Sector, and discussed support to African Geoscience on September 2024. Other international events included the 10th Anniversary of the International Geoscience and Geoparks Programme UNESCO Global Geopark and the 3rd General Assembly of the International Science Council (ISC) in Muscat, where Bureau members fulfilled IUGS's obligations and membership rights in ISC, strengthened collaboration with other GeoUnions, and initiated communication with the science and research community in Oman and explored potential IUGS memberships of Oman and Saudi Arabia.

International Engagements

HM was invited to China by the Ministry of Natural Resources during 20th-31st October 2024, where she met the vice minister of Natural Resources and Vice Minister of the Minister of Science and Technology. HM gave an opening address to the International Symposium on Deep Earth Exploration Practice – DEEP-2024 in Beijing and the International Lithosphere Program workshop at Nanjing University.

HM also attended meetings in Oman and Saudi Arabia to discuss membership and collaboration, and was invited to give a presentation on Medical Geology.

Young Reporters Initiative

YRA presented the activities they had done in the past six months. The Young Reporters initiative is a global network of early career Earth scientists and communicators raising awareness on Earth/Climate Sciences and Society. It continuously seeks young amateur reporters for outreach activities, providing feedback and a platform to promote their videos or written reports. The initiative has successfully attracted six new Young Reporters from the IESO 2024 competition in Beijing, China, representing five different countries: France, Italy, United States, Australia, and Oman. Besides, one of them was Eva Corot (France) will represent IUGS as a young reporter in the UN Conference on the Ocean in Nice, France (June 7–15, 2025).

LS concluded that this is a very important and successful initiative and extend his appreciation to what they have done to involve young scientists to promote IUGS.

Katherine Boggs (KB) asked how do people get in touch with them. YRA explained that they had website and email.

Administrative Activities

LS highlighted internal efforts including the revision of statutes and by-laws, with support from a legal advisor, the optimization of EC review procedures, including new reporting templates, and the start of a strategic vision update of IUGS-Strategy/Benefits/Mission & Vision, replacing the 2010/2011 framework.

MC added that they had prepared new reporting sheets and formulas and asked the groups to read the instructions and adhere to existing rules when filling in relevant information.

LS also mentioned the commitment to reviewing the existing task groups/commissions' objectives to ensure alignment with IUGS goals, and an effort to launch new initiatives, including TAP for Africa, a new initiative initiated in Nairobi in 2024.

Future Plans

Lastly, LS reported long-term future plans for the new EC, key takeaways are:

- 1) Increase the number of memberships, including countries from Middle East and Global South;
- 2) Establish and strengthen the collaboration with other Geo-Unions. For example, IUGS and IUGG has established cooperation;
- 3) Explore additional financial sources for IUGS;
- 4) TAP of Africa;
- 5) Establish and increase engagement with UNESCO, EU, AU;
- 6) Merge IUGS and its flagship IGC to one unified body;
- 7) Revision of the structure of the annual EC-meetings;
- 8) Review the webpage and the E-Bulletin in collaboration with an agency from Canada.

LS concluded the Bureau report by thanking the Permanent Secretariat in Beijing for its ongoing support and expressing enthusiasm for the collaborative work ahead.

4.b. Treasurer's Report

DC presented an unaudited 2024 financial statements, which offered a clear overview of IUGS's financial status.

DC reported the income and expense during the financial year 2024. IUGS income includes membership fee, UNESCO-IGCP reimbursement, Royalties from Geological Society of London (GSL) and capitation fee both from IGC (once every four years). IUGS

expenses include IGCP allocation, joint programs, IUGS Commissions, Task Groups, Initiatives, Affiliated Organizations, membership of the ISC, IUGS committees, Episodes and administration costs.

By December 25, 2024, the total balance of the IUGS account is USD 1,356,862. Breakdown of current part as of December 25, 2024, includes USD account (USD 867,176), EUR account (EUR 392,317), and JPY account (JPY 12,989,437).

Income

IUGS income for 2024 is USD 540,595 in total, including membership fees (USD 374,956), contribution from UNESCO to IGCP (USD 165,526), royalties from GSL (USD 150) AND INTEREST (USD 98).

Expense

IUGS expense in 2024 is USD 773,101 in total, resulting in a net deficit of USD -267,402. Translated exchange loss (with no cash-out) is USD 34,895. The major share of expenditures is directed to scientific projects, commissions, task groups, and the like (USD 382,000 granted in 2024 and USD 583,000 requests for 2025). The administrative costs support the Secretariat, accounts support, and costs of travel for the EC members, which is normally less than 15%. Costs were slightly higher for the latter in 2024 due to the holding of the 37th IGC.

Reserves and Net Cash Change

Cash reserves decrease from USD 1.72 million in 2020 to USD 1.39 million in 2024. This deficit is less than anticipated in the 2024 budget, as there was an underspend of USD 157,003. This underspend relative to the budget is largely related to the IGCP (similar to IUGS and UNESCO funding), the IGC, committee costs, and the African Project. Net cash change is USD -233,000 in 2024, with a large sum of funds going to Busan.

Membership Fees

Membership fees have been dropping over the last few years. But in 2024, it went up slightly because countries decided to buy their vote to the IGC. In 2024, active members dropped to 54 while inactive members increased to 69.

There has continued to be a decline in active membership while requires increasing the number of paid-up member countries and a clear value proposition to encourage countries to contribute and upgrade their membership status.

IUGS Australia

IUGS funds are currently held with MUFG Bank in Japan but will be transferred shortly to the ANZ bank in Australia. DC introduced the newly established IUGS Australia Inc., a new independent not-for-profit association registered in the state of New South Wales with the Australian Securities Investments Commission to host the IUGS funds. It carries an Australian business number, tax file number, a goods and services tax

number. It has 9 members currently, 3 from IUGS, 1 from NCES, 2 from AGC, and 3 from other institutions. The Board has three members: President Kevin Cassidy, who is also the AGC Chair, VP LS, and secretary treasurer DC. The IUGS Australia Inc. is established to manage IUGS funds legally and securely in Australia, and the Board will control that bank account.

To clarify roles and responsibilities, a formal Memorandum of Understanding (MoU) had been signed between IUGS and IUGS Australia Inc. to handle the IUGS funds, governance oversight, audit accounts, account support, and legal indemnities.

DC closed by mentioning the necessity of submitting audited accounts and tax returns to regulatory bodies and suggesting exploring additional funding sources.

Analysis of Membership Status and Fees

Status of Countries by Fees Category - 2024

Category	Active	Pending	Inactive	Total	Number of Countries paid for			
					2025	2024	2023	2022
1	18	1	52	71	1		13	1
2	14		3	17			11	2
3	12		3	15		1	10	1
4	8		1	9			6	
5	-		-	-	-	-	-	-
6	2		0	2			2	
7	5		0	5			2	
8	3	1	0	4			3	
Total	62	2	59	123	1	1	47	5

Notes:

- Category 1 Argentina paid for 2025 in advance.
- Category 2 Egypt became active in May 2024.
- Category 3 Hungary paid for 2024 in advance during 2023. Included in the column “paid for 2024”.
Kazakhstan became active in July 2024.
One member made a “deposit” for 2018-2022 in its country due to OFAC.
- Category 4 South Africa became active in January 2024.
- Category 7 One member made partial payment for 2023 with the possibility to change its status.
- Category 8 The membership of Russia has been suspended.

Proposed 2025 Membership Fees

USD -> EUR = 0.96 (Jan 2025)

Category	USD	EUR
1	600	570

2	1,420	1,360
3	2,840	2,720
4	4,980	4,780
5	8,540	8,190
6	14,230	13,660
7	24,910	23,910
8	49,820	47,820

5. Permanent Secretariat's Report

MA Yongzheng, the Director of IUGS Permanent Secretariat, provided a comprehensive overview of the Secretariat's activities from August 2024 to March 2025, and outlined the work plan for 2025. He emphasized that all tasks were performed under the guidance of the IUGS Bureau and Executive Committee, following the operational principles of encouraging participation, improving visibility, and enhancing collaboration. Key activities are as follows:

Business Meetings

(1) 81st EC Meeting on March 17-20, 2025

- Distributed the call for submitting IUGS Annual Reports to the IUGS Constituent Groups and Affiliated Organizations;
- Collected all the annual reports and prepared meeting documentation (including list of participants, annual reports, etc.);
- Coordinated meeting participants and logistical issues.

(2) EC Virtual Progress Meeting and Bureau Virtual Meetings

The Secretariat arranged the following meetings through ZOOM:

- EC Virtual Progress Meetings (December 4, 2024)

- Prepared and distributed meeting documentation;
- Minutes taking, preparation, and distribution (including Action List).

- 5 Virtual Bureau Meetings (October 15, November 19 and December 17, 2024, February 17 and March 6, 2025)

- Prepared and distributed meeting documentation;
- Minutes taking, preparation and distribution (including Action List).

Major Work Related to the 37th IGC and the 5th Ordinary Session of the IUGS-IGC Council

(1) Organized the following IUGS activities during the 37th IGC

- The Fifth Ordinary Session of the IUGS-IGC Council, including the organization of the election of new EC members and host of the 38th IGC, and Minutes of the 5th Ordinary Session of the IUGS-IGC Council;
- Meeting with Affiliated organization representatives;
- International Geological Congress Committee Meeting;

- 80th IUGS EC meeting;
 - IUGS reception;
 - IUGS Awards Ceremony at the 37th IGC Opening Ceremony;
 - IUGS Booth display (72m²);
- (2) Nominations of NC candidates
- Distributed the Call for Additional Nominations of the IUGS Nominating Committee 2024-2028.

IUGS Exhibitions at Major International Events

In order to publicize and promote IUGS scientific activities in the international geoscience community, the Secretariat organized IUGS booth exhibitions at the major international geoscience conferences and events.

- Set up IUGS booths at GSA 2024 and AGU 2024 and reserved IUGS booth space at EGU 2025;
- The Secretariat redesigned and exhibited the IUGS posters introducing IUGS constituent groups and scientific activities, displayed and distributed IUGS products (charts, brochures, Episodes, annual reports, and IUGS-GSL books), and produced and distributed IUGS promotional materials for the exhibitions;
- Designed a new series of IUGS promotional gifts for the booth.

Outreach and Publications

- (1) E-Bulletin
- Formatted and distributed the E-Bulletin #207-#212 to over 80,000 recipients;
 - Updated the list of recipients based on feedbacks;
 - Drafted some pieces of IUGS news being published on E-Bulletin.
- (2) New Year E-Card
- Designed and distributed the electronic New Year Card in the name of the Bureau to the international geoscience community.
- (3) Assisting in renovating IUGS Website
- Sent a call for materials to be published on IUGS' new website and provided the collected materials to the website designer for publishing.

Membership Maintenance

- (1) Adhering Members
- Updated the contact information of the IUGS Adhering Members in the IUGS Information Management System;
 - Prepared the updated list of membership status (Active, Pending, Inactive) of Adhering Members being posted on the IUGS website;
- (2) Affiliated Members
- Updated the contact information of IUGS Affiliated Organizations in the IUGS Information Management System.

Work Plan for 2025

Preparations and Participation of the IUGS Business Meetings

- 81st IUGS EC Meeting in Paris, France (Minutes taking, onsite organization)
- IUGS EC Progress Meetings (online) and monthly Bureau Meetings (online)

Daily Routines

- Basic Work on membership maintenance
- Information system updates
- Distribution of IUGS E-Bulletin
- Compilation of IUGS annual report 2024

IUGS Exhibitions at EGU, GSA, and AGU, materials for distribution are as follows:

- IUGS posters, flyers, and brochures
- Flyer and brochures of some IUGS-affiliated organizations (voluntary contribution)
- IUGS annual reports in 2023-2024
- Hard Copies of ICS charts
- IUGS Publications (e.g. Episodes, IUGS First and Second 100 Geoheritage Book, and IUGS First 55 Heritage Stones with purchase information, Geochemical Sampling Book, IUGS books published by GSL, and voluntary contributions from IUGS-affiliated organizations)
- Promotional items

MA concluded by thanking the Executive Committee for their guidance and reiterated the Secretariat's commitment to its duties in support of IUGS's global mission.

6. Nominating Committee Report

Qiuming CHENG (QC), Past President of IUGS and Chair of the Nominating Committee, presented the report of the Nominating Committee (NC), summarizing its activities and preparation of a new slate for the 2024–2028 term.

For the previous tasks, the NC has prepared two lists in 2024: one for EC nominations and another for the new Nominating Committee.

As per the IUGS Statutes and Bylaws, the NC is responsible for preparing the slate of candidates for election to the IUGS Nominating Committee. The IUGS issued three calls for nominations (November 2023, February 2024, and December 2024). A total of 12 candidates were nominated (8 from the second call and 4 additional ones). After two withdrawals, 10 nominees remained. After careful review, the NC unanimously recommends the full slate of 10 candidates for election. NC has compiled short biographies and photographs of the candidates to be posted on the IUGS website to ensure transparency throughout the election process. These documents will be transferred to the IUGS Secretariat for further processing.

QC also noted that the original election, which was scheduled for the Fifth Ordinary Session of the IUGS-IGC Council in August 2024, was postponed due to uncertainties regarding the legitimacy of some candidates and the withdrawal of two candidates

from the slate. A renewed call was issued in December 2024 with a new deadline of February 10, 2025.

QC also notified that the NC is committed to ensuring the continued success of the IUGS through the preparation and election of a capable and diverse Nominating Committee for the 2024-2028 term.

Slate for the NC Elections

Nomination Committee 2024-2028

The list includes 10 candidates, including 6 female candidates and 4 male candidates from 10 countries.

