



Geology for Global Development

Annual Report and Review 2021



1 NO POVERTY



2 ZERO HUNGER



3 GOOD HEALTH AND WELL-BEING



4 QUALITY EDUCATION



5 GENDER EQUALITY



6 CLEAN WATER AND SANITATION



7 AFFORDABLE AND CLEAN ENERGY



8 DECENT WORK AND ECONOMIC GROWTH



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



10 REDUCED INEQUALITIES



11 SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



14 LIFE BELOW WATER



15 LIFE ON LAND



16 PEACE, JUSTICE AND STRONG INSTITUTIONS



17 PARTNERSHIPS FOR THE GOALS



Geology for Global Development Supports the Sustainable Development Goals

Registered Charity
Number: 1165663

-- Report and Financial Statements 2021 --

Geology for Global Development

C/O Dr Joel C. Gill, School of Earth and Environmental Science, Cardiff University, Main Building, Park Place, Cardiff, CF10 3AT

Registered Charity: 1165663

Trustees (during reporting period):

Nicholas Bilham (Chair)

Kirsty Dawkes

Florence Bullough

Marie Fleming

Sarah Gordon PhD

Natasha Dowey PhD

OVERVIEW

Geology for Global Development is a registered charity (England and Wales) working to mobilise and reshape the geoscience community to help deliver sustainable and resilient communities, as expressed in the UN Sustainable Development Goals (SDGs). Geoscience is critical to eradicating poverty, reducing inequality, ensuring environmental sustainability, and securing universal and fair access to natural resources (e.g., water), food, energy, education, and healthcare. Geoscience underpins the work needed to ensure current and future generations are resilient to natural hazards, have access to sustainably planned

In 2017, we launched a strategy setting out our priority objectives to support our mission to help deliver the SDGs, with interlinking strands of inspiration, education, action, and leadership. Our work towards these objectives continued through 2021. We initiated new research projects, working with colleagues in the UK and beyond. These include work to explore the geoscience requirements to deliver Kenya's Vision 2030, characterise the training and development needs of hazard professionals in Guatemala, and understanding the barriers that prevent NGOs from using geoscience knowledge to deliver clean water in eastern Africa. We engaged in global policy dialogues around science and sustainable development and participated in COP26, where we were also granted official observer status to the UN Framework Convention on Climate Change. We also continued to invest in our network of University Groups and deliver and share high-quality educational resources, including a textbook.

We celebrated our 10th birthday in 2021 and in September we hosted a webinar with contributions from those involved in different aspects of our work. With attendees from across five continents, it was great to come together and hear positive and inspiring stories of the impact of our work. Planning for the next 10 years is underway, with a strategy to guide our work from 2022 through to 2031 due to be published in Autumn 2022.

Our work through 2021 was made possible through the contributions of many volunteers, input from consultants, the generous support of donors, and valued collaborations with partners. We are particularly grateful to the International Union of Geological Sciences and the UNESCO/ IUGS International Geoscience Program for supporting our activities, to GeStEIN for selecting GfGD as a fundraising partner, and to the University of Hull for partnering with us on a grant-funded project.

Here we set out our charitable objectives (**Section A**) and the strategy agreed in 2017 to help implement these objectives (**Section B**). We proceed to give a report on activities in 2021 (**Section C**) and review how these, with other activities since 2017, have collectively helped deliver our strategic objectives (**Section D**). We present a summary of our governance and management (**Section E**) and an overview of our finances in 2021 (**Section F**). We explain our progress towards improving Equality, Diversity, and Inclusion in our work through 2021 (**Section G**). We then look to the future, with details of events and opportunities in 2022 (**Section H**), and ways you can stay informed about our work (**Section I**).

FROM OUR TRUSTEES

In our previous Annual Report, I reflected on the impacts of the Covid-19 pandemic, both on GfGD and on the outside world, and on the imperative to maintain our focus on the inequalities and the wider nexus of sustainable development challenges that were highlighted by its ramifications. A year on, the pandemic has not gone away, but other critical global challenges, from conflict to the climate emergency, demand our attention ever more loudly. Through all this, the imperative to address the fundamental global challenges captured in the UN Sustainable Development Goals remains as strong as ever, demanding a just transition based on cooperation, embracing a diversity of perspectives, ensuring that marginalised voices are heard, and leaving no-one behind.

As GfGD reaches the end-point of the strategy we set out in 2017, and prepares to launch a new strategy to help us steer through the challenges of the coming decade, it is a good moment to look back as well as forward. So, in this report, we look back not only on the achievements of 2021, but on how our activities have evolved over the past five years, and on what impact they have had. Not everything turned out as we might have initially anticipated – some strands of our work quickly blossomed, while others were redirected as we learned from experience, or have been slower to have demonstrable impact. Unquestionably, GfGD has achieved a great deal, and has gained increasing recognition for its vital role in the geoscience community and more widely.

