



**INTERNATIONAL UNION OF
GEOLOGICAL SCIENCES**

2025 REPORT

Fostering a global voice for the geosciences

In association with ISC and UNESCO

**IUGS Secretariat
Chinese Academy of Geological Sciences
No.26, Baiwanzhuang Road
Xicheng District
Beijing 100037
CHINA
Tel: +86-10-68310893
Fax: +86-10-68310893
Email: secretariat@iugs.org**



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WHAT IS IUGS?

The International Union of Geological Sciences (IUGS) is a non-political, non-governmental, non-profit organization. Founded in 1961, it is one of the largest member organizations of the International Science Council (ISC) and one of the world's largest scientific organizations. It has a global membership of about a million earth scientists through more than 70 member countries, which are represented through Adhering Organizations - commonly academies, geological surveys, or geological societies. In addition more than 60 international organizations are affiliated with IUGS.

IUGS promotes development of the earth sciences by supporting broad-based scientific activities. It promotes international collaboration in establishing global geostandards. It strengthens public awareness of geosciences and advances geoscience education. IUGS organizes international projects and meetings, sponsors symposia and scientific field visits, produces publications, and addresses issues of standardization. Topics range from fundamental earth science research to economic and industrial applications and extend to social, educational, environmental and developmental issues.

CORE VALUES

The core values of IUGS can be expressed through the acronym "RISE," which signifies the growing presence of geosciences in modern society: A Rejuvenated, modern, and agile union that operates based on Inclusivity, Sustainability, and Ethical professional practices.

- A union that promotes innovative research in geoscience and beyond, aligned with the International Science Council, upholds ethical standards, and promotes inclusivity, all while remaining dynamic and forward-thinking in shaping the future of geoscience.
- A union that advocates for and supports the next generation of geoscientists worldwide and acts as a global voice for geosciences and their community.

VISION



OBJECTIVES

Unite

the global geoscience community to enhance the development of Earth and Planetary Sciences by supporting relevant, broad-based scientific studies.

Apply

the results of these studies to support the environment, wise use of natural resources and sustainably for the benefit of society in achieving economic, cultural and social goals.

Strengthen

global and public awareness of geosciences and geoscientific education.

Promote

inclusivity by involving geoscientists in international geoscience activities, regardless of race, nationality, language, political stance, or gender.

Encourage

global interaction among geoscientists to meet the geoscientific needs of any country or region while representing the geosciences in international scientific and cultural organizations.

- To inspire the global geoscience community and serve humanity through innovation and collaboration.
- To foster a culture of inclusivity and diversity within the Union, emphasising the importance of representation from all regions, genders and backgrounds, and to commit to ethical decision-making in every aspect of the Union.
- To enhance informed decision-making and sustainable practices in the development and management of our natural resources.
- To foster strong collaborations with other geounions and partners in the Global South to improve knowledge exchange and technology transfer as well as to strengthen the long-term, fruitful cooperation with UNESCO through IGCP, ILP, and other potential initiatives.
- To engage with IUGS Council members to stimulate dialogue and interest in the Union's strategic agenda and activities.

MISSION

GOVERNING THE UNION

The Council

Meets every four years at the International Geological Congress

Representatives appointed by the Adhering Organizations from the active IUGS member countries/regions

Inactive or non-member countries/regions may send observers (without voting rights) to Council meetings

Executive Committee (2024–2028)

Bureau

Day-to-day decisions and responsibilities

Secretary General



Dr. Ludwig Stroink

President



Prof. Hassina Mouri

Treasurer



Emeritus Prof. David Cohen

Vice Presidents



Prof. Marko Komac



Prof. Maria Rose Petrizzo

Councilors (2022–2026)



Prof. Lola Pereira



Prof. Yamirka Rojas-Agramonte

Councilors (2024–2028)



Dr. Farnoosh Farjandi



Dr. Wei Jun Zhao

Councilors (2026–2030)



Prof. Renee Clary



Dr. Josephine Uushona

Prof. Hassina Mouri



IUGS President (2024–2028)

Dear Council Members,
Dear Colleagues, Friends, and Supporters of
Geosciences and IUGS,

As we reflect on 2025, we are reminded that environmental challenges and geopolitical uncertainties continued to shape communities, scientific cooperation, and sustainable development worldwide. These challenges reinforced the need for scientific expertise, international collaboration, and innovative solutions, demonstrating that effective responses to global challenges increasingly depend on scientific cooperation, knowledge sharing, and strong international partnerships.

Despite these challenges, IUGS remained committed to advancing its mission and meeting the strategic priorities set at the start of the current Executive Committee's term. Geoscience plays a critical role in helping society understand and respond to complex global issues. As a global organisation representing the geological sciences, IUGS has continued to promote scientific excellence, strengthen international collaboration, support capacity development, and enhance the contribution of geoscience to sustainable development and societal well-being.

Throughout 2025, the Union continued to build on the foundations laid in 2024. Our focus has been to translate these strategic priorities into tangible actions while laying the groundwork for long-term growth, greater inclusivity, and

a stronger global presence for IUGS. These efforts have been guided by the core values embodied in the acronym RISE, introduced at the start of our term in 2024. RISE reflects our vision of a **R**ejuvenated, modern, and agile Union founded on **I**nclusivity, **S**ustainability, and **E**thical and professional practices. The achievements outlined below demonstrate how these values have been put into practice, strengthening the Union, expanding its global reach, and positioning it for greater impact in the years ahead.

Among the year's most significant achievements was the establishment of a framework to expand IUGS engagement across the Global South. A major milestone was the launch of the UNESCO–IUGS IGCP Call for Africa, the first initiative of its kind under the UNESCO–IUGS partnership. The programme supported African-led research while promoting regional cooperation, capacity development, and scientific leadership, establishing a model that can be expanded to other regions.

Building on this success, preparations began in 2025 to extend this model to Latin America and the Caribbean. Discussions with regional partners identified common priorities and opportunities for collaboration, laying the groundwork for a new phase of IUGS engagement in the region, to be implemented in 2026. Together, these initiatives mark an important step towards a more inclusive



and globally representative Union, while strengthening scientific networks and opportunities for collaboration across the Global South.

The expansion of IUGS activities and partnerships across the Global South also fuelled increased interest in IUGS membership and participation. Through active dialogue with geological surveys, ministries, scientific institutions, and geoscience communities, the Union received membership applications and expressions of interest from several countries, reflecting growing confidence in the Union and greater recognition of the value of international scientific cooperation. Most importantly, these developments laid a strong foundation for admitting new members in 2026. If the current expressions of interest and membership applications are successfully concluded, the number of Adhering Members could reach 74 in 2026, the highest level of membership achieved by the Union in recent decades, further strengthening its diversity, inclusivity, and global reach. We look forward to reporting on these developments in next year's report.

Furthermore, in 2025, IUGS worked to strengthen its engagement with the International Science Council (ISC) and the Geo-Unions. Discussions were initiated to enhance collaboration among the international scientific unions, focusing on shared scientific priorities, interdisciplinary approaches to global challenges, and opportunities for joint activities that maximise collective impact. These discussions laid an important foundation for future collaborative initiatives.

An important development supporting these efforts was my appointment as Vice-Chair of the ISC Geo-Unions Steering Committee for the 2025–2027 term. This role offers a valuable opportunity to advance these discussions and

ensure that geoscience contributes effectively to a more coordinated and interdisciplinary international science agenda.

While we can take pride in the progress made in 2025, our focus remains firmly on the future. The foundations laid during the year position the Union for significant developments in 2026 and beyond, including the admission of new members, the expansion of IUGS initiatives across the Global South, the launch of new capacity-development programmes, and the strengthening of partnerships that support scientific excellence and international cooperation.

These achievements demonstrate what can be accomplished when vision is translated into action through collaboration, inclusivity, and shared commitment. Together, we will continue to strengthen the Union, expand its global impact, and build a more inclusive, globally connected, and impactful geoscience community capable of contributing to a sustainable and resilient future.

In conclusion, on behalf of the Executive Committee, I would like to express my sincere gratitude to all our members, Adhering Organisations, constituent groups, affiliated bodies, and partners for their continued support and commitment. Your contributions remain essential to advancing geoscience for the benefit of society.

I would particularly like to acknowledge the dedication and professionalism of the IUGS Secretariat and to express my appreciation to the Government of China for its continued support in hosting the Secretariat in Beijing.

Hassina Mouri

IUGS President 92024-2028)

Vice Chair, ISC-Geo-Unions Steering Committee (2025-2027)

Professor, University of Johannesburg, South Africa



Dr. Ludwig Stroink



IUGS Secretary General (2024 – 2028)

A Year of Strategic Growth and Global Engagement

The year 2025 marked a period of strong momentum and strategic development for the International Union of Geological Sciences (IUGS). Guided by the vision of its newly elected Executive Committee (EC), the Union further strengthened its role as a leading global voice for geosciences by expanding international partnerships, increasing global engagement, and promoting innovative scientific initiatives across continents.

IUGS at the General Assembly of the International Science Council (ISC)

In January 2025, IUGS President Prof. Hassina Mouri, Secretary General Dr. Ludwig Stroink, and Treasurer Prof. David Cohen travelled to Muscat, Oman, to participate in the General Assembly of the International Science Council (ISC) and several high-level side events. During the visit, the IUGS Bureau actively represented the Union within the ISC framework, strengthened collaboration with fellow GeoUnions, and initiated new dialogue with governmental, academic, and scientific institutions in Oman. The mission also opened promising discussions regarding Oman's future membership in IUGS.

Building New Partnerships in Oman and Middle East

The Bureau also held meetings with senior representatives from ministries, universities, and

innovation institutions in Oman. A particularly important meeting took place on 29 January with Prof. Rahma Bint Ibrahim Al Mahrouqi, Minister of Higher Education, Research and Innovation of the Sultanate of Oman, and Dr. Saif Al-Hiddabi, Undersecretary of the Ministry. The discussions focused on Oman's potential future membership in IUGS and opportunities for long-term cooperation in geoscience, research, and innovation. The meeting was conducted in a highly constructive and positive atmosphere, and the Ministry invited IUGS to submit a formal proposal regarding Oman's membership.

Further discussions with representatives from the German University of Technology (GUTech) and the Institute for Advanced Technology Integration (EJAAD) explored opportunities for collaboration between IUGS, universities, and the rapidly growing geoscience innovation and start-up sector in Oman. The Bureau was impressed by the strong potential for future scientific cooperation in the region.

During the same mission, President Hassina Mouri and Secretary General Ludwig Stroink also visited the King Fahd University of Petroleum and Minerals in Saudi Arabia. Meetings with senior academic representatives focused on possible future cooperation within the framework of the UNESCO/IUGS International Geoscience Programme (IGCP) and on Saudi Arabia's potential membership in IUGS. These discussions marked the beginning



of a broader dialogue that continued throughout 2025 and ultimately resulted in an agreement for Saudi Arabia to join IUGS as a member country from 2026 onward.

Strategic Leadership and Future Planning

The 81st Executive Committee Meeting, held in France from 17 to 20 March 2025, represented an important milestone for defining IUGS's future strategic direction. With more than 70 delegates participating, discussions focused on governance, scientific priorities, global engagement, and long-term organizational development. Key topics included preparations for the 38th International Geological Congress in 2028, implementation of the Ten Action Plan for Africa (TAP for Africa), and a review of financial and administrative structures. The EC also initiated preparations for the 82nd Executive Committee Meeting in Bogotá in January 2026, which will be preceded by a two-day Latin American and Caribbean (LAC) Symposium aimed at strengthening regional cooperation and scientific exchange.

Restructuring the International Geoscience Programme IGCP

One of the most important strategic initiatives of 2025 was the comprehensive restructuring of the UNESCO/IUGS International Geoscience Programme (IGCP). Building on recommendations from the 2022 IUGS Ad Hoc Review, the Executive Committee, together with UNESCO, launched a major modernization process to position the more than 50-year-old Programme for future scientific and societal challenges.

The renewed IGCP strategy reflects the EC's commitment to increasing the Programme's global relevance, strengthening support for the Global South, and promoting regional

scientific capacity building. A central innovation is the introduction of a stronger regional focus. Activities began in Africa in 2025 and will expand to Latin America and the Caribbean (LAC) in 2026 and Southeast Asia in 2027. At the same time, UNESCO and IUGS agreed to significantly increase funding levels for selected projects - from a maximum of USD 10,000 to up to USD 50,000 annually per project.

Through this new model, the EC aims to strengthen scientific impact, international visibility, and long-term sustainability of IGCP activities.

The first UNESCO-IUGS call under this new framework was launched in May 2025 as the "IGCP Special Call for Africa." Its objective is to support Africa's geoscientific advancement through targeted research funding and dedicated capacity-building initiatives. To underline this strategic commitment, IUGS increased its annual contribution to IGCP from USD 100,000 to USD 150,000 in 2025.

Success Story: Ten Action Plan for Africa

The continued implementation of the "Ten Action Plan for Africa" (TAP for Africa) became another success story in 2025. Presented during the 30th Colloquium on African Geology (CAG) in Nairobi from 22 to 25 September 2025, TAP for Africa has developed into a flagship initiative for sustainable development, scientific cooperation, and capacity building across the continent. During the special session "United in Geosciences – New Horizons for IUGS/UNESCO & Africa," jointly organized by IUGS and UNESCO and moderated by Secretary General Ludwig Stroink, more than 50 participants from 13 African countries discussed scientific priorities, regional challenges, and opportunities for future collaboration with IUGS.



During the session, Özlem Adiyaman Lopes (UNESCO) announced the three awardees of the first IGCP Africa Call, supporting high-impact geoscience projects across the continent. For further information please refer to: (<https://www.iugs.org/post/unesco-and-iugs-announce-funding-for-three-igcp-africa-projects>).

A second call is planned for 2027. To further strengthen regional expertise and support early-career scientists, an IUGS Academy is planned for Addis Ababa in spring 2027.

Building on the success of the African initiative, IUGS is now preparing to expand similar activities to LAC. Preparations include a high-level fact-finding workshop with representatives from across the region in Bogotá in January 2026, followed by the launch of a joint UNESCO-IUGS LAC-IGCP Call in June 2026.

Expanding Membership and Global Reach

Expanding global membership remains a central priority of the current EC. In 2025, several new countries joined IUGS as new members or reactivated their memberships. Additional countries have expressed strong interest in joining from 2026 onward. This growing interest demonstrates IUGS's increasing international relevance and attractiveness as a global scientific partner (see revised Member ship Map).

Institutionally, the Asociación de Servicios de Geología y Minería Iberoameri-canos (ASGMI) also joined IUGS as a new affiliated organization, further strengthening the Union's presence in Latin America (<https://asgmi.org/en/>).

Strengthening and Reviewing IUGS Constituent Groups

The International Union of Geological Sciences (IUGS) continued in 2025 to actively support its network of Commissions, Task Groups, and Joint Programmes, recognizing these constituent groups as one of the Union's most important strategic instruments for advancing international geoscience cooperation and addressing emerging scientific and societal challenges.

Through their highly specialized activities, the constituent groups play a key role in translating the Union's mission and strategic objectives into concrete scientific action. They contribute significantly to scientific excellence, interdisciplinary collaboration, capacity building, international networking, and the global visibility of geosciences. At the same time, they strengthen the role of geoscience in addressing pressing global issues such as sustainable development, natural resources, environmental change, geohazards, and societal resilience.

The Executive Committee (EC) considers the constituent groups essential for ensuring that IUGS remains scientifically relevant, internationally visible, and responsive to rapidly evolving priorities within the global geoscience community. In particular, the constituent groups provide important platforms for supporting early-career scientists, strengthening regional cooperation, and increasing participation from underrepresented regions, including countries of the Global South.

At the Executive Committee Meeting held in Paris in March 2025, all constituent groups presented reports summarizing their recent achievements, ongoing activities, and future priorities. The EC highly commended the groups for their substantial scientific contributions and for their continued commitment to advancing the



mission, vision, and strategic goals of the Union.

At the same time, the EC emphasized that the constituent groups must remain dynamic, forward-looking, and closely aligned with current scientific developments and emerging international priorities. According to the IUGS Statutes, all Commissions are intended to operate with a limited mandate and should undergo a formal review every four years to assess their scientific relevance, performance, and strategic alignment.

As such reviews had not always been conducted consistently in recent years, several Commissions have remained active well beyond their originally intended duration. To strengthen organizational renewal and ensure continued scientific relevance, the newly elected EC therefore initiated a systematic review process for all Commissions active for more than eight years.

The objective of these reviews is not only to evaluate past achievements, but also to identify future potential, emerging scientific priorities, opportunities for restructuring, and possible new directions. Through this process, the EC aims to ensure that IUGS constituent groups continue to reflect the latest developments and priorities within the international geoscience community while maintaining the highest scientific standards and long-term strategic impact.