Name	Gender	Country/Region
Ariadne Argyraki	Female	Greece
Ashok Kumar Singhvi	Male	India
Daekyo Cheong	Male	Korea
Irina Artemieva	Female	Germany
John Ludden	Male	UK (to be the NC chair)
Klaudia Oleshko	Female	Mexico
Tânia Martins	Female	Canada
Tegist Chernet	Female	Finland
Wenzhi Zhao	Male	China
Yamirka Rojas-Agramonte	Female	Germany/Cuba

QC closed by expressing sincere gratitude to all national committees and individuals who contributed nominations, and to the candidates for their willingness to serve.

7. Publication and Outreach Groups

7.a. Episodes

Sang-Keun Lee delivered the Episodes report virtually. He gave an overview of recent publication activities, submission trends, and upcoming thematic issues. Notable updates are as follows:

A total of 141 manuscripts had been received through the Editorial Manager system, and 52 manuscripts (39 original articles, 2 reviews, 6 communications regarding IUGS geological standards, 2 History of Geology articles, and 3 editorials) were published in Vol. 47, no. 1-4, including 2 special issues (Issue 3 and Issue 4).

The year 2024 was the largest submission so far, with higher acceptance rate but increased submission to first decision day.

The impact factor and other metrics for episodes show a fluctuation year to year, partly because the number of publications that we actually share with episodes is not that much.

Work Plan for 2025

They convened an informal AE meeting and discussed how to manage episodes. Probably, they would involve their expert instead of guest editors in the evaluation process.

Regarding the manual type, they are thinking of accepting the letter-type article and having the lead and focus papers by distinguished members of IUGS to increase the visibility. The page number will be given once the paper is accepted, and suggestions and advice will be asked.

In 2024, there were 28 associate editors. 3 of them resigned. Some editors didn't respond. So, they need to recruit 5 new editors who are in the field of geochemistry, geophysics, and engineering in geology. Once they recruit new associated editors, they will be able to send the certificates to the new associated editors as well as the existing editors.

Sang-Keun Lee also accepted the suggestion from MRP to hold an online meeting per year.

7.b. E-Bulletin

Gurmeet Kar, the Editor of IUGS E-bulletin, reported on the status and recent improvements of the IUGS E-Bulletin. She acknowledged the contributions of her predecessors and outlined her editorial vision moving forward. Key points are as follows:

A new template was designed for the news to be published in the IUGS e-Bulletin. The format was circulated in January 2024. Contributions since then are requested in the new format. The hyperlinks were added to all the news to improve readability and engagement.

The timeline for accumulating news and preparation of the monthly IUGS e-Bulletin was updated. First, the contributors are requested to submit the material in the new format before the end of every month. Next, the e-bulletin is prepared in the first week of every month and sent to the secretariat, IUGS webmaster and IUGS social media coordinator/manager. Then, the e-Bulletin is distributed to around 8000 geoscientists/organizations every month by the secretariat, uploaded to the IUGS website, widely publicized through IUGS social media.

Gurmeet Kar also reported that all the contributors of the e-bulletin include the EC, scientific commissions, task groups, initiatives, affiliated organizations, and so on. And they publish the episodes quarterly journal through projects, including the UNESCO IGCP project.

Gurmeet Kar closed by expressing her acknowledgement and wishing predecessors good luck.

8. IUGS Commissions, Task Groups, and Initiatives

8.a. International Commission on Stratigraphy (ICS)

E. Erba, the Chair of International Commission on Stratigraphy (ICS), reported the progress that ICS had made during the past year.

Composition

ICS currently comprises an executive team and 17 active sub-commissions, involving over 750 scientists worldwide. This makes it the largest cluster of geoscientists within IUGS. The commission is making notable strides toward inclusivity, with 41% of members identifying as female and 48% being early- to mid-career scientists.

Primacy Focus

The commission's main focus in 2024 remained the ICS Chronostratigraphic Chart, primarily based on GSSPs, and the modernization of its website (www.stratigraphy.org).

Achievements in 2024

Several significant achievements were noted. The most recent version of the ICS Chronostratigraphic Chart (2024/12) was released, including many revised numerical ages and translations into 20 languages. Permissions were granted to multiple users—including authors, educators, and professional societies—to freely reproduce and use the chart. Scientific advancements included the publication of several articles in a special issue on biostratigraphy and the acceptance of the paper “The ICS International Chronostratigraphic Chart This Decade” by Cohen et al., scheduled for publication in Episodes in 2025.

Key events included the rejection of the Anthropocene base proposal following a vote by the Quaternary Sub-commission, with a joint IUGS–ICS statement issued subsequently. GSSP progress featured ratifications and ceremonies for the Hauterivian, Albion, Barremian, and Valanginian stages, with ongoing data generation at field sites to support future proposals. ICS also held several strategic meetings, including an online assembly of all Sub-commission Chairs in November 2024 and a joint discussion with the Time Scale Calibration Sub-commission in December 2024. A call for proposals for the STRATI 2026 meeting was issued, with three submissions

evaluated in early 2025. Vice-Chair Shuzhong Shen was appointed as ICS representative to the Deep-time Digital Earth (DDE) program.

Expectations and Plans for 2025

Looking ahead to 2025, ICS aims to maintain regular online meetings with Sub-commission Chairs (three annually), finalize a GSSP proposal template, and significantly increase the completion rate of GSSPs, to finalize all Phanerozoic GSSPs by 2028 in preparation for the next International Geological Congress (IGC).

Specific GSSPs, such as those for the Kungurian, Aptian, and Oxfordian stages, are planned for completion. Sub-commissions will also engage in field workshops, meetings, and international symposia, including the 12th Cretaceous Symposium (Hanover, Aug 31–Sept 5), the 4th International Conference on Geobiology (June), and collaborative work toward the next Geological Time Scale book planned for 2030. ICS will also contribute to the Third 100 initiative.

Budget Request

The budget request for 2025 is \$ 82,425.75.

Challenges

The commission faces two primary challenges: inadequate funding to execute its planned activities and the need for strategic support in developing the 2030 Geological Time Scale.

8.b. History of Geological Sciences (INHIGEO)

Ezio Vaccari, the president of Commission on History of Geological Sciences (INHIGEO) gave the report as follows.

Achievements in 2024

One of the year's highlights was the 49th INHIGEO Annual Symposium, held in conjunction with the 37th International Geological Congress (IGC) in Busan. The event featured five sessions and one workshop, followed by a geo-historical field trip to southern Japan.

In addition, INHIGEO organized two public webinars: *Bridging the Gulf: Intersections of Geology, Biology and Environmental Justice* and *The Art of the Carboniferous Period in the Times of Decarbonization*.

Collaborations within IUGS

Within IUGS collaborations, INHIGEO made a significant contribution to *The Second 100 IUGS Geological Heritage Sites* project, proposing six locations: Gno Valley and Mt. Vesuvius in Italy; Scheibenberg in Germany; Maruia Falls in New Zealand; Cavansham

Ferry and Llanstephan in Great Britain; and Esmark and Tank Moraines in Norway. These contributions were also showcased at a special event during the IGC in Busan.

Publications

In terms of publications, INHIGEO published proceedings from its sessions at the 3rd ICS and the 6th IPC in *Earth Science History*. It maintained regular communication through its *Quarterly Circular*, which shares membership news, and its *Annual Record*, which compiles full reports of member activities and country reports. The INHIGEO *Anniversary Series* continued with monthly geo-historical papers for the IUGS E-Bulletin. Additional contributions were made to *Episodes*, including papers on the history of geology and book reviews.

Awards Presented

Two awards were presented during the year: the INHIGEO Early Career Award to Lucero Morelos-Rodriguez (Mexico) and the Vladimir V. Tikhomirov History of Geology Award to Kenneth L. Taylor (USA).

New INHIGEO Website

INHIGEO also launched a redesigned website (<https://www.inhigeo.org>).

Expectations and Plans for 2025

Conferences

For 2025, INHIGEO plans to hold its 50th Annual Symposium within the 27th International Congress of History of Science and Technology in Dunedin, New Zealand, from 29 June to 5 July. The commission will sponsor a session on the *History of Forensic Geology* at the IUGS Initiative on Forensic Geology (IFG) conference in Rome from 21 to 23 May, as well as the conference '*Epistemic Frontiers'? Geoscientific Knowledge, Authority, and Politics of Participation in Arctic and African Exploration* in Oslo, Norway, from 22 to 24 April. Preparations are also underway for the 51st INHIGEO Annual Symposium, to be held in 2026 in Victoria Falls (Zimbabwe) and Johannesburg (South Africa).

Publications

Publication efforts will continue with the regular release of *Quarterly Circulars*, the *Annual Record*, and the *Anniversary Series*. INHIGEO will contribute to a special issue of *Episodes* focusing on the empowerment of women in geoscience as part of Sustainable Development Goal 5 (Gender Equality), and participate in the development of two new volumes: one on the *History of Women in Geosciences* for the Geological Society of London's Special Publications, and another titled *History of Geology Without Borders: Armenia and Beyond* for Springer Nature. The second part of the INHIGEO session proceedings from the 6th IPC will also be published in *Earth Science History*, and a proposal for a new book series on the history of geoscience will be submitted to Springer Nature.

Collaborations within IUGS

Collaborative efforts within IUGS will continue, including work with the ICG on *The Third 100 IUGS Geological Heritage Sites*, coordination with the IFG for the Rome meeting, and discussions with CG and COGE on joint initiatives.

Outreach

Outreach plans include hosting three to four new webinars that will be recorded and shared online, and launching INHIGEO's own social media channels, alongside regular contributions to IUGS platforms.

Challenges And Expectations from IUGS

The commission identified several challenges and set expectations from IUGS. These include promoting historical studies of geological sciences internationally, supporting scholarly publications, sponsoring relevant conferences, maintaining a rich digital and social media presence, and expanding membership—particularly in underrepresented countries and among early-career scholars.

INHIGEO also hopes to support student engagement, foster cooperation with other IUGS bodies and scientific unions (such as DHST/IUHPST), develop a new membership directory with research fields, create an extended bibliographical database on the history of geosciences, and aid in the preservation and cataloguing of important archival materials.

INHIGEO expects IUGS to remain a platform for interdisciplinary exchange and to enhance its support for historical perspectives in geoscience, which are vital for public understanding and responsible science policy.

Budget Request

Budget request for 2025 is €6,020, including:

- € 2500 for travel grants for conferences / symposia;
- € 120 for web domain and web software;
- € 500 for website management;
- € 400 for webinars organization;
- € 800 for travel costs INHIGEO Secretary-General to IUGS EC Meeting in Paris;
- € 1500 for printing and shipping of INHIGEO Annual Record, and
- € 200 for banking fees.

8.c. International Commission on Geoheritage (ICG)

Asier Hilario, Chair of the International Commission on Geoheritage (ICG), presented the activities, credibility, visibility, and the promotion of both the ICG and the IUGS as follows:

Achievements in 2024

The main activities are related to giving recognition to the sites, stones, and collections that have been essential for the development of geological sciences.

Consolidation

2024 is a year of consolidation of the program, standards, and methodology. After 6 years working in the Commission on Geo Heritage, during the International Geological and Congress, ICG announced the second 100 IUGS Geological Heritage Sites, the first 55 IUGS Heritage Stones, and the first 11 Geo-Collections.

Collaboration

The second spirit of the ICG is collaboration. More than 700 international experts have participated in, making proposals, selecting sites, making evaluations, preparing books, and doing all the other work.

Website

The ICG's website has played a crucial role in outreach and engagement. It now includes individual files for each of the newly designated heritage sites, stones, and collections, as well as an interactive global map.

They uploaded all the files of "The Second 100" and of the 55 stones and created a file for each of them. They also created a map with all the heritage sites, stones, and geo-collections.

The program now spans 85 countries represented across these categories. The commission's books have been downloaded over 7,000 times, and its website attracted over 160,000 visitors from 190 countries within just 2.5 years. Notably, after ICG's presentation at the IGC in Busan, the site received over 45,000 visitors in only two days.

ICG's visibility has also grown offline—such as through the erection of a large monument in Peru celebrating a geological heritage site, helping to link IUGS recognition with local pride and community identity.

International Cooperation

The program has welcomed more than 20 international organizations covering all geological disciplines in the program, all of which were well represented. The role of ICG is to coordinate and include everyone in the program.

UNESCO Global Geoparks

ICG is responsible for assessing 15-20 new applications of aspiring geoparks per year to ensure that the quality of the geological heritage of international significance meets the standards of the program, conducting 80 evaluations per year, and involving more than 50 experts

Expectations and Plans for 2025

In 2025, ICG will continue its core initiatives. The call for *The Third 100 IUGS Geological Heritage Sites* has opened and is expected to attract approximately 150 nominations. The nomination window for new heritage stones is also open, with 14 new countries joining the program.

ICG plans to participate in major international meetings including the GSA, PROGEO, and GGN. The commission is already preparing for a major event in 2026 to announce “The Third 100”, as well as new recognized stones and collections, during a dedicated IUGS Geoheritage event.

Budget Request

Budget request for 2025 is €19,800, including €14,000 for conferences and congresses, €5,500 for dedicated meetings and fieldwork of the body, €10,000 for the second edition of “The First 100”, €3,500 for dissemination, outreach, and website, and €2,500 for TAX management advise.

After deducting the remaining €15,986 from 2024, the total budget requested for 2025 is €19,800.

8.d. Global Geochemical Baselines (CGGB)

Alecos Demetriades, Chair of Commission on Global Geochemical Baselines (CGGB) gave the presentation as follows:

Long-term Mission

The CGGB’s long-term objective is the establishment of a Global Geochemical Reference Network supported by a harmonized, accessible global geochemical database. This work is of great importance to a wide spectrum of users, including policymakers, environmental regulators, resource managers, and the scientific community. A foundational element of this effort was the publication of the Manual of Standard Methods for the Establishment of the Global Geochemical Reference Network in 2022.