Developing our new strategy, drawing on this past experience, has been a major priority for GfGD's trustees and executive team throughout 2021 and into 2022. Our mission remains fundamentally the same, but we are excited to share our refocused strategic priorities, and the approach we will take to delivering these. We cannot know what the world will be like in 2031, the envisaged end-point of our new strategy. If the past few years are any guide, some of the global challenges and opportunities we face will be impossible to predict, while others will be all too familiar. But I am confident that our new strategy will equip GfGD to be resilient in an uncertain world, to mobilise and focus the contributions geoscience can make to delivering the UN 2030 Agenda for Sustainable Development, and to help shape whatever succeeds it.

The trustees have been deeply impressed at the skill, dedication and hard work of all those who take part in the many varied activities of GfGD. This is especially true of our voluntary executive team, listed later in this report, led by Executive Director Joel Gill. Without their energy and commitment, none of what GfGD achieves would be possible. We were delighted to welcome some fantastic new members to the team in 2021, and at the time of writing we are working to recruit additional team members to help take forward the new strategy. We were also sorry to lose some much-valued colleagues – we are very grateful for all their work, in some cases over many years. At the risk of singling out just one of this dedicated group, I would particularly like to thank Emily White, who stepped down as Deputy Director late in 2021, for her enormous contribution in various roles over the past decade, and for the thoughtful advice and support she provided to the trustees in recent years.

Nic Bilham
Chair of Trustees

A. CHARITABLE OBJECTIVES

Geology for Global Development, established in 2011, is a registered charity working to mobilise and equip the geology community to prevent and relieve poverty. As stated in our Governing Constitution, *Geology for Global Development* provides public benefit (nationally and internationally) through the following charitable objectives:

- i. **Educational advancement** of the public in general, and particularly amongst geologists, in subjects relating to geology and sustainable development (defined below), in any part of the world. This will be done (in particular, but not exclusively) by means of relevant communications, educational material, training courses, placement opportunities, and by promoting research in all aspects of that subject and publishing the useful results.
- ii. **Poverty prevention and relief**, in any part of the world, by providing grants, equipment and services (in particular but not exclusively education and training in geology) to individuals in need, other charitable organisations, and/or other organisations working to prevent or relieve poverty.

In this context, we note sustainable development to mean ‘*development which meets the needs of the present without compromising the ability of future generations to meet their own needs*’ as defined in the Brundtland Report (1987).

In meeting these objectives, we provide public benefit through advancing education, at all levels, of the role of geology in supporting sustainable development, as well as using geological science to prevent and relieve poverty. In setting our aims for the year and preparing this review, the trustees have given due regard to the Charity Commission guidance on public benefit.

B. STRATEGY

Mission: We exist to champion the role of geology in sustainable development, mobilising and reshaping the geology community to help deliver the UN Sustainable Development Goals (2015–2030).

Long-Term Vision: We see a world where:

- (i) Every geologist is equipped with the skills and understanding required to make a positive contribution to sustainable development;
- (ii) The geology community is actively engaged in the design, implementation, monitoring, and evaluation of international development activities; and
- (iii) Organisations, governments, and individuals have equal access to, and an understanding of, the geoscience required to ensure sustainable development.

We have agreed four **Strategic Objectives** to help realise our vision:

1. **INSPIRATION. Promote the value of geology in supporting sustainable development.** Many people are unaware of the role geology can play in supporting sustainable development. We will work towards greater recognition for, and understanding of, the role of geology in tackling global challenges (e.g., water security, food security, resilience to natural hazards, natural resource management, urbanisation, and climate change).
2. **EDUCATION. Equip geologists to engage positively in sustainable development.** The skills and knowledge required to make an effective and positive contribution to sustainable development are often missing from the traditional education and continued professional development of geologists. We will provide opportunities for geologists to develop these essential skills to best serve the communities that we engage with.
3. **ACTION. Enhance the application of geology to international development.** We will make a high-quality contribution to practical development projects. We will develop and support poverty-fighting programmes in collaboration with other UK-based and international organisations. By the end of 2021 we envisage our work having helped to address six of the UN Sustainable Development Goals, across five different countries.
4. **LEADERSHIP. Exercise international leadership on matters relating to geology and sustainable development.** We seek to be a recognised and trusted voice on ‘geology and sustainable development’, helping to reshape the global geology community to better serve society. We will grow in our international influence, and reputation for excellence in all we do.

To support the delivery of these four strategic objectives, we recognise the need to develop the following aspects of our organisation:

- **Finance:** We will seek a consistent income stream from diverse sources to promote greater financial resilience.
- **Personnel:** We will grow our Board of Trustees to ensure access to relevant experience and professional skills. We will grow our Executive Team to ensure reliable, professional delivery of these strategic objectives. By 2021, we anticipate having transitioned to a paid staff team, working with a growing volunteer community.
- **Infrastructure:** We will explore the benefits and costs of operating out of a permanent headquarters, such as a host geological organisation.

C. ACTIVITIES IN 2021

In seeking to fulfil our objectives and provide broad public benefit, we have undertaken the following charitable activities, expressed through four strategic objectives:

INSPIRATION. PROMOTE THE VALUE OF GEOLOGY IN SUPPORTING SUSTAINABLE DEVELOPMENT.

