

# British Geological Survey

## Name of Organisation:

British Geological Survey (BGS)

## Fellowship Summary

The training programme will build on the experience of hosting 12+ Fellows since 2012. The primary aim is to provide experience and training in modern geochemistry laboratories, alongside learning systems of work for handling research data (e.g. Quality Assurance, H&S, infrastructure maintenance). Further objectives may include experience in contributing or leading on scientific outputs, use or presentation of data for interpretation (e.g. statistics, QGIS). A Theory of Change process will be developed for the Fellows to evaluate how lessons learnt can be applied to their home situation for onward improvement and cascading of information to colleagues. An additional component over previous years will incorporate social science training to encourage the thought process for 'pathways to impact' partnering with specialists at the Universities of Plymouth/Nottingham.

Fellows will be linked into a WhatsApp group of previous BGS hosted Fellows from across Africa to contribute to building their own regional support network.

## Weblink for Candidates

<https://www.bgs.ac.uk/geological-research/science-facilities/environmental-geochemistry/inorganic-geochemistry-facility/>

## Eligibility

The candidates should have an environmental geochemistry background, but with a primary interest in laboratory activities and application of data to applied settings – this may include social science for pathways to impact. A mix of expertise and experience is welcome across the three Fellows. We have focused on building a group across Africa with previous Fellows to ensure onward benefit for Fellows but are open to other contributors.

## Proposed Fellowship Dates

21/02/2024 to 17/05/2024

## Proposed Activity

### Arrival 19/20 February

21 February: Induction

22-23 February: Orientation, introduction to lab systems at BGS

### Week 26 February

Evaluation of existing datasets for onward training courses in GIS and Geostatistics – data management, assessment of IT skills at BGS.

### Week 4 March

Laboratory methods and quality assurance for measurements – interpretation/presentation

of data – basic statistics and Geospatial software at BGS.

### **Week 11 March**

Modern methods of chemical analyses (isotope tracers, elemental speciation) to discern environmental pathways – benefit understanding for collaboration internationally and teaching purposes in home country.

Include discussion with social scientists (BGS/University of Nottingham staff) at BGS.

### **Week 18 March**

University of Plymouth for social science training – provision of courses from Environmental Sciences department.

Communicating with stakeholders in study design to dissemination at community level to policy decision makers – practical examples for East Africa from lessons learnt.

Combination of formal course delivery (cost to affiliated Schumacher College) and delivery via Soil Erosion research group at Plymouth.

### **Week 25 March**

Complete training with social scientists and determine homework for rest of fellowship at Plymouth.

28 March: Return to Nottingham

29 March: Bank Holiday

### **Week 1 April**

1 April: Bank Holiday

2-5 April: Follow-up training on data handling and presentation systems.

Scenario/datasets for practical exercises for social science, geospatial-(GIS) and R-statistics at BGS.

### **Week 8 April**

8-10 April: Follow-up on data handling/presentation systems for social science, geospatial (GIS) and R-statistics on-the-job training using example scenario and datasets at BGS.

11-12 April: Writing skills training – differing formats for public communication, scientific writing and policy briefs. Utilise learning material from British Academy funded writing workshop series for African researchers at BGS.

### **Week 15 April**

Shadow range of other laboratory techniques for soil and water analyses. Reinforcement of mechanisms required in labs for safe working, quality assurance, training and development requirements for staff and building a mindset for the preventative maintenance of equipment, planning for running costs at BGS.

## **Week 29 April**

Evaluate quality assurance measures for laboratory methods, problem solving, readiness of data for publication in peer review or policy – appreciation for trust, confidence and transparency in data communication and decision making.

BGS to draw on ISO accreditation experience and capacity strengthening worldwide. Trainees to learn how to incorporate, spot problems in others work and train in data integrity at BGS.

## **Week 6 May**

6 May: Bank Holiday

7-10 May Refresh social science methods learnt at Plymouth – either online or in-person at BGS/Plymouth. Re-engage with communication, with new knowledge in presenting data in a technical format appropriate to the audience and the confidence in reliable and impartial information – communication to differing audiences to ensure pathway to impact and evaluate what success for research looks like at BGS or Plymouth.

## **Week 13 May**

13-14 May: Write-up experiences, lessons learnt or write up data outputs from samples/data analysed at BGS.

15 May: Scope plans for follow-up funding – discussed throughout, but set aside time here as a focal point and action plan for continuance of lessons learnt for home return at BGS.

16 May: Finalise report for CSC and write web blog to highlight experience at BGS.

17 May: Spare day to cover any gaps in forward planning, write-up. If appropriate encourage lunchtime lecture at BGS.

18/19 May: Return home

## **Priority Theme**

Science and technology for development