Publications

- International Union of Geological Sciences Manual of Standard Geochemical Methods for the Global Black Soil Project, which garnered 160 downloads from 1st November 2022 to 31st December 2024;
- International Union of Geological Sciences Manual of Standard Methods for Establishing the Global Geochemical Reference Network, which garnered 414 downloads from 2nd September 2022 to 31st December 2024;
- R-scripts for Generation of 5, 8 and 16 Random Sampling Points Within Predefined Rectangles, which garnered 88 downloads from 30th September 2022 to 31st December 2024;

- Program ROBCOOP4A for Estimation of Balanced Classical and Robust Analysis of Variance: Instructions for Use and Source Code, which garnered 93 downloads from 30th September 2022 to 31st December 2024.

Achievements in 2024

In 2024, the CGGB was active across a wide range of educational, outreach, and scientific engagements. From April 16 to 21, students at the University of Athens participated in the Athens Science Festival, showcasing CGGB's initiatives. On May 17, the group contributed to a SEGH Fellows Webinar by reporting on European groundwater geochemistry and promoting the IUGS Manual of Standard Methods. A four-hour workshop on these methods was held on July 1 in Ávila, Spain, in conjunction with the XI National Geological Congress. On August 13, CGGB delivered a plenary talk titled "Standardisation of Applied Geochemical Methods" at the Joint Conference of ISEH, ICEPH, and ISEG at the University of Galway, Ireland.

CGGB also had a presence at the 37th IGC in Busan, South Korea. Later in the year, from September 25 to 28, the Commission participated in the FAO's Global Symposium on Soil Information and Data, held in hybrid format in Nanjing, China. The group hosted and supported several virtual engagements, including the ASGMI-GEG webinar on November 13–14, titled "Sample Preparation: Key Stage to Generate Geochemical Information," and the 3rd International Student Conference on Medical Geology and Environmental Health – Europe Edition, held virtually from November 26 to 29 in collaboration with SEGH and IMGA.

Expectations and Plans for 2025

Looking ahead to 2025, CGGB has outlined a robust and ambitious agenda. From July 2 to 5, a four-day workshop titled "Global to Regional and Local Scale Geochemical Mapping" will be held at the Goldschmidt Conference in Prague, utilizing the IUGS Manual of Standard Methods. This will be followed by a thematic session (Session 05j) at the same conference from July 6 to 11, with 29 abstracts already submitted. The annual joint business meeting of CGGB, EGS-GEG, and ASGMI-GEG is scheduled for October 9 to 11 at the Geological Survey of the Netherlands in Utrecht. From November 5 to 7, CGGB will lead a four-hour workshop during the International Professional Geology Conference (IPGC-5th Edition) in Zaragoza, Spain. To further expand outreach and training, CGGB plans to organize multiple webinars across various time zones in collaboration with ASGMI-GEG and EGS-GEG, promoting the IUGS Manual and addressing applied geochemistry topics like quality control and data processing.

In terms of educational resources, several tutorials are planned: plotting a topographical map (already published on February 19, 2025), plotting Thompson & Howarth plots (forthcoming in April 2025), and a tutorial on levelling geochemical data. Translation efforts are also underway—ASGMI-GEG is translating the Manual of Standard Methods into Spanish, while the Scientific Secretary, Paula Adánez-Sanjuan,

is translating the ROBCOOP4A program documentation. CGGB will also continue to promote its publications, including two accompanying eBooks: one on R-scripts for generating sampling points and another on robust statistical analysis.

Challenges Faced and Expectations from IUGS

CGGB is currently facing several major challenges. Firstly, there is a pressing need for a well-illustrated, engaging booklet that can be used for lobbying efforts at the level of the United Nations and UNESCO; while CGGB can provide the technical content, professional editorial support is required.

Secondly, they lack the full suite of reference materials needed for calibration in geochemical mapping, and though they have at least two Geological Survey laboratories, the required funding has not yet been secured. Thirdly, equipping national sampling teams with necessary instruments and providing training remain financially difficult.

Expectations from IUGS

The CGGB has the expertise but expects that the IUGS will support this very important Global project wholeheartedly. They are aware that this is not a simple task, as it took 10 years (1986-1996) to convince the European Geological Survey Directors to approve the implementation of the FOREGS Geochemical Atlas of Europe project in which 26 countries participated.

Budget Requests for 2025

Budget request for 2025 is €40,125.

8.e. Management and Application of Geoscience Information (CGI)

Harvey Thorleifson, Chair of Commission on Management and Application of Geoscience Information (CGI) reported the achievements in 2023 and 2024 work plan as follows:

Achievements in 2024

CGI successfully assembled a new Council with broad international representation and adopted a strategic plan to guide activities over the next four years. The group held productive sessions during the 37th IGC and remained an active partner in the DDE initiative, specifically contributing to the implementation of FAIR (Findable, Accessible, Interoperable, Reusable) data principles. CGI also worked closely with CODATA under the DDE framework to further promote these standards.

Notably, CGI co-led the IUGS Africa GeoData initiative under the 10 Action Plan for Africa (TAP for Africa) and helped organize a successful workshop in Belfast. Collaborations continued with the Open Geospatial Consortium (OGC) to advance GeoJSON encoding, which supports the standardized language and structure of

geological maps via GeoSciML. The Commission made strides in enhancing online multilingual geoscience vocabulary services, hosted agreements on standards with groups such as ICS, and updated its communication tools, including its website, annual newsletter, and official reports to IUGS.

Expectations and Plans for 2025

For 2025, CGI's focus will be on implementing its strategic plan across several key areas: governance, geoscience vocabularies, logical data models, artificial intelligence, 3D geology and digital twins, cross-commission collaboration, and the operation of its working groups. The group will continue its collaboration with CODATA on FAIR principles and support the TAP for Africa initiative. It will also support the current standards with emphasis on GeoJSON encoding. Further emphasis will be placed on enhancing the functionality of multilingual geoscience vocabularies and expanding the digital hosting of geoscience standards.

Plans also include updating the CGI website and publishing the annual newsletter. The Commission's annual meeting will be held at the GIC conference in Denmark.

Budget Requests for 2025

Budget request for 2025 is \$10,000.

8.f. Education, Training and Technology Transfer (COGE)

Sandra Villacorta, Chair of Commission on Education, Training and Technology Transfer (COGE), reported the following issues:

Achievements in 2024

COGE actively participated in the 37th International Geological Congress and strengthened its global reach by establishing connections with new members from Ghana, Colombia, Bolivia, and Nigeria. The Geoscience Education Field Officer (GEFO) Program has intensified its activities in Africa and South America, while also benefiting from the contributions of field officers from Asia. COGE contributed to the 2024 International Earth Science Olympiad (IESO) through members from Italy, the Philippines, and South Korea.

The Public Outreach and Communication sub-commission, in collaboration with the IUGS social media team, hosted two webinars and introduced the "Geoscience Educator of the Month" campaign to honor local geoscience educators. On the publication front, the commission made significant contributions with seven papers published in a special issue of Episodes and nine additional articles in the journal Teaching and Communication of Geosciences (CGEO-UNAM). Another notable milestone was the presentation of the first Chris King Medal to Dr. Hector Lacreu at the 2024 Argentinian Geological Congress. Furthermore, COGE conducted a global survey focused on Equity, Diversity, and Inclusion (EDI) to identify systemic gaps, and

updated its Terms of Reference to ensure sustainable growth aligned with IUGS priorities.

Expectations and Plans for 2025

Looking ahead to 2025, COGE plans to deepen its collaboration with international organizations and expand the GEFO Program, while addressing persistent challenges in content delivery and operational coordination. Strengthening global connections remains a central aim, particularly to enhance support for geoscience education.

Planned Products

Expected deliverables include two conference papers or publications, two issues of the CGEO-UNAM journal, and the announcement of the 2026 Chris King Medal awardee.

The commission will support two early-career geoscience educators, sign two new Memoranda of Understanding with international partners, and recruit at least four new members from underrepresented countries. It also aims to appoint four new field officers from currently unrepresented regions and host two in-person GEFO workshops.

Planned EDI-focused initiatives include an annual report and work plan strategy, a photography exhibition titled *The Girl Who Brought Me to Today* (Mexico, CGEO-UNAM), a webinar on gender equality in collaboration with IAEG Peru, and two Public Outreach and Communication webinars focused on the Latin America and Caribbean (LAC) region and Africa.

Challenges Faced and Expectations from IUGS

Despite its achievements, COGE faces several challenges: increasing member engagement in underrepresented regions, securing long-term funding for in-person meetings, maintaining sustained contributions, navigating administrative hurdles for partnership agreements, and integrating advanced technologies within traditionally rigid curricula.

To address these, COGE expects IUGS support in expanding its community—especially in Africa, Latin America, and the Caribbean—along with financial backing for in-person training and strategic guidance for formalizing collaborations with international organizations. Furthermore, COGE calls for coordination across IUGS commissions to enhance transdisciplinary geoscience education.

Budget Requests for 2025

Budget request for 2025 is \$28,700.

8.g. Commission on Geoethics (CG)

Silvia Peppoloni, Chair of Commission on Geoethics (CG), mentioned that the commission was established two years ago, which mainly consists of experts from the International Association for Promoting Geoethics (IAPG). Silvia Peppoloni gave the report as follows:

Achievements in 2024

CG has successfully fulfilled its 2024 work plan. Key achievements included the development and IUGS Executive approval of the Ethical Guidelines for meetings and the Action Plan on Diversity, Equity, Inclusion, and Accessibility (DEIA). CG also supported the IUGS Presidency and Executive Committee in dispute resolution by reporting incidents and recommending actions. Activities also extended to the Chair on Geoethics of the International Council of Philosophy and Human Sciences.

CG co-organized geoethics sessions at the European Geosciences Union General Assembly and the International Geological Congress, and its members delivered presentations at these events as well as the IUGS Congress 2024 and the First Latin American Symposium on Geoethics. The commission engaged in topical discussions such as the implications of large language models in geology and made substantial editorial contributions, including the launch of book proposals and special journal issues. Outreach and communication efforts were amplified through its website, IUGS E-bulletin, and social media platforms.

Documents

In terms of documentation, CG's Task Groups published several influential documents, including the "Guidelines for Ethical Conduct at IUGS/IGC Meetings and Events" and the "Action Plan for the IUGS on Diversity, Equity, Inclusion, and Accessibility".

The CG Chair, Secretary, and Governing Board released three additional reports: "Assessment of Diversity within IUGS Bodies", two reports addressing ethical controversies, and one report for the Standing Committee on Gender Equality in Science. A newly established Task Group on Artificial Intelligence (AI) in Geosciences drafted a "White Paper on AI in Geosciences."

Meetings

The Commission actively participated in global scientific gatherings, chairing Theme 39 at the 37th IGC in Busan and organizing sessions and lectures at other international forums and academic institutions.

Publications

In publishing, CG released the book *Geoethics for the Future: Facing Global Challenges, the special issue 25 Years of Advancing Geoethics and Social Geosciences*, and 10 articles across various international journals. CG also contributed to the AGU's "Ethical Framework Principles for Climate Intervention Research" and launched new editorial initiatives.

Other Activities

Additional activities included celebrating International Geoethics Day on October 17, awarding the 2024 Geoethics Medal to Prof. Erika Marín-Spiotta, initiating memoranda of agreement, and establishing two new IAPG national sections in New Zealand and Colombia. CG was also involved in two European projects: CIRAN (Critical Raw Materials Extraction in Environmentally Protected Areas) and CORE (Science and Human Factor for Resilient Society).

Expectations and Plans for 2025

For 2025, the commission plans to create a Task Group on Deep-Sea Mining and continue drafting reports for the IUGS Executive Committee. It will support the IUGS Presidency and EC in handling ethics complaints by proposing codified procedures.

CG will organize and present sessions and deliver presentations on geoethics in national and international scientific congresses. It will also offer educational courses, aiming to further develop the International Geoethics Research Infrastructure as a center of excellence.

CG will start a comparative geoethics project to address issues related to justice and indigenous knowledge and develop a comprehensive educational initiative to cultivate ethical awareness and skills among geoscientists, with the organization of an innovative course on geoethics and educational materials.

Dissemination will continue through web platforms, and the commission will pursue new editorial projects involving books, special issues, and journal articles.

Challenges Faced and Expectations from IUGS

CG identified several challenges that require IUGS support. These include 1) Supporting IUGS community through fostering a shared platform for ethical practices, research integrity, and policy-making to improve professional standards, and advance the societal relevance of geoscience research, and developing further guiding documents for the IUGS to orient the geoscience community on topical, delicate issues of international relevance. 2) Expanding the landscape of geosciences through encouraging multidisciplinary and interdisciplinary approaches in geoscience studies to address global challenges from multiple perspectives, and networking and strengthening international cooperation with other organizations and institutions for developing joint initiatives on geoethics. 3) Nurturing the next generation of ethically conscious geoscientists, through educational activities that include geoethics. 4) Improving the quality of the publications on geoethics and facilitating the access to resources through open access policies.

Budget Requests for 2025

Budget request for 2025 is €9,290.

8.h. Task Group on Submarine Geohazards (TGSG)

Kiichiro Kawamura, Chair of Task Group on Submarine Geohazards (TGSG), reported that:

Achievements in 2024

In 2024, TGSG actively facilitated international knowledge exchange on submarine geohazards by conducting online meetings with Benha University in Egypt and the University of Costa Rica. The group organized two sessions at the 37th International Geological Congress (IGC) held in Busan, South Korea, and supported the participation of one student from Taiwan and one early-career researcher from the Philippines using IUGS funds. As part of its youth and research development efforts, TGSG also established a student presentation award.

Further expanding its visibility and influence, TGSG launched a parallel session at IRDR 2024 held in Beijing and organized an open symposium on submarine geohazards at the Science Council of Japan, providing an important forum for sharing research and raising awareness.