Highlights from 2021 include:

- **Publications.** We published an edited book on *Geosciences and the Sustainable Development Goals* (www.springer.com/gb/book/9783030388140) in collaboration with the British Geological Survey and involving 42 authors from many countries, including: the UK, Morocco, Mongolia, Italy, the US, Australia, Nepal, Malaysia, Ecuador, the Netherlands, New Zealand, South Korea. The book, an output of 4 years work, provides a detailed overview of the role that the geosciences community can play in implementing all 17 SDGs. While primarily aimed at geoscientists (and including resources to help integrate content into teaching contexts), it also supports others working on specific SDGs to understand why geoscientists are a valuable partner. Complimentary copies of the book were provided to institutes in Kenya, Argentina, the Philippines, and Bangladesh.
- **Presentations and Talks on Geoscience for Sustainable Development.** Representatives of *Geology for Global Development* attended and presented at many events and institutions throughout the year, including the Responsible Raw Materials conference, a roundtable on geoscience and sustainable development organised by the Geological Society of Kenya, the Professional Geoscientists Ontario Symposium (Canada), and at the Pardee Keynote Symposium, GSA Connects (USA).
- **Website.** We continued to add new resources to our website (www.gfgd.org) – acting as an information hub for those wanting to learn more about geoscience and sustainable development.

EDUCATION. EQUIP GEOLOGISTS TO ENGAGE POSITIVELY IN SUSTAINABLE DEVELOPMENT

Highlights from 2021 include:

- **University Groups.** These affiliated groups, run by student volunteers known as Ambassadors, engage students and academics with our charitable work through seminars, discussion groups and other activities. At the end of 2021, groups were active or being initiated in the Universities of Bristol, Cambridge, Cardiff, Durham, Aberdeen, Southampton, Liverpool, Manchester, Oxford, Imperial College London, and University College London (UCL). Examples of University Group activities in 2021 include:
 - **Talks from Industry and Academia:** A variety of talks were put on by Ambassadors throughout the year. For example, GfGD Cardiff hosted talks with Lucy Crane

(Cornish Lithium) to discuss the vital role minerals play in our day to day lives, Catherine Leech (Cardiff PhD student) on the effects of turbines in tidal range energy schemes, and Ben Lepley (Environmental Consultant at SRK) on sustainable development licenses. Imperial GfGD invited Professor Martin Blunt to discuss Carbon Capture and Storage and the Energy Transition. Durham GfGD invited Graham Bennett (VP and Head of UK Energy Transition) to talk about the outlook to 2050 for energy supply and demand, Richard Lagesse (Senior Engineering Geologist, Arup) discussing the role of engineering geology in delivering the SDGs, and Professor Jon Gluyas (University of Durham) on the sustainable use of Earth's energy and resources.

- **Fundraising:** In February 2021, the GfGD University Group at Liverpool raised £550 for the charity through their annual Herdman Symposium.
- **Mapathons:** During a mapathon a group of people get together (in person, or virtually) to use satellite imagery to add valuable digital information to OpenStreetMap in poorly mapped areas. Southampton, Durham, Cardiff, and Liverpool GfGD groups hosted multiple mapathon sessions throughout the year.
- **Other Events:** GfGD Ambassadors helped promote the work of GfGD through stalls at freshers' events, social media engagement (e.g., GfGD Cardiff used this to promote discussion around each SDG), and contributions to blog articles.
- **Geoscience Education for Sustainable Development in Kenya.** Collaborating with partners in the UK and Kenya, we initiated a research programme to explore opportunities to strengthen geoscience education for sustainable development, and support delivery of Kenya's Vision 2030. The project team compiled a database of tertiary geoscience courses offered by Kenyan universities and thematically analysed Kenya's Vision 2030, the country's primary sustainable development strategy. Comparing these datasets, we discovered gaps in available geoscience higher education that will be required to provide the skills needed for delivery of Vision 2030. The team additionally characterised the current geoscience workforce and conducted interviews with stakeholders, allowing us to make concrete recommendations for strengthening the available geoscience educational opportunities. Based on the results of this work, in conversation with stakeholders, and aligned with the project's theory of change, our recommendations included strengthening and supplementing

ACTION. ENHANCE THE APPLICATION OF GEOLOGY TO INTERNATIONAL DEVELOPMENT

Highlights from 2021 include:

- **Water Management in Eastern Africa.** Working with a Ugandan national and MSc student at Cranfield University (UK), Brenda Wagaba, we initiated a new project exploring how NGOs working on water projects in eastern Africa access and use geoscience information and experts. Brenda's thesis provides important context for understanding the barriers, and

enabling factors, to the use of geoscience data and expertise. Informed by 44 responses to an online survey and 16 in-depth interviews of stakeholders, Brenda identified barriers such as bureaucratic hurdles, incomplete and outdated datasets, and lack of understanding of what data could be beneficial to access. The research revealed that working with experts was hindered due to prohibitive hiring costs and expert availability, with donor restrictions on funding and timing also an obstacle to the integration of geoscience data and expertise into water and WASH projects. Based on these results, Brenda has suggested a framework for addressing the major barriers. GfGD and Cranfield University will continue to collaborate to further understand these challenges and innovate solutions by engaging with key stakeholders. To support Brenda's professional development, GfGD sponsored her attendance at Loughborough University's 42nd Water Engineering and Development Centre International Conference in September 2021.