Modern Communication and Strong Branding

In 2025, IUGS undertook major efforts to modernize its communication strategy and strengthen its international visibility. The IUGS website was updated, the E-Bulletin was

redesigned and published monthly throughout the year, and the 2024 Annual Report was finalized and published. Outreach materials and branding initiatives were also refreshed to improve transparency, accessibility, and engagement with members and partners worldwide.

To foster community engagement, IUGS launched a global logo design contest, inviting contributions from the international geoscience community. The initiative generated broad participation and reflected a renewed emphasis on inclusivity and shared identity.

Looking Ahead: 2026 and Beyond

The developments of 2025 clearly demonstrate that IUGS is evolving into an even more dynamic, globally connected, and forward-looking scientific organization. Supported by a committed Executive Committee, strong international partnerships, and an expanding worldwide network, IUGS is well positioned for continued growth and impact in the years ahead. Strategic priorities for 2026 and beyond include:

- expanding specific Programmes in Africa, Latin-America and SE-Asia
- strengthening partnerships with UNESCO, ISC and Geo-Unions
- preparing major international scientific events
- and further growing its worldwide membership network

Under the guidance of the IUGS Bureau and Executive Committee, the Secretariat has maintained efficient and professional operations throughout 2025, providing consistent support to both scientific and administrative functions. The Secretariat team includes Ms. Gu Yanfei, Ms. Mu Langfeng, and Ms. Niu Jiachen.



Prof. David Cohen



Treasurer (2024–2028)

General comments

Nearly all IUGS funds held by the MUFG Bank in Japan (USD 1.39M combined in USD, EUR and JPY accounts) were transferred to and AUD account with the ANZ Bank in Australia on 16 April. A small residual fund was left at MUFG to cover additional transfer costs in 2025. In late 2025, USD and EUR accounts were also set up with the ANZ Bank.

The IUGS funds are currently held in trust by IUGS Australia Incorporated (IUGS(Aust)), which was registered as not-for-profit association in the state of New South Wales in early 2025. Handling of the IUGS accounts is covered by a detailed Memorandum of Understanding between the two organisations. The elected committee of IUGS(Aust) comprises the Chair Dr Kevin Cassidy (also the chair of the Australian Geoscience Council), Vice-President Dr Ludwig Stroink (also Sec. Gen. of the IUGS), Secretary-Treasurer Prof David Cohen (also Treasurer of the IUGS) and ordinary member Ms Jessica Askew (consulting geologist). Of the remaining members of the associations, one is associated with the IUGS (Prof H. Mouri, President of the IUGS) and four others are independent members.

Net income for the IUGS in 2025 was \$630,031 and the expenses were \$725,549, resulting in a net reduction in reserves from \$1,389,100 to \$1,293,582. Income was \$89,437 higher in 2025 than in 2024. This is partly attributed to

increased membership subscriptions and that three countries have paid for 2026 in advance. The income from capitation fees at the 37th IGC were significantly less than budgeted. The final UNESCO co-contribution to the IGCP program was subsequently met in early January 2026, along with the 2025 subscriptions from three countries.

On the expenditure side, most costs were in line with the budget and were \$47,550 higher than in 2024. EC expenses were significantly higher due to attendance at the International Science Council and associated GeoUnions meetings in January and the normal face-to-face EC meeting in March, along with attendance at a number of major conferences in order to discuss joining of the IUGS with a number of non-member countries. The Latin American Countries workshop that preceded the 2026 EC meeting in Bogota was not budgeted in 2025, but a significant proportion of the expenditure was made in late 2025 (and scientific grants to IUGS bodies and affiliates expedited in early 2026) due to the rise in the value of the Australian Dollar that effectively increased the IUGS cash reserves in late 2025.

The 2025 IUGS accounts were subjected to a more complete financial audit than in previous years, by the firm LBW Partners. The 2025 Financial Statements and the Audit were approved at the Annual General Meeting of IUGS(Aust) on 22 May 2025. It is noted that



the audit covered the period during which IUGS(Aust) held the funds, however there were very few transactions between 1 Jan and 21 Apr during which time the funds were still held in Japan. In August 2025, \$723,000 was transferred to a 12-month ANZ Term Deposit to take advantage of higher interest rates (3.9%).

Over 95% of the income to the IUGS is obtained from membership subscriptions, co-contributions by UNESCO to IGCP projects, and the quadrennial capitation fees delivered by the IGCs, and 76% of expenditure on scientific grants, Episodes and membership of the ISC. It is noted that some IUGS-controlled bodies did not apply for funding in 2025. In other cases, funding was not approved due to unresolved overlaps between IUGS bodies and affiliates. The funding of these bodies and some affiliates will increase substantially in 2026.

The amount of funding and relative contributions of the IUGS and UNESCO for IGCP (International Geological Program) projects was not finalized until mid-year due to issues with the overall UN budget. The Union agreed to contribute a total \$166,500 with UNESCO contributing \$133,500. The Union pays the up-front funding, with UNESCO subsequently reimbursing the Union for the agreed UNESCO proportion. The first 16 projects were funded by August 2025. The final three projects form part of a block of funds allocated to projects based

in Africa. Commencement of these was delayed until late in 2025, however the Union completed funding of these by the start of Jan 2026. Both the full IUGS funding and the UNESCO reimbursement to the IUGS was completed by 9 Jan 2026.

At the end of 2025 there were 63 adhering members (countries), of which 51 had paid their 2025 subscription. Payment for three other countries was made in Jan 2026.

Treasurer's Statement

I confirm that:

- i. The financial statements in this report provide a materially accurate state of the finances of the IUGS and the income and expenditure for 2025;
- ii. The Audit of the Financial Statements of IUGS Australia Incorporated by LBW Partners confirms the veracity of the IUGS financial statements;
- iii. There are no extraordinary matters that substantially affect the financial position of the IUGS since 31 Dec 2025; and
- iv. The IUGS continues to be in a position to pay all of its debts as and when they become due.



Em. Prof. David Cohen FRSN FAIG FAAG
IUGS Treasurer

Table 1. Financial summary for 2025 with comparison with 2024 actuals, 2025 budget and 2026 budget. Values reflect the average AUD to USD exchange rates in Dec 2025.



all amounts in USD

	Note	2025 Actuals	2025 Budget	2024 Actuals	2026 Budget
Income					
Membership Fees	1	449,020	400,000	374,956	400,000
Royalties from GSL		0	2,500	15	0
Interest	2	119	1,000	98	32,600
IGC Capitation fees		72,796	120,000	0	0
UNESCO contrib. to IGCP	3	104,970	133,500	165,526	150,000
Other Income		3,126	1,000	0	1,000
Total Income		630,031	658,000	540,595	583,600
Expenditure					
Contrib. to IGCP and other joint programs		265,240	298,000	254,185	205,000
IGCP	3	250,240	280,000	234,000	190,000
Joint Programmes		15,000	18,000	20,186	15,000
Contrib. to IUGS Commissions, Task Gps,		225,928	205,470	292,673	347,000
IUGS Commissions		118,380	114,700	198,089	225,000
IUGS Task Groups		5,500	5,500	12,500	6,000
IUGS Initiatives		18,700	30,000	15,000	30,000
Affiliated Orgs (proj. spt)		55,288	55,270	42,000	46,000
IUGS African activities		28,060	0	25,084	20,000
IUGS South Amer. activities		0	0	0	20,000
Membership of the ISC		29,979	28,000	26,810	30,500
IUGS committees, events, receptions		980	10,000	64,358	25,000
Other IUGS scientific support		0	10,000	16,460	20,000
37 IGC receptn & awards		0	0	47,898	0
IUGS Associated Events		980	0	0	5,000
Episodes		30,000	30,000	28,000	30,000
Executive committee meetings and travel	4	118,972	60,000	71,282	80,000
IUGS secretariat, treasury and website		29,861	23,000	22,095	41,000
Treasurer office costs		2,360	4,000	7,095	8,000
Secretariat expenses		15,000	15,000	15,000	15,000
Website & publications	5	12,500	4,000	0	18,000
Currency exchange, bank fees and audit		19,221	15,600	12,935	20,500
Currency exch.	6	14,066	12,000	8,988	12,000
Bank fees		2,135	3,600	3,947	2,500
IUGS financial audit		3,021	5,000	2,467	6,000
Depreciation and maintenance		0	0	0	0
Insurance, registration, reporting and legal		0	0	764	10,000
Other Expenses		5,368	2,000	0	6,000
Total Expenditure		725,549	672,070	773,101	795,000
Net Income		-95,518	-14,070	-232,506	-211,400
Reserves as of 1 Jan 2025		1,389,100			
Cash flow in 2025		-95,518			
Reserves as of 1 Jan 2026		1,293,582			

David Col

IUGS Treasurer

Note 1 Some countries paid for 2026 in advance

Note 2 This will not be realised until Term Deposit matures in Aug 2026

Note 3 Under UNESCO contract - some payments delayed until early 2026

Note 4 Includes some expenditure for the Jan 2026 LAC workshop-EC meeting in 2025

Note 5 More work than expected on website

Note 6 Difference between ANZ bank rates and www.x-rates.com.

Table 2. Scientific program support for IUGS Commissions, Task Groups and Initiatives, and affiliated organizations.



all amounts in USD

Groups	Grant approved 2025	Budget request for 2025	Grant awarded 2024
IUGS Commission			
Commission for Geoscience Information	12,000	18,000	10,000
Int. Assoc. Structural Geol. & Tectonics	7,630	10,900	2,500
Commission on Global Geochem. Baselines	22,000	40,125	15,000
Commission on Geoscience education	0	22,420	25,000
Int. Commission on Geoheritage	23,480	21,580	38,000
Int. Commission on History of Geol. Sci.	3,270	6,560	6,400
Int. Commission on Stratigraphy	50,000	82,425	74,189
Commission on Geoethics	0	10,120	7,000
Sub-total	118,380	212,130	178,089
IUGS Task Group			
Task Group on Submarine Geohaz.	5,500	8,500	2,500
Task Group on Igneous Rocks	0	17,000	10,000
Task Group on Isotope Geochem.	0		
Sub-total	5,500	25,500	12,500
IUGS Initiative			
Initiative on Forensic Geology	15,000	15,000	
Young Reporters Initiative	3,700	15,000	
Resources for Future Generations	0		
Sub-total	18,700	30,000	
Episodes	30,000	30,000	28,000
Joint Program			
Int. Geosci. Prog. (net payment by IUGS)	150,000	101,500	68,474
Int. Lithosphere Program	15,000	15,000	15,000
One Geology	0		5,186
Deep-time Digital Earth	0	20,000	
Sub-total	165,000	136,500	88,660
Affiliate			
Comm. for Geol. Map of the World	7,000	7,000	6,000
Int. Palaeontological Association	5,000	20,800	
Int. Research Center on Karst	2,000	3,000	
Geology for Global Development	3,000	3,000	3,000
Int. Assoc. on Genesis of Ore Dep	3,000	3,000	5,000
Int. Consortium on Landslides	4,000	8,000	5,000
Int. Geoscience Education Org.	3,000	19,800	
Int. Medical Geology Association	3,288	3,270	3,000
Geological Society of Africa	0	56,000	7,000
Nairobi Conference of CAG	10,000		
Nigerian Mining & Geosci. Soc.	3,000	11,000	
Soc. Geology Appl. to Mineral Dep.	5,000	5,000	3,000
Soc. Environ. Geochem. & Health	10,000	27,000	10,000
Assoc. of Geoscientists for Int. Dev.	0	0	
Int. Assoc. for Promoting Geoethics	0	0	
Sub-total	58,288	166,870	42,000
TOTALS	395,868	601,000	349,249

Table 3. 2025 funding of IUGS-UNESCO International Geological Program (IGCP) projects.

 								
IGCP N°	TITLE	Start	End	Theme	USD			Lead Country
					Budget	UNESCO	IUGS	
725	Forecasting coastal change	2021	2026	Global change				Canada
751	4GEON: Geoparks' People of Four Continents Connected through Playful Earth Heritage Education	2022	2026	Special theme/ Geoheritage	11,000	5,500	5,500	Czech Rep
669	Identification of seismogenic faults in populated areas of Latin America and its incorporation into seismic hazard assessment	2020	2025	Geohazards	11,000	5,500	5,500	Spain
732	Language of the Anthropocene	2021	2026	Global change	11,000	5,500	5,500	Austria
767	E-DOOR: Environmental dynamics of the volcanic region of western Rwanda: An integrative study	2023	2025	Earth Resources	20,000	10,000	10,000	Rwanda
722	Development Minerals workshop in the Pacific	2021	2026	Earth resources	11,000		11,000	Fiji
765	Capacity building networks and improved methodologies for increased interoperability mapping and monitoring C stocks	2022	2026	Earth Resources	11,000	2,000	9,000	Mexico
704	Carbon in Peat on Earth through Time: Tropical peatland processes and ecosystem services	2020	2025	Global Change	9,500	4,750	4,750	Indonesia
636	Geothermal resources for energy transition: direct uses and renewable base-load power around the	2020	2026	Earth Resources	9,500	4,750	4,750	Colombia
735	Rocks and the Rise of Ordovician Life (Rocks n' ROL)	2021	2026	Global change	9,500	4,750	4,750	France
700	Carbonate Build-ups in South East Asia	2020	2025	Global Change	9,500	4,750	4,750	Thailand
679	Cretaceous earth dynamics and climate in Asia	2019	2026	Global Change	9,500	4,750	4,750	China
739	The Mesozoic-Palaeogene hypothermal events	2021	2025	Global change	8,000	4,000	4,000	China
740	West Makran Paleo-tsunami Investigation	2021	2025	Geohazards	8,000	4,000	4,000	Iran
696	The Fate of Mercury Used in Artisanal and Small-Scale Gold Mining (ASGM) in Amazonian Ecosystems	2020	2025	Earth Resources	8,000	4,000	4,000	Canada
705	Building Global Capacity for the Observation of Volcanic and Atmospheric Change	2020	2025	Geohazards	7,000	3,500	3,500	Sweden
774	Metallogenic Evolution of the W. Congo Belt: Fluid Chemistry, Structural Controls, Tectonic Processes, and Early-stage Geometallurgy	2025	2026	Earth Resources	50,000	22,500	27,500	Sth Africa
776	Machine Learning Geochemistry for Climate-Smart Groundwater in North Africa	2025	2026	Earth Resources	46,500	20,750	25,750	Egypt
777	Hydrogeological and climate impact assessments of groundwaters and ecosystems in Dahomey Basin, West Africa:	2025	2026	Global change	50,000	22,500	27,500	Nigeria
Totals					300,000	133,500	166,500	

Table 4. Summary Financial Statement and Auditor's Report.

IUGS AUSTRALIA INCORPORATED on behalf of the INTERNATIONAL UNION OF GEOLOGICAL SCIENCES			
ABN 14 432 854 341			

STATEMENT OF SURPLUS OR LOSS FOR THE YEAR ENDED 31 DEC 2025

	Note	2025	2024
	1	\$US	\$US
	2		
Revenue and other income			
Revenue from Member Fees	3	449,020	374,956
Contributions by UNESCO	4	104,970	165,526
Revenue from IGC capitation fees		72,796	0
Revenue from books and journal		0	15
Interest on bank accounts		119	98
Other income		3,126	0
		<u>630,031</u>	<u>540,595</u>
Less: expenses			
Contributions to IGCP and other joint programs		265,240	254,186
Contrib. to IUGS Commissions, Task Groups, Initiatives & affiliates		225,928	292,673
Membeship of the IGC		29,979	26,810
IUGS committees, events, receptions	5	980	64,358
Episodes		30,000	28,000
Depreciation, amortisation, repairs and maintenance	6	0	0
Distribution to members	7	0	0
Insurance			
IUGS secretariat, treasurer's office and EC meetings		148,832	93,377
Bank fees and audit		5,156	12,934
Currency exchange gain/loss with no cash-out	8	14,066	34,895
Other expenses		5,368	764
		<u>725,549</u>	<u>807,996</u>
Surplus or loss from operating activities		-95,518	-267,401
Adjustment on 36IGC income (repayments)			0
Total comprehensive income		<u>-95,518</u>	<u>-267,401</u>

Notes

1. From April 2025, IUGS accounts are administered by IUGS Australia Incorporated under an MOU
2. Exchange rates as of 31 Dec 2024: AUD->USD = 0.5851; EUR->USD = 1.105
3. This includes \$74,487 in arrears from 2022 and 2023
4. This includes \$33,026 final payment from 2023

STATEMENT OF FINANCIAL POSITION AS AT 31 DEC 2025

	Note	2025 \$US	2024 \$US
Current assets			
Cash and cash equivalents		531,451	1,389,100
Receivables		34,263	0
Term deposits (ANZ Bank)		683,118	0
Pre-payments (against 2026 budget)		44,751	
Total current assets		1,293,583	1,389,100
Non-current assets			
Property, plant and equipment		0	0
Investments		0	0
Total non-current assets		0	0
Total assets		1,293,583	1,389,100
Current liabilities			
Trade and other payables (membership in arrears)		49,478	0
Other liabilities (Contracted IGCP funding)		46,681	0
Total current liabilities		96,159	0
Non-current liabilities			
Borrowings		0	0
Provisions		0	0
Total non-current liabilities		0	0
Total liabilities		96,159	0
Net assets		1,197,424	1,389,100
Equity			
Retained surpluses		1,197,424	1,389,100
Total equity		1,197,424	1,389,100

5. Includes receptions and awards ceremonies at the 37th IGC, Busan

6. The IUGS has no physical assets such as property, vehicles, IT devices or furnishings

7. As a not-for-profit organisation and under the IUGS Statutes, no distribution to members is allowed.

8. Translated exchange loss on beginning balance and gain in EUR and JPY on equiv. USD

Note: UNESCO reimburses a portion of the funding provided to IGCP projects, based on Implementation Partners Agreement upon submission of payment report by IUGS.