Expectations and Plans for 2025

For 2025, TGSG plans to maintain this momentum through a series of targeted activities. The group will launch a thematic session at the Coordinating Committee for Geoscience Programmes in East and Southeast Asia (CCOP) in 2025, hold sessions at the 12th International Conference on Scour and Erosion (ICSE-12) in Chongqing, China, and participate in the Japan Geoscience Union Meeting (JpGU 2025). It also plans to publish a special issue in the journal *Episodes*, continue organizing online meetings for international collaboration, and create comprehensive guidelines for marine development through the Science Council of Japan.

Challenges Faced and Expectations from IUGS

TGSG expressed a strong desire to disseminate its marine development guidelines as international standards, translated into multiple languages including Chinese, Spanish, French, and Arabic, with English included in abstracts and figure legends.

Budget Requests for 2025

Budget request for 2025 is \$7,500.

8.i. Initiative on Forensic Geology (IFG)

Laurence Donnelly, Chair of the Initiative on Forensic Geology (IFG), introduced the initiative's core mission—applying geological knowledge and techniques to support police and law enforcement investigations in cases of serious crime. The work of IFG is grounded in four pillars: crime scene examination, forensic analysis of geological

samples for legal proceedings, subsurface searches for illicit materials or human remains, and the investigation of minerals and mining-related crimes.

Laurence Donnelly reported as follows:

Achievements in 2024

In 2024, IFG undertook extensive international collaborations and initiatives. The IUGS-IFG “Special Project” on Mining, Minerals, and Metals Crimes involved partnerships with INTERPOL’s Illegal Mining Team through Operation Sanu, the Mining Security Working Group (MSWG) at the Royal Military Institute in Toronto, and Brazil’s Federal Police through the Clean Gold Program.

The group contributed to the forensic examination of crime scenes, notably through collaboration with the European Network of Forensic Science Institutes (ENFSI) on Animal, Plant, and Soil Traces (APST) in Latvia. IFG also addressed forensic geological challenges at the 11th World Conference on Sampling and Blending in Johannesburg and the 9th China International New Energy Industry Expo in Jiangsu, China.

In the area of ground searches, IFG provided training to the Colombian National Police in collaboration with the ICMP, and also to Police Scotland, UK Police, and the UK’s Police National Search Centre (PNSC) for counter-terrorism investigations. Their work contributed to the discovery of the remains of a 19-year-old missing teenager in New Zealand using GSS methodologies.

IFG’s presence extended across major international forums, including the 79th IUGS Executive Committee Meeting in Nairobi, Kenya, and the 37th IGC in Busan, where they co-hosted a joint session with the International Medical Geology Association.

The group also held the first international meeting focused on the forensic investigation of fossil crimes. Publications in 2024 included a range of contributions such as Federal Forensics on Brazil’s Clean Gold Program, papers on forensic geoarchaeology in Italy, and technical standards (e.g., colour, XRD, SEM, and soil sampling) under OSAC-GEO. The group was also featured by the European Federation of Geologists and authored the most downloaded paper in the GSL collection.

Expectations and Plans in 2025

Looking to 2025, IFG has set an extensive agenda. It will continue collaborations with INTERPOL and the FBI, and participate in key forums including the Senior Investigating Officers (SIO) Conference in the UK and the Status of Geoscience Information in Africa conference at Queen’s University Belfast.

IFG plans to organize its own conference in Rome, Italy, to celebrate the 15th anniversary of its founding. It will participate in the 13th South Brazilian Geology

Symposium, a visit to China's Ministry of Public Security, and the EAGE Near Surface Geophysics conference in Naples to explore forensic applications of geophysics.

Additional plans include participation in the VI Ibero-American Seminar in Forensic Geosciences (Chile), a conference on illegal sand mining with the British Geological Survey, training workshops in Argentina, and ongoing collaborations with the Brazilian Federal Police and mining institutes. IFG will continue working with international police laboratories (Brazilian, FBI, Colombian) and support ground searches for burials and counter-terrorism efforts with UK law enforcement and military.

Other 2025 activities include follow-up meetings with the Swedish Geological Survey, support for ICMP's missing persons work, development of IUGS-IFG student chapters in Latin America, Africa, and Asia, and promotion of forensic geology in BSc, MSc, and PhD education. The Raymond Murray Award will also be issued in 2025.

Finally, IFG will produce new publications, including a themed issue in Episodes, and contribute to public awareness via media collaborations such as podcasts and interviews, including with the New York Times.

Challenges and Expectations from IUGS

Despite its many accomplishments, IFG continues to face challenges. These include the high cost of international travel in a post-pandemic context, managing confidentiality related to investigations, addressing growing global demand for forensic geology, expanding its presence in Africa, and ensuring the development of the next generation of forensic geologists.

IFG calls on IUGS for financial and administrative support, visibility through e-bulletins and publications, strategic guidance, alignment with UNESCO and the International Science Council, enhanced global awareness, and influence at the governmental level to serve as an international voice for forensic geology.

Budget Requests for 2025

Budget request for 2025 is \$15,000.

8.j. Task Group on Igneous Rocks (TGIR)

Michele Lustrino, Chair of Task Group on Igneous Rocks (TGIR), reported as follows:

Activities in 2024

TGIR participated the IUGS executive meeting in Nairobi online, the Lunar and Planetary Science Conference Woodlands in, and joined the extraterrestrial and terrestrial communities. TGIR also participated the IGC, organized a 2-hour workshop in Busan with more than 40 participants, and held the special session Theme 8

Petrology. Besides, TGIR has joined the SIMP in Bari, Italy and held two seminars in India.

TGIR closed the revision of several candidatures for the second 100 IUGS Geological Heritage Sites and prepared an official book proposal to the Geological Society of London. Eventually, TGIR had a definitive transfer of copyright from the owner of the previous versions.

TGIR started the scientific divulgation of the activities in ResearchGate platform which garnered a total of 3,360 views. Regarding TGIR's activities related to the writing of the third edition of the IUGS book on the nomenclature and classification of igneous rocks, around 70% of the activities had been completed.

Plans for 2025

In finalizing the third edition of the IUGS book on the nomenclature and classification of igneous rocks, problems arose among the Chair and some TGIR members after the IGC Congress, the coordination role of the Chair was considered insufficient to finalize the project, and three out of 15 members argued against the Chair. As a result, the Chair decided to follow a schedule without taking into consideration the Chair the following aspects: to have all the 15 members as co-editors of the book, to add the names of single authors to each chapter, to include external authors not listed among the official TGIR members, and not to follow the International System of Units rules. Besides, they also decided not to share on ResearchGate the preliminary results of the TGIR activities, fix strict deadlines without involving the TGIR Chair, to use pooling systems without access to the data, and to interact with GSL representatives without involving the TGIR Chair. As a result, the Chair wrote a letter to the IUGS EC to disband the group.

Budget Requests for 2025

Budget request for 2025 is \$17,000 to cover the publication fees to GSL.

9. International Geological Congress (IGC)

9.a. 37th IGC in 2024 (Busan)

Daekyo Cheong (DK), Chair of the Organizing Committee of the 37th IGC, summarized the past 37th IGC and gave the report as follows:

Key Achievements of the 37th IGC

DK presented the three main achievements of the 37th IGC. First, they successfully held a large-scale geological science event. 6,003 experts from 99 countries in geology-related academia and specialized fields participated the event, with special sessions and collaboration with developing countries to support participants and promote advancements in geological sciences. Second, the Busan Declaration was adopted.

They also proposed establishing the “Global Future Geoscience Research Center” centered in Busan. Third, the awareness of global environmental changes was raised.

DK summarized key performance indicators. A total of 6,413 participants joined the event. Among them, there were 3,000 paid registrations, 472 free registrations, and 2,941 free visitors. A total of 99 countries participated, and 2,978 presentations were shown under 41 topics during 233 sessions. At the exhibition, there were 9 thematic pavilions, 34 planned courses, and 27 sponsoring companies.

DK also presented the specific number of participants, their classification based on paid registration, and the main content of the event, including the opening ceremony, keynote speech, business meetings, workshops, special symposiums, field trips, paid tours, and the closing ceremony. There were also GeoExpos and Geology Film Festival. A Young Scientists Party was held during the closing ceremony.

DK then presented their promotional activities, including 87 articles on national and regional newspapers, 4 articles on news reports, and other promotional activities on related organizations’ websites, such as the Busan City Hall, Busan City Hall Elevator Displays, Busan Tourism Organization Newsletter, Geological Society of Korea, Korea Institute of Geoscience and Mineral Resources (KIGAM), and BEXCO. In addition, there were also offline promotional activities such as streetlight banners and BEXCO exterior wall banners, online promotional activities such as newsletters and official SNS Management through Facebook and YouTube.

9.b. 38th IGC in 2028

Katherine Boggs (KB), Chair of the Canadian National Organization Committee, presents the IGC 2028 Update.

KB first let the members take in the glorious view of Canada, including the magnificent mountains, permafrost, tundra, and the deep sea off the Pacific Coast.

To start with, KB showed the website of the IGC 2028 (<https://www.igc2028canada.org/>). The promotional video and media coverage had been uploaded to the landing page of the website.

KB reported that they are transitioning to the National Organization Committee (NOC) with all sorts of meetings. Besides, they are also standing up an Indigenous Advisory Board alongside the International Advisory Council (IAC). They have a series of MoUs and contracts that are either signed or in the process. And they will be negotiating contract with the BMO Convention Centre and hotels soon. They will be attending multiple conferences to promote IGC 2028, launching sponsorship with a reception and distributing the first circular by the end of 2026.

Leading into IGC 2028, they have plans for two years of national geoscience, including the distribution of coins, stamps, and indigenous artifacts. Regarding the opening ceremony, it is planned to be hosted at the Convention Center, which can host around 10,000 people. Besides the speeches and presentations, they also plan to host a relay base, musical concert, and fireworks.

Regarding the first circular, they plan to send it out in March 2026. KB reminded the members to save the dates: 11-20 August 2028. There would be field excursions, general structure for scientific sessions, call for proposals for scientific sessions, and call for proposals for the remaining keynote daily theme.

KB requested members to help with their marketing for IGC 2028, highlighting the importance of leveraging annual conferences like PDAC and AGU to promote the event. Strategies include distributing promotional postcards, utilizing pop-up banners, and encouraging online distribution of promotional materials. Additional suggestions and ideas for magnifying and augmenting social media campaigns are welcome.

Regarding the challenge Africans face with visa applications to Canada, KB explained that they offer registration with the Canadian Border Services, and they have a special program to help process visas as quickly as possible. They will open up registration a year ahead of time. So as long as there is a partial portion of the registration paid, they can provide a letter that can be used to facilitate the visa.

Regarding another concern of the organizer, KB explained that they had signed the contract with a professional conference organizer to ensure the smooth holding of the event.

10. IUGS Joint Programs

10.a. International Lithosphere Program (ILP)

Hans Thybo, the Chair of International Lithosphere Program (ILP) introduced that ILP is financed through annual contributions from IUGG & IUGS and national contribution from member countries, and ILP office is operated by Nanjing University. ILP has carried out more than 85 programs since 1980, including many global and continent scale interdisciplinary geoscience programmes with each program involving 50 to 1000 scientists. ILP is a bottom-up organization. ILP has 4 research themes, including Geoscience of Global Change, Contemporary Dynamics and Deep Processes, Continental Lithosphere and Oceanic Lithosphere. Task Forces and Coordinating Committees are the core of ILP and their duration is five years. In 2024, ILP approved its tenth task force.

Hans Thybo presented that ILP organized a workshop in Nanjing on “Interaction of Deep Earth and Surface Processes” with 4 senior lecturers and 30 early career

scientists. ILP awarded Evgenii Burov Medal 2024 to Dr. Fabio Capitanio from Monash University, Australia, and Flinn-Hart Award 2024 to Dr. Eszter Bekesi from Institute of Earth Physics and Space Science, Sopron, Hungary.

Hans Thybo reported that for 2025, ILP will initiate several new Task Forces/Coordinating Committees, hold sessions and town hall meetings at EGU, IAGA/IASPEI, AGU, bureau meeting at IAGA/IASPEI, and workshops by individual projects. ILP officers will meet Advisory Board. ILP will award the E. Burov medal and Flinn-Hart award with lectures. ILP will expand the national membership and seek new support from national science foundations and industry.

10.b. Deep-time Digital Earth (DDE)

Harvey Thorleifson, the President of the DDE Governing Council reported on behalf of DDE. 2024 is a transitional year of DDE. In 2024, DDE had significant presence and visibility at 37th IGC, including DDE booth, DDE theme 37, and 14 sessions, reception, and many informal meetings with members and partners for future cooperation. DDE presented itself at NMGS, EGU, JpGU, GSA, and AGU to share achievements and demonstrate DDE platform and GeoGPT. First DDE-funded project for Africa, and 7 additional projects got approved for 2026-2028 implementation. First DDE/REC in Europe was established at the University of Strasbourg, and a proposal for the first African RCE at UNILU/DRC was received. IUGS-led review of DDE was completed, and DDE has provided feedback on the review.

For 2025, Harvey Thorleifson reported that DDE will make dialogue and negotiations with Provincial and Central Government funders of DDE in China to sustain and assure continuation of fund flows. DDE will draft and adopt DDE Strategic Plan for 2026 to 2028 by June to July 2025. DDE Statutes will be amended for governance streamlining. DDE will continue its emphasis on supporting African events and initiatives and increase collaboration with UNESCO under Open Science and IDSSD frameworks.