- **Disaster Risk Management in Guatemala.** We commenced research to characterise the professional geohazards community in Guatemala, and explore training and development opportunities and gaps for natural hazard scientists working in the region. This work, conducted by Dr Ailsa Naismith, will continue through 2022 and guide our future engagement in the region.
- **Bond Network of International Development Organisations.** We engaged with this network of development organisations. We provided support to letters sent to Government Ministers, joined meetings of the Sustainable Development Goals working group, and benefitted from training opportunities provided by Bond. Our involvement helped us to better understand NGO requirements for geological information in international development, and communicate this with the broader geoscience community.

LEADERSHIP. EXERCISE INTERNATIONAL LEADERSHIP ON MATTERS RELATING TO GEOLOGY AND SUSTAINABLE DEVELOPMENT.

Highlights from 2021 include:

- **Engaging in UN Forums on Sustainable Development.** Three key contributions to UN processes focused on sustainable development are:
 - In advance of the **High-Level Political Forum on Sustainable Development**, we contributed to the Scientific and Technological Major Group's Position Paper. Setting out ways to advance progress on the SDGs through the 'Decade of Action' while living with the COVID-19 pandemic, our input advocates for greater collaboration between Earth scientists, ecologists, and health professionals, making clear the link between geodiversity and public health. We also express our support for the work of UNESCO Global Geoparks, and advocate for governments to endorse the creation of an International Geodiversity Day.
 - We contributed to the **UN Forum on Science, Technology and Innovation for the SDGs**, with an invited written statement contributed to the session on '*ending poverty and hunger, enhancing human well-being, and building resilience*'. In our submission, we emphasised the importance of geoscience education and the need to characterise and value geodiversity to improve health and strengthen resilience.

- We responded to a call for inputs to the **UN Global Sustainable Development Report 2023**, building on our previous engagement with the 2019 report. This flagship report of the UN, published every four years, documents and describe the landscape of policy-relevant science for achieving sustainable development.
- **Engaging in UN Forums on Climate Change.** At the start of COP26, we secured formal observer status to the UN Framework Convention on Climate Change (UNFCCC), improving access to Earth science expertise in this, and future, international climate negotiations. A delegation from GfGD attended COP26, where we met with officials from government, civil society, and intergovernmental organisations. Using two new published resources, we highlighted the need to invest in and work with Earth scientists if we are to meet the ambitions of the Paris Agreement.

ORGANISATIONAL PARTNERSHIPS

In 2021, we partnered with a range of organisations to deliver the activities above and advance our charitable objectives.

- **International Union of Geological Sciences (IUGS).** We are an affiliated organisation of the IUGS. In 2021, we received a grant of £2825 to support our work.
- **UNESCO/IUGS International Geoscience Program.** We are a partner organisation on **International Geoscience Programme Project 685**, which provided funds to support our engagement at COP26.
- **University of Hull.** We received funding from the University of Hull to advance research on geoscience education for sustainable development in Kenya. This project included collaboration with the researchers at the University of Hull (UK), the University of Nairobi (Kenya), Kenyatta University (Kenya), and Sheffield Hallam University (UK).

SUMMARY

These activities demonstrate the positive impact of *Geology for Global Development*, with respect to our two primary charitable objectives.

- **Educational Advancement.** Many of our activities promoted the role of geology in sustainable development to diverse audiences both in the UK and overseas. Our engagement with the geological science and sustainable development communities (through conferences, online consultations, engagement in universities, and publication of resources) has helped to increase awareness of how geoscientists can make a positive contribution to sustainable development. We initiated research relating to challenges affecting communities in eastern Africa and Central America, with projects providing learning and development opportunities for students and early-career scientists. Our social media content and publications helped to raise public awareness of why geological science

matters when implementing sustainable development activities. Our work helps to train geologists to better serve the public, by improving professional practices (e.g., partnership and capacity building, ethics and integrity) relating to the application of geology to sustainable development.

- **Poverty Prevention and Relief.** We engaged in programmes aiming to enhance education for sustainable development and responsible management of natural resources. Work on improving water provision and resilience to environmental shocks (e.g., volcanic eruptions) was initiated. Our activities help to prevent and relieve poverty by connecting a more socially-aware geoscience community engaged in sustainable development activities with partners including NGOs and government agencies.

D. PROGRESS TOWARDS STRATEGIC OBJECTIVES

We have been working towards our four strategic objectives since 2017, summarised by the words '**inspiration, education, action, and leadership**'. We recognise that the four objectives below interrelate, and progress in one can reinforce another.