**LBW & Partners**

Chartered Accountants & Business Advisors
ABN 80 618 803443

Office

Level 3, 845 Pacific Hwy, Chatswood NSW 2067

Postal address

PO Box 276, Chatswood NSW 2057

W www.lbw.com.au

E mail@lbw.com.au

P (02) 9411 4866

Partners

Elias Y Bader

Rupa Dharmasiri

George P Rochlos

Mark W Wlock

IUGS Australia Incorporated
ABN: 14 432 854 341

Independent Auditor's Report to the Members of IUGS Australia Incorporated

Opinion

We have audited the accompanying financial report of IUGS Australia Incorporated (the Association), which comprises the statement of financial position as at 31 December 2025, the statement of income and retained earnings and the statement of cash flows for the period from 22 April 2025 to 31 December 2025, and notes to the financial statements, including material accounting policy information and the committee members' declaration.

In our opinion, the accompanying financial report of the Association for the period from 22 April 2025 to 31 December 2025 is prepared, in all material respects, in accordance with the *Associations Incorporation Act (NSW) 2009*, including:

- (i) Giving a true and fair view of the Association's financial position as at 31 December 2025 and of its financial performance for the period from 22 April 2025 to 31 December 2025; and
- (ii) Complying with Australian Accounting Standards- Simplified Disclosures, and the *Associations Incorporation Regulation (NSW) 2022*.

Basis for Opinion

We conducted our audit in accordance with Australian Auditing Standards. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Report* section of our report. We are independent of the Association in accordance with the auditor independence requirements of the *Associations Incorporation Act (NSW) 2009* and the ethical requirements of the Accounting Professional and Ethical Standards Board's APES 110 *Code of Ethics for Professional Accountants (including Independence Standards)* (the Code) that are relevant to our audit of the financial report in Australia. We have also fulfilled our other ethical responsibilities in accordance with the Code.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Committee Members' Responsibilities for the Financial Report

The committee members are responsible for the preparation of the financial report that gives a true and fair view in accordance with Australian Accounting Standards – Simplified Disclosures, the *Associations Incorporation Act (NSW) 2009* and the *Associations Incorporation Regulation (NSW) 2022*. The committee members' responsibility also includes such internal control as the committee members determines is necessary to enable the preparation of the financial report that gives a true and fair view and is free from material misstatement, whether due to fraud or error.

In preparing the financial report, the committee members are responsible for assessing the Association's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the committee members either intend to liquidate the Association or to cease operations, or have no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Report

Our objectives are to obtain reasonable assurance about whether the financial report as a whole is free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Australian Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial report.

As part of an audit in accordance with the Australian Auditing Standards, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Association's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the committee members.
- Conclude on the appropriateness of the committee members' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Association's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial report or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Association to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial report, including the disclosures, and whether the financial report represents the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the committee members regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.


Rupaninga Dharmasiri
Partner
LBW & Partners
Chartered Accountants
Level 3, 845 Pacific Highway
CHATSWOOD NSW 2067

Date: 4 May 2026

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under Professional Standards Legislation



Analysis
Interpretation
Planning



PERMANENT SECRETARIAT

The IUGS Secretariat is hosted within the premises of the Chinese Academy of Geological Sciences (CAGS) under the China Geological Survey, the Ministry of Natural Resources of China. Since the relocation of the Secretariat to Beijing in December 2012, the Chinese government has been providing tremendous and stable financial and logistical support for the smooth operation of the Secretariat.

Under the guidance of the IUGS Bureau and Executive Committee, the Secretariat works in line with its duties, and plays an active role in the communication and coordination of the scientific activities and daily administration of IUGS with the guidelines as follows:

- Encourage and substantiate the participation of the Adhering Organizations and National Committees in promoting geosciences;
- Develop initiatives of wide societal and applied interest;
- Renew and establish closer links to UNESCO, ISC, and GeoUnions as well as develop new initiatives together with these organizations;
- Improve visibility of IUGS through publications and presence at scientific forums.

In 2025, the Secretariat assisted in the organization of several regular administrative meetings, including the 81st EC meeting in Paris, France on March 17-20, 2025, the 82nd EC meeting on January 22-27, 2026, EC Virtual Progress Meeting on July 22nd and November 25th, 2025, and 6 virtual Bureau meetings respectively on February 17th, March 6th, April 10th, June 16th, August 25th, and December 17th.

The Secretariat organized the election of IUGS

Nominating Committee (2024-2028), including drafting and distributing the Announcement on the election on IUGS NC (2024-2028) and running the two steps of the NC Election, including online election system management and the election result announcement.

In order to publicize and promote the IUGS scientific activities in the international geoscience community, the Secretariat organized IUGS booth exhibitions at major international geoscience conferences and events, including EGU2025, AGU 2025, GEOMIN 2025 and CCOP Annual Meeting and reserved IUGS booth space at EGU 2026. The Secretariat redesigned and displayed 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 and a new series of the IUGS promotional gifts for the booth.

As for the IUGS outreach and publications, the Secretariat formatted and distributed the monthly E-Bulletins to 14,000+ recipients per month, updated the list of recipients based on feedbacks, drafted some pieces of IUGS news published on IUGS E-Bulletins, including some briefs on the attendance of IUGS Bureau members in international events and IUGS booth display at EGU, AGU etc.

The Secretariat supported the maintenance of IUGS official website, including sharing with IUGS webmaster the updated information of IUGS adhering members, constituent groups and affiliated organizations, providing materials

according to the requests of IUGS webmaster, drafting news on IUGS Bureau members' activities and attendance in international events for website publishing.

For the membership maintenance, the Secretariat updated the contact information of the IUGS Adhering Members in the IUGS Information Management System, prepared the updated membership map which shows active, inactive and potential members for IUGS website and drafted letters to IUGS members according to the instruction of IUGS Bureau members. We updated the contact information

of IUGS Affiliated Organizations in the IUGS Information Management System and assisted candidate organizations to join in IUGS as affiliated organizations.

The Secretariat would like to thank the IUGS Executive Committee members for their valuable guidance and great support to the Secretariat for its smooth operation during the past year. The Secretariat staff members will continue full devotion to the Secretariat duties with concerted efforts to actively support the work of the IUGS Bureau and Executive Committee and the broad-ranging scientific activities of IUGS.



Fig.1 IUGS booths at EGU2025, GEOMIN 2025, CCOP 60th Annual Meeting and AGU2025



Fig.2 81st EC meeting in March 2025 in Paris, France

2025 HIGHLIGHTS

January-February 2025

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



Fig.3 Left: IUGS Bureau members at the ISC General Assembly. Right: IUGS Bureau members and the minister and undersecretary of higher education and innovation in Oman.

On 7-8 January 2025, Dr. Laurance Donnelly (Chair, IUGS-IFG) was invited to provide search training for the UK College of Policing, PNC. The training focused on environmental factors whilst searching for clandestine graves and human remains. The training delivered by Laurance was on, 'Searching for Clandestine Graves and Human Remains, Environmental Factors: The Geoforensic Search Strategy (GSS)'. Other subject matter experts focused on, (i) operational police searches, (ii) forensic

archeology, (iii) forensic oceanography and water searches, (iv) forensic botany, and (v) forensic anthropology. The training was attended by the UK police and military.

March-April 2025

Hosted by the Geological Society of France, the 81st IUGS Executive Committee Meeting was held in Paris, France, on March 17-20, 2025. The meeting comprised the open session on March 17-18 and the closed session on March 19-20. The members of the IUGS Executive Committee, leaders of IUGS commissions, task groups, joint programs, and initiatives, as well as representatives from IUGS adhering organizations and affiliated organizations, attended the open session. They presented their major achievements from the year 2024 and outlined the workplan for the year 2025 for their groups. The open session was held in a hybrid format and attracted more than 70 delegates.



Fig.4 A photo of the delegates attending the first EC meeting organised by the newly elected IUGS EC. This is the first time since COVID-19 that the event attracted many participants both in person and online.

The International Commission on the History of Geological Sciences (IUGS INHIGEO) has just launched its new website www.inhigeo.org providing information about the work of

our Commission, members, affiliated bodies, our wide-ranging activities from the Annual Symposia, online webinars, sponsored conferences and cross-disciplinary sessions and links to publications arising from research by our members worldwide as well as our outreach series Anniversaries in Geo-history. Our strength is our multidisciplinary approach - Geologists and Historians working as a team on diverse archival resources worldwide, underlining the key importance of this historical-scientific heritage for studies of the global development of the geological sciences.

May 2025

The General Assembly 2025 of the European Geosciences Union (EGU 2025) was held in Vienna, Austria, from April 27 to May 2, 2025. The IUGS Secretariat set up a booth at the exhibition of the meeting to promote IUGS's scientific achievements and materials and to enhance the international influence of the Union. IUGS publications, including *The First 55 IUGS Heritage Stones*, *The First 100 IUGS Geological Heritage Sites*, *The Second 100 IUGS Geological Heritage Sites* and *Manual of Standard Methods for Establishing the Global Geochemical Reference Network*, IGCP projects, IUGS Geoscience in Africa Event, and the latest version of the ICS Chronostratigraphic Chart attracted a number of meeting participants.

IUGS Secretary General Dr. Ludwig Stroink, Treasurer Emeritus Prof. David Cohen, Vice President Prof. Marko Komac, and Councillor Prof. Yamirka Rojas-Agramonte were present at the event and promoted IUGS activities at the booth.



Fig.5 Left: IUGS Secretary General Ludwig Stroink (right) and IUGS Treasurer David Cohen (left) visiting the IUGS booth at EGU 2025.

For more than 50 years, the IUGS and UNESCO have worked together through the International Geoscience and Geoparks Programme (IGGP) to promote international geoscience cooperation and support UNESCO Global Geoparks. At its 10th session in March 2025, the International Geoscience Programme (IGCP) Council reviewed the progress of 33 active projects, with their scientific achievements and contributions to the Sustainable Development Goals (SDGs) documented in the 2025 IGCP Annual Report. To strengthen global collaboration, the Council approved two new projects, including initiatives supporting UNESCO Global Geoparks and cooperation with the International Continental Scientific Drilling Program (ICDP). Funding from IUGS, UNESCO, and the National Commission of the Republic of China was awarded to 16 ongoing projects, while another 16 projects will continue within the IGCP network without direct financial support.



Fig.6 IGCP 672: Students practicing using Stream Drill to install an ablation stake at Changri Nup Glacier in the Everest region of Nepal. © Dibas Shrestha and Guillem Vincent

June 2025

On 2 June 2025, UNESCO hosted a certificate award ceremony to officially welcome 16 newly designated UNESCO Global Geoparks (UGGps), celebrating their entry into a growing international network that now spans 229 sites worldwide. These new designations, which were formally approved by UNESCO's Executive Board on 17 April 2025, extend across Asia, Europe, Latin America, and the Middle East - and mark the first inclusion of geoparks from the Democratic People's Republic of Korea and Saudi Arabia.



Fig.7 Red Chert Rocks and Lava Pillow, Kebumen UNESCO Global Geopark, Indonesia © Rizal Nur Alfian

A brainstorming session titled *“Incubating the Culture of Startups in the Geoscience Community of India”* was organized on 7th June 2025 by the INSA Committee for IUGS-INQUA at the Conventional Hall of INSA in New Delhi. The event brought together a dynamic mix of participants, including young scientists, Ph.D. students, budding entrepreneurs, and domain experts from sectors such as oil and gas, disaster management, infrastructure, and academia.

July 2025

Prof. Hassina Mouri was invited to China for a nine-day visit, highlighting the country's growing engagement in global geoscience cooperation supporting ecological progress, disaster risk

reduction, and the UN Sustainable Development Goals (SDGs). In Beijing, she met with Dr. Niu Zhijun, Vice President of the China Geological Survey (CGS), to discuss cooperation in geoscience data sharing, capacity building, and talent development. She later attended the 13th Eco Forum Global Guiyang, where she praised China's commitment to ecological development and emphasized the importance of big data, artificial intelligence, and international collaboration in advancing sustainable societies and environmental stewardship. Throughout the visit, Prof. Mouri engaged with major Chinese scientific institutions, including the Geological Society of China, the Jiangsu Geological Society, the Chinese Academy of Geological Sciences, and Nanjing University, exploring opportunities for research collaboration, training, and academic exchange. Medical geology remained a key theme, with lectures focusing on the links between geological environments, public health, and the achievement of SDGs in Africa. The visit concluded with a field trip to the Shuanghe Cave system in Guizhou Province, one of the world's largest karst cave networks and an important site for geoconservation and geotourism development.

On the occasion of Goldschmidt 2025 in Prague, Czech Republic, the CGGB organised a four-day workshop from the 2nd to the 5th of July. The workshop was titled “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’”. Three days were devoted to lectures and practical exercises (left), while the fourth and last day comprised a field training course on the outskirts of Prague (right). It was attended by 24 earth scientists from Africa, N & S America, Asia, Europe, and the Middle East.



Fig.8 Workshop participants doing a hands-on exercise. Photograph by A. Demetriades.



Fig.9 Workshop participants and tutors during the field training course. Photograph by Michal Poňavič, Czech Geological Survey.

August 2025

From August 17 to 24, Prof. Mouri was invited to attend the 3rd International Conference on Earth and Environmental Sciences (ICEES 2025) in Durban, South Africa. As a representative of IUGS, she delivered a plenary lecture on her research and postgraduate training in Medical Geology in Africa. She served as a panelist on the theme “Emerging Contaminants: challenges and solutions.” This conference, which drew over 300 delegates, serves as a global platform to advance interdisciplinary research and foster dialogue on pressing environmental issues. It features 19 themes, including natural resource management, hydrogeology, environmental science, mining, and the environment, among others. Researchers from various fields,

including chemistry, physics, public health, geology, and biochemistry, participated in the event.

IUGS-IFG members attended the 2025 EMFA at Dumoulin Barracks (Soesterberg, south-east of Amsterdam), home of the Victim Identification Unit of the Royal Netherlands Army. The first day event, attended by 75 people, began with a business meeting chaired by IFG’s Matteo Barone. This was followed by presentations focused on Conflict and Victim Identification. The second day featured a series of outdoor training exercises, including digital recording at excavations, battlefield metal detection, UXO location and identification. The event concluded with a military-style fireworks display using high explosives, which entertained all attendees.

September 2025

As of September 1, the new Executive Committee of the International Union of Geological Sciences (IUGS) has been in office for one year. During this first year, we have worked with dedication to strengthen the Union’s global role and visibility while advancing its mission to promote Earth sciences for the benefit of society. Over the past twelve months, we have deepened our partnerships with UNESCO and the International Science Council and launched innovative initiatives under the International Geoscience Programme (IGCP). The IUGS website has been redesigned to provide better access to information and opportunities, while our growing presence on social media has enhanced public awareness and interaction. With targeted outreach and membership campaigns we have started to further expand our international community and strengthen the Union’s inclusiveness. We extend our sincere gratitude to the global geoscience community for its

continued trust, collaboration, and enthusiasm. Together, we look forward to building on this momentum and advancing the Earth sciences for the benefit of all and for future generation.

This year, the 14th Iberian Geochemistry Congress (XIV CONGRESSO IBÉRICO DE GEOQUÍMICA: “Geoquímica: novos desafios, novas soluções”) took place from 8 to 12 September on the island of São Miguel in the Azores, Portugal, an unrivalled setting due to its volcanic land-scapes of great geological interest. The Congress was organised by the Universidade dos Açores, the Instituto de Investigação em Vulcanologia e Avaliação De Riscos, and the Fundação para a Ciência e a Tecnologia. The first three days were devoted to scientific sessions, while the last two days were dedicated to field trips.

