

Geology and the Sustainable Development Goals

Best Practice – Personal Engagement

Friday 4th November 2016

Registration: 09:45 (for a prompt 10.20 start)

Ends: 17:30 (followed by posters and a drinks reception)

The Geological Society, Burlington House, London, UK



The
Geological
Society

**This conference is kindly supported by the
Geological Society of London.**

This is the UK national society for geoscience, providing support to over 10,000 members in the UK and overseas. Founded in 1807, it is the oldest geological society in the world.

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ACKNOWLEDGEMENTS

We are very grateful to the Geological Society for their significant support in organising and hosting this conference, providing such a special venue, refreshments, practical support and advice.

Thank you to all our speakers and session chairs, and those taking part in the 'opportunities marketplace', for taking the time out of their busy schedules to support this conference and share from their experiences.

Thank you also to all those who have made this conference possible through their hard-work behind the scenes. Special thanks to Sarah Caven, Megan Hammond and Emily White for their contributions to the conference planning and delivery.

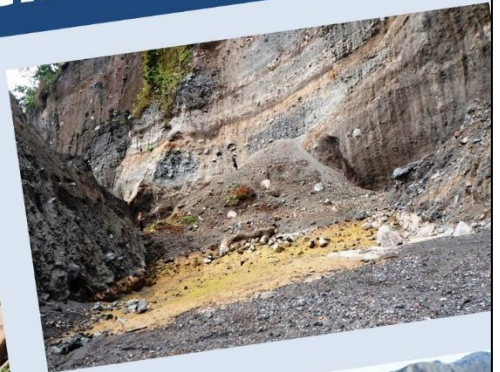
Find out more about our work and register for our newsletter: www.gfgd.org.

Facebook (www.facebook.com/gfgd.org) and Twitter (@Geo_Dev).



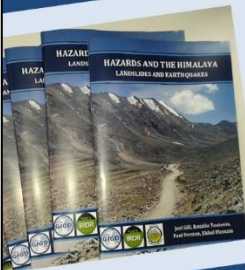
**Geology
for
Global
Development**

Mobilising and equipping the geology community to prevent and relieve poverty.



GEOLOGY AND DEVELOPMENT: Climate Change / Water and Sanitation / Disaster Risk Reduction / Infrastructure / Natural Resources / Geo-tourism / Agriculture / Environmental Management / Geo-education / Geo-diplomacy / Capacity Building

WHAT WE DO: Conferences / Workshops / University Group Activities / Publications and Resources / Education and Outreach / Placements / Knowledge Exchange / Technical Advice and Capacity Strengthening / Fundraising



GfGD is a not-for-profit organisation.
Registered Charity Number: 1165663.

Find out more and get involved:

Website: www.gfgd.org
Blog: blogs.egu.eu/gfgd
Facebook: facebook.com/gfgd.org
Twitter: @Geo_Dev



DIRECTOR'S CUT

Last year *Geology for Global Development* organised the first major gathering of geologists/Earth scientists anywhere in the world to explore our role in delivering the UN Sustainable Development Goals (SDGs). Over 120 geologists came together to consider how our science and skills can help ensure the successful achievement of these 17 ambitious goals, aiming to end global poverty, fight injustice and inequality, and ensure environmental sustainability by 2030.



(left) GfGD Annual Conference 2015 - Geology and the Sustainable Development Goals; (right) The 17 Global Goals for Sustainable Development 2015–30 (United Nations, 2015)

Our leadership in the geology community on the SDGs has been recognised internationally. A leading US university described our conference as one ‘*of and for the future*’. We have since organised workshops on geology and the SDGs at events in Europe and Africa, published the first detailed examination of ‘[Geology and the SDGs](#)’, and will soon release a briefing note with The Geological Society on the same topic.

We have focused our 2016 conference on the theme of ‘**best practice**’. GfGD aims to equip geologists to engage effectively in development, having maximum positive impact. Throughout today we will be exploring the skills and topical understanding required to deliver high quality, high-impact development projects – including themes such as communication, ethics, human rights, and community engagement. We are delighted to have speakers from many different development backgrounds join us today.