As set out in successive annual reports since then, we have delivered high-quality, impactful activities aligned to these. By building relationships with valued, international partners, we come to the end of this strategy period working in spaces that previously lacked a voice for geoscience. As we prepare to set out the priorities that will shape our work over the next 5 to 10 years, here we reflect on our primary achievements and what they mean for us as an organisation and our charitable objectives.

Strategic Objective 1:

Promote the value of geology in supporting sustainable development

Stated Ambition: Work towards greater recognition for, and understanding of, the role of geology in tackling significant global challenges (e.g., water security, food security, resilience to natural hazards, natural resource management, urbanisation, and climate change).

Progress since 2017:

Delivering against this objective required extensive engagement with different stakeholders - from across the geoscience community and beyond. Through diverse publications, conferences, and other activities we were at the forefront of efforts to grow understanding of the role of geology in the UN Sustainable Development Goals. An early academic article on 'Geology and the SDGs', published in the IUGS journal 'Episodes' In 2017, had more than 17,000 people access it on one site alone. From this paper, we were commissioned to manage a book project involving 42 authors from across six continents. '*Geosciences and the Sustainable Development Goals*' was accessed more than 10,000 times in its first 15 months and is being used in diverse teaching contexts.

These two 'flagship' publications sit alongside hundreds of blog articles, dozens of presentations at events around the UK and beyond, and many other journal articles, briefing notes, and collaborative reports published since 2017. Together with our web presence and social media

engagement, they have contributed to a much broader understanding of the value of geology in supporting sustainable development. This is evidenced by the inclusion of the SDGs in academic modules relating to the geosciences, as well as in other organisational communications and strategies. Our article on 'Geology and the SDGs' was quoted at the open session of the UNESCO IGCP Council meeting in 2019 as informing the refocusing of IGCP activities.

Recognition of the importance of geodiversity, and the need to raise awareness of why it is important, was instrumental in UNESCO also declaring 6 October as International Geodiversity Day. We were one of 17 international organisations supporting this proposal, joining with 84 national organisations from 41 countries.

Strategic Objective 2:

Equip geologists to engage positively in sustainable development

Stated Ambition: Recognising that the skills and knowledge required to make an effective and positive contribution to sustainable development are often missing from the traditional education and continued professional development of geologists, we desired to provide opportunities for geologists to develop them to better serve the communities they engage with.

Progress since 2017:

We organised three conferences since 2017, each including dialogue on the content- and skills-based knowledge required to contribute to implementation of the SDGs. On themes of water (SDG 6), cities (SDG 11), and health (SDG 3), each gathered more than 100 people (mainly students) with overwhelmingly positive feedback. Our engagement with students in other contexts - most notably through our network of University Groups - means thousands of students across dozens of institutes have had an opportunity to reflect on how we can contribute to sustainable development and do so in an ethical and effective way.

Recognising the increasing demand for the inclusion of sustainability concepts in the training of geoscientists, and the impact of Covid-19 on the means of delivering learning resources, in 2020 we published a fully open-access module on 'Geoscience and Sustainable Development'. The module includes eight classes, collectively helping learners to understand how geoscience knowledge can contribute to understanding and tackling sustainability challenges and develop complementary skills to strengthen their own engagement in relevant activities (e.g., science diplomacy, context mapping, policy engagement). This project was supported by the International Union of Geological Sciences (IUGS) and the UNESCO/IUGS International Geoscience Programme Project 685.

Strategic Objective 3:

Enhance the application of geology to international development

Stated Ambition: Make a high-quality contribution to practical development projects, develop and support poverty-fighting programmes in collaboration with other UK-based and international organisations. Help address six of the SDGs, across five different countries.

Progress since 2017:

Our expectations of the activities we would undertake to deliver this objective shifted early in the strategy period. Initially expecting to be involved in the design and delivery of local-scale development projects (e.g., the implementation of a clean water project in rural Tanzania), it was soon apparent that the best use of our resources (including financial, expertise, networks) was to invest in research and capacity strengthening. Aligned with our strategic priorities, these projects were (i) pro-poor, (ii) collaborative, and (iii) focused on addressing one or more SDGs. Examples include:

- Research on *'geoscience education for sustainable development'* in **Kenya** supports efforts to address **SDG 4** (targets 4.4 and 4.7) by building understanding of the skills required for future employment and the promotion of sustainable development.
- Research on water management in **eastern Africa** (particularly **Tanzania** and **Uganda**), supports efforts to address **SDG 6** (target 6.1), universal and equitable access to safe and affordable drinking water for all. Working in collaboration with small NGOs in the region, information is informing practice and shaping the design of our future activities.
- Our approach to projects contributes to a strengthened national capacity in many contexts, an ambition of **SDG 9** (target 9.5). This was done by funding postgraduate-level research and networking opportunities by those from **Malawi, Uganda, and Kenya**, supporting scientific conferences in **Guatemala**, and providing resources to institutions in **Bangladesh, Kenya, Zambia, Sierra Leone, Tanzania, and India**. On scientific publications we worked with collaborators in (amongst others) **Morocco, Mongolia, Nepal, Malaysia, Ecuador, Zambia, and Kenya**. Our approach has contributed to North-South and South-South cooperation on and access to science, described in **SDG 17** (target 17.6).
- Through the support of scientific research and conferences in **Guatemala**, relating to disaster risk reduction, we also contribute to the implementation of the Sendai Framework for Disaster Risk Reduction (referenced in **SDG 11** (target 11.5 / 11.b)).