October 2025

On October 13, at the GEOMIN International Symposium, Prof. Hassina Mouri, President of the International Union of Geological Sciences, held an official meeting with Eng. Abdullah Al-Shamrani, Chief Executive Officer of the Saudi Geological Survey (SGS), in Jeddah, Saudi Arabia. The two sides engaged in in-depth discussions and agreed on key topics, including strengthening cooperation in geological science, technological innovation, sustainable resource use, and international collaboration mechanisms.



Fig.10 Prof. Hassina Mouri meeting with CEO of SGS.



Fig.11 Hassina Mouri meeting with SGS representatives.

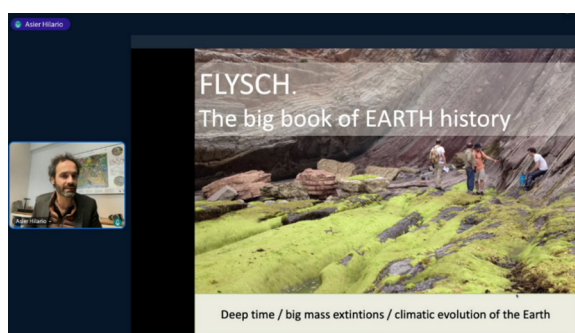
The document *Artificial Intelligence (AI) Ethics Recommendations for the Geoscience Community* has been prepared by the Task Group on AI Ethics in Geosciences under the IUGS Commission on Geoethics. It is intended to guide practicing academic, industry, governmental and non-governmental geoscientists, society leaders, and policymakers. It outlines ethical considerations for the use of AI in geoscience, while also contributing to ongoing academic discussion on AI and geoethics. Eight themes were identified with recommendations intended to address ethical issues and concerns occurring, or likely to occur, within the geosciences.

November 2025

The Geochemistry Expert Group of the Ibero-American Association of Geological and Mining Surveys (ASGMI-GEG) organised the third webinar in the series “Geochemical Information for Social Service”, entitled “Generating Geochemical Information for Society: Sample Analysis”, held on November 12-13, 2025, and coordinated by the Geological Survey of Ecuador. The ASGMI-GEG webinar brought together more than 86 participants and featured distinguished speakers from international organisations, as well as experts in geochemical sample analysis from Latin America, Spain, and Portugal. Alecos Demetriades (CGGB Chair),

Anna Ladenberger (Senior Geochemist at the Geological Survey of Sweden & CGGB Steering Committee Councillor), Philippe Négrel (Chair of the EuroGeo Surveys Geochemistry Expert Group), and Jinfeng Bai (Laboratory Director, Institute of Geophysical and Geochemical Exploration, Langfang, China), among others, shared their expertise through outstanding presentations.

Seminar by Dr. Asier Hilario in International Recognition of the Memory of the Earth at the Institute of Geosciences, Heidelberg University - 12 November 2025, Invited by Prof. Yamirka Rojas-Agramonte,

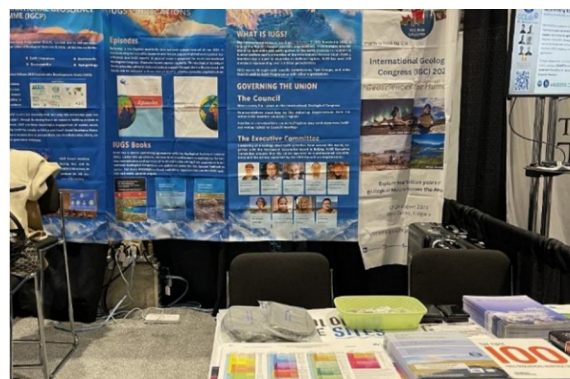


On 12 November 2025, the Institute of Geosciences at Heidelberg University hosted a livestream lecture by Dr. Asier Hilario Orús, scientific coordinator of the Basque Coast UNESCO Global Geopark and Chair of the IUGS International Commission on Geoheritage. In his talk, "International Recognition to the Memory of the Earth," Dr. Hilario outlined how geological heritage has been identified and valued worldwide - from UNESCO World Heritage Sites and Global Geoparks to the IUGS-designated Geological Heritage Sites. He emphasized the growing role of IUGS in promoting Earth literacy and strengthening geoscience education.

December 2025

IUGS was present at the American Geophysical

Union (AGU) Fall Meeting 2025 in New Orleans, USA, from 15 to 19 December 2025, through an exhibition booth organised by the Secretariat's office in Beijing. IUGS activities and materials, including publications such as the IUGS Geological Heritage Series Book, the Manual of Standard Methods for Establishing the Global Geochemical Reference Network, were displayed and reviewed at the booth. IGCP projects, IUGS Ten Action Plans for Africa, and the latest version of the ICS Chronostratigraphic Chart attracted several meeting participants. The 38th IGC, to be held in Calgary, Canada, on 12-20 August 2028, was also promoted at the booth.



The *IUGS Manual of Standard Methods for Establishing the Global Geochemical Reference Network* was displayed at the IUGS booth at the American Geophysical Union's 2025 Annual Meeting (AGU25) in New Orleans, U.S.A. (15-19 December 2025; see photos below). The AGU annual meeting attracts more than 20,000 participants from around the world; it is considered the largest annual gathering of earth and space scientists, educators, policymakers and communicators.

The display of the IUGS Manual of Standard Methods at two big global annual scientific events - the EGU General Assembly in Vienna (Austria) last spring, and the AGU Annual Meeting in the U.S.A. in the winter helps its widespread distribution enormously. The



Zenodo website records 682 downloads of the Manual and 849 views from its publication date(September 2 2022) until December 31 2025; whereas, from the two CGGB Publications

webpages, 267 people downloaded the Manual during the same period, making a grand total of 949 downloads.



EPIISODES



Prof. Dr. Sung Keun LEE
Editor in Chief

- There are a total of 206 manuscripts received through the Editorial Manager (EM) system and 42 manuscripts (26 original articles, 3 reviews, 4 communication regarding IUGS geological standards, 4 history of geology, 3 book review, and 2 editorials) were published in Vol. 48, no.1~4.

Volume/ Issue	Publication Date	Number of published manuscripts (n)
Vol. 48, No. 1	2025.03.01	11 (8 articles, 1 communication regarding IUGS geological standards, 1 history of geology and 1 book review)
Vol. 48, No. 2	2025.06.01	10 (4 articles, 2 communication regarding IUGS geological standards, 1 review, 1 history of geology, 1 book review and 1 editorial)
Vol. 48, No. 3	2025.09.01	10 (8 articles, 1 review, and 1 history of geology)
Vol. 48, No. 4	2025.12.01	11 (6 articles, 1 communication regarding IUGS geological standards, 1 review, 1 history of geology, 1 book review and 1 editorial)

- The Impact Factor (IF Clarivate index) of Episodes remained unchanged at 2.2 for both 2023 (reported in 2024) and 2024 (reported in 2025). The CiteScore improved between 2020 and 2023, with the score peaking at approximately 5.5. The 2024 CiteScore is 3.5. The journal maintained its status in the Q2 category.

- What makes Episode unique

Publication of commentary on what makes Episodes unique (by Lee SK, 2024):

<https://www.gskorea.or.kr/html/?pmode=webzine&smode=viewDetail&par=14&seq=5622>

“These metrics for Episodes indeed show a moderate degree of fluctuation from year to year. This could result from a relatively small number of yearly publications, as the values seem to be heavily affected by how several key papers would perform.”

“The fluctuation may also partly stem from the journal policy; as a community journal, we do not discriminate against any specific discipline/topic that may not secure a larger readership. Our



evaluation criteria do not include any emphasis on perceived importance or topical significance. This could be somewhat contrary to recent trends in journal publications elsewhere where emphasis is given, unfortunately, more on topical interest (i.e., how many people would click)."

- Other progress

a) Lead/Focus Papers article invitation

"Lead/Focus Paper": written by an invited, prominent scientist, on a contemporary subject, new discoveries and developments in the broad field of Earth sciences, and/or new models and interpretations of existing concepts and theories

Emeritus Professor Yong-IL Lee (Scopus Citation 4454, Sedimentologist) at Seoul National University accepted our invitation to write the Lead/Focus article for Episodes:

See the link below for Prof. Lee's earlier publications:

<https://www.sciencedirect.com/author/57214764677/yong-il-lee>

b) The explicit statement on "neutrality in depicting disputed borders" has been added to submission guideline

https://www.episodes.org/content/contributors/for_author.html

Episodes remains neutral regarding the depiction of disputed borders.

Authors are advised to declare their compliance with the above policy using the following statement (as applicable): "The map(s) in this manuscript is (are) neutral with respect to the depiction of border dispute areas."

c) Authors are asked to confirm that the manuscript is formatted according to the journal style

https://www.episodes.org/content/contributors/for_author.html

For GUIDANCE ON SUBMISSION OF CONTRIBUTIONS TO EPISODES

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- AE Recruitment

Given recent resignments of our 4 Associate Editors and disciplines of the submitted papers, we had extend our effort to recruit 3-4 experts across diverse fields, including Geochemistry, Sedimentary Geology (Geomorphology), Economic Geology, Geophysics, and Engineering Geology.

"The Associate Editors should be internationally-recognized for their disciplinary expertise and accomplishments, and representative of the global earth science community in their demography, racial, ethnic and gender diversity."

- Episodes Confidentiality Policy Statement

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The International Commission on Stratigraphy (ICS)



Elisabetta Erba
Chair



Shuzhong Shen
Vice-Chair



Charles Henderson
Secretary-General

The **International Commission on Stratigraphy** (ICS) comprises an executive and seventeen active subcommissions (SC) involving over 750 stratigraphy experts from around the world, representing the largest cluster of geoscientists within IUGS. Two key areas continue to be the primary focus of ICS activity, including developing the International Chronostratigraphic Chart (ICC), based mainly on Global Stratotype Sections and Points (GSSPs), and the modernization of the webpages (www.stratigraphy.org). The current version of the ICC is the 2024/12 version. GSSPs establish the definitions of systems, series and stages. These results form the basis for the periods, epochs, and ages of the International Geologic Time Scale (GTS). In doing so, ICS provides global standards for expressing Earth's history.

The very first GSSP marked the Silurian-Devonian boundary at Klonk Hill, Czech Republic. It was ratified during the 24th International Geological Congress at Montreal in 1972. Since then, over 80 more GSSPs have been ratified by IUGS and twenty-two more are in development. On October 9 an official ceremony (Fig.12) was held to mark the rescue of the monument to the world's first stratotype location at Klonk Hill. After many years of disputes over land ownership, a team from the Czech Geological Survey and other institutions led by Dr. Petr Budil (Corresponding member of the Subcommittee on Devonian Stratigraphy)

managed to save the monument, completely restore it, and move it to municipal land. The world's first stratotype thus continues to have a dignified and representative presence directly at the site.

The 20th International Congress on the Carboniferous and Permian was held under the banner of *GeoTolosa 2025 – News from the Paleozoic World* (Fig.13) in Toulouse, France (June 24-27) and for the first time included the Subcommittee on Devonian Stratigraphy and colleagues of the VARISCAN Meetings. It brought together almost 180 participants from 30 countries from all continents to Toulouse in late June. The high number of students, early and middle career scientists showed the attractiveness and renewal of the global community studying the late Paleozoic. Half of the attendees joined pre- and post-conference field trips, which enabled hands-on investigation of upper Paleozoic rocks in southern France (Massif Central and Pyrenees), including visits to three global boundary stratotypes. The diverse program proved highly effective in generating new ideas and consensus around various topics, including stratigraphic boundary definitions. GeoTolosa 2025 delivered a productive blend of scientific insight, community engagement and field-based interactions, strengthening the role of the ICS family and the global community in the understanding of the late Paleozoic World and raising the precision and utility of global geological boundaries.

A second meeting saw more than 230 participants, including 75 Early Career Scientists, from over 29 countries exchange views on aspects of the Cretaceous Period during the International Cretaceous Symposium (Fig.14) held at Leibniz University Germany (August 31-September 5). Integrated stratigraphy and the incorporation of new dating methods provided the focal point of the symposium. The Cretaceous was characterized by a completely different tectonic configuration, biosphere and climate compared to today. Geological research into the Cretaceous Period is of great significance because this interval represents one of the warmest phases in the entire Phanerozoic Eon and was marked by high sea levels and an absence of polar ice caps. A mid-conference field trip offered all participants the opportunity to study Cretaceous rock exposures around Hannover, and researchers could also choose to participate in field excursions to study Cretaceous rocks in northern Germany before and after the conference. Participants look forward to the next symposium in 2029 at Kanazawa University, Japan.

The annual meeting of the International Subcommittee on Silurian Stratigraphy was held at Seville, Spain (September 9-13). Two

days of indoor scientific sessions and the ISSS Business meeting were organized in the magnificent building of the “Delegation of the Spanish Government” in the emblematic *Plaza de España* in Seville and were followed by a ceremony for the replacement of the Telychian Stage GSSP. The new Telychian GSSP is in the El Pintado I section, and the primary criterion is the first occurrence of the graptolite *Spirograptus guerichi*. The section is in northern Andalusia, about 70 km north of Seville, in the municipality of Cazalla de la Sierra and in the Sierra Norte de Sevilla Unesco Global Geopark (Fig.15).

ICS published many papers including a synthesis paper on the International Chronostratigraphic Chart for the past decade (Cohen et al., 2025; Episodes, 48 (1), 105-115). Other meetings in which ICS was represented included the 5th International Conference of Geobiology (Wuhan, China), the Ordovician Subcommittee with IGCP 735 (Wales, Brittany, and China), and a Triassic field workshop on the base-Anisian in Albania. Two major meetings are planned for 2026 including Penrose 2026 “GTS2030: Defining the future of Time Scale Calibration” (Iowa City, USA; May 30-June 5) and STRATI 2026 (June 28-July 3; Suzhou, China).



Fig.12 Photo of participating representatives in front of the Klonk GSSP monument.



Fig.13 Group photo for the GeoTolosa Meeting held in Toulouse, France.



Fig.14 Group photo for the International Cretaceous Symposium held in Hannover, Germany.



Fig.15 Members of the ISSS and ICS Chair at the golden spike for the Telychian Stage.

2025 Report on the IUGS COMMISSION ON GEOSCIENCE EDUCATION (COGE)

Sandra Villacorta Chambi Chair



In 2025, the IUGS Commission on Geoscience Education (COGE) solidified its role as the Union's global platform for advancing geoscience education. It strengthened international collaboration and expanded initiatives that support educators, outreach professionals, and public engagement in the Earth sciences.

COGE enhanced its international collaborations and cooperative efforts with prominent scientific organizations throughout 2025. In particular, work continued under the Letter of Collaboration subscribed to between the European Geosciences Union Education Committee and IUGS-COGE. The discussions inspired the design of collaborative initiatives to aid geoscience educators worldwide, such as a plan for webinar series and efforts under the **Geoscience Education Field Officers (GEFO) programme**, in 2026. COGE also strengthened the global GEFO network by supporting field officers who promote geoscience education and outreach within their local communities. Proof of these efforts is the organisation of COGE's first in-person workshops in Africa (Accra, Ghana) with the support of COGE's African commission members, marking an important step toward strengthening regional engagement and visibility of IUGS educational initiatives focused on educational exchange, and international dialogue among geoscience educators.

COGE continued expanding its communication and outreach initiatives. The **Geoscience Educator of the Month (GEM)** campaign was further developed as a global platform to recognise educators making outstanding contributions to geoscience education across different regions. By highlighting diverse leadership in geoscience education, the initiative contributes to strengthening the international community of educators and inspiring new generations of teachers and science communicators. In parallel, COGE launched preparations for several global outreach initiatives, including the **GeoArt Global Contest**, designed to promote creative communication of Earth science concepts and encourage broader public engagement through artistic expression. The design of this program was completed in 2025 and is scheduled for a global release in 2026.

The Commission also celebrated the selection of Prof. María Amelia Calonge as the recipient of **the 2025 Chris King Medal for excellence in geoscience education**, an award which recognises outstanding international contributions to the field. The medal ceremony, accompanied by educational outreach activities, is planned for 2026 in Almería, Spain.

