



Cambridge ESRC DTP Interdisciplinary Studentship 2022:

Dangerous waters: investigating the distribution and social impacts of volcanic metal and volatile pollution in the East African Rift

The University of Cambridge ESRC Doctoral Training Partnership [DTP] is pleased to offer an interdisciplinary studentship available for admission in October 2022.

The studentship is open as either a one-year masters followed by three-year doctoral programme or a three-year doctoral programme and will be co-supervised by Dr Amy Donovan (Geography), Prof. Marie Edmonds (Earth Sciences) and Dr Anja Schmidt (Geography and Chemistry).

DTP students will acquire a unique set of skills that will equip them for high-profile careers as leading social scientists, in academia or in other government, industrial, commercial and third sector organisations, either in the UK or elsewhere.

Project description

Communities in the East African Rift are growing rapidly, and live alongside some of the least studied volcanic systems in the world. These systems are known to pollute local water resources with fluorides, but other trace metal volcanic products (e.g. lead, mercury, arsenic) are much less studied, despite the volcanic rocks in the region being considerably enriched in these species relative to other settings). The social impacts, understandings and adaptations to this pollution are unstudied. This project aims to work with communities to understand their own narratives around the soils beneath their feet, contributing to emerging work on political geology, and also gain insights into local-level adaptations to the pollution. It will also involve original measurements of metal pollution (Pb, As and Tl, among others), to quantify the level of hazard from these rift volcanoes.

In the Rift Valley, rapid development is occurring alongside traditional practices of living in a hazardous environment. Development is often carried out by non-local organisations that lack local knowledge. In this project, the student will spend four months living alongside a community (likely Awassa in Ethiopia) in