



Sands of Change: The Global Challenge of Sand Mining

International Conference, Wednesday 3 December 2025

Burlington House, Geological Society of London, London

Sand is one of the most important raw materials on the planet. After water, it is the second most utilised resource on Earth. Global demand for sand is driven by its use in construction (in particular in concrete) and wider industry (glass manufacture etc). Estimates suggest that global sand demand increased 23 times between 1900 and 2010, with a projected annual demand of 82 billion tonnes per annum by 2060. Human mass migration to cities has led to rapid, ongoing urban growth in many parts of the world fuelling an ever increasing demand for sand. If not adequately managed, this demand can lead to extensive, unregulated and illegal sand mining. Illegal sand mining has been reported from 70 countries often largely involving artisanal and small-scale mining operations, but also larger scale criminality involving criminal cartels and associated conflict. Whilst on a local scale, illegal sand mining can provide employment and raw materials needed for development, unregulated mining has considerable cumulative negative environmental, social and economic impacts.

For many, sand is seen as a freely available, and easily extracted material. Yet, when sand is not adequately valued, supply can become inadequate to meet society's needs, causing price fluctuations and shortages in many countries, this is a supply system that is either breaking down or has effectively already broken down. Geoscience has a crucial role to play in the monitoring and management of sand supply. From understanding the location of deposits, the chemical and physical properties of sand, and how this relates to its end use, through to modelling the impacts of extraction and understanding how we can reduce our reliance on sand for a sustainable future.

This in person/virtual 1 day International Conference will be held at The Geological Society of London on Wednesday 3 December 2025, 09.30-17.00, in association with the Geological Society of London Forensic Geoscience Group, International Union of Geological Sciences Initiative on Forensic Geology and the British Geological Survey. This event is of interest to academics, practitioners, and those interested in the governance and mitigation of risks associated with illegal sand mining.

Deadlines: Abstracts for papers or poster presentations 31 October 2025.

Deadline for registration 14 November 2025.

<https://www.eventbrite.co.uk/o/the-queens-university-belfast-41343632673>

Convenors: Laurance Donnelly (Chair, IUGS Initiative on Forensic Geology and AHK International), Duncan Pirrie (University of South Wales), Tom Bide (British Geological Survey), Clive Mitchell (British Geological Survey) and Alastair Ruffell (Queens University Belfast).