COGE continued to strengthen the visibility of research and practice in geoscience education



through its **publications projects**. The Publications Committee maintained regular publication activity in the journal Teaching and Communication of Geosciences, produced through collaboration with the National Autonomous University of Mexico (UNAM), supporting contributions from Spanish- and Portuguese-speaking authors and highlighting innovative educational practices across multiple regions. Additionally, work was started on a thematic collection about global geoscience education in the journal Discover Geoscience from Springer Nature. The collection will bring together international contributions addressing innovative teaching approaches, inclusive curricula, digital transformation in geoscience education, and international cooperation. Publication is anticipated in late 2026. In the same line of efforts, COGE initiated the conceptual development of a **White Paper on Geoscience Education**, envisioned as a strategic policy document assessing global challenges and opportunities in geoscience education. The White Paper will offer suggestions to enhance international collaboration, capacity development, and the contribution of geoscience education in tackling societal issues linked to climate change, natural hazards, water resources, and critical minerals. This initiative aims to support broader strategic discussions within the International Union of Geological Sciences and its partner organisations while positioning geoscience education more prominently in global scientific and policy dialogues.

Throughout 2025, COGE also focused on strengthening internal governance and

coordination. Key actions included the following:

- improving coordination among subcommissions
- supporting broader participation of members from different regions
- conducting the first financial review of treasury activities
- aligning COGE structures and programmes more closely with the strategic priorities of IUGS

During 2025, the IUGS Commission on Geoscience Education reviewed its internal structure and implemented adjustments to better align its activities with the mandate of the International Union of Geological Sciences. As part of this process, the former Public Outreach and Communication Subcommission was restructured as the Education, Outreach and Policy (EOP) Subcommission, expanding the scope of activities related to education policy, public engagement, and international collaboration. Under this structure, several ongoing initiatives were consolidated within the EOP framework, including the GEFO Programme, the GEM Campaign, and the GeoArt initiative, which focus respectively on field-based education support, global geoscience awareness, and creative public engagement.

By the end of 2025, COGE had completed the organisational and planning steps required to implement several activities scheduled for 2026, including international outreach events, collaborative programmes with partner organisations, and expanded educational initiatives coordinated through its subcommissions.



Fig.16 Agreements signed by IUGS Commission on Geoscience Education in 2025, including collaborations with the European Geosciences Union Education Committee, IAEG Peru, and Red de Educadores en Ciencias de la Tierra.



Fig.17 COGE–GEFO inaugural workshop, held in Accra, Ghana. The event brought together 40 African participants, including educators, technicians and students.



Fig.18 Page of the GEM (Geo-Educator of the Month) campaign on the COGE website.



Fig.19 Flyer announcing the election of the Chris King Medal winner for 2025, Prof. Amelia Calonge from Spain.



Fig.20 Covers of *Teaching and Communication of Geosciences*, National Autonomous University of Mexico journal (Vol. 4, No. 1, June 2025, and Vol. 4, No. 2, December 2025).



INTERNATIONAL COMMISSION ON THE HISTORY OF GEOLOGICAL SCIENCES (INHIGEO)



Ezio Vaccari
President



Martina Kölbl-Ebert
Secretary General

The International Commission on the History of Geological Sciences (INHIGEO) includes an interdisciplinary community of scholars, mainly geologists and historians, as well as institutions around the world, with 272 members from 56 countries and 12 affiliated associations. Our aim is the historical study of geological sciences in all their forms, as well as its promotion and dissemination, in order to establish new links between this historical knowledge and the contemporary context of the Earth sciences, also in relation to the development and sustainability of society. Our research work (symposia, publications, projects, collaborations with other IUGS Commissions and Initiatives) and outreach activities (circulars, webinars,

anniversaries papers for the IUGS E-Bulletin) are presented and available to download on the INHIGEO website (<https://www.inhigeo.org>).

The highlights of our activities in 2025 included the 50th INHIGEO Annual Symposium, followed by a geo-historical fieldtrip in the North Island of New Zealand, the co-organization of the IUGS Initiative on Forensic Geology 15th anniversary conference in Rome, the launch of a new series of presentations on geo-historical archives, the scientific awards received by our young and senior members, as well as a new series of webinars focused on some outstanding new research works carried out by early-career scholars in the history of geological sciences.



Fig.21 Renee Clary asks Johannes Mattes a question at the session on Geological Sciences and Empire (chair: Silvia Figueiroa), during the 50th INHIGEO Symposium

At the 27th International Congress of History of Science and Technology (ICHST) in Dunedin, New Zealand, from 29 June to 5 July 2025, INHIGEO organized three thematic sessions as part of its 50th Annual Symposium: "Indigenous peoples' knowledge and beliefs about the

Earth: an open historiographical issue", "The geological notebook: reflections in the field" and "Geological Sciences and Empires: Connections Forging the Production of Knowledge". At these sessions 35 presentations were given by participants from 15 countries.



Fig.22 (left) Carol Bacon chairing the session on Geological Notebooks; (right) Khallaf El Ghalbi presenting at the session on Indigenous peoples' knowledge (chair: Ezio Vaccari) at the 50th INHIGEO Symposium

The INHIGEO 7-days fieldtrip in the North Island of New Zealand, led by Hamish Campbell, took place on 7-13 July 2025 and included geo-historical and geological sites such as the Wairarapa fault at Pigeon Bush and

Thrust Creek/Te Honge Stream, Pukerua Bay, Raukawa Falls, Whakapapa, Mt Ruapehu and Lake Taupo volcanic area, Waimangu Volcanic Valley, Waitomo Glow-worm Caves, Port Waikato, Takapuna Beach.



Fig.23 Rodney Grapes explaining the Wairarapa fault at Thrust Creek/Te Honge stream, studied by Charles Lyell (1856) in relation to earthquakes



Fig.24 Group photo in front of Port Waikato's wave-cut platforms with well-stratified volcanoclastic sedimentary rocks (Late Jurassic)

At the INHIGEO Business Meeting held on 4 July 2025 in Dunedin, the "INHIGEO Early Career Award", was presented to Sarah Qidwai (University of York, UK) for her presentation

Islam, Geology, and Colonialism in 19th-Century South Asia, within the INHIGEO session *Indigenous peoples' knowledge and beliefs about the Earth: an open historiographical issue*.

Later in the year, INHIGEO member Renee M. Clary (Mississippi State University, USA) was the recipient for her contribution to the history of geological sciences of the 2025 Mary C. Rabbitt

History and Philosophy of Geology Award of the Geological Society of America, presented at the GSA Annual Meeting held in San Antonio, Texas, USA, 19–22 October 2025.

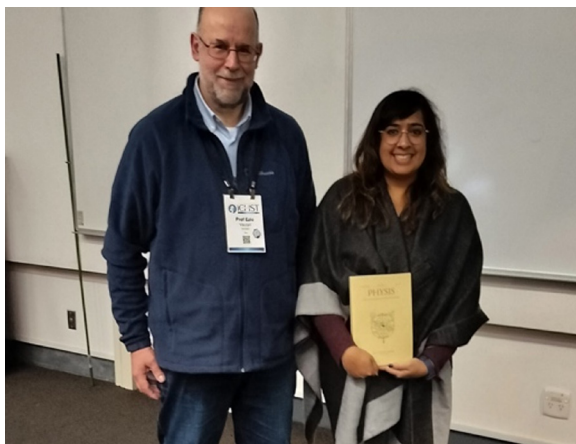


Fig.25 Sarah Qidwai being congratulated for her award by Ezio Vaccari at the INHIGEO Business meeting



Fig.26 Renee Clary receiving the Mary C. Rabbitt award from David Spanagel (GSA)

An INHIGEO sponsored session was organized in collaboration with the IUGS - Initiative on Forensic Geology (IFG), as part of the international conference to celebrate the 15th anniversary of IUGS-IFG held on 21 May 2025 at the Spazio Europa in Rome (Italy). The session, chaired by Martina Kölbl-Ebert and Ezio

Vaccari, included five presentations under the theme *History of Forensic geology. In memory of Raymond Murray*, on topics such as the history of research in forensic geology, fakes and frauds in the early history of geological sciences, a case of forensic geology in Nazi Germany, the origins of forensic geology in Australia and Italy.



Fig.27 (from left to right) Laurance Donnelly, Ezio Vaccari and Martina Kölbl-Ebert introducing the IFG-INHIGEO joint session in Rome, 21 May 2025



The INHIGEO Webinar Series *New Perspectives in the History of Earth Sciences*, with free access, continued to provide an active and regular virtual forum for discussion. The four webinars held in January, April, September and November covered topics such as *Geology, Diplomacy and Exchange: focus in the Chinese context* (talks by Jingfei Zhang, Chinese Academy of Sciences, Beijing, and Lijuan Yang, Zhejiang University, Hangzhou, China), *Coming Out of the Shadows: Women and Geology at Oxford, 1813 – 1914* (talk by Grace Exley, University of Leeds, UK), *Volcanology as an experimental science: the evolution of scientific instruments for studying Mount Etna* (talk by Valentina Roberti, Università di Catania, Italy) and *Fossils & Fabrications* (talk by Reese Fulgenzi, University of California Berkeley, USA).

Finally, the new series *Archives in the History of the Geological Sciences*, featured in the

INHIGEO Quarterly Circular starting in March 2025, presented the first short overviews of Archives from around the world that are relevant for research in the History of the Geological Sciences in order to highlight their existence and help foster scholarly interest in their content. In 2025 we have presented the *History of Science Collections of the University of Oklahoma Libraries* (Norman, Oklahoma, USA); the *Charles Lyell Collections* at the University of Edinburgh (Scotland, UK); *The Geologist's Archive* at the Universitätsbibliothek of the University of Freiburg i.Br. (Germany) and the *Historical Archive of the Geology Institute of the National Autonomous University of Mexico (UNAM)* in Mexico City. More presentations will be included in the next Circulars. We hope to thus encourage the use of these fundamental resources by geologists and historians worldwide and underline the key importance of this historical-scientific heritage for studies of the global development of the geological sciences.



COMMISSION FOR GEOSCIENCE INFORMATION (CGI)

Chair Harvey Thorleifson



The IUGS Commission for the Management and Application of Geoscience Information (CGI) fosters the interoperability of geoscience information, through leadership, collaboration, education, standards, and best practices.

CGI strives to ensure that geoscience information can be exchanged, understood, used, and integrated with information from other domains. Geoscience information needs to be semantically rich and structured to enable seamless interaction in all environments. Global education about the management and use of information enables societal benefits.

CGI represents IUGS on geoscience information matters, provides the means for transferring knowledge on geoscience information and systems, assists international dissemination of best practice in geosciences information, stimulates and supports initiatives that are developing standards, and its Council members hold leadership positions in the information community.

CGI was active in 2025. We have 534 members in 82 countries. We have a Chair, Past Chair, Co-Secretaries General, Treasurer, and eight Councilors, from Australia, Botswana, Brazil, China, France, Japan, NZ, Slovenia, UK, and USA. CGI hosts or co-hosts the DDE Standards Task Group (DDE-STG) and five working groups, and we coordinate with partners. In 2025, CGI Council meetings were held online on Ap 2, June 18, Sep 23, and Dec 10. The web site was updated, and a 2025 Newsletter produced. The CGI secretariat is located at the Geological Survey of Slovenia (CGIsecretariat@geo-zs.si). The CGI bank account is managed in New Zealand.

CGI has been active in supporting implementation of the IUGS Action Plan for Africa, as cohost and financial supporter of the Dublin Workshop in February 2025, which was meant to fulfil the geoscience information aspects of the plan. Prof Jennifer McKinley, Queen's University Belfast (QUB) and IUGS Executive Committee Councilor from 2020



2024, arranged for a workshop to occur, in collaboration with the Geological Society of Africa (GSAf). The workshop was funded by the QUB International Strategic Partnerships Fund Overseas Development Assistance (ODA) Funding and by CGI. The result was the hybrid 'Status of Geoscience Information in Africa' workshop, 11- 13th February 2025 in Riddel Hall, Queen's University Belfast, UK.

The aim of the workshop was to synthesize our current understanding of this field, to support coming actions by Africa-based colleagues. The workshop over 3 days included 31 presentations, starting with welcomes by Prof John Ludden, IUGS President 2020-2024, on behalf of Prof Hassina Mouri, IUGS President 2024-2028; Prof Olugbenga Okunlola, GSAf President; and Dr Rokhaya Samba and Mr Gabriel Data, Organization of the African Geological Surveys (OAGS). Presentations from African Geological Surveys were presented for Nigeria, Namibia, Senegal, Cape Verde, Gambia, Zambia, Uganda, Botswana, and Kenya.

Collaborative international activities were presented by UNESCO in Africa and Global Geoparks, British Geological Survey (BGS), BGRM, Geological Survey of Northern Ireland (GSNI), the IUGS Initiative on Forensic Geology (IFG), the International Medical Geology Association (IMGA), PanAfGeo and Amira Global.

Objectives included: Synthesize the status of geoscience information and current understanding of this field supporting the IUGS Ten Action Plan for Africa (TAP for Africa); Develop a framework for collaboration to assess Geoscience Information in Africa with key stakeholders like Geological Surveys, GSAf, and OAGS; Advance Pan-African collaboration

to optimize geoscientific information, FAIR data, aligned with African priorities, existing platforms and sustainable resource use; Facilitate Pan-African dialogue on integrated geoinformation to address environmental challenges and support the UN Sustainable Development Goals; Promote open Pan-African dialogue on accessible geoscience data to support education, outreach in social economic transformation, decarbonization and energy resources and sustainable mineral resources.

Benefits and impacts included: A co-designed online platform to optimize geoscientific information, FAIR data, aligned to African priorities and existing platforms with a focus on sustainability of African resources; Discussion on the need for up-to-date, integrated geodata to help address environmental challenges; Discussion on geoscience information as a driver for education, socio-economic transformation, decarbonization, and sustainable mineral resources; Resilience building of Energy systems in Africa; Increased collaboration between geoscientists across Africa.

Key outcomes from the workshop included: workshop proceedings, and presentations at the May 2025 Geoscience Information Consortium (GIC) meetings in Denmark, and at the Colloquium of African Geology (CAG30), September 2025, Nairobi, Kenya. A synthesis paper, as is a thematic article collection for the new open access Taylor and Francis Journal , Critical Insights in Climate Change. Discussions between CGI, DDE and the EU Project PanAfGeo are focused on using the Status of Geoscience Information Workshop and associated collaboration as an exemplar for future collaborative activity.

CGI will have a busy 2026, focusing on



technology updates. We will ensure that our work groups receive the support they need. We will support the DDE Standard Task Group focus on FAIR and Open Science. We will sustain our broad communication mechanisms.

We will sustain our partnerships. We will hold a webinar on standards development. We will have an active presence at the Geoscience Information Consortium meetings in Beijing on 25-28 May 2026. Support from IUGS, and from our employers, is appreciated.

COMMISSION ON GLOBAL GEOCHEMICAL BASELINES

<https://www.globalgeochemicalbaselines.eu/>

Alecos Demetriades



In 2022 the Commission on Global Geochemical Baselines (CGGB) published the '[International Union of Geological Sciences Manual of Standard Methods for Establishing the Global Geochemical Reference Network](#)'. This manual provides a harmonised framework for building a Global Geochemical Reference Network, enabling the development of a compatible global geochemical database to document the

distribution of chemical elements in Earth's near-surface environment. In 2025, CGGB members actively promoted the manual through presentations at international conferences, webinars, and workshops (Fig.28). The manual was also displayed by the IUGS Secretariat at major events, including the EGU and AGU meetings. Additional publications and tutorials were released during the year.



Fig.28 Group photograph taken at the joint annual meeting of IUGS-CGGB, EGS-GEG and ASGMI-GEG (left by C. Zhang) and during the meeting (right by A. Demetriades).

1. Publications

Applied Geochemistry publication for university teachers and young researchers:

The chapter "*Applied Geochemistry –The How and Why*" by A. Demetriades (CGGB Chair), published in Volume 8 of the *Treatise on Geochemistry* (3rd edition, 2025) (<https://doi.org/10.1016/B978-0-323-99762-1.00004-8>), offers a practical framework for designing geochemical surveys based on established

international methods. It has been recognised for its clarity and usefulness, particularly for early-career professionals in mineral exploration and environmental studies.

A useful tutorial for making topographical maps with modern digital tools: In response to participants feedback from a three-day workshop at the 37th IGC in Busan, South Korea, CGGB initiated a series of practical tutorials aimed at university teachers and

applied geochemists. The first tutorial addresses challenges in regions lacking detailed topographic maps—an issue encountered during the Busan field training course (Fig.29): Demetriades, A., 2025. [Tutorial: Making Digital Topographical Maps](#). International Union of Geological Sciences, Commission on Global Geochemical Baselines, Tutorial Publication No. 1, 40 pp., 57 figures, [Supplementary material: https://doi.org/10.5281/zenodo.14453284](#).