Harvey Tholeifson reported that DDE is facing challenges, including:

- Asserting and stressing that DDE is a formally approved IUGS big science program
- Diversifying DDE funding sources beyond China
- Communicating DDE achievements and value of products and services to scientific and non-scientific audiences
- Encouraging and facilitating the creation of DDE hubs in Europe and elsewhere

Harvey Tholeifson presented the budget requests and motivation for 2025, including:

- IUGS contribution of 20,000 USD to continue. Only non-China support at present

- IUGS to disseminate review of DDE (2019-2023) outcomes with a view to encouraging partners and donors to collaborate with DDE, an IUGS big science program
- IUGS to encourage its Commissions, particularly those who are DDE members, to collaborate with DDE to diversify funding source – joint proposals to non-China funding sources
- IUGS strengthen geosciences UNESCO, including through DDE contributions to Open Science and IDSSD programs

10.c. UNESCO-International Geoscience Programme (IGCP)

Özlem Adiyaman Lopes, (UNESCO Representative of the International Geoscience Programme, recognized the 10-year collaboration between UNESCO and IUGS in international geoscience programs. The programme harnesses the intellectual capacity of a global network of over 10,000 geoscientists from more than 150 countries, to lay the foundations for the future of our planet, providing expertise in geoheritage conservation, energy transition, and sustainable use of resources. Besides IGCP, another cooperation between UNESCO and IUGS is UNESCO Global Geopark (UGGp). UGGp covers single, unified geographical areas where sites and landscapes of international geological significance are managed with a holistic concept of protection, education, and sustainable development. At present, there are 195 UNESCO Global Geoparks in 48 countries. Özlem also extended her thanks to IUGS for its expertise.

Mission

IGCP serves as a knowledge hub of UNESCO to facilitate international scientific cooperation in the geosciences. The IGCP mission includes promoting sustainable use of natural resources, advancing new initiatives related to geo-diversity and geo-heritage, and geohazards risk mitigation. There are five themes and one special theme under IGCP: earth resources, global change, geo-hazards, hydro-geology, geodynamics, and geoheritage for sustainable development.

IGCP in 2024

IGCP had a budget of \$240,000 jointly provided by UNESCO and IUGS. It organized events, workshops, and trainings with more than 2600 participants from 120 countries. It organized over 70 capacity-building activities for 33 projects. IGCP prioritizes gender equality and youth empowerment, with over 43% female participants and 52% youth participants. Besides, over 50% participants come from developing countries.

IGCP has published its annual report online, which explains how IGCP's projects contribute to sustainable development goals.

IGCP had its council closed session on 24 February 2025 to evaluate a total of 33 projects in 2024 and decide on 29 projects to continue in 2025.

Future of IGCP

IGCP had no new project calls from 2022. However, it hopes to call for partners and expression of interest instead of new project proposals to have more participants and control over the projects. However, as all projects will come to an end in 2026, IGCP launched a call for projects recently for Africa. IGCP is now actively seeking fundraising opportunities and hopes to receive more funds from the private sector.

Budget Requests for 2025

Budget request for 2025 is \$100,000 from IUGS.

Discussion

During the open discussion, Jonathon Arthur raised concerns about the drafted MoU and the relationship between DDE and GeoGPT. Harvey explained that DDE is well-functioning to operate under the IUGS banner and is excited about the potential of GeoGPT, which was inspired by DDE. The MoU was signed to recognize their coordinated work, and they will maintain mutual supportiveness.

11. Reports from IUGS Adhering Organizations

11.a. China

Xu Yaqi from Geological Society of China (GSC) reported that founded in 1922, GSC has 26 founding members (including three foreign geoscientists), 90,000 members, 143 council members, 63 commissions, 31 provincial societies, and 29 academicians. GSC is committed to fulfilling its missions by building a high-level academic exchange platform, developing an influential hub for international cooperation, creating a platform for geoscience outreach, establishing a transparent, fair and equitable system for talent cultivation and recommendation, and forging a bridge for inheritance of geological culture. GSC has sent delegation and set up booth at every IGC since the 25th IGC in 1976. Currently, GSC is probing into the possibility to set up an international award. GSC publishes *Acta Geologica Sinica*, which is an English periodical listed in SCI. In the near future, GSC will focus on rebooting two international conferences, including Global Chinese Congress on Geological Sciences jointly sponsored by Geological Society of Hongkong and Department of Geosciences of National Taiwan University and the Joint Academic Conference by GSC and Geological Society of America.

Xu Yaqi reported that GSC delivers on UN's sustainable development goals, including End Poverty in All Its Forms, Zero Hunger, Ensure Access to Water and Sanitation, Sustainable Consumption and Production, Combat Climate Change and Its Impacts, Conserve and Sustainably Use the Oceans and Biodiversity, Forests, Desertification.

Xu Yaqi introduced that the largest project for earth science and deep exploration in China, SinoProbe II has been initiated in 2024. By virtue of 3D Earth Imaging, National

Geo-Transects, Material Composition Probing, Subsurface Observatory, and Ultra-Deep Scientific Drilling, major advancements will be made in basic geoscience research and mineral resources exploration during the coming six years. Chinese geoscientists will continue to promote the development and utilization of clean energy, especially geothermal energy and natural hydrogen, put more efforts on the development of strategic critical metal resources, and enhance carbon sequestration capacity and fully explore underground spaces for carbon dioxide storage to achieve the "Carbon Peaking and Carbon Sequestration" commitment.

11.b. Lithuania

Jurga Lazauskienė from Lithuanian Geological Survey reported achievements in 2024, including:

- Pan-African support to the EuroGeoSurveys –Organization of African Geological Surveys Partnership (PanAfGeo) supports the training of geoscientists of African Geological Surveys;
- Participation in the 37th International Geological Congress in Busan, South Korea;
- Participation in GSEU programs - WP3, 5, 6, 8, 9
- Participation in the Development Programme for the Management of Nuclear Facilities and Radioactive Waste year 2021-2030 in Lithuania
- The European Marine Observation and Data Network, the European Commission in situ marine data service project
- State Geological Investigations Action Plan “CLIMATE CHANGE AND THE GEOLOGICAL ENVIRONMENT” year 2021-2025.

For 2025, Lithuanian Geological Survey will focus on the following aspects:

- Continued participation in GSEU programs - WP3, 5, 6, 8, 9
- Continued participation in the Development Programme for the Management of Nuclear Facilities and Radioactive Waste year 2021-2030 in Lithuania
- New national programme of State Geological Investigations of Critical Raw Materials as defined by Reglament (ES) 2024/1252
- New State Geological Investigations Programme with action plan for years 2026-2030
- The European Marine Observation and Data Network – the European Commission in situ marine data service project.

Jurga Lazauskienė presented several expectations from IUGS, including:

- To seek better promotion of the Geoscience training and strengthen the geoscience knowledge transfer and capacity building activities at the international, national and regional levels.

- To get into the initiatives in Minerals and Energy themes of RFG. To shift focus to Sustainable Development goals of the United Nations and society needs oriented initiatives. To build capacities in 3D mapping, critical minerals, and new energy sources studies to better ensure a society's expectations and energy independence.
- To get acquainted with efficient geodata resources in data sharing and best practice in geoscience information management.

11.c. Republic of Korea

Daekyo Cheong, the Ex-President of Geological Society of Korea (GSK), reported GSK's activities in 2024, including:

Conferences:

- The 5th KGU in Pyeongchang (July 1-2)
 - Organized as a member society of the Korean Geoscience Union;
- IGC 2024 in Busan (August 25-31)
 - 2,978 presentations (1,649 oral, 1,329 poster)
 - 17 field trip courses (317 participants)
- GSK annual meeting in Gyeongju (October 29- November 11)
 - 321 presentations (195 oral, 112 poster)
 - 21 scientific sessions (15 regular, 6 special)
 - Special lectures, workshops, and field trip

Publishing Scientific Journals:

- Journal of the Geological Society of Korea (domestic, quarterly)
- *Episodes* (SCIE, quarterly)
 - IF 2.2 (2023, Q2 in JCR journal rank)
 - 3 regular and 1 special issues (52 papers)
- Geosciences Journal (SCIE, bimonthly)
 - IF 1.0 (2023, Q4 in JCR journal rank)
 - 5 regular and 1 special issues (64 papers)

Scientific Divisions:

- Field trips
 - Geoheritage (February 22-24)
 - Structural and Energy Geology (May 15-17)
 - Volcanology (June 24-27)
- Short courses
 - Remote sensing in planetary geology (Division of Planetary science, February 15th)

International Networking

- IUGS
 - Renewal of MOU (publishing of *Episodes*)
- Geological Society of America
 - Planning for collaborative academic activities

- Geological Society of Mongolia
 - Signing MOU (during IGC2024)
 - Attending the 80th anniversary meeting of the National Geological Survey of Mongolia

Daekyo Cheong presented GSK's plans for 2025, including:

Conferences:

- The 6th KGU in Osong (July 7-8)
 - To participate as a member society of the Korea Geoscience Union
- GSK annual meeting in Jeju (October 28-31)
 - Scientific sessions and annual congress
 - Leadership election

Publishing Scientific Journals:

- New editor-in-chief (Dr. Chang, Chandong) of Geosciences Journal (March 10, 2025- March 9, 2028).

Field Trips and Short Courses:

- Short course in Planetary Science (February 12-13)
 - Geology of Mars
- 17th Field camp for Geology Students (summer)
 - Joint Field Camp for Geology Departments

New Award Program for early-career geologists

- Outstanding thesis award
 - Doctoral and master's theses of outstanding quality and achievement in all areas of geology
 - One PhD and two master's degree recipients

International Collaborations

- Joint scientific sessions in conferences
 - GSA 2025 (active tectonics, radioactive waste)
 - Joint sessions with geological societies (GSA, Mongolia, Taiwan, China, Uzbekistan, etc) at the GSK annual meeting in Jeju
- Field trip
 - GSK-Geological Society of Mongolia joint field trip in Mongolia during summer

Networking with the geoscience community in Taiwan, China

- Signing MOU with the Geological Society of Taiwan, China and the Museum of Natural Sciences in Taiwan, China (summer)
- 2025 Taiwan Geosciences Assembly (keynote speech, joint sessions and field trip)

Academic exchange for nurturing the next generation

- Geology students in Uzbekistan for resource geology

Building a solid foundation for long-term collaboration and academic exchange to advance geoscience

11.d. Slovenia

Marko Komac, IUGS Vice President, reported on behalf of Slovenian Geological Survey that several Slovenian geologists are members of IUGS scientific commissions and initiatives, including ICS, ICG, CGGB, CGI, and IFG. Slovenian researchers participated in 6 IGCP projects, and the Slovenian Pliocene to Holocene Records from Raciska Pecina Cave have been designated and included in the list of the Second 100 IUGS Geological Heritage Sites, which is the second designation from Slovenia. In 2024, Marko Komac, delegated by the Geological Society of Slovenia and supported by the Slovenian National IGGP Committee, was elected as Vice-President of IUGS at the 5th Ordinary Session of IUGS-IGC Council Meeting in August 2024 in Busan, South Korea.

Marko Komac reported that in 2025, Slovenia will continue the fruitful collaboration with IUGS scientific commissions and initiatives, submit a cross-border, Italian-Slovenian nomination for Karst limestone to be included in the list of IUGS Heritage Stones, and find a good solution for the substitution of the participation of Slovenian researchers in IGCP projects.

Marko Komac mentioned that in 2019, the Slovenian National Committee for UNESCO established the Slovenian National IGGP Committee as one of its constituent bodies. Since then, it supports financially the activities, coordinated by the IGGP NC, and through this, the participation of Slovenian geologists in IGCP projects. With the decision of IUGS and UNESCO to terminate IGCP projects and with the new, regionally focused projects, Slovenia is faced with the great challenge of how to continue and adapt its activities. Marko Komac also pointed out that activities as PanAfGeo only allow staff of geological surveys to collaborate, while other institutions are excluded. Therefore, the Slovenian National Committee asks IUGS EC to find or suggest ways for the continuation of the international collaboration of researchers within this new concept.

11.e. Spain

Santiago Martin Alfageme from Instituto Geológico y Minero de España (IGME) reported that in 2024, IGME organized the 11th National Geology Congress Organization on July 1st to 6th, 2024, in Avila and Geolodia on May 11th to 12th, 2024. Spanish geologists actively join in IUGS commissions and programs, including International Geoheritage Commission (IGC), Commission on Global Geochemical Baselines (CGGB) and International Geoscience and Geoparks Program (IGGP). In 2025, IGME will continue its participation in Geolodia 2025, boost better international relationships support. For the Geochemistry Committee, IGME will organize Session “Multi-scale Geochemical Mapping for Mineral Resource Management” and participate in the 4-day Workshop “Global to Regional and Local Scale Geochemical Mapping based on the methods described in the *International Union of Geological Sciences Manual of Standard Methods for Establishing the Global Geochemical Reference Network*”.

Santiago Martin Alfageme mentioned the challenges, including how to increase involvement of Spanish researchers in IUGS and how to increase support from IGME management staff to these researchers. Santiago Martin Alfageme also suggested enhanced performance of IUGS Secretary.

Santiago Martin Alfageme pointed out that there are challenges at the international level that are putting geosciences in the spotlight. The role of international associations is key to raising awareness at the political level in new scenarios, including mineral and energy resources, natural disasters, etc.

11.f. The UK

Simon Thompson, the Executive Secretary of Geological Society of London (GSL) and Natasha Stephen, GSL representative, jointly gave the report. Natasha Stephen introduced that in 2024, there were 1,035,743 downloads from the Lyell Collection and 80,958 online views of Geoscientist magazine 2024. GSL had huge social media influence with 11,052 new fans and followers and over 1 million visitors to the GSL's website in 2024, generating over 4.5 million page views. Over 300 events run in 2024, including conferences, workshops, and training sessions and over 700 geoscientists trained via GSL training courses throughout 2024. In 2025, GSL will still focus on its expertise in service and support to social development and planet research in geoscience perspective. GSL is going to launch an engagement campaign with the theme "This is Geoscience" among students from geoscience universities, and Natasha Stephen encouraged promotion of this activity by the meeting participants.