In the coming years, we hope to build on and scale up some of these projects to catalyse greater impact, and achieve and exceed the levels of ambition stated in 2017.

Strategic Objective 4:

Exercise international leadership on matters relating to geology and sustainable development

Stated Ambition(s): Become a recognised and trusted voice on *'geology and sustainable development'*, helping to reshape the global geology community to better serve society, grow in our international influence, and have a reputation for excellence in all we do.

Progress since 2017:

Through the delivery of high-quality products (as set out above) we established a global reputation as being knowledgeable on matters relating to geology and sustainable development, and generous with that knowledge. We prioritised publishing articles in open-access formats, and where this was not possible proactively distributed copies to institutions in the Global South. For example, we

sent copies of our '*Geosciences and the SDGs*' book to individuals and institutions in Kenya, the Philippines, and Bangladesh.

In 2017, we secured affiliated status to the *International Union of Geological Sciences*. Since then we have advised and worked with a range of international geoscience unions and national geological societies (in both the Global North and South), using our understanding of the SDGs to enrich their own outputs and processes. Asked by *The Geological Society of London* to inform and review a poster on geosciences and the SDGs, this well-received output has now been translated into more than 20 languages.

We are at the forefront, amongst geoscience organisations, of international conversations around science and sustainable development. In 2017, we did not expect or plan to engage in UN processes and mechanisms, but it soon became apparent that there was a significant gap in terms of engagement by the geoscience community. Working with relevant UN Major Groups to amplify our messages, we contributed to three UN-level Forums on Science, Technology, and Innovation for the SDGs (convening the first Earth science focused side event), the High-Level Political Forum on Sustainable Development, and the Conference of the Parties to the *UN Framework Convention on Climate Change* (UNFCCC). In 2021, we were formally accepted as an observer organisation to the UNFCCC and were recently granted special consultative status with the *UN Economic and Social Council* (ECOSOC). Through engaging at this level, we ensured text around the value of geodiversity was included in the Scientific and Technological Major Group position paper for the 2021 High Level Political Forum, and key messages about environmental education were embedded into the formal meeting report of the UN Forum on Science, Technology and Innovation for the SDGs.

Our Journey to Impact

We are confident that, as a result of our work, there is greater recognition for, and understanding of, the role of geology in tackling significant global challenges both within and beyond the geosciences community. This change in knowledge, together with new skills, supports the wider geoscience community to make their own contribution to practical development projects (through diverse jobs), tackling the scourge of poverty and diverse inequalities. The impact on implementation of the SDGs of a mobilised and equipped community will always exceed what we - as one organisation of volunteers - can do directly.

Through our approach, expertise, and presence in global forums and networks, we have rapidly become a recognised and trusted voice on '*geology and sustainable development*', with a demonstrated commitment to reshaping the global geology community to better serve society. We recognise, however, that there is still much to do to leverage maximum impact from the work we have initiated, and many barriers to the use of geoscience information that hinders deliver of the SDGs. We look forward to continuing our work to address these issues through our new strategy over the coming decade and hope you will partner with us to achieve this.

E. GOVERNANCE AND MANAGEMENT

BOARD OF TRUSTEES: Trustees have been appointed to oversee and guide our work, in accordance with our Governing Document (based on the Charity Commission’s ‘Foundation’ model constitution for a Charitable Incorporated Organisation whose only voting members are its charity trustees).



NIC BILHAM (CHAIR OF TRUSTEES)

Nic is a consultant working on sustainable mineral supply chains and responsible sourcing of raw materials, before which he worked at the *Geological Society of London*. Nic is European Coordinator for the *International Association for Promoting Geoethics*.



KIRSTY DAWKES

Kirsty has an MSci in Geological Sciences and is a Chartered Geologist through the *Geological Society of London*. She currently works in the energy sector, with international engagement.



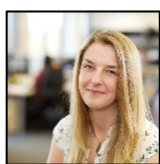
MARIE FLEMING

Marie is an Engineering Geologist at *Arup*, based in Ireland. She is a former president of the *Institute of Geologists of Ireland*, and a member of the External Relations committee of the *Geological Society of London*.



FLO BULLOUGH

Flo has an MSci in Geology from *Imperial College London* and a background in geochemistry research, contaminated land and groundwater. She has expertise in policy, until recently working for the *Geological Society of London*.



NATASHA DOWEY

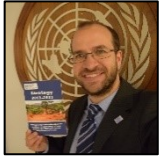
Natasha lectures in physical geography at *Sheffield Hallam University*, with specialisms in hazards, volcanoes, and igneous geology. Her research into the uncertainty involved in studying rocks formed in explosive eruptions aims to improve understanding of volcanic hazards.