Tutorial for plotting analytical precision charts: Thompson and Howarth’s graphical method for estimating analytical precision

remains widely used. Updated templates now include log-log and linear formats with control lines at key percentiles to assess precision at the 95% confidence level. The tutorial provides guidance on data preparation, plotting, and interpretation, supported by examples (Fig.29). Demetriades, A. and Argyraki, A., 2025. [Tutorial: Analytical Precision - Plotting Thompson and Howarth Charts](#). International Union of Geological Sciences, Commission on Global Geochemical Baselines, Tutorial Publication No. 2, 28 pp.; [https://doi.org/10.5281/zenodo.15557648](#). [Supplementary material.](#)

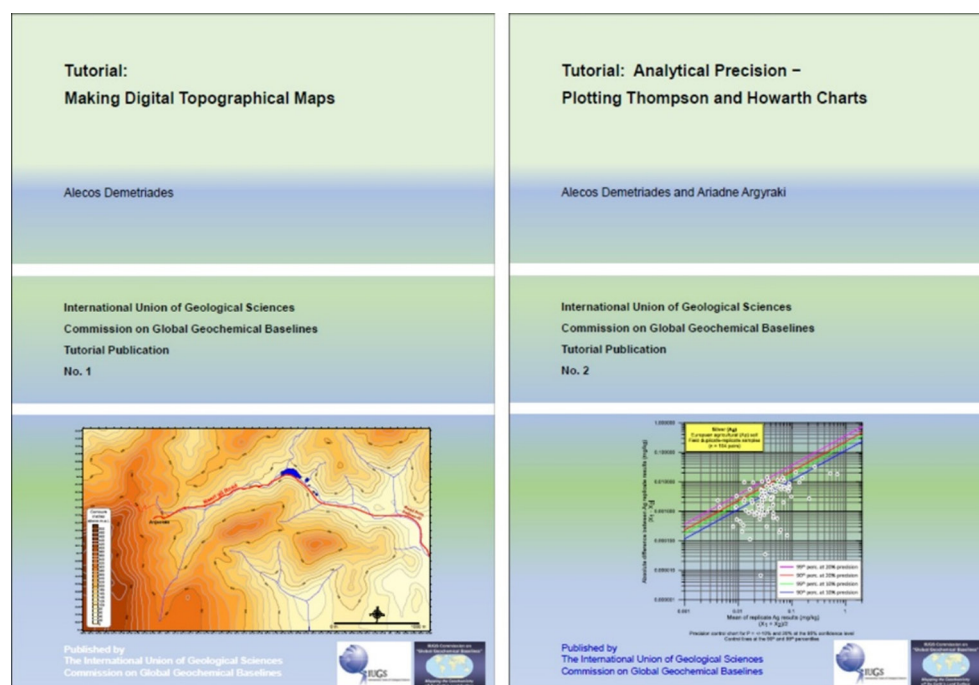


Fig.29 Front covers of the two CGGB tutorials published in 2025.

Article about the Commission’s Busan IGC workshop in EXPLORE: The article “Review of the workshop on global- to regional-scale geochemical mapping” was published in [EXPLORE No. 206](#) (p. 20–25), the newsletter of the [Association of Applied Geochemists](#). It reviews the three-day workshop “Global-to-Regional-Scale Geochemical Mapping” held from August 30 to September 1, 2024 during the 37th International Geological Congress (IGC) in

Busan, Republic of Korea.

2. Workshops

Workshop and session organisation at Goldschmidt 2025 (Prague, Czech Republic): CGGB organised a four-day workshop (July 2–5) titled “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". The programme included lectures, practical exercises (Fig.30a), and field training (Fig.30b), covering mapping methods, sampling strategies, quality control and map preparation. The workshop brought together 24 scientists from almost all continents and was hosted by the [Czech Geological Survey](#).

CGGB also organised the session "[05j-Multi-scale Geochemical Mapping for Mineral Resource Management](#)", highlighting geochemical mapping as a key tool for studying the Earth's surface. The keynote lecture, "[Systematic Phased Geochemical Mapping Surveys for Mineral Exploration](#)", was presented by Alecos Demetriades (CGGB Chair). The session, held on July 9, attracted around 50 participants.

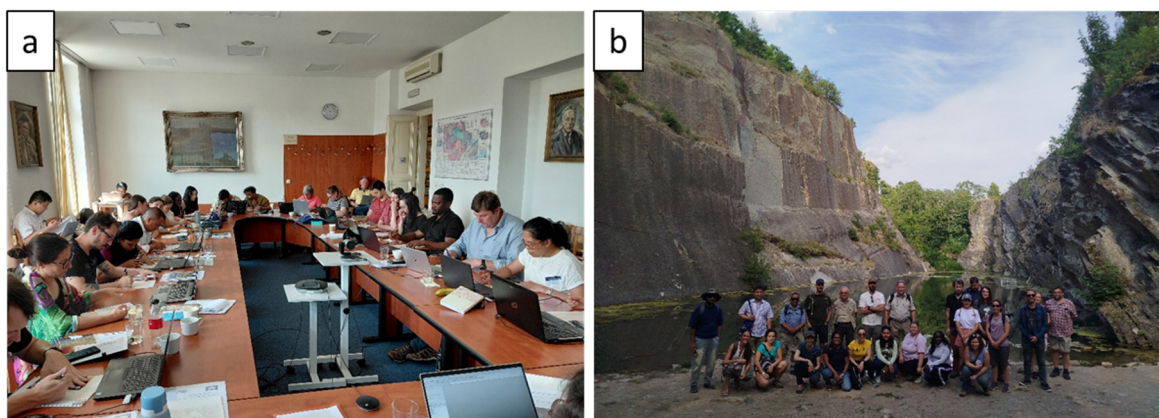


Fig.30a Workshop participants performing a hands-on exercise, and 30b: Workshop participants and tutors during the field training course. Goldschmidt 2025 (Prague, Czech Republic). Photographs by A. Demetriades (left) and Michal Pořávič (right).

Hands-on Field Workshop for MSc students studying at the University of Athens, Hellenic Republic: On February 22, 2025, eight MSc students participated in a field workshop led by the CGGB Chair and organised by Prof. Ariadne Argyraki – CGGB Public Relations Officer (Fig.31). Students were taught geochemical

sampling techniques for rock, soil, water, and sediments following the international standards of the [IUGS Manual of Standard Methods](#), with an emphasis on proper labeling and sample contamination prevention. The workshop effectively linked theory with practice.



Fig.31 (a and b): CGGB Chair, Alecos Demetriades, teaching the students during the field workshop, University of Athens, Hellenic Republic (Photographs by Ariadne Argyraki).

3. Participation in conferences and webinars

XIV Congresso Ibérico de Geoquímica (Azores, Portugal): From September 8–12, 2025, on São Miguel Island, Paula Adánez (CGGB Scientific Secretary) delivered an invited plenary lecture

titled “*Geochemistry without borders: keys to establishing a global reference network*”, highlighting efforts to develop harmonised global geochemical data (Fig.32).



Fig.32 Iberian Geochemistry Congress venue (left) and plenary lecture by Paula Adánez (right).

International Professional Geology Conference (IPGC) (Zaragoza, Spain): On November 5, 2025,, Iván Martín presented the IUGS Manual of Standard Methods.

on analytical methods, quality control and standard procedures.

Geochemical Information for Social Service, by ASGMI-GEG: The third webinar series, “*Generating Geochemical Information for Society: Sample Analysis*” (Fig.33), was held on November 12–13, 2025. It was coordinated by the Geological Survey of Ecuador, and gathered over 86 participants from Latin America, Spain, and Portugal. Presentations by [ASGMI-GEG](#), IUGS-CGGB and [EGS-GEG](#) members focused

4th International Student Conference on Medical Geology and Environmental Health: CGGB supported the South Asia edition (Fig.33) of this virtual conference, held from November 24 to 29, 2025, and coordinated by [Rashtrasant Tukadoji Maharaj Nagpur University](#) in India. The CGGB Chair delivered the workshop lecture “*Preparing manuscripts for publication in International Journals: Instructions for young researchers*”.



Fig.33 ASGMI webinar logo (left) and logos of the 4th International Student Conference on Medical Geology and Environmental Health and supporting organisations (right).

Podcast interview: Alecos Demetriades (CGGB Chair) participated in the [GeOChemISTea podcast](#), discussing the philosophy of the Global

Geochemical Reference Network, including harmonised sampling and quality control, under the title “*Geochemistry without Borders*”.

INTERNATIONAL COMMISSION ON GEOHERITAGE

Asier Hilario. Chair

www.iugs-geoheritage.org

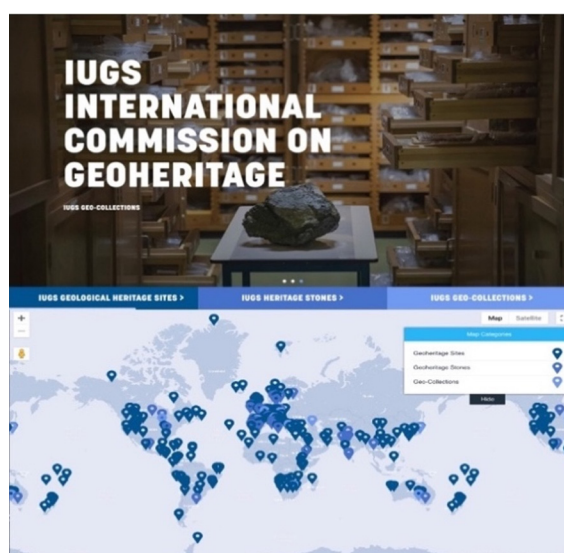
Asier Hilario
Chair



Introduction.

The IUGS International Commission on Geoheritage (ICG) was reformulated in 2020. During the last five years the IUGS ICG has become into a global reference in the field of Geoheritage with more than 1.500 collaborators from all over the world. Our website has received 290.000 visitors from over 190 nations since October 2022.

Our designation programs have been strongly consolidated in 2025. The Third 100 IUGS geological Heritage Sites, 14 new Heritage Stones and 21 the Geocollections have been designated.



The Third 100 IUGS Geological Heritage Sites

IUGS Sites initiative has become into a global reference for the recognition of key geological sites worldwide. “An IUGS Geological Heritage Site is a key place with extraordinary geological elements or processes of the highest scientific relevance, used as a global reference, and/or with a substantial contribution to the development of geological sciences through history.”

The process for the selection of the Third 100 started in February 2024. 20 international

THE THIRD
100
IUGS GEOLOGICAL
HERITAGE SITES

organizations representing all geological disciplines and 66 nations were contacted and invited to participate: 19 from Europe, 11 from America, 17 from Africa, 15 from Asia Pacific and 4 from Middle East. 145 candidates from 70 countries were received in June 2025. A total number of 720 evaluation were produced between September and November by a wide and committed group of 104 experts from 32 countries. In total, more than 500 experts from more than 50 countries have been involved in this global endeavour. After a detailed analysis of the evaluation files the final list of the Third 100 was created and ratified the 82th IUGS EC during in Bogota. 15 sites have been postponed for the Forth 100.

The list of the Third 100 is impressive. Iconic sites for geological sciences like Mount Fuji in Japan, the Fiords in Norway, San Andreas Fault in EEUU, Fitz Roy in Patagonia or the Fish Canion in Namibia have been selected together with many other sites that represent key advancements in the evolution and knowledge of our science. 6 sites related to Marine geology have been included for the first time in this collection.

The Third 100 together with the newly designated heritage stones and Geocollections will be announced in the IUGS Geoheritage Special event hosted by Algarvensis geopark in Portugal in November 4-8th.

More information about the Third 100 at: <https://iugs-geoheritage.org/the-third-100-evaluation-process-final-result/>

IUGS Heritage Stones

IUGS Heritage Stones connect the geological knowledge with our cultural and historical evolution. *An IUGS Heritage Stone is a natural stone that has been used in significant*

architecture and monuments globally recognized as integral aspects of human culture.

Between January and October 2025, a total of 17 proposals from 17 different countries were submitted to the Heritage Stone Subcommittee. These proposals were accordingly sent for review to five experts each, selected from a pool of distinguished voting members and subject specialists from leading universities and institutes. After the evaluation process 14 new Heritage Stones has been designated in 2025.

All the new files have been updated in our website. <https://iugs-geoheritage.org/designations-stones/>

In 2025 this subcommittee celebrated its biannual meeting with the 4th International IUGS Heritage Stone Workshop in Dublin. 40 experts from 10 different nations participated in this meeting consolidating the community of this growing initiative.

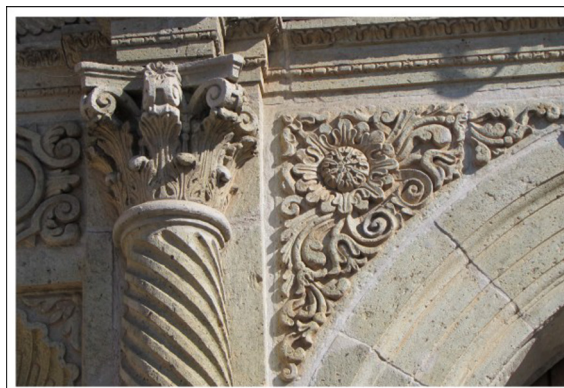


Fig.34 An intricate ornamental sculptural work of the Oaxaca Green Tuff. Column, capital, spandrel, and arch section from the Church of San Felipe Neri (18th century).

IUGS Geo-collections

IUGS Geo-collection program was approved in 2023 and rapidly created its first results with the announcement of the First 11 Geocollections in 2024. *An IUGS Geo-collection is a museum collection or part of a museum collection of global importance because of its particularly high*

scientific, historical or educational relevance for geological sciences.

This long-documented initiative has been consolidated in 2025 with the recognition of new 21 Geocollections. 39 proposals from 16 different countries were received. Each of the proposals has been evaluated by 5 experts. Iconic and spectacular collections like La Brea Tar pits in Los Angeles or special collections like Vienna Geosphere collection have been included in list of IUGS geo-collections.

All the new files have been updated in our website. <https://iugs-geoheritage.org/designations-geo-collections/>

The new IUGS Geocollections will be announced and presented during the IUGS Geoheritage Special event hosted by Algarvensis geopark in Portugal in November 4-8th.



Fig.35 The Rancho La Brea collection is the world's most abundant, comprehensive, and well-preserved record of terrestrial Pleistocene life.

IUGS desktop assessment for aspiring UNESCO Global Geoparks

The IUGS ICG provides the desktop assessment of the international significance of geological heritage in aspiring UNESCO Global Geoparks. 13 dossiers were evaluated by a group of 38 experts. The final dossier was handed to UNESCO by May 2025. This important contribution that the IUGS does to the development of UGGp program was presented during the UNESCO Geoparks Council in September 2025 during the X International Conference on UNESCO Geoparks In Kuttralkura, Chile.

www.iugs-geoheritage.org

Commission on Geoethics



**By Silvia Peppoloni
(Chair)**



The CG serves as the supporting body of the International Association for Promoting Geoethics (IAPG) within the IUGS, and is the official IUGS entity dedicated to geoethics and social geosciences.

The CG has a streamlined organizational structure consisting of a Governing Board, a Support Structure, and an Operational Structure composed of Task Groups addressing specific thematic areas.

Further information is available on the CG webpages: www.geoethics.org/iugs-cg

In 2025, the CG pursued the following main objectives:

- Drafting AI ethics recommendations for the geoscience community.
- Supporting the IUGS Presidency and Executive Committee on sensitive issues, including proposed courses of action.
- Co-organizing geoethics events at the EGU General Assembly 2025.
- Delivering geoethics presentations at numerous scientific meetings and congresses.
- Publishing books and advancing editorial initiatives in geoethics, including new proposals

and special journal issues.

- Promoting CG activities via www.geoethics.org, the IUGS E-Bulletin, and social media, enhancing IUGS visibility.

All these objectives were successfully achieved.

The most significant document released by CG in 2025 is the Artificial Intelligence (AI) Ethics Recommendations for the Geoscience Community drafted by the Task Group on AI in Geosciences (Fig.36). This document is the outcome of a highly specialized team of experts from diverse disciplinary backgrounds, including geoscientists, a legal scholar, and a philosopher. It was further reviewed by 16 scientists representing a wide range of international geoscience organizations.

To date, the document has been endorsed by thirteen geoscience organizations, including American Geosciences Institute, European Geosciences Union, Geological Society of Africa, European Federation of Geologists, EuroGeoSurveys, International Association of Geomorphologists, International Geoscience Education Organization, International Association for Engineering Geology and the Environment, Italian Geological Society,



and International Association for Promoting Geoethics.