Feedback from our 2015 conference suggested people were excited about engaging with the SDGs through their careers, but would also like to know more about how to engage in the short term. We’ve therefore introduced sessions this year that outline practical projects and opportunities to get involved, and allow you as delegates to ask questions and interact with the speakers. Whether you are a student, educators, researcher, industry professional, public servant or policymaker – you can all contribute to the achievement of the SDGs.

In addition to discussing the SDGs, this conference is also an opportunity for you to hear about and comment on our five-year strategy. The trustees of *Geology for Global Development* will outline our thinking on where we would like to be in five years, and the role we see for GfGD in delivering the SDGs. We value your comments and ideas, and encourage you to play a full and active part in the poster consultation during the evening drinks reception.

Finally, the GfGD annual conference creates an opportunity for geologists to interact with others who are passionate about engaging in development. I hope you have a great day, enjoy the networking and talks, and are inspired to be ambassadors for the SDGs in your universities and organisations.

Joel Gill
GfGD Founder/Director

OUR WORK (2015–2016)

Geology for Global Development, established in 2011, is a not-for-profit organisation working to mobilise and equip the geology community to prevent and relieve poverty. Much of our work to date has been with early-career geologists, providing them with the skills, information and opportunities they need to make a long-term, effective and sustainable contribution to international development. In the spring of 2016 we received news that our application to the Charity Commission (England and Wales) was successful, and *Geology for Global Development* became a formal registered charity. Since registration, a group of charity trustees has met regularly to oversee our work, and develop a 5-year strategy for 2017-2021.

Trustees are responsible for overseeing and directing the work of *Geology for Global Development*.



JOEL GILL (PROJECT DEVELOPMENT SCIENTIST, BRITISH GEOLOGICAL SURVEY)

Joel recently completed a PhD on characterising interacting natural hazards within the Environmental Dynamics Research Group at King's College London. In November 2016, he joined the British Geological Survey (BGS), contributing to their overseas development assistance work. Joel founded *Geology for Global Development* in 2011 and continues to coordinate its work.



JULIA HALL (SENIOR CONSULTANT, RISK MANAGEMENT SOLUTIONS)

Julia is a senior consultant at RMS where she advises on the use of catastrophe modelling techniques and solutions. Based in London/Zurich, she has worked with many global (re)insurance companies and public and academic partners on disaster risk management.



NIC BILHAM (DIRECTOR OF POLICY AND COMMUNICATIONS, THE GEOLOGICAL SOCIETY)

Nic has worked at the Geological Society for 19 years, and now leads delivery of its policy, education, media and wider communications activities. He also works with the Society's Council and senior staff to coordinate strategic planning and reporting. Nic is on the Board of Experts of the International Association for Promoting Geoethics, with a focus on geoscience communication.

SELECTED ACTIVITIES

UNIVERSITY GROUPS: These groups, run by student volunteers, work to engage students with our national work, arrange seminars and discussion groups, and promote the vital role of geology within development.

BLOG AND COMMUNICATIONS: Our blog (blogs.egu.eu/gfgd), hosted by the European Geosciences Union, provides a forum for exploring issues relating to geology and development. It also gives students an opportunity to develop skills in science communication through writing guest blogs.

CONFERENCES AND EVENTS:

- **UNISDR Science and technology Conference:** In January, we joined many other organisations in supporting a UNISDR meeting gathering scientists to explore our role in supporting the Sendai Framework for Disaster Risk Reduction (DRR). During this event, we presented a poster on our work relating to DRR, and helped to launch the Young Scientists Platform for DRR (find out more in **Session 4** today).
- **European Geosciences Union (EGU) General Assembly:** In April, we helped to coordinate a splinter meeting on the UN Sustainable Development Goals at the EGU General Assembly in Vienna, gathering early career researchers and senior professionals from diverse geoscience backgrounds.
- **Sustainable Earth Conference (Plymouth):** In June, we presented work on the role of geology in the UN Sustainable Development Goals at the Sustainable Earth Conference at the University of Plymouth.
- **35th International Geological Congress (IGC), South Africa:** In late August, our Director received a bursary to attend the 35th IGC in Cape Town. Here we presented work on the UN Sustainable Development Goals and our skills development activities. We also delivered a workshop on geoscience and international development with representatives from ~7 countries.