SARAH GORDON

Sarah is a geologist and a co-founder of the risk management company, *Satarla*. She has previously worked for *Anglo American*, which has taken her to live and work around the world, and has a PhD in the chemistry of meteorites from *Imperial College London*.

TEAM: Day-to-day responsibility for the running of the charity is delegated to a volunteer Executive Director of *Geology for Global Development*, working alongside a Senior Leadership Team (indicated with an asterisk * below) and a wider team of volunteers. With both additions and resignations through 2021, those involved in some capacity through 2021 are noted below:



JOEL GILL (EXECUTIVE DIRECTOR*)

Joel founded *Geology for Global Development* in 2011 and has overall responsibility for the leadership and management of GfGD, overseeing the implementation of our strategy and day-to-day operations.



VIKI O'CONNOR (BUSINESS DEVELOPMENT AND FUNDRAISING LEAD*)

[Appointed in 2021] Viki leads our business development and fundraising activities, and supports our financial planning and management.



SABRINA JAMES (BUSINESS DEVELOPMENT ASSISTANT)

[Appointed in 2021] Sabrina supported various administrative tasks through 2021, with a growing focus on supporting our business development activities.



EMILY WHITE (DEPUTY DIRECTOR AND NETWORKS LEAD*)

[Stepped down in 2021] Emily led our GfGD University Group network, acting as the link between these groups and the GfGD leadership.



ALLIE MITCHELL (INDUSTRY LEAD)

[Stepped down in 2021] Allie led our *Network of Professionals* and helped us to engage with industry.



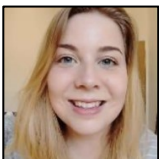
SEAN RUFFELL (UNIVERSITY GROUPS ASSISTANT / STUDENT NETWORK COORDINATOR)

Sean supports our GfGD Student Ambassador Network, helping students to engage with activities that align with GfGD's core values.



HANNAH HILBERT-WOLF (RESEARCH AND ANALYSIS LEAD*)

[Appointed in 2021, Stepped down in 2022] Hannah led the Research Team, which develops and coordinates a program of impact-focused research.



LAURA HUNT (RESEARCH ASSISTANT, IMPACT)

[Stepped down in 2022] Laura helped design and deliver research to understand the impact of GfGD's activities.



LAURA ROBERTS-ARTAL (COMMUNICATIONS LEAD*)

Laura has responsibility for developing and managing our portfolio of communications.



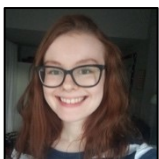
JESSE ZONDERVAN (CONTENT EDITOR)

Jesse supports communication and outreach through his editorial role in the written work of GfGD.



RACHEL ONG (GRAPHIC DESIGN ASSISTANT)

[Appointed in 2021] Rachel supports our communications work and wider team by designing graphics for GfGD's social media, reports and other outputs.



ANNA LEPPÄNEN (SOCIAL MEDIA ASSISTANT)

[Appointed in 2021, stepped down in 2022] Anna supported our communications work and wider team by managing and expanding our social media presence.

F. FINANCIAL OVERVIEW

The accounts below document financial activity (income and expenditure) that occurred in 2021 and 2020. The Statement of Financial Activities is calculated on a cash basis. The Balance Sheet shows total funds including non-cash assets and liabilities. For full details of activity in 2016 to 2020, please refer to previous GfGD Annual Reports (www.gfgd.org/annual-reports).

Key observations include:

- **[Unrestricted Income]** £10522 is labelled as unrestricted income and can be used to support the full portfolio of our work. This income was raised through grants, personal donations, and fundraising activities. We are particularly grateful to the International Union of Geological Sciences (IUGS), the UNESCO/IUGS International Geoscience Programme Project 685, GeStEIN, and the University of Hull for their support. A further donation of £714 was pledged in 2021, to be paid to GfGD in early 2022. This is included below as a sum of £714 in the Balance Sheet, under *Debtors: Due in One Year*. At the time of publication, this sum has been received.
- **[Restricted Income]** No restricted income was received in 2021.
- **[Expenditure from Unrestricted Income]** £11694 is labelled as expenditure using our unrestricted income. This was used exclusively to support our charitable activities (described in detail in **Section C**).

- **[Expenditure from Restricted Income]** £300 is labelled as expenditure using our restricted income. Drawing on funds for work to increase resilience to volcanic hazards in Guatemala, this payment supported a research project to help characterise the training and development needs of hazard scientists in the region (described in detail in **Section C**).

In 2021, the net movement in *unrestricted* funds (including non-cash assets and liabilities, as set out on the Balance Sheet) was therefore -£458. The total net movement in funds (including both *unrestricted* and *restricted* funds) was -£758.

Our Charity Reserves Policy, agreed in 2018, sets an ambition to ensure free reserves of six to nine months operational costs (or 50 to 75%). Based on budgeted expenditure of approximately £15,850 in 2022, this equates to £7925 to £11888. At the end of 2021, based on our balance sheet, our free reserves stood at £8821. Equivalent to 56% of our budgeted expenditure in 2021, this is within the range set out in our Charity Reserves Policy.

