



International Union of Geological Sciences (IUGS), Initiative on Forensic Geology (IFG) Monthly Update and Information for IUGS E-Bulletin, October 2024

IUGS-IFG Special Project on Illegal Mining, Minerals and Metals Crimes

The IUGS-IFG Special Project is making significant progress. We are working steadily to complete each chapter. This has to be submitted to the new IUGS President, Secretary General and Executive Committee during the next IUGS meeting in the early new year. The papers will then be submitted to *'Episodes'* (Journal of the International Union of Geological Sciences) for the publication of a themed issue in 2025. The revised papers/chapters are as follows:

1. Illegal and criminal activity in the global minerals industry; an introduction
2. Organised Crime, Minerals, Mining and Law Enforcement: Underworld v Upperworld
3. Global gold; identifying the scale of illegal mining and gold trading
4. Critical Raw Materials; challenges for supply and demand (PGM, Cu and Ni are included as CRMs)
5. Conflict minerals: Responsible sourcing through the minerals supply chain
6. Illegal sand mining and its environmental impact
7. The Illegal Trade in Fossils

If you would like to contribute to any of the above, and you are not currently an active co-author, please contact the projects leads; laurance.donnelly@ahkgroup.com or geologist@hotmail.co.uk and dpirrie@helfordgeoscience.co.uk

IUGS-IFG Annual Report for 2024

The IUGS-IFG Annual Report for 2024 will be submitted to the IUGS President and Secretary General at the start of 2025. This will include a summary of IUGS-IFG's main events and achievements in 2024, a summary of our accounts and a budgetary request for 2025. If you would like to include any information in this report, or if you have a specific request for funding in 2025, this should be submitted to laurance.donnelly@ahkgroup.com or geologist@hotmail.co.uk before 20 December 2024. A draft will be circulated for review before submission to IUGS.

IUGS Social Media

Social media is a fundamental means to keep the global geoscientific community informed about the work of IUGS. All requests related to IUGS social media should be sent to iugs.socialmedia@gmail.com. Please ensure any information submitted for social media is first brought to the attention of the appropriate IUGS-IFG Officer, including the IUGS-IFG Chair (Laurance Donnelly), Vicechair Dr Rob Fitzpatrick, Secretary (Prof Duncan Pirrie), Treasurer (Prof Lorna Dawson) and Communications Officer (Prof Jennifer McKinley).

Training UK Police in Search

In 2025, IUGS-IFG have been invited to participate in the training of the UK police in searches for burials, including the application of the Geoforensic Search Strategy (GSS).

laurance.donnelly@ahkgroup.com or geologist@hotmail.co.uk

Unprecedented crime levels threaten mining's sustainability

Increases in mining crime during 2024, by multi-billion-dollar transnational criminal groups combined with illegal mining, illicit trafficking of precious metals and corruption is reported to be having a serious impact on mining and minerals sustainability.

<https://www.miningweekly.com/article/unprecedented-crime-levels-threaten-minings-sustainability-2024-03-22-1>

GeoBlock Gold Traceability

IUGS-IFG has been supporting the Clean Gold Programme, established the Brazilian Federal Police. Recently, 'GeoBlock', gold traceability and fingerprinting system was launched, which aligns with Geoforensic Passport for gold traceability, based on the analysis of a questioned gold sample using XRF.

<https://geoscientist.online/sections/news/forensic-geology-and-the-clean-gold-program/>

<https://www.geoblock.ch/digitalizing>

<https://www.geoblock.ch/geoblock-fast-fingerprint-verification>

Illegal sand mining continues to threaten infrastructure and the environment

Billions of tonnes of sand is illegally mined every year around the world by organised crime groups and this threatens infrastructure, lives and the environment.

<https://www.abc.net.au/news/2024-10-25/sand-mining-impacts-vietnam-bridges/104511578>

<https://www.unodc.org/unodc/en/environment-climate/illegal-mining.html>