FUNDRAISING (GUATEMALA VOLCANIC MONITORING/EDUCATION): We have continued our fundraising through the 2015-16 academic year, and will be working with partners in Guatemala over the 2016-17 year to ensure that these funds help to improve monitoring of Guatemala's volcanoes and/or education/outreach in affected communities.

CONFERENCE INFORMATION

The Sustainable Development Goals (SDGs) are an ambitious set of targets that seek to eradicate extreme poverty and change unsustainable consumption patterns over the next 15 years (2015-2030). Achieving these will require effective engagement by the geology community. We have a significant responsibility and exciting opportunity to work with other disciplines to promote strong stewardship of the Earth for the benefit of society and to facilitate global development.

Our 4th Annual Conference will bring together geologists and development professionals to consider our role in delivering the SDGs, and what 'best practice' looks like in these contexts. Through a series of presentations, group activities and discussion sessions, participants will have the opportunity to:

- Consider the aims of the SDGs and their relationship to the work of geologists.
- Interact with those engaging in development projects, to develop a better understanding of what 'best practice' may look like in the context of the SDGs, and the skills required to engage in development in this effective, positive way.
- Explore the role of the extractives sector in delivering the SDGs.
- Talk to a variety of individuals running projects and organisations that you can get involved in.
- Hear from Professor Iain Stewart on the 'Ethical Dimensions of Transdisciplinary Approaches in Seismic Risk Communication', and ask him your questions.
- Find out more about *Geology for Global Development*, and take part in our strategy consultation.

The conference is also a great opportunity to meet geology students and recent graduates from across the UK that share an interest in international development.

RECOMMENDED READING (MANY OPEN ACCESS)

Many of the conference sessions include the opportunity for you to ask questions and share your opinions and ideas. We'd therefore encourage you to have a look at some of the background reading below:

Stewart (2016), [Sustainable Geoscience](#), Nature Geoscience, 9(262) (login required)

Gill (in press), [Geology and the Sustainable Development Goals](#), Episodes.

[*Key Reading] United Nations, 2015, [Transforming Our World: The 2030 Agenda for Sustainable Development](#), UN, Geneva.

Lambert *et al.*, (2013), [Resourcing Future Generations: A proposed new IUGS initiative](#), Episodes, 36 (2), 82-86.

Mora (2013), [The Need for Geologists in Sustainable Development](#), GSA Today

CAFOD (2012), [Let's be honest – corruption, business and aid](#).

WHAT TO BRING?

We suggest you bring a notebook and a pen, as well as your lunch (see below). We do not require you to print out and bring your ticket. However, we may ask to see some form of ID (e.g., student card) if necessary. We will have some copies of the conference programme, but will not have printed copies of this full booklet. We suggest you download this to your phone/tablet/computer, or bring your own print-out.

ARRIVAL

Please enter The Geological Society via the main entrance (opposite Fortnum and Mason Department Store). Doors open and registration starts at 9.45am, with tea/coffee being served in the lower library. The conference sessions start at 10.20am. We would kindly request that you make every effort to arrive on time and take your seat by 10.15am so that we can start promptly. If arriving later in the day, please ensure that you inform a conference steward upon arrival so that they can register you.

VENUE

Full directions and a map can be found at the end of this document, on page 12.

LUNCH

We will not be providing lunch, but there will be a space to eat a packed lunch if you wish to stay at the venue, giving more time for informal networking, looking at posters and talking with those speaking and organising the event. The venue is close to a range of shops and cafes.

FEEDBACK

We will circulate a survey via email after the event, we would appreciate you taking the time to give feedback to help us improve future events.

PHOTOGRAPHY

Official photographs will be taken throughout the conference and may be used on our website, blog and other publicity. If you do not wish to be photographed, please indicate this to our photographer on the day. If you take photographs during the day, please so share them with us via email/social media after the event.