The document addresses eight key topics:

- Responsible use of AI
- Transparency and explainability
- Bias and fairness
- Informed consent and data protection
- Participatory design and community engagement
- Environmental protection
- Integrity in science, publishing, and education
- Geopolitical considerations

Four reports were submitted to the IUGS Executive Committee addressing sensitive issues, including collaboration with the Russian community, the IUGS Nominating Committee, the Deep-Time Digital Earth initiative, and specific matters concerning the CG. These reports were not requested by the Executive Committee but were developed proactively by the CG, in recognition of its responsibility to provide ethical guidance and recommendations on such matters.

Two edited volumes were published, including one that compiles all contributions from the Geoethics session at the International Geological Congress in Busan (Fig.37): *Peppoloni S. and Di Capua G. (2025). Geoethics and Geosciences Serving Society: Reflections from the 37th International Geological Congress. SpringerBriefs in Geoethics.* <https://doi.org/10.1007/978-3-032-03754-1>

Five articles on various geoethics-related topics were published in scientific journals.

CG members also participated, in various roles, in 14 scientific events, often contributing invited talks and lectures on key and timely topics such

as climate change, geological hazards, artificial intelligence, mineral resources, and gender equality (Fig.38).

CG members served on several international advisory committees. Notably, the CG Chair was appointed Geoethics Adviser to the IUGS Initiative on Forensic Geology, highlighting the long-standing collaboration and mutual esteem between the two IUGS constituent groups.

In 2025, CG members delivered courses and training sessions (Fig.39) at EGU25 (Fig.40), for the Geological Society of London, and at various Italian universities.

Numerous interactions took place between the CG and other IUGS constituent groups, including co-organization of scientific events—such as the conference in Uganda led by the African Association of Women in Geosciences—and participation in scientific boards, including the International Advisory Committee of the upcoming International Geological Congress 2028 in Calgary.

The CG has kept the IUGS community informed through multiple channels, including its webpage on the IAPG website, the IUGS E-Bulletin, and active engagement on social media platforms such as Twitter/X, Facebook, and Bluesky.

Looking ahead to 2026, the CG has defined strategic objectives to strengthen the visibility and credibility of geoethics within the geoscience community, while supporting IUGS activities. Key actions include publications and educational initiatives.

The Commission has outlined a concrete work plan, including new documents—such as the ongoing Recommendations for the Use of

“Openness” Terminology in Geoscience AI—as well as courses, outreach activities, webinars, and participation in conferences and scientific boards.

In May 2026, the Commission will organize a session, a course, and a Great Debate at the EGU congress, and in June it will contribute to an AI-focused workshop at the Geological Society of London.

Several publications are in preparation for 2026, including a volume on Geoethics and

Social Geosciences in Africa, an introductory book on geoethics, a chapter on geoethics in paleontology, and additional accepted articles.

Finally, the CG will continue contributing to the International Geoethics Research Infrastructure (IGRI), in collaboration with IAPG and the CIPSH Chair on Geoethics. IGRI aims to build an international research network fostering dialogue on global ethics grounded in geoethics and strengthening links between geosciences and the humanities.

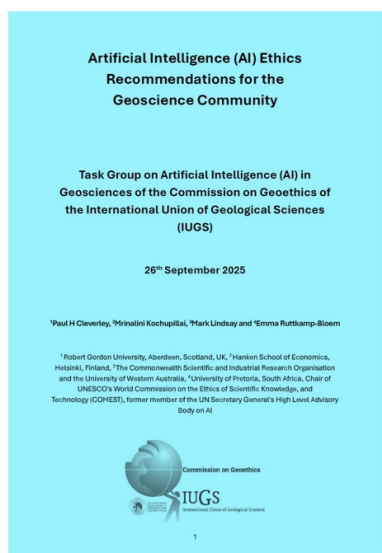


Fig.36 Cover of the AI Ethics Recommendations for the Geoscience Community with endorsing organizations.

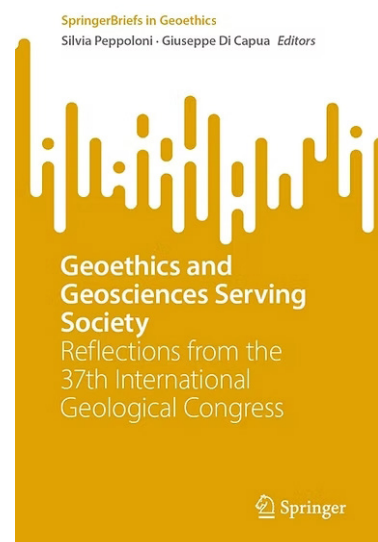


Fig.37 Cover of the volume in the SpringerBriefs in Geoethics series, featuring contributions from the geoethics session at the 37th IGC in Busan.

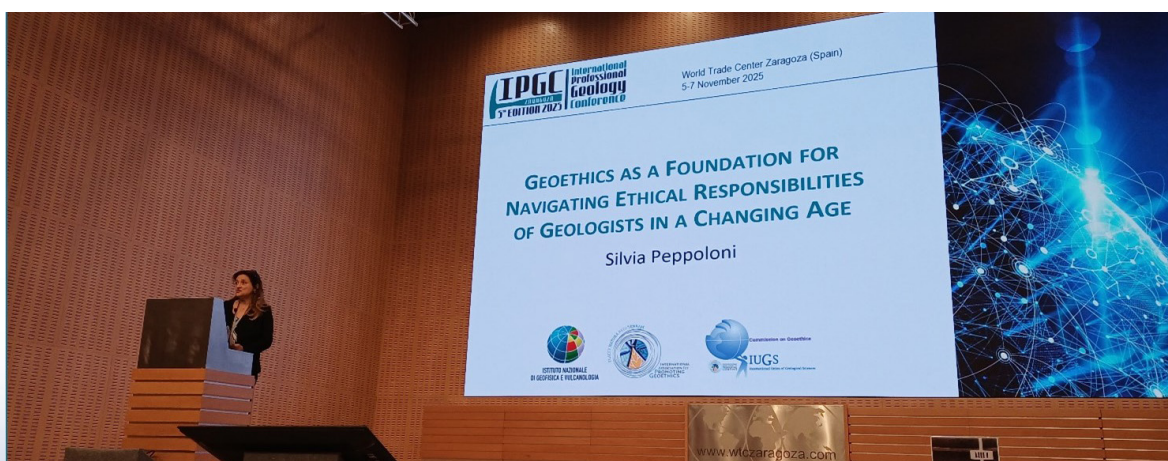


Fig.38 Silvia Peppoloni (CG Chair) delivered a keynote speech at the 5th International Professional Geology Conference (IPGC), held in Zaragoza, Spain, in November 2025.



Fig.39 Short Course on Geoethics at EGU25, held in Vienna, Austria, in April-May 2025..



Fig.40 Session on Geoethics at EGU25, held in Vienna, Austria, in April-May 2025.

International Union of Geological Sciences Task Group on Submarine Geohazards (TGSG)

Kiichiro Kawamura (Yamaguchi University) and TGSG members

<https://iugs-tgsg.com>



Kiichiro Kawamura
(Yamaguchi University)

The Task Group on Submarine Geohazards is working to solve the problem of submarine geohazards occurring around the world. Submarine geohazards are diverse and include volcanic eruptions, earthquakes, tsunamis, submarine liquefaction, submarine creep, submarine landslides, turbidity currents, shallow gas eruptions, mud volcanoes, and submarine landslides and tsunamis, as well as sediment instability such as erosion and erosion around mobile seabed topography and marine/offshore structures.

The Task Group on Submarine Geohazards (TGSG) addresses the full spectrum of such submarine geohazards that affect people's lives and critical infrastructure. Offshore renewable energy systems are rapidly developing to meet the global need for sustainable development. Fiber optic cables, submarine power cables, and submarine pipelines are laid in many locations on the seabed, and their strategic and economic importance has increased dramatically in recent years. However, these marine and offshore infrastructures are exposed to the chain reactions of complex geohazards such as landslides, tsunamis, earthquakes, and volcanic eruptions. Because submarine geohazards occur widely around the world, they have become a globally important and urgent

issue that must be addressed more effectively in the face of global climate change.

In particular, the global development of offshore renewable energy systems faces new challenges. Developing offshore renewable energy in diverse geological environments, including narrow continental shelves, subduction zones, and steep seabed topography, requires risk management and the development of submarine geohazards mitigation strategies. This necessitates the advancement and integration of interdisciplinary research in marine geology, oceanography, and physical processes. To this end, TGSG collaborates with the offshore renewable energy and submarine cable industries to identify and address critical knowledge gaps. Furthermore, TGSG aims to provide a global mapping of submarine geological hazard risks and develop guidelines for assessing various submarine geohazard risks related to new energy transitions. The targeted actions include (1) case studies of submarine geological hazards, (2) archiving of offshore geological and geophysical data, (3) guidelines for submarine geological and geophysical surveys, (4) submarine geological hazard risk assessment, and (5) provision of international capacity building and knowledge exchange. We aim to jointly address these

challenges through collaborative activities within this international framework in the Asia-Oceania, Europe-Africa, and North and South America regions.

To achieve the above goals, in FY2025, we actively exchanged views at several academic conferences including JpGU, ISC, and CCOP (Photo 1), as well as with various countries including Egypt, Taiwan, the Philippines, Thailand, Laos, and East Timor (Photo 2). We also played major roles in the interactions with the relevant leading international organizations, such as UNESCO, ICL, and ISSMGE, across North America, Europe, Asia, South America, and Africa (Photos 3-6). Furthermore, to vigorously promote international capacity building and knowledge exchange, we have launched international lectures on submarine geohazards targeting Southeast Asia, East Asia,

and Oceania time zones. In 2026, the Science Council of Japan is scheduled to publish a “Submarine Geohazard Risks Assessment, Prediction and Countermeasure Guideline for Sustainable Offshore Wind Development in Active Margin Areas” in Japanese that will form the basis of the international guidelines. Following this, international guidelines as applicable to passive margins as well will be created through the across-margin discussions within TGSG. Also in 2026, the TGSG Special Issue on “Submarine Geohazards and Their Risks”, covering a broad range of submarine geohazards, from earthquakes to liquefaction, coastal and submarine landslides, tsunamis, turbidity currents, sand wave migration, and scour and erosion at/around offshore structures, with the authors from America, Europe, Asia, and Oceania, will be published in the IUGS journal, *Episodes*.



Fig.41 Thematic session at CCOP, 3-6 November 2025, Vientiane, Laos. Kiichiro Kawamura (TGSG Chair) and Shinji Sassa (TGSG Vice-Chair) were Keynote Speakers and Yasukuni Okubo (TGSG Secretary General) was the Thematic Session Chair at CCOP, November 2025.



Fig.42 Research meeting at The National Authority for Remote Sensing and Space Sciences, Cairo, Egypt.



Fig.43 UNESCO Chairs Programme- 2nd International Conference on Smart Informatics and Multi-hazard Reduction (SIMR2025), 12-14 September 2025, Chengdu, China.
Shinji Sassa made an Opening Address and Keynote Lecture, September 2025.



Fig.44 12th International Conference on Scour and Erosion (ICSE-12) in Chongqing, China on 4-7 November 2025. Shinji Sassa is the Chair of the ISSMGE Technical Committee on Scour and Erosion that has been organizing the ICSE Conference Series worldwide. The ICSE-12 Conference Proceedings edited by Shinji Sassa is available at [Online Library | ISSMGE](#).
Shinji Sassa made an Opening Address and Opening Keynote Lecture, November 2025.



Fig.45 2 UNESCO International Conference on Landslide Disaster Risk Reduction, 2 December 2025, UNESCO Headquarters, Paris, France.
Shinji Sassa was a Lead Panelist across North/South America, Europe, Asia, and Africa.



Fig.46 IUGS has been KLC2020 Official Promoter for Global Promotion of Understanding and Reducing Landslide Disaster Risk and contributed to the publication of the ICL Open Access Book Series "Progress in Landslide Research and Technology" Volume 4, Issue 1: [Progress in Landslide Research and Technology, Volume 4 Issue 1, 2025 | SpringerLink](#).
Shinji Sassa is Series Editor for Progress in Landslide Research and Technology.

IGCP 2025 ANNUAL REPORT SUMMARY

Ozlem Adiyaman Lopes



Geoscience for all: IGCP's 2025 year in review

The International Geoscience Programme (IGCP), jointly run by UNESCO and the International Union of Geological Sciences (IUGS) since 1972, has released its 2025 Annual Report, documenting a landmark year for the programme. The full report is available online at <https://unesdoc.unesco.org/ark:/48223/pf0000397788>.

A record year for reach and resources

In 2025, IGCP supported 35 active projects across its six thematic areas; Earth Resources, Global Change and the Evolution of Life, Geohazards, Hydrogeology, Geodynamics, and Geoheritage for Sustainable Development, with 18 projects receiving direct funding. The programme achieved its highest annual budget in over a decade: USD 300,022, more than double the USD 141,800 available in 2016. This was made possible through increased contributions from both IUGS (USD 161,522) and UNESCO (USD 138,500, including USD 20,000 from the People's Republic of China).

The programme engaged 121 member states in project delivery, the highest country-level figure in IGCP's history. More than 2,100 people participated in over 70 meetings, workshops, training schools, and field activities, of which more than 80% were delivered in the field,

spanning all inhabited continents. Sixty percent of participants came from developing countries, 60% were under 35, and 40% were women. Over 250 students and early-career researchers received direct support through travel grants, thesis supervision, and funded placements. Critically, the programme's catalytic role is illustrated by the fact that an initial UNESCO/IUGS investment of USD 153,500 (excluding the Africa call) leveraged more than USD 1 million in additional funding from national governments, universities, and research bodies.

The Africa Call: a historic investment

The defining development of 2025 was the launch of IGCP's first-ever dedicated Special Call for geoscience in Africa, backed by up to USD 150,000 made possible through IUGS financial support. The response exceeded all expectations: 313 Expressions of Interest were received from researchers in 45 African countries, representing over 1,000 researchers through collaborative project teams across all six IGCP themes. The top countries by researcher affiliation were Nigeria, South Africa, Ghana, Ethiopia, and Kenya. Earth Resources and Hydrogeology were the most represented thematic areas.

Following a rigorous evaluation process, three projects were selected for funding: IGCP 774: Metallogenic Evolution of the West Congo



Belt (South Africa, Democratic Republic of Congo, Republic of Congo, Angola), applying modern structural geology and geochemistry to understand the mineral wealth of the Neoproterozoic West Congo Belt; IGCP 776: Machine Learning for Sustainable Groundwater Management under Climate Stress (Egypt, Sudan, Cameroon, Libya), developing AI-driven tools to manage critical transboundary aquifer systems; and IGCP 777: Climate Change Impacts on Groundwater in the Dahomey Basin (Nigeria, Ghana, Togo, Benin), assessing how climate change is affecting the transboundary freshwater system that serves millions of people across West Africa.

The quality of proposals received far exceeded available funding. UNESCO is actively seeking additional resources to support unfunded proposals, and is developing targeted proposal-writing training for the large community of African researchers engaged through the call.

Project highlights

IGCP 722 (Development Minerals) expanded its Mineral Security Masterclass beyond the Pacific for the first time, delivering a placement in Malawi in collaboration with the Malawi Mining Investment Company and the Korean Institute of Geoscience and Mineral Resources, bringing together early-career geoscientists from Malawi, Mozambique, Tanzania, Zambia, and Zimbabwe. IGCP 636 (Geothermal Resources for Energy Transition) secured a major research grant of approximately USD 730,000 from the Colombian Ministry of Science and Technology, an exceptional example of the additional funding IGCP projects can catalyse.

IGCP 767 (E-DOOR: Environmental Dynamics of Western Rwanda) produced significant cross-

disciplinary outputs in volcanology, limnology, and soil science, and directly supported the doctoral training of two Rwandan researchers, including one female scientist, at the East African Institute for Fundamental Research (EAIFR).

IGCP 735 (Rocks and the Rise of Ordovician Life) provided travel grants to female scientists, young researchers, and scientists from developing countries, while a co-leader publication in an open-access journal documented the global pattern of parachute science in palaeontology, a powerful contribution to the equity agenda in geosciences.

Looking ahead

The programme's regional focus will shift to Latin America and the Caribbean in 2026, with a new dedicated call carrying a budget of USD 150,000. Researchers from institutions across the LAC region are encouraged to prepare proposals, while geoscientists from the Global North and from other regions are invited to engage with existing projects as collaborators and co-investigators. The IGCP model is built on partnership, and every Special Call strengthens a global network committed to using Earth science for sustainable development.