Simon Thompson presented several concerns to IUGS related to IUGS's relationship with DDE & GeoGPT and the governance of DDE and GeoGPT, including IUGS's reputational risk, legal & financial risk, the possibility of setting DDE independent from IUGS and reward to IUGS, and whether IUGS has the resources and capacity to govern these complex digital services and to deal with complaints and controversy.

11.g. The USA

Bradley Cramer, the representative of US National Committee for IUGS reported that the Committee is composed of more than 90 USA geologists participating in the IUGS scientific commissions, task groups, initiatives, and joint programs. Bradley Cramer mentioned that US has a strong connection with International Commission on GeoHeritage. The Advisory Committee of Geoheritage, which is currently housed by USNC is going to be moved to the Geological Society of America. Geological Society of America published a Series Book *Roadside Guide to Geology*, which was not published in recent past. What role that USNC should play in US geologists' participation in IUGS activities and the funding sources are being rethought currently. A bid for the host of the STRATI 2026 Congress was put by USNC, but China finally won the host of the Congress. Bradley Cramer introduced that with the effort of GSA Chronological

Division, a decision has been made that GSA time scale chart will be necessarily tied to the official timescale chart of International Commission on Stratigraphy (ICS) so as to ensure there is no discrepancies between the two charts. USNC also started the networking for Canada's bid for the host of the 38th International Geological Congress (IGC). Bradley Cramer also hoped that IUGS can clarify IUGS's role in DDE and GeoGPT.

11.h. Switzerland

Allison Daley, the President of Switzerland National Committee for IUGS and Director of Earth Science Institute of Switzerland, reported that the Committee provided support for the Swiss Geoscience community, including working closely with the Swiss Academy of Sciences, Platform Geosciences, and sponsoring a plenary talk at Swiss Geoscience Meeting (SGM) and supporting for GEODES workshop. In 2024, Switzerland sent delegates to the 38th IGC in Busan, South Korea, and Prof. Dr. Bettina Schaefli, the SGM speaker, gave the presentation "Alpine water resources in the Anthropocene". The Annual Meeting of the Committee was held in November 2024.

Allison Daley reported that for the year 2025, the Committee is going to deliver a plenary talk at Swiss Geoscience Meeting (SGM), to support GEODES workshop at the SGM, to develop a new travel grant programme for participants to EGU 2025 or IGCP meetings in 2025, and to update and elaborate the website.

Allison Daley pointed out that the Committee is faced with several challenges, including the visibility of the committee, involvement in the Swiss Roadmap for Geosciences, involvement in SCNAT Geosciences activities, and finding more financial sources besides the SCNAT. As the new President of the Switzerland National Committee for IUGS, Allison Daley is willing to be more involved in IUGS scientific activities and more linked to IUGS.

Discussion

HM summarized that IUGS welcome the adhering members' evaluation on the operation and achievements of IUGS ExCom and IUGS constituent groups. HM appreciate the presentations by the adhering members and congratulated on their achievements in 2024. DP mentioned that according to a Memorandum of Understanding (MOU) between IUGS and Geological Society of London (GSL), IUGS and GSL joint publish books for years and DP calls for more visibility of IUGS and its logo in all the IUGS-GSL publications.

John Ludden reviewed that a meeting with the subject "GeoGPT – Governance committee sponsored meeting on Large Language Models in Geoscience" was held on March 12th at Geological Society of London (GSL) and online. DDE and GeoGPT have signed an MOU, where separated governance structures of DDE and GeoGPT have been defined. All the discussions and presentations of the meeting are transparent

and available on GeoGPT website. GeoGPT will be launched in conjunction with EGU 2025.

Mike Stephenson pointed out that the objective of DDE is to provide open data in geosciences and a completely open platform where geoscience data and models are free and equally available to developed and under-developed countries. Mike Stephenson admitted that this is a challenge to the professional community, but the upside should not be neglected. He mentioned medical sciences, which suffered a lot from the unavailable medical sciences data since the Second World War.

Bradley Cramer commented that deep collaboration between DDE and other IUGS constituent groups are undergoing. The concern is about whether DDE is an IUGS activity and what the role of IUGS in DDE and GeoGPT will be like in the future. The biggest challenge that IUGS faces is whether the quality of the product is good or not, which is also some IUGS members are concerned about. The concept of open science should be defined as well. The above-mentioned issues should be discussed to a large extent, not just at the IUGS EC meeting closed sessions.

Alecos Demetriades pointed out that IUGS can promote open data sharing, but this should be controlled by national geological societies and national geosurveys. DDE should not control everything as a central body. Katherine Boggs commented that geoscience data should be completely accessible not only to geoscientists, but also to communities, specifically to classrooms.

Mike Stephenson responded to the commenters above that DDE is not possessed of data or establishing its own database, but is trying to link data together and realize communication among databases. With the aim of establishing a foundation for international geosciences cooperation, DDE will not create and control a single database. A network should be established to realize easier access to materials of different sizes, qualities and internal makeup. Currently, some databases are internally well-organized but are not linked to each other or difficult to use. GeoGPT will make every effort to formulate regulations to protect the rights of geodata owners and users. DDE is willing to solve geological problems in an international way, which is against strong geopolitics.

Qiuming Cheng expressed that as a legacy of IUGS EC from 2016 to 2020 with his presidency, DDE is a data-driven earth science program enlightened by interdisciplinary trends of that time. There was no large language model at that time, but he realized that with scientific commissions and programs of diverse disciplines, IUGS can have a trans-disciplinary program fostering international collaboration, so as to provide open and transparent data service to its members. DDE should involve international organizations, including UNESCO, GeoUnions, etc. The under-represented regions should be supported. The aim of DDE is to harmonize evolutionary

data so as to promote trans-disciplinary geoscience research. DDE will link users to the long-tail data scattered in literature.

Yamirka Rojas-Agramonte commented that legal and ethical concerns should be clearly addressed. Bradley Cramer pointed out that, as Qiuming Cheng mentioned, part of the practice is going through the literature and taking all the 4D data into the database, with which people are still having trouble in understanding what is being developed and what constitutes the program. Santiago Alfageme commented that a global database is an illusion and the more practical way is to share expertise in IT techniques in geosciences.

Hassina Mouri summarized that the controversy on DDE focuses on the clarity of objectives, the transparency, and all the confusing parts of the program. Another question is about whether IUGS should be an umbrella under which the program will be operated.

12. Reports from IUGS Affiliated Organizations

12.a. Commission for the Geological Map of the World (CGMW)

Manuel Pubellier, the Honorary President of Commission for the Geological Map of the World (CGMW), presented CGMW's achievements in 2024 as follows:

- Printing of Tectonic Map of the Antarctic at 1:10 M (2nd edition)
- Printing of Tectonic of the Antarctic Explanatory notes to "Tectonic Map of the Antarctic."
- The World Map of Orogens at 1:35 M (IGCP 667 project): compilation completion for North America, Europe, and Africa
- The World 5M Geological Map (CGMW/DDE joint project) is already available on the DDE platform.
- Structural Map of the World's Ocean – 1:5 000 000 (included as a layer in the World 5M geological map).
- Structural Map of the Caribbean – GIS edition: Newly published and now available in our catalog. This GIS product is a valuable resource for researchers and practitioners alike.

For 2025, Manuel Pubellier reported that the Geoscientific Map of Africa is in press and the International Tectonic Map of East and South East Asia is almost completed (Chinese Academy of Geological Sciences is doing the final collection). CGMW is launching the Structural Map of Himalayas, which includes Pakistan, India, part of China and Myanmar, the Atlantic margins & shelves and the Geological & Structural Map of Hispaniola. CGMW is going to publish *Central Africa Geohazards* with UNESCO and *Tectonics of the Antarctic*.

For the challenges faced and expectations from IUGS, Manuel Pubellier reported that CGMW is facing challenges in terms of the Project MAPRIDGES (SC Ocean Maps), the Project World 5.2 Refine W5 & add layers (jointly project with DDE), and the compilation of the Roadmap to 1:1M Geological Map of the World. To cope with the above challenges, Manuel Pubellier pointed out that CGMW is looking forward to more professional support from IUGS and other international organizations.

12.b. European Federation of Geologists (EFG)

Anita Stein, the Interim Executive Director of European Federation of Geologists (EFG) introduced that EFG is a not-for-profit organization founded in 1980 with headquarters in Brussels. It represents 45,000 geoscientists from across Europe and a global network of 150,000 professionals. It has members who are national professional associations. Its mission is to promote excellence in the application of geoscience across Europe, represent the professional European associations of geoscientists, and create public awareness of geoscience's importance to society.

Anita Stein reviewed that in 2024, EFG contributed Policy Manifesto presented at European Parliament, launched CRM Expert Database, organized a campaign featuring importance of diversity, equity and inclusion in geosciences, advocated indispensable role of geology at COP29 in Azerbaijan, fostered relationships with other geosciences organizations, participated in innovation EU-funded projects and joined in EFG Academy courses offering Continuing Professional Development (CPD).

Anita Stein reported that for 2025, EFG will hold the 5th International Professional Geology Conference (IPGC) on November 5-7, 2025, in Zaragoza, Spain. The registrations are open, abstract submissions are open until 31 March, and some exhibition and sponsorship options still available. Anita Stein pointed out that EFG is still facing difficulties to collect reliable data on geology students and professionals across Europe to better support any publications around the expected skills gap for geology expertise and the need for geology education at all levels. Anita Stein called for collaboration on a Skills Manifesto to be launched at the IPGC. Anita Stein presented a budget request of 5,000 Euros (2,500 Euros per person) for 2 young professional geologists from disadvantaged countries to join the 5th IPGC in November 2025.

12.c. European Geological Surveys (EGS)

Julie Hollis, the Secretary General of European Geological Surveys (EGS) introduced that EGS represents geological survey organizations in Europe and has 37 member organizations and 11 professional groups and 2 task forces focusing on geoenergy, geohazards, geoheritage, geochemistry, modeling, geophysics, marine geology, urban geology, etc. The mission of EGS is to enable sustainable and responsible use of the Earth's subsurface environment and resources and its vision is to create the Geological

Service for Europe as the scientific reference partners of the EU, delivering knowledge of the Earth's subsurface environment and resources as the foundation of a sustainable future for Europe.

Julie Hollis introduced that EGS organizations were recognized in the Critical Raw Materials Act. EGS provided geological data recognized in the Net Zero Industry Act, contributed to the National Exploration Programmes and the guidance document to Member States recommending a mandate to NGSOs. EGS launched EGS SRIA 2025, which is a geoscientific and digital foundational framework focusing on strategic geosciences and integrating subsurface management and stakeholder engagement.

Julie Hollis mentioned that for 2025, EGS has signed the first contract with the European Commission for PanAfGeo+, which is a continental-scale training program for African geoscientists in collaboration with UNESCO and African UNESCO global geoparks.

12.d. Geological Society of Africa (GSAf)

Olugbenga Okunlola, the President of Geological Society of Africa (GSAf) gave a video presentation. Olugbenga Okunlola introduced that the main objectives of GSAf is to promote the understanding of earth sciences in the African continent, promote the training and development of African earth scientist, provide a forum for discussion dissemination and publication of information and promote cooperation among scientists and associations engaged in African geology across national boundaries, and engage stakeholders significant to the growth of Mining, Energy, Water Geoheritage, Education and all natural resources sector of the African continent. By December 2024, GSAf has 1800 members from 84 countries.

Olugbenga Okunlola reported GSAf's achievements in 2024, including:

- Active participation at the IUGS Council Meeting and the IGC in Busan, South Korea in August, 2024
- Organization of Quarterly webinars featuring presentations on geothermal energy, African pegmatites, forensic geology respectively in March, August and December, 2024
- Board Membership activities of the Eurogeosurveys/OAGS PanAfGeo programs for training of geoscientist of the geological surveys of African. Participation in the review meeting of PanAfGeo2 and planning of PanAfGeo+ livingstone, Zambia in October 2024
- Collaboration and with the Society of Geology Applied to Mineral deposits SGA and Resourcing the Short Course on West African Metallogeny and Economic Potentials in Dakar in Senegal in November, 2024
- Collaboration with the African Union Commission African Mineral Development Center AMDC in the production of Pan African Resource Code document and the

training modules for the Pan African Resource code - Executing, Coordinating and Resourcing, the Workshops respectively in Jos, Nigeria in March 2024, in Dakar, Senegal in November 3-5 and in Uganda in March 2024

- Participation and assistance in sourcing for African resource experts – Joined in the discussion for the IUGS Africa Initiative and the Ten Actions for Africa (TAP) as part of the IUGS EC meeting in Nairobi, Kenya, in February 2024
- Collaboration and participation in the programs of the global geoscience professionalism group GGPG
- Webinar collaboration, mobilization, and resourcing with IUGS COGE in August, 2024
- Collaboration on information dissemination of activities of GSA and GSF to African Geoscientists
- Publication with Springer, of the Journal of African and Earth Sciences
- Participation and Joint promotion of the Geology of Africa Conference with the Geological Society of Egypt in September 2024
- Participation, promotion, and part sponsorship of the Nigerian Mining and Geosciences Society 60th Annual International Conference
- Continuous and active planning for the colloquium of African Geology in Kenya, September 2025

For 2025, Olugbenga Okunlola reported that GSAf is planning to push forward the following tasks, including:

- Organization of the 30th Colloquium of African Geology in September 2025
- Continuous collaboration with the Eurogeosurveys/OAGS on the PANAFGEP PLUS initiative
- Continue the participation, execution, and leadership of the AUC/AMDC, AMREC/PARC program for competency and standards reporting of mineral and energy resources in Africa
- Chairing and leading the tasks of the Assessment Committee of the AMREC/PARC
- Continuous collaboration with IUGSCOGE, IUGS Task Group on Geoheritage and Geosites, GSA, AGI, GSA, GSF, GGPG, and UNESCO
- Intensity information dissemination through our newsletter and publication of the journal of African and Earth Sciences
- Organization of our quarterly webinars
- GSAf's budget request for 2025 is 64,000 USD

12.e. Geological Society of India (GSI)

Hema Achyuthan, the Foreign Secretary of Geological Society of India (GSI) introduced that GSI was founded in 1959 and currently has more than 2500 fellows. The aim and objective of GSI is to bring geologists and practicing earth scientists of India together and discuss various issues in earth sciences, mitigating natural hazards, mineral

resources etc, and publish journal. GSI became an affiliated organization of IUGS in 2000.

Hema Achyuthan pointed out that on affiliation with IUGS, Indian students and early career researchers have been able to present their work in international meetings and conferences, such as the grants from IUGS for participation in the 37th IGC in Busan. GSI is running the geoheritage and geosites program funded by MOES and organized monthly virtual lectures delivered by eminent foreign scientists. Hema Achyuthan introduced that three regional centers have been started respectively at IIT Kharagpur, New Delhi, and Pune. These centers conduct regional meetings, workshops, and lectures for students and GSI members. The Society is actively involved in the conduct of IESO. At the end of her presentation, Hema Achyuthan mentioned that GSI would like to host the next IUGS EC meeting in Chennai or Gangalore, India.

12.f. International Association for Structural Geology & Tectonics (IASGT)

Manish Mamtani, the President of International Association for Structural Geology & Tectonics (IASGT) introduced that IASGT evolves from IUGS Commission on Tectonics & Structural Geology (TecTask). TecTask transitioned itself to IASGT in 2022 and got affiliated to IUGS in 2023 as one of the youngest affiliated organizations of IUGS. IASGT's headquarter is presently at IIT Kharagpur, India. IASGT represents 17 countries and has 1000 members from 56 countries.

Manish Mamtani reported that in 2024, IASGT established its own website, organized the IASGT Workshop in February, 2024 in IIT Kharagpur, India with a foreword written by IUGS Former President John Ludden, 17 lectures by geoscientists from Germany, Italy, Spain, Australia, Czech Republic, Switzerland, Brazil, UK and USA, 200 participants from India, Spain and Bangladesh (40% females). IASGT representatives gave two lectures in University of Turin, Italy in December 2024.

Manish Mamtani presented the work plans for 2025, including to promote structural geology and tectonics amongst under-represented groups, starting with women and African groups and to promote applied structural geology for sustainable living, starting with radioactive waste disposal and geothermal energy.

12.g. American Geosciences Institute (AGI)

Jonathan Arthur, the President of American Geosciences Institute (AGI) reported that in 2024, AGI redesigned its website featured with data, product, and information discoverability, smartphone friendliness, as well as improved maintenance, updates and security. Working together with Geologize LTD, AGI served the Practical GeoCommunications, which is an online educational platform accessible to all AGI member societies. AGI completed and published an Economic Analysis of Geological Mapping in the US, which is funded by US geological survey and primarily written by

members of the Association of American State Geologists and AGI staff. AGI continued the Geoscience for Sustainability Initiative, which built a framework of actions, tools and programs that will empower geoscientists and their organizations to support the SDGs with many K-12 products are developed. AGI provided critical needs documents, which is involved in the new national administration and help the congress understand the ways the geosciences can support the nation's needs. These documents refer to scopes including economy, infrastructure, innovation, national security, public safety and natural hazards and diplomacy. AGI continued the Geoscience Caucus Discussion and the GRANDE program funded by US National Science Foundation. AGI organized Global Outreach activity – Earth Science Week with topic “Earth Science Everywhere” in 2024 and in 2025, Earth Science Week will be with the topic “Energy Resources for our Future”.

Jonathan Arthur pointed out the risks underlying the relationship between IUGS and DDE in terms of information security, transparency of data and information exchange.

12.h. Earth Science Matters Foundation (ESM)

Courtney Jermyn, the Executive Director of Earth Science Matters Foundation (ESM) introduced that ESM was founded in the legacy of International Year of Planet Earth (IYPE). ESM inspires young people and general public, creates awareness of geosciences by holding open door events in high schools and universities. ESM holds innovative contests for international participants of all ages and backgrounds, the Transformatathon – The Journey Begins in the collaboration with UNESCO IGCP.

Courtney Jermyn reported that in 2024, ESM gave high school presentations (e.g. Mock UN), elementary school presentation on climate change and was invited to a grand opening of a science lab. ESM presented at the 37th IGC and continued to build and strengthen relationships with IUGS members and other organizations. At the 37th IGC, ESM did snapshot interviews and compilation videos with the topics such as Geoscience careers, Advancement in geosciences, Key take aways and Tips and Advice at the 37th IGC.

Courtney Jermyn presented the challenges that ESM is facing, including reducing capacity with increasing opportunities in 2025, still recovering from a strong hit during COVID, dominating in-house work and boosting social media engagement. To cope with the above-mentioned challenges, ESM are going to take actions, including filling board positions, seeking long-term funding opportunities, accessing to advance technology to enhance media deliverables, collaborating on other outreach activities within the Netherlands and beyond and keeping informed and think outside box.

Courtney Jermyn reported that in 2025, ESM will strengthen relationships and partnerships, scale up activities and join projects, focus on activities that address the

decline in enrollment and create awareness of geosciences role for society and ethical responsibility in the energy transition and other global sustainable challenges.

12.i. International Research Center on Karst (IRCK)

Qukan Luo, the Deputy Secretary General of International Research Center on Karst (IRCK) introduced that IRCK became an affiliated organization to IUGS in 2020. IRCK's major aim is to advance karst science through scientific research, publications and international cooperation and influential outputs, so as to maintain sustainable development of karst areas all over the world.

Qukan Luo reported that in 2024, IRCK has primarily established a Global Typical Karst Observation Network (GEO Pilot Initiative) containing 32 observatories under the cooperation among 11 countries. IRCK organized a seminar on "Karst Geology and Sustainable Development" at the 37th IGC in Busan, South Korea, which attracted more than 30 representatives from 8 countries and included topics on karst ecology, karst geomorphology, karst carbon cycle, karst water cycle and karst engineering geology. IRCK recommended Mammoth Cave in USA and Guilin Karst in China, which have been included into the Second IUGS 100 Geoheritage Sites. IRCK organized the 16th International Training Course on Karst and Global Climate Change with 55 participants from 22 countries and during the training course, *An Initiative Concerning Global Karst Science and Technology Innovative Cooperation* was jointly stated among scientists from Croatia, Indonesia, Serbia, Slovenia, Slovakia, Turkey and China. In terms of scientific popularization, IRCK participated in the 2024 Sustainability Tour fully granted by European Union. IRCK has cooperative relations with International Association of Hydrogeologists, International Geological Congress, and Global Earth Observation Pilot Initiative-Earth Observations for Global Typical Karst, International Organization for Standardization, UNESCO and International Karst Water Resources Research and Application Center.

For the work plan for 2025, Qukan Luo mentioned that IRCK will apply for one international programme on karst water utilization and sustainable development, add two more monitoring stations to the Global Typical Karst Observation Network with the data sharing platform been released. IRCK is going to hold the 3rd Governing Board and Academic Committee Meeting of IRCK and the International Training Course on Karst and Water, publish *Karst and Its Development of Tethys* and *Karst Geomorphological Types and Landscape in China*. IRCK will continue science popularization activities such as theme-day activities and short-videos competition. IRCK asked 3,000 USD allocated from IUGS for the year of 2025. IRCK's mid-term plan for 2024-2026 is to set up more monitoring stations in African and South America and to publish *Adventure of Karst World (I): Southeast Asia*.

12.j. Society for Environmental Geochemistry and Health (SEGH)

Alecos Demetriade presented the Society for Environmental Geochemistry and Health (SEGH). Established in 1971, SEGH focuses on the interaction between geochemistry and health in plants, animals and humans. Its mission is to promote interdisciplinary research and collaboration environmental geochemistry and health. It has an international structure with regional chairs for Africa, Europe, the Americas and Asia-Pacific. SEGH organizes annual conferences, regional networking and early-career mentoring, and has a publication of a Springer Nature journal.

In 2024, SEGH hosted multiple events fostering collaboration, increased visibility through its Springer Nature journal and strengthened mentorship programs and opportunities. SEGH strengthened mentorship programs and opportunities and worked with international organizations on pressing environmental health issues. SEGH strengthened ties with the International Medical Geology Association (IMGA) through joint conferences and initiatives and Reinforced collaboration with the IUGS Commission on Global Geochemical Baselines (CGGB). 53 early career researchers from African continent got IUGS funds to join in SEGH 2024 and with IUGS support, Alecos Demetriades delivered three Fellow's Talks discussing geochemical baselines projects.

For 2025, SEGH plans to expand its regional activities by strengthening SEGH's presence globally, to enhance research and publications by increasing the impact factor and outreach of its journal, to seek new grants and partnerships to support initiatives and to continue joint efforts with IMGA and CGGB to advance research and policy impact in geochemistry and health. Alecos Demetriade reported that SEGH still facing challenges in terms of sustaining growth, financial stability, visibility and influence and support for collaborations.

12.k. International Association on the Genesis of Ore Deposits (IAGOD)

Wei Jian, the Executive Secretary of International Association on the Genesis of Ore Deposits (IAGOD) presented IAGOD's achievements in 2024, including:

- Attended the 2024 IUGS EC meeting in Nairobi, Kenya in February 2024
- Supported the 10th International Geoscience Conference of Young Researchers, online in May 2024
- Organized two sessions in the 37th IGC, Busan, South Korea in August 2024
- Attended the 17th National Mineral Deposits Conference of China, Guiyang, China in September 2024
- Attended the SEG 2024 Conference, Windhoek, Namibia in September 2024
- Delivered short course in Tashkent, Uzbekistan in August 2024
- Delivered short course in Oskemen, Kazakhstan in December 2024

Wei Jian reported expectations and plans for 2025 as follows:

- Prepare for the 16th Quadrennial IAGOD Symposium, Porto Portugal in August 2026
- Sponsor/attend the VMSG-MDSG 2025 conference, Dublin, Ireland in January 2025
- Sponsor/attend the SEG 2025 conference, Brisbane, Australia in September 2025
- Sponsor/attend the 18th SGA Biennial Meeting, Golden, USA in August 2025
- Sponsor/attend the GAC-MAC meeting in Ottawa, Canada in May 2025
- Support the organization of the next IGC in Calgary, Canada in 2028
- Deliver guest lectures to university or research organizations by IAGOD Honorary Travelling Lecturer Prof. Huayong Chen
- Deliver IUGS-sponsored short course to young scientists in Africa or Asia

Wei Jian presented that IAGOD is facing challenges in terms of the role that Africa plays in the global supply of minerals and metals for the green energy transition and how to encourage the geoscience community to engage in improving the performance of the mining sector across Africa. For 2025, IAGOD requests a budget of 3,000 USD from IUGS, which will be used for short course training for young scientists in Africa or Asia.

12.I. International Geoscience Education Organisation (IGEO)

Nir Orion, the Chair of International Geoscience Education Organization (IGEO) gave the report. Nir Orion pointed out that the status and the profile of Earth Science education in schools worldwide is still very low, which influences the public image of Earth science and quantity and quality of university students. Nir Orion pointed out that climate change is not a climate crisis, but an educational crisis and Earth Science education is facing two-way challenge.

Nir Orion reported that, in 2024, IGEO finished its Multi-year Master Plan, organized the GLESE in Greece with 10 participants from Africa, USA, Asia and Europe and held workshops in China, South Korea, Portugal and India. IGEO held International Earth Science Olympiad in Beijing, China and launched the Geoscience Youth Movement (GYM). IGEO also joined in the IUGS Young Reporter Initiative and collaborated with DDE.

For 2025, Nir Orion mentioned that IGEO will expand GLESE, its regional workshops, IESO in Ji'ning, China, GYM and collaboration with IUGS Young Reporters Initiative, DDE and Commission on Geoethics. IGEO will publish IESE Journals and organize workshop for young researchers. For 2025, IESO requests total budget of 19,800 USD for IESO 2025, GLESE Program, GYM members summer camp and IESE Journal. Nir Orion pointed out that IGEO expects IUGS to provide the scientific umbrella and help with the resources for IGEO's activities.

In terms of *IUGS Statement of COGE-IGEO*, Nir Orion reviewed that a Review group evaluation of roles of COGE and IGEO and strategy approve by IUGS EC on March 21st, 2024. According to the evaluation, COGE should have a strategic role in ESE within IUGS; IUGS would expect COGE to develop, in collaboration with IGEO and other appropriate bodies, strategic documents on ESE for IUGS EC's approval; IGEO is to be the operational arm of ESE activities for IUGS and as such it should be the main education outlet for IUGS to students.

12.m. International Paleontological Association (IPA)

Roger Thomas, the Interim-President of International Paleontological Association (IPA) reported that IPA has individual members and corporate members, which are national or regional organizations. IPA access a global coordinate activities focusing on research, education and the spread of knowledge of paleontology. IPA's scope embraces all aspects of paleontology, as well as practical, geological, environmental and climatic applications of paleontological data.

Roger Thomas introduced that at the 6th International Paleontological Congress in 2022, IPA didn't elect a new slate of officers partly due to the COVID-19 Pandemic. The new slate will be concluded at the 7th International Paleontological Congress in 2026. This is the first IPA congress in Africa. IPA will use this Congress as a springboard to establish new contacts in Africa for their engagement with IPA, focusing on professional and educational curriculum development.

In 2023, Roger Thomas became the successor of Sylvie Crasquin, who resigned from the President position due to health concern. Over the past 18 months, IPA reengaged and expanded IPA's corporate memberships and redefined individual membership, renovated IPA website, worked on an effective mechanism for payment annual dues. Over the past 2 years, officers of IPA have been actively engaged in reviewing sites inclusion in the Second 100 IUGS Geological Heritage Sites and IPA is now recruiting geoheritage proposals and in anticipation of the involvement in selection of the Third Book. IPA is also planning its own heritage conservation program.