SOCIAL MEDIA

Please use **#GfGDConf** if referring to this event on social media, such as Twitter and Facebook. You can also include **#GlobalGoals**. We'd love to see and share your comments and photographs. We're particularly keen to see and share photos holding the Global Goals flyers we'll be giving out on the day. We would love to catch the attention of the UN and show them that we are a community committed to achieving the Global Goals for Sustainable Development.

CONFERENCE STEWARDS

If you have any problems or questions on the day, please speak to one of the conference stewards who will do their best to assist you. Stewards can be identified by their conference badges.

DRINKS RECEPTION AND POSTERS

In the final session, we will be outlining our 5-year strategy centred around the following mission, vision and strategic objectives. During the drinks reception (from 5.30pm, when formal sessions will end), we will have a consultation, giving you the opportunity to comment on this draft strategy – and answer some specific questions. We value and look forward to reading your comments and ideas.

Geology for Global Development: Draft Strategy 2017- 2021

OUR MISSION: To be a global authoritative voice on 'geology and international development', mobilising and reshaping the geology sector to help achieve the *Sustainable Development Goals* (2015-2030) and better serve society.

OUR VISION: We see...

- Every geologist equipped with the skills and understanding required to make a positive and sustainable contribution to the fight against global poverty.
- A geology community actively engaged in the design, implementation, monitoring and evaluation of global international development activities.
- A world where organisations, governments and individuals have access to and an understanding of the geological science required to end global poverty.

OUR STRATEGIC OBJECTIVES:

1. [**Inspiration**] Promote the value of geology in supporting international development.
 2. [**Education**] Ensure that every geologist has access to the resources required to engage positively in sustainable international development.
 3. [**Action**] Enhancing the application of geology to international development.
 4. [**Leadership**] Exercise international leadership within the geology community on matters relating to geology and international development.
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CONFERENCE PROGRAMME

TIME	SESSION DETAILS
09.45–10.20	Arrival and Registration (<i>Tea/Coffee Available</i>). Please aim not to arrive before 09.45 to allow us time to prepare for registration.
10.20–10.30	Welcome and Introduction to Conference
10.30–10.45	Opening Remarks – Nic Bilham (Director of Policy and Communications, The Geological Society)
10.45–11.30	Session 1: Geoscience and Development – Lessons Learned - Joel Gill (GfGD Founder/Director) This session will give some background context to the role of geoscientists in supporting international development, while introducing participants to the work of <i>Geology for Global Development</i> . It seeks to set the scene for the sessions throughout the day, and remind delegates of some of our core learning at past GfGD Annual Conferences.
11.30–11.50	Break
11.50–13.00	Session 2: Geoscience and Development - Exploring Best Practice (<i>Discussion Groups</i>) This session will involve delegates being split into three groups, each examining a themed case study of a project in a development context. The groups will hear from experts involved in those (or similar) projects, can ask questions about their career, and will be tasked with identifying what made the project succeed or fail. After discussions within these three discussion groups, all delegates will come back together to share their leaning during a facilitates feedback session. Renewable Energy, Social Enterprise and Development [Vijay Bhopal, Scene] Water and Development [Stephanie Gill, Tearfund] Geohazards and Development [Solmaz Mohadjer, Parsquake]
13.00–14.00	Lunch (<i>Bring your own!</i>)
14.00–15.00	Session 3: Minerals and the Sustainable Development Goals (<i>Panel Discussion</i>) This session will explore the role of mineral exploration and development in delivering the Sustainable Development Goals. Many geoscience graduates are employed in the natural resources sector, contributing for example as exploration geologists, hydrogeologists, engineering geologists, and geochemists. The transition from fossil fuels to alternative energy sources will increase demand for many minerals. The need to feed a growing population may also increase demand for essential mineral fertilisers. Edmund Nickless (Resourcing Future Generations, International Union of Geological Sciences) Anne Lindsay (Lead Analyst, Private Sector, CAFOD) Milly Owens and Robert Pell (Camborne School of Mines, University of Exeter)
15.00–15.30	Session 4: Opportunities to Get Involved (<i>Marketplace</i>) We've invited people involved in practical geology/development themed projects to share these with you in the form of a marketplace. They will have posters, interactive exhibits and other information for you to learn more about their projects and how you can either get involved or replicate them at your universities/institutions. 1. Humanitarian and Development Mapathons [Janet Chapman, Tanzania Development Trust] 2. Water in Myanmar - Coastal Hydrogeological Aid Projects [GfGD Bristol/Southampton] 4. Resilience to Volcanic Hazards in Guatemala [GfGD National Project] 5. Young Scientists in DRR Platform [Lydia Cumiskey, University of Middlesex] 6. Water Youth Network [Lydia Cumiskey, University of Middlesex] 7. Parsquake [Solmaz Mohadjer] 8. Mining, Environmental Protection and Development (Colin Robertson, CAFOD) 9. International Citizen Service (Catherine Honor, University of the West of England)
15.30–16.00	Break (<i>Tea/Coffee Available</i>)
16.00–17.00	Session 5: Ethical Dimensions of Transdisciplinary Approaches in Seismic Risk Communication Professor Iain Stewart (University of Plymouth)
17.00–17.30	GfGD and the SDGs - Our Vision and Strategy to Mobilise and Equip the Geoscience Sector to Engage in Development [Joel Gill, Julia Hall, Nic Bilham - GfGD Trustees]
17.30–	Strategy Engagement (Posters) and Drinks Reception

