



International Union of Geological Sciences (IUGS), Initiative on Forensic Geology (IFG)

Monthly Update and Information for IUGS E-Bulletin, December 2025

Paper Cited in UNODC Report

A paper published by Laurance Donnelly and Duncan Pirrie on 'Crimes Associated with Geological Materials: Mining, Minerals, Metals and Fossils' published in 'Geology Today', Volume 40(4), July 2024, has been cited in a UNODC publication on 'Minerals Crime: Illegal Gold Mining'.

<https://onlinelibrary.wiley.com/doi/10.1111/gto.12487#:~:text=Generally%2C%20the%20crimes%20include%20illegal,land%2C%20air%20and%20water>

https://www.unodc.org/documents/data-and-analysis/Crimes%20on%20Environment/ECR25_P2b_Minerals_Crime.pdf

BBC YouTube Report on Illegal Sand Extraction,

A BBC report on YouTube provides details of the billions of dollars made by illegal sand extraction and the associated environmental impacts. IUGS-IFG in association with the British Geological Survey (BGS) and the Geological Society of London Forensic Geoscience Group (GSL-FGG), will hold a one day conference on illegal sand mining, at GSL headquarters, London, on 18 March 2026.

<https://www.youtube.com/watch?v=2ASGA9IBJTY>

<https://www.geolsoc.org.uk/events/the-global-challenge-of-sand-mining-international-conference/>



BBC World Service Report on Illegal Sand Mining (left) and IUGS-IFG, BGS and GSL-FGG one day conference on illegal sand mining, 18 March 2026 (right)

Brazilian Federal Police, Illicit Gold and Traceability

On 2-5 December 2025, the BFP organised a seminar on illicit gold and traceability, with a focus on the Yanomami Land in the Amazon. This also aligns with project in Europe and South African on minerals and gold traceability, an t he IUGS-IFG Special Project on mining crime.

Fabio Salvador, IUGS-IFG Officer for Latin America, salvador.fass@pf.gov.br

Laurance donnelly, IUGS-IFG Chair, laurance.donnelly@ahkgroup.com | geologist@hotmail.co.uk

2nd International Seminar on illicit activities and traceability in the gold

December 2nd to 5th, 2025

9:00 am - 6:00 pm

Authorities and experts gathered to exchange experiences with neighboring countries, launch new tools, and hold strategic discussions on gold traceability.

Organized by

Scientific Technical Directorate (DITEC/PF)
Directorate of the Amazon and Environment (DAMAZ/PF)

Session on Forensic Geology Accepted by the Japan Geoscience Union (JpGU)

Forensic geology has been accepted as a session at the 2026 joint meeting of the Japan Geoscience Union (JpGU) and the American Geophysical Union (AGU), in collaboration with the Geological Society of Japan (JGS), Society of Geomagnetism and Earth, Planetary and Space Sciences, (SGEPSS) and the Japanese Society of Geo-pollution Science, Medical Geology and Urban Geology PMUG. Submission of abstracts will open on 15th January 2026, at 14:00 (Japan time), and close on 17 February at 17:00.

https://www.jpгу.org/meeting_e2026/

Ritsuko Sugita, National Research Institute of Police Science sugita@nrrips.go.jp

Noriko Kawamura, Japan Coast Guard, kawamura-noriko@jcgga.ac.jp

Libby Stern, FBI Lab, lstern@fbi.gov

Laurance Donnelly, IUGS-IFG Chair, laurance.donnelly@ahkgroup.com | geologist@hotmail.co.uk

Molecular Tracking for Commodities

At the 13th Annual Precious Metals Conference, Dubai's Multi Commodities Centre, revealed a molecular identifications system for traceability. Developed by SMX, this embeds chemical markers into metals and minerals that survive melting, refining and transport, providing an alternative to traditional paper-based verification.

<https://finance.yahoo.com/news/smx-technology-driving-dubai-precious-170000213.html?guccounter=1>

<https://www.morningstar.com/news/accesswire/1112743msn/the-smx-technology-driving-dubais-precious-metals-proof-based-takeover>

82nd Annual IUGS Executive Committee Meeting, Colombia

Laurance Donnelly has been invited to attend the 82nd IUGS EC meeting in Bogota, Colombia, 24-25 January 2026. He will present; the IUGS-IFG annual report for 2025; a summary of the IUGS-IFG accounts and expenditure; a proposal for a session on forensic geology at the 38th International Geological Congress (IGC) in Alberta, Canada in 2028; an update on the IUGS-IFG Special Project on mining crime and illicit minerals trading; a 2026 work plan and budgetary request. Any items to be raised with the EC should be sent directly to Laurance before 20 January 2026.