Many of our activities were delivered through the dedication of a team of volunteers. We are very grateful to all those who gave their time in 2021 to help realise our charitable objectives.

GfGD STATEMENT OF FINANCIAL ACTIVITIES (AS AT 31 DECEMBER 2021)

	Unrestricted Funds (£)	Restricted Funds (£)	Total 2021 (£)	Total 2020 (£)
Income and endowments from:				
Donations and legacies	10,050	--	10,050	8136
Activities for Generating Funds (Fundraising Events)	472	--	472	454
Charitable activities	--	--	--	--
Other trading activities	--	--	--	--
Investment income	--	--	--	--
Total Income	10,522	--	10,522	8590
Expenditure on:				
Costs of Generating Voluntary Receipts	--	--	--	--
Raising funds	--	--	--	--
Investment Management Costs	--	--	--	--
Charitable activities	(11,694)	(300)	(11,994)	(3660)
Governance Costs	--	--	--	(144)
Total Expenditure	(11,694)	(300)	(11,994)	(3804)
Surplus/(Deficit) of income over expenditure	(1172)	(300)	(1472)	4786
Net gains/(losses) on investments	--	--	--	--
Net income/(expenditure)	(1172)	(300)	(1472)	4786
Transfers between funds	--	--	--	--
Net movement in funds	(1172)	(300)	(1472)	4786
Reconciliation of funds				
Total funds brought forward	9279	1346	10625	5839
Total funds carried forward	8107	1046	9153	10625

BALANCE SHEET (AS AT 31 DECEMBER 2021)

	2021 (£)	2020 (£)
Fixed Assets		
Tangible Assets	--	--
Investments	--	--
Total Fixed Assets	--	--
Current Assets		
Debtors: Due in one year	714 ¹	--
Debtors: Due after one year	--	--
Cash at Bank and in hand	9153	10625
Total Current Assets	9867	10625
Current Liabilities		
Creditors due within one year	--	--
Net current assets	9867	10625
Total assets less current liabilities	9867	10625
Funds		
Unrestricted Funds	8821	9279
Restricted Funds ²	1046	1346
Total Funds	9867	10625

CASH FLOW STATEMENT (AS AT 31 DECEMBER 2021)

	2021 (£)	2020 (£)
Cash flows from operating activities:		
Net cash provided by operating activities	(1472)	4786
Cash flows from investing activities:		
Net cash provided by investing activities	--	--
Cash flows from financing activities:		
Net cash provided by financing activities	--	--
Change in cash and cash equivalents in the reporting period	(1472)	4786
Cash and cash equivalents at the beginning of the reporting period	10625	5839
Change in cash and cash equivalents due to exchange rate movements	--	--
Cash and cash equivalents at the end of the reporting period	9153	10625

¹ Income pledged in 2021 but to be received in 2022.

² Money raised for a project building resilience to volcanic hazards in Guatemala.

G. EQUALITY, DIVERSITY, AND INCLUSION (EDI)

In our 2020 annual report, we recognised the need to listen, learn, and implement change where needed to help deliver a more diverse and inclusive geoscience community. Being accountable to both our supporters and beneficiaries, we note below some of our work on EDI in 2021:

- *Strengthening Training:* We implemented mandatory safeguarding training in 2021, supporting the team to identify and know how to report all forms of harm, exploitation, and abuse. Our CEO also completed an extended training course on safeguarding in international development contexts.
- *Improving Recruitment Processes:* We ensured our recruitment processes followed good practice in terms of transparency and inclusivity. We increased the number of applications from outside of the UK and are now taking steps to build on this, translate this into recruitment and retention of team members from outside of the UK, and improve the diversity of our team.
- *Supporting Research Projects:* We supported (in kind) research projects aiming to improve the diversity and inclusivity of the geoscience community.
- *Funding Decisions:* We reviewed the extent to which our bursaries are accessed by those in and/or from the Global South. In 2021, 68% of placement funding/bursaries went to this group, and 31% of our consultancy funding.

Our work to improve monitoring of EDI within GfGD, taking actions where needed, and support the wider geoscience community to be a more equal, diverse, and inclusive environment continues through 2022.

H. LOOKING TO THE FUTURE

In 2022, we will launch our new strategy, focused on supporting implementation of the UN 2030 Agenda for Sustainable Development by delivering high quality and impact-driven research, engaging in international policy mechanisms, and supporting education and capacity strengthening at all levels. This will be detailed in our 2022 Annual Report (published in early 2023), together with activities on our social media. Live updates will be made available on our website and social media.

I. FURTHER INFORMATION

Find the latest GfGD news, events, and opportunities to get involved on our website (www.gfgd.org), Facebook (www.facebook.com/gfgd.org), LinkedIn (www.linkedin.com/company/gfgd/), and Twitter (www.twitter.com/Geo_Dev).

Download this Annual Report and Review from our website (www.gfgd.org/annual-reports).