SPEAKER PROFILES (BY SESSION)



VIJAY BHOPAL
(CO-DIRECTOR, SCENE)

Vijay is co-founder of Scene, and is a specialist in renewable energy development, community-commercial joint ventures and ICT for development. He has led much of Scene's consultancy work and has a broad knowledge of renewable energy technologies, especially, wind, solar and hydroelectric. Vijay loves social enterprise, and believes that, at times, business can be a force for good. He is an adept project manager as has managed many small-to-medium, and several large (> £1m) social enterprise projects over the past 5 years. He won Scottish Renewables' Entrepreneur award in the inaugural Young Professionals Green Energy Awards. Vijay has forever been a traveller, stretching his university education over three countries, and continues to follow this trend with Scene.



STEPHANIE GILL
(POLICY LEAD FOR SAHEL REGION & EBOLA RECOVERY, TEARFUND)

Stephanie leads Tearfund's policy work on the Sahel Region of West and Central Africa, with a focus on land rights. She also works on Ebola recovery. She works to build capacity of local partners in the region and advocates on their behalf. Her previous role at Tearfund focused on Water and Sanitation policy. Before joining Tearfund Stephanie worked on small-scale Water and Sanitation programmes in Tanzania and Uganda, and has an MSc in Community Water and Sanitation from Cranfield University.



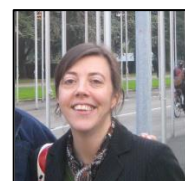
SOLMAZ MOHADJER
(FOUNDER, PARSQUAKE; SEISMIC HAZARDS RESEARCHER, UNIVERSITY OF TÜBINGEN, GERMANY)

Solmaz's research interests lie primarily in the understanding of mountain hazards, particularly earthquakes and rockfalls, and the quantification of hazards using a variety of different techniques including remote sensing, geographic information systems, and high precision LiDAR mapping of topography. She is also interested in bridging the communication gap that exists between the scientific community and the public. She is the Founder of Parsquake, an organisation delivering earthquake education in the Persian speaking world.



EDMUND NICKLESS
(CHAIR, IUGS STRATEGIC IMPLEMENTATION COMMITTEE/IUGS COUNCILLOR 2016-2020)

Edmund was Executive Secretary of The Geological Society of London from 1997 until his retirement in September 2015. Previously he held senior posts within the British Geological Survey, the then Science and Technology Secretariat of the Cabinet Office where he was environmental adviser, and the Natural Environment Research Council. Since 2013 he has chaired a group on behalf of the International Union of Geological Sciences (IUGS) promoting a new initiative, Resourcing Future Generations. He is a Fellow of the Geological Society of London, a Chartered Scientist, Chartered Geologist and European Geologist.