Roger Thomas introduced that in the past, all the subscribers to *Lethaia*, a scholar journal published by Scandinavian University Press and formally affiliated with IPA, were designated as individual members of IPA. Under this arrangement, the *Lethaia* foundation made modest annual payment to IPA based on numbers of subscribers to the journal. This Journal is now a fully open online publication, which benefits scholars working in nations where financial support for research and publication are limited. In light of the changes of *Lethaia*, IPA needs to seek other sources of revenue and return the favor of former years by seeking to channel financial support to the shoe string budget.

Roger Thomas pointed out that paleontology needs to punch above its weight in global science. IPA seeks financial support from IUGS to enhance its ability to do so. Paleontology is both a Gateway Science and an Essential Science. For 2025, IPA requests budget of 25,800 USD from IUGS.

12.n. International Medical Geology Association (IMGA)

Chaosheng Zhang, the Chair of International Medical Geology Association (IMGA) gave IMGA Annual Report 2024. Chaosheng Zhang introduced that Medical Geology is defined as the science dealing with the relationship between geological factors and health problems in humans, animals and plants. IMGA was founded in 2006.

Chaosheng Zhang reported that in 2024, IMGA contributed a paper on Medical Geology in Journal Applied Geochemistry and organized a Special Session: Medical Geology in Honor of Prof. Olle Selinus at the 37th International Geological Congress in August 2024. At the Joint Conference of ISEH, ICEPH and ISEG in August, 2024, IMGA organized a Special Session for Olle Selinus. Working with SEGH, IMGA organized the 3rd International Students Conference on Medical Geology and Environmental Health (virtual). In addition to Chapters (country/region based), November 22, 2024, 3 new IMGA Working Groups respectively on Early, Career Researchers Network, GeoHealth and Asia-Pacific Youth Scholars are approved. IMGA published the Proceedings of MED-GEO and Medical Geology of Africa. In 2024, IMGA held online seminars including Olle Selinus and Origin of Medical Geology and Asbestos: The Silent Killer.

For 2025, Chaosheng Zhang reported that IMGA is going to redesign its website, participate in the IUGS “Status of Geoscience Information in Africa” workshop in February, 2025 in Queen’s University in Belfast, UK. IMGA WG GeoHealthy 1st activity will be held in Beijing in March, 14, 2025. MEDGEO 2025 will be held in Aveiro on July 27th to August 1st, 2025. IMGA will reactivate Chapters Developing Working Groups Webinars and GeoHealth Special issues. In 2026, IMGA will elect its new governing bodies.

Chaosheng Zhang mentioned that IMGA is facing challenges in terms of membership, new generation of IMGA members, the connection between chapters, security concerns for hosting international conferences in certain countries, website security finance issues underlying MEDGEO conferences. For 2025, IMGA requested a total budget of 3,000 Euros from IUGS.

12.o. Nigerian Mining and Geosciences Society (NMGS)

Akinade Olatunji, the Chair of the Nigerian Mining and Geosciences Society (NMGS) reported that NMGS got official recognition of affiliation with IUGS in 2024. In 2024, NMGS participated in the IUGS Geoscience in Africa Event in February, 2024 in Nairobi, Kenya. NMGS held her 59th Annual International Conference and Exhibition in March

2024 at the Northcentral Nigerian city. At the NMGS Conference, a post conference workshop on DDE was held for members, and more than 350 participants attended the workshop. NMGS co-hosted the 39th International Conference of the Environmental Geochemistry and Health in Abuja with SEGH and IMGA-Nigeria, with support from IUGS, with participants from UK, China, Kenya, Cameroon, Greece and Nigeria.

Akinade Olatunji reported that for 2025, NMGS is going to host the 60th Annual International Conference and Exhibition from February 16-21, 2025 at the city of Abuja. NMGS will be invited to join in the event of the installation of the 33rd President of NMGS. NMGS Biannual Conference for Students in Tertiary Institutions will be held in July 2025 at the Kwara State University, Malete, and more than 1000 student participants are expected to join in the Conference. NMGS will actively participate in the Colloquium of African Geology in Nairobi, Kenya.

Akinade Olatunji presented challenges that NMGS is facing, including the continuous relevance of geosciences to national development and the massive sensitization and engagement of government at all levels by the NMGS. NMGS expects IUGS to strengthen the relationships with UNESCO and other relevant UN and Global Governance agencies to continuously put the geoscience right at the forefront of development. NMGS requested 11,000 USD from IUGS for the year of 2025.

12.p. Society for Geology Applied to Mineral Deposits (SGA)

Beate Orberger, the representative of Society for Geology Applied to Mineral Deposits (SGA) introduced that SGA was founded in 1965 with its headquarter in Geneva, Switzerland. It has 1,140 different kinds of members. Beate Orberger expressed her gratitude to IUGS for the funding support of 3,000 USD each year from IUGS, which has been used for the African Metallogeny Short Courses co-sponsored by IUGS, SGA, SEG, UNESCO and local organizers. SGA organizes lectures, panel discussions, workshops, excursions and social program with topics related to country and region specific mineral wealthy issues & perspectives and with early career geoscientists and engineers from academia, industries, government, organizations as the audience.

Beate Orberger reported that in 2025, SGA is going to hold the 10th SGA-IUGS-SEG-UNESCO Short Course on Missipian Valley Type Deposits (MVT): The role of the extractive industries in the economic development of Northern Africa. SGA requests 3,000 USD from IUGS for the Short Course.

Discussion

Maria Rose Petrizzo (MRP) asked whether IPA is considering doubling membership fee and Roger Thomas responded that IPA has already doubled the membership fee since last year. MRP suggested more visibility of IPA in international conferences and Roger

Thomas responded that this is what IPA is carrying out and the International Paleontological Congress has increased the visibility of IPA.

Alecos Demetriades pointed out that some professional organizations and societies are facing the challenge of decreasing membership, and he raised the question “Whether those organizations should still be alive, or should some of them merge?” Alecos Demetriades suggested IUGS push forward the negotiation on the merging of some organizations, which have similar objectives and missions.

13. Closing of the Open Session

HM expressed her appreciation to the reporters and meeting participants both online and offline and congratulated them on the achievements of IUGS constituent groups and affiliated organizations. HM also mentioned that IUGS will try its best to address all the challenges and concerns mentioned at the meeting. HM mentioned the overlaps among some IUGS constituent groups and affiliated organizations and IUGS would like to encourage the merging of some of them. HM closed the open session of the 81st IUGS EC meeting.

List of Participants
81th IUGS Executive Committee Meeting
Paris, France
March 17-20, 2025

Representatives from IUGS Constituent Groups, Adhering Organizations and Affiliated Organizations						
NO.	GROUP	POSITION	F_NAME	G_NAME	AFFILIATION	COUNTRY/ REGION
1	Executive Committee Members	President	Mouri	Hassina	University of Johannesburg	South Africa
2		Secretary General	Stroink	Ludwig	GFZ Helmholtz Centre for Geosciences	Germany
3		Treasurer	Cohen	David	University of New South Wales	Australia
4		Past President	Ludden	John	GEORG Iceland	France
5		Vice President	Petrizzo	Maria Rose	University of Milan	Italy
6		Vice President	Komac	Marko	Geological Society of Slovenia	Slovenia
7		Councilor (2022-2026)	Pereira	Lola	University of Salamanca	Spain
8		Councilor (2022-2026)	Rojas-Agramonte	Yamirka	Heidelberg University	Germany
9		Councilor (2024-2028)	Zhao	Weijun	China Geological Survey	China
10		Councilor (2024-2028)	Farjandi	Farnoosh	Iran Geological Survey	Iran
11	Constituent Groups	Chair	Cheng	Qiuming	IUGS Nominating Committee	China
12		Editor-in-chief	Lee	Sung Keun	Episodes	Korea
13		Editor (until December 2024)	Kaur	Gurmeet	IUGS e-Bulletin	India
14		President	Peppoloni	Silvia	Commission on Geoethics (CG)	Italy
15		Secretary General	Di Capua	Giuseppe	Commission on Geoethics (CG) /International Association for Promoting Geoethics (IAPG)/IUGS Webmaster (until December 2024)	Italy
16		Chair	Demetriades	Alecos	Commission on Global Geochemical Baselines (CGGB)	Greece
17		Deputy Chair	Batista	Maria Joao	Commission on Global Geochemical Baselines (CGGB)	Portugal
18		Advisory Panel Member	Ladenberger	Anna	Commission on Global Geochemical Baselines (CGGB)	Sweden
19		Advisory Panel Member	Prieto	Gloria	Commission on Global Geochemical Baselines (CGGB)	Colombia
20		Chair	Thorleifson	L. Harvey	Commission on the Management & Application of Geoscience Information (CGI)	USA
21		Chair	Villacorta Chambi	Sandra Paula	Commission on Geoscience Education (COGE)	Australia
22		Vice-Chair	Occhinpinti	Susanna	Commission on Geoscience Education (COGE)	Italy

23		Chair	Hilario	Asier	International Commission on Geohieratge (ICG)	Spain
24		Chair	Erba	Elisabetta	International Commission on Stratigraphy (ICS)	Italy
25		President	Vaccari	Ezio	International Commission on History of Geological Sciences (INHIGEO)	Italy
26		Secretary General	Kölbl-Ebert	Martina	International Commission on History of Geological Sciences (INHIGEO)	Germany
27		Chairperson	Hitzman	Murray	IGCP Council	Ireland
28		UNESCO Representative	Adiyaman Lopes	Özlem	International Geoscience Programme (IGCP)	France
29		UNESCO Representative	Lee	Eunhee	International Geoscience Programme (IGCP)	France
30		President	Thybo	Hans	International Lithosphere Program (ILP)	Turkey
31		Chair	Kawamura	Kiichiro	Task Group on Submarine Geohazards (TGSG)	Japan
32		Vice Chair	Sassa	Shinji	Task Group on Submarine Geohazards (TGSG)	Japan
33		Secretary General	Okubo	Yasukuni	Task Group on Submarine Geohazards (TGSG)	Japan
34		Chair	Lustrino	Michele	Task Group on Igneous Rocks (TGIR)	Italy
35		Chair	Laurance	Donnelly	Initiative on Forensic Geology (IFG)	UK
36		Representative	Ishwaran	Natarajan	Deep-time Digital Earth (DDE)	France
37		Executive Committee Counsellor	Fedonkin	Mikhail	Deep-time Digital Earth (DDE)	Russia
38	Adhering Organizations	President	Mattielli	Nadine	National Committee of Geological Sciences from Belgium (NCGS)	Belgium
39		Chair	Boggs	Katherine	Canadian National Committee for IUGS	Canada
40		Representative	Hua	Lijuan	Geological Society of China (GSC)	China
41		Representative	Xu	Yaqi	Geological Society of China (GSC)	China
42		Director	Jawo	Alieu	Geological Department, The Gambia	Gambia
43		Representative	Abdoulie M.	Cham	Geological Department, The Gambia	Gambia
44		Representative	Lazauskienė	Jurga	Lithuanian Geological Survey	Lithuania
45		Representative	Radiene	Rasa	Lithuanian Geological Survey	Lithuania
46		Ex-President	Cheong	Daekyo	Geological Society of Korea (GSK)	ROK
47		Representative	Young-Seog	Kim	Geological Society of Korea (GSK)	ROK
48		Representative	Novak	Matevž	Geological Survey of Slovenia	Slovenia
49		Representative	Martin Alfageme	Santiago	Instituto Geológico y Minero de España (IGME)	Spain
50		President	Daley	Allison	Switzerland National Committee for IUGS	Switzerland
51		Executive Secretary	Thompson	Simon	The Geological Society of London (GSL)	UK
52		Representative	Stephen	Natasha	The Geological Society of London (GSL)	UK

53		Chair	Cramer	Bradley	US National Committee for IUGS	USA
54	Affiliated Organizations	Executive Director	Arthur	Jonathan	American Geosciences Institute (AGI)	USA
55		President	Pubellier	Manuel	Commission for the Geological Map of the World (CGMW)	France
56		Representative	Stein	Anita	European Federation of Geologists (EFG)	Belgium
57		Secretary General	Hollis	Julie	European Geological Surveys (EGS)	Belgium
58		Executive Director	Jermyn	Courtney	Earth Science Matters Foundation (ESM)	Netherlands
59		President	Okunlola	Olugbenga Akindeji	Geological Society of Africa (GSAf)	Nigeria
60		Foreign Secretary	Achyuthan	Hema	Geological Society of India (GSI)	India
61		Executive Secretary	Jian	Wei	International Association on the Genesis of Ore Deposits (IAGOD)	China
62		President	Mamtani	Manish	International Association for Structural Geology & Tectonics (IASGT)	India
63		Chair	Orion	Nir	International Geoscience Education Organisation (IGEO)	Israel
64		Deputy Secretary General	Luo	Qukan	International Research Center on Karst (IRCK)	China
65		Interim-President	Thomas	Roger D. K.	International Palaeontological Association (IPA)	USA
66		Chair	Zhang	Chaosheng	International Medical Geology Association (IMGA)	Ireland
67		President	Olatunji	Akinade Shadrach	Nigerian Mining and Geosciences Society (NMGS)	Nigeria
68		Vice President	Ndong	Rose	Nigerian Mining and Geosciences Society (NMGS)	Nigeria
69		President	Argyaki	Ariadne	Society for Environmental Geochemistry and Health (SEGH)	Greece
70		Representative	Orberger	Beate	Society for Geology Applied to Mineral Deposits (SGA)	France
71	IUGS Secretariat	Director	Ma	Yongzheng	China Geological Survey	China
72		Secretary	Gu	Yanfei	Chinese Academy of Geological Sciences	
73		Secretary	Yuan	Peng	Chinese Academy of Geological Sciences	