For more information and to explore the full project list, visit www.unesco.org/en/iggp or contact the IGCP Secretariat at iggp@unesco.org



Fig.47 IGCP funding was used to support early-career female researchers from developing countries in attending the International Field Workshop of CCVG in Japan. © IGCP 705



Fig.48 Supervision provided to an MSc student as part of project IGCP 774 © Dr. Yann Mpaka Waku / IGCP Project activities (2025 field season)



Fig.49 Malawi Course Participants ©IGCP 722



Fig.50 IGCP767: Group Photo of the E-Door Conference in Kigali, jointly organised by UNESCO IGCP © Philbert Ntivuguruzwa





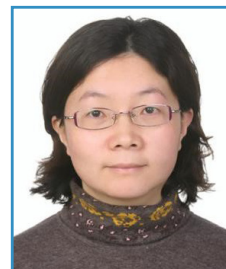
INTERNATIONAL LITHOSPHERE PROGRAM



Hans Thybo
President



Mian Liu
Secretary General
(until Sep., 2025)



Qin Wang
Executive Secretary
Interim Secretary General
(since Sep. 2025)

International Lithosphere Program (ILP)

The lithosphere forms the connection between deep Earth and the surface. This basic observation was the background for International Union of Scientific Unions (ICSU - today ISC) to form ILP in 1980 charged to:

- promote interdisciplinary research on the lithosphere
- at the interface between IUGS and IUGG
- through multidisciplinary research projects

ILP's activities build on the understanding that major breakthroughs in the study of the Lithosphere require integration of imaging, monitoring, reconstruction and process modelling. ILP seeks to achieve a fine balance between "addressing societal needs", e.g. understanding natural catastrophes and other solid earth processes that affect the biosphere, providing information for improved resource exploration and environmental protection; and "satisfying scientific curiosity" to promote high-level fundamental research.

ILP is financed through national contributions

from member countries and annual contributions from IUGS and IUGG. Nanjing University complimentary runs the secretariat.

ILP is a bottom-up organisation that takes initiatives to bring together individuals and organisations in Task Forces and Regional Coordinating Committees, selected solely on the basis of scientific quality and societal needs. Key features of the projects are their dynamic nature and focus on bringing in new talent. Task forces exist for a period of five years, which may be extended for one term after successful review. The task forces are organised within four thematic subjects:

- Geoscience of Global Change
- Contemporary Dynamics and Deep Processes
- Continental Lithosphere
- Oceanic Lithosphere

Several major successful international research programmes have grown from ILP projects, and many continue as high-level organisations outside ILP, including International Continental Drilling Program (ICDP), Global Seismic Hazard Map, World Stress Map, Global Geoscience

Transects and regional committees, such as EGT, EUROPROBE, TOPOEUROPE, TOPOASIA.

The activities in 2025 show that the Task Forces/Coordinating Committees again are in full activity; they held several in-person meetings as separate workshops and as symposia at international conferences, in particular EGU25 and AGU25. ILP organized a special session at IAGA-IASPEI Joint Scientific Meeting in Lisbon: “45 Years of Milestones in Lithosphere and Solid Earth Research with ILP”. In addition, ILP organized a special session “International Lithosphere Program: Progress and Opportunities” at Annual Meeting of Chinese Geoscience Union (CGU), which is the largest conference in geosciences in China with over 4000 attendants.

The business meeting was held in Vienna on April 29 2025 with short presentations on the achievements of the ongoing projects, introduction to IUGS and IUGG, and discussion of ILP’s strategic plan. The Evgenyi Burov medal was awarded to Prof. Laetitia Le Pourhiet, Sorbonne Université, France for “her contributions to our understanding of the links between the geological record and lithospheric and mantle dynamics, as well as exemplary dedication to supporting the geodynamics community”. The Flinn-Hart Award to an early career scientist was given to Dr. Yibo Wang, Institute of Geology and Geophysics, Chinese Academy of Sciences, China for “his contributions to the study of heat flow and lithospheric thermal structure”. Dr. Yibo Wang gave a presentation with overview of his scientific achievements at the ILP session during the IAGA-IASPEI Joint Scientific Meeting in Lisbon.

ILP has a very active and fruitful year in 2025. Among 13 active projects, 7 Task Forces (TF) and 4 Coordinating Committees (CC) accomplished their projects in 2025. The projects include researchers from all continents and represent a broad coverage of lithosphere research. In addition, inspired by the ILP Coordinating Committee TOPO-EUROPE, international workshops on TOPO-Asia and TOPO-Arabia were successfully held in Shanghai (China) and Riyadh (Saudi Arabia), respectively. This demonstrates the global relevance and exportability of TOPO-EUROPE as a model for integrated lithosphere–surface process research.

ILP received 7 new proposals in 2025. After careful evaluation of the Advisory Group and the Bureau members, 3 Task Forces and one Coordinating Committee were approved. These projects include renewal of successful ILP projects with a new team and different topics, such as “Volcanotectonic processes and new technologies”, “Global pore pressure data – A new addition to the World Stress Map Project”, “Sedimentary Basins”, and a new project to expand the ILP themes “TOPO-ASIA: 4D Topography Evolution in Asia — From Deep Earth to Surface”. We are particular glad to see an increasing number of early career scientists in ILP projects.



Fig.51 The Evgenii Burov Medal for 2025 was awarded to Prof. Laetitia Le Pourhiet for “her contributions to our understanding of the links between the geological record and lithospheric and mantle dynamics, as well as exemplary dedication to supporting the geodynamics community”.



Fig.52 Dr. Yibo Wang (left) received the Flinn-Hart Award from Prof. Hans Thybo (right) at the ILP session during the IAGA-IASPEI Joint Scientific Meeting in Lisbon.



Fig.53 Participants in the opening ceremony (upper) and field trip (lower) in 19th 2025 ILP Task Force Sedimentary Basins Workshop in Riyadh, Saudi Arabia, 1- 5 December 2025. The workshop was a success with ~200 participants, mobilizing key academia and industry participants from many countries across the Arabian Peninsula and numerous other international participants.

太古宙构造样式：约束与推断学术研讨会

2025年5月17日 湖北·武汉



Fig.54 Participants in the Workshop of Archean Tectonic Patterns in May 17-18, 2025, in Wuhan (China), which was organized by ILP Task Force 2023-TF1 "Formation, character, history, and behavior of Earth's oldest lithospheres"

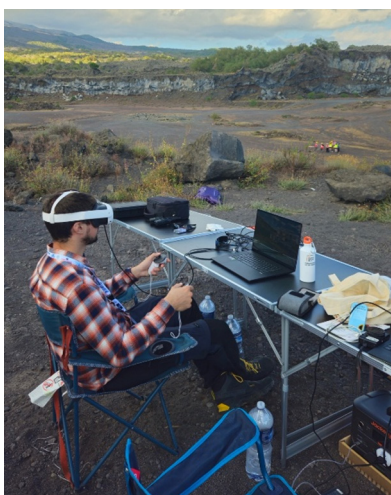


Fig.55 Supported by the ILP Task Force 2021-TF2, "International School on Drone and VR for Volcano-Tectonic Studies at Etna" was held in 29 September - 3 October 2025, Italy. This workshop shows how to study deformation and magmatic processes from the lithosphere to the surface using integrated multidisciplinary approaches.

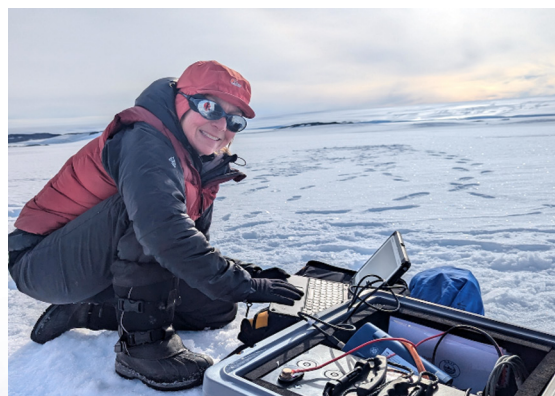


Fig.56 Left: Maria (Coti) Manassero (magnetotelluric station field leader, left) explains how to optimize an MT station electrode installation to Niam Askey-Doran (PhD student, right). Training a growing cohort of researchers in geophysics field skills is an important component of Antarctic activities. Credit: Anya Reading.
Right: Anya Reading (Coordinating Committee 2021-CC5 Project Leader) downloads seismic data from a site near the Browning Peninsula, East Antarctica, adjacent to the fast-changing Vanderford Glacier. Credit: Arno Payan (Field Guide).



Fig.57 Participants at 4D Topographic Evolution in Asia: Connecting Deep-Earth Geodynamics to Surface Processes, Oct. 19-24, 2025, Shanghai, China. This workshop attracted over 250 participants from nearly 30 countries, which established an international and inter-disciplinary community to advance research on Asia's deep Earth and tectonic evolution. The CC proposal of TopoAsia was approved by ILP in January 2026.



INITIATIVE ON FORENSIC GEOLOGY (IFG)



Dr Laurance John Donnelly
Founder & Chair

IUGS-IFG celebrated its 15th anniversary, following its establishment by Dr Laurance Donnelly, five years after he set up of the Geological Society of London Forensic Geoscience. At an event in Rome, the Raymond Murray Award was presented to several forensic geologists in recognition of outstanding international contributions to forensic geology. A video compilation was shown that captured IUGS-IFG global advancements and achievements in forensic geology.

Crime scene examination and geological trace evidence collaborations included the Government of China, Ministry of Public Security, Institute of Forensic Science and China Police Forensic Laboratory; the Institute for Soil, Climate and Water, Pretoria, South Africa; the Brazilian Federal Police and the Brazilian National Institute of Criminalistics.

The search for homicide graves and burials related to cartels and serious and organised crime included cooperation with the British police and military, at the UK College of Policing, Police National Search Centre. Searches continued in Latin America to locate graves of the 'disappeared' associated with

past political remiges or drug cartels. The incorporation of the Ibero-American Network of Forensic Researchers was considered. IUGS-IFG supported a project with the FBI laboratory on geophysical methods applied in criminal investigations. Search training was given at the European Association of Geoscientists and Engineers, Near Surface Geophysics conference, Naples, Italy and 13th European Meeting on Forensic Archaeology: Conflict Archaeology & Victim Identification, Netherlands. Search training was provided on the use of geophysics to locate burials for the Italian Environmental Police, Polizia and Carabinieri, and for the Commonwealth War Graves Commission. IUGS-IFG was involved in a search where Assad's Government, Syria, secretly moved thousands of bodies from a mass grave site in Qutayfah to a hidden site in Dhumair.

Dr Laurance Donnelly continued to work with INTERPOL at their headquarters in Lyon, France, with a focus on illegal gold and illegal sand mining. Including an illegal mining and illicit minerals trafficking workshop in Vietnam with the Vietnam Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and



Consumer Protection and the International Climate Initiative (ICI). Other illegal mining and illicit minerals trafficking events included attendance at the Asian Forensic Science Network, Trace Evidence Working Group Symposium; the Brazilian Federal Police Clean Gold Programme and UNODC and INTERPOL event in Peru. The IUGS-IFG Special Project on Illegal Mining and Illicit Minerals was concluded, publication is expected in 2026. A summary was provided on how the international work conducted by IUGS-IFG, on illegal mining and the trafficking of illicit minerals, aligns with the UN Sustainability Development goals.

Publications included support for the OSAC 2025-S-0011, Standard Practice for Polarized Light Microscopy in the Forensic Examination and Comparison of Soils and OSAC 2024-S-0012, Standard Practice for the Forensic Analysis of Geological Materials by Scanning Electron Microscopy and Energy Dispersive X-Ray Spectrometry. An IUGS-IFG paper was named as one of the most read in the Geological Society of London, Special Publications. A paper co-authored by two IUGS-IFG members was cited in a publication by the UNODC. Several other papers and operational cases were published including a cold case child homicide and illegal gold mining in the Yanomami Indigenous Land, Brazil. There were two podcasts in a series called Listening to the Dead, available on Spotify and Apple Podcasts. Social media, TV documentary producers and Netflix projects also initiated.

Conferences included INTERFORENSCIS 2025, Brazil; 16th Chilean Geological Congress and 6th Ibero-American Seminar on Forensic Geosciences, Santiago, Chile; ENFSI Animal Plant and Soil Trace Working Group, Pecs, Hungary; European Association of Forensic

Science, Dublin, Ireland; 18th International Clay Conference, Dublin, Ireland; 41st International Conference on Environmental Geochemistry and Health, Ljubljana, Slovenia; IUGS-IFG and IUGS-INHIGEO conference, Rome, Italy; Status of Geoscience Information in Africa Workshop, Queen's University Belfast, Northern Ireland and 11th Meggen Raw Material Days, Germany.

IUGS-IFG developed an environmental forensic capability and assigned an expert from the Nazionale di Geofisica e Vulcanologia, Rome, Italy. A simulated forensic test was used for the deployment of non-invasive geophysical methods mounted on a drone for the detection and location of buried waste.

IUGS-IFG raised awareness of multi-million-dollar illegal, fakes and fraud fossils. A landmark initiative progressed to harmonise and operationalise global protocols for the investigation, protection, and regulation of palaeontological heritage. IUGS-IFG was represented at the Society of Vertebrate Palaeontology, which has more than 2,000 active members worldwide.

Science festivals and public events were organised to support early-career students. The IUGS-IFG Student Chapter in Latin America was expanded. Strategic guidance was provided for the IUGS Young Reporters Initiative. Learning and development was given for the MSc in Human Taphonomy, University of Lausanne, Switzerland. PhD research support was given for the environmental impact of mercury contamination at artisanal and small-scale gold mining sites in the vicinity of the Palito Gold Mine, Pará State, Brazil. IUGS-IFG hosted a six-month PhD placement on soil forensics for student from Sao Paulo, Brazil.



| le savoir vivant |

Investigating
the «after death»

Fig.58 'Investigating the After Death', IUGS-IFG provided a course on forensic geology for an MSc in Human Taphonomy (source: University of Lausanne, Switzerland).

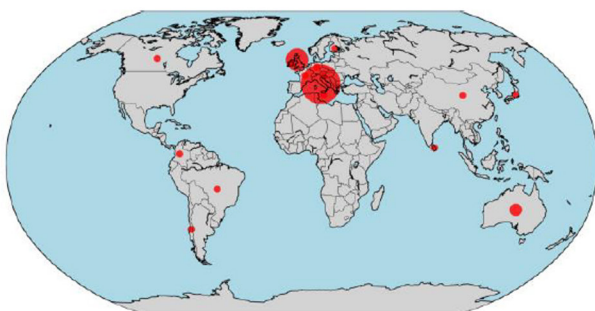


Fig.59 The Raymond Murray Award, presented to forensic geologists in recognition of outstanding international contributions to forensic geology (upper) (source, Dr Laurance Donnelly). Map showing the origin of delegates that attended the IUGS-IFG and IUGS-INHIGEO joint conference and 15 years IUGS-IFG anniversary celebration in Rome, with the dimension of the red dot being proportional to the number of people coming from that country (lower left). Photograph of selected delegates and members of the IUGS-IFG committee (lower right) (source, Dr Pier Matteo Barone).

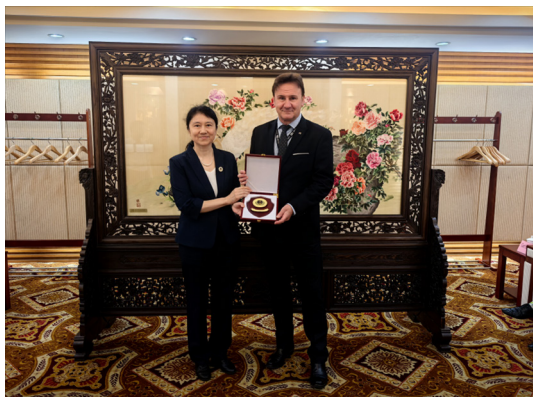


Fig.60 Dr Laurance Donnelly presented with recognition from the China Ministry of Public Security, Institute of Forensic Science, (left). Delegates at the 2025 AFSN Trace Evidence Working Group Symposium (right) (source, Dr Laurance Donnelly and Dr Guo Hongling).

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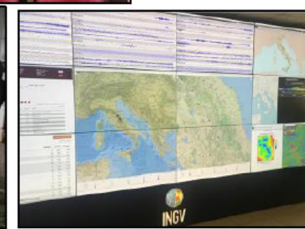


Fig.61 IUGS-IFG and INGV training event on environmental geophysics, showing photograph of delegates (upper), explanation of the use of a UAV for environmental geophysics (far left), Prof Dawson, Dr Donnelly and Dr Ruffell in front of a magnetometer mounted onto a drone (centre left), the INGV simulated burial site (centre right) and the Italian national seismological and volcanology central command and monitoring centre (source, Dr Laurance Donnelly).



Fig.62 Prof Matteo Barone, Prof Alastair Ruffell, and Captain Geert at the 13th EMFA, Dumoulin Barracks, Amsterdam, Netherlands (source, Alastair Ruffell).