ANNE LINDSAY
(LEAD POLICY ANALYST – PRIVATE SECTOR, CAFOD)

Anne heads up CAFOD's work on the private sector. She leads on the role of business in development and the issue of business and human rights. Focus countries for her research include Colombia, Myanmar and Mexico. Her work also includes looking at conditions in global supply chains, including the electronics industry, and she represents CAFOD within the Ethical Trading Initiative. As part of CAFOD's commitment to Publish What You Pay, Anne is working on implementation of country by country reporting requirements for oil, gas and mining companies. She is one of the directors of the CORE Corporate Responsibility coalition in the UK.



MILLY OWENS
(CAMBORNE SCHOOL OF MINES, UNIVERSITY OF EXETER)

Milly is a postgraduate student, examining 'Resource efficient, low environmental impact production of rare earths from Songwe, Malawi'. A physicist by training, Milly has an MSc in volcanology from the University of Bristol.



ROBERT PELL

(CAMBORNE SCHOOL OF MINES, UNIVERSITY OF EXETER)

Robert is a postgraduate student, examining the 'responsible sourcing of rare earth elements'. He has previously worked as Assistant Editor at *International Mining*, a globally distributed magazine covering technical innovations and project case studies for the mining industry.



PROFESSOR IAIN STEWART MBE

(DIRECTOR, SUSTAINABLE EARTH INSTITUTE, UNIVERSITY OF PLYMOUTH)

Iain is professor of Geoscience Communication at Plymouth University and Director of its Sustainable Earth Institute. His long-standing research interests are in interdisciplinary investigations of geological hazards (earthquakes, volcanism, tsunamis) and abrupt environmental change, and more recently in the communication of 'contested geoscience' to the public. Iain has also published on sustainable geoscience, and is a Member of the Scientific Board of UNESCO's International Geological Programme (IGCP). As part of his geo-communication he regularly presents Earth science programmes for BBC television, including *Earth: The Power of the Planet*; *How Earth Made Us*, *How To Grow A Planet*, *The Rise of the Continents* and, most recently, *Planet Oil*.

OPPORTUNITIES MARKETPLACE PRESENTERS

We've invited people involved in practical geology/development themed projects to share these in the form of a marketplace. We are grateful to the following individuals for agreeing to help with this session.

1. **Janet Chapman** (Campaigns Manager/Project Officer and Trustee, Tanzania Development Trust).
2. **Hamish Robertson** (President, GfGD Bristol), and team from Bristol and Southampton.
3. **Lydia Cumiskey** (PhD Researcher, University of Middlesex).
4. **Solmaz Mohadjer** (Founder, Parsquake).
5. **Colin Robertson** (Extractive Industries Adviser, CAFOD).
6. **Catherine Honor** (International Citizen Service participant, MSc Volcanology graduate).



CONFERENCE VENUE & DIRECTIONS

The conference will be hosted by The Geological Society, and held at their premises (Burlington House) in Central London. This venue is easily accessible by public transport, being a short walk away from both Piccadilly Circus and Green Park tube stations.

DIRECTIONS TO THE GEOLOGICAL SOCIETY, LONDON

Address: The Geological Society, Burlington House, Piccadilly, London W1J 0BG

Tel: +44 (0) 20 7434 9944

Website: www.geolsoc.org.uk/

How to get there from...

King's Cross Station: Take underground from King's Cross St. Pancras, Piccadilly Line towards Uxbridge alighting at Piccadilly Circus (5 stops, approximately 8 minutes). Take the exit from this station onto Piccadilly. The Geological Society is on the *north side of this road*, opposite Fortnum and Mason Department Store.

Euston Station: Take underground from Euston station, Victoria Line towards Brixton, alighting at Green Park (3 stops, approximately 5 minutes). Take the exit from this station onto Piccadilly. The Geological Society is on the north side of this road, opposite Fortnum and Mason Department Store.

Victoria Station: Take underground from Victoria station, Victoria Line towards Seven Sisters, alighting at Green Park (1 stop, approximately 1 minute). Take the exit from this station onto Piccadilly. The Geological Society is on the north side of this road, opposite Fortnum and Mason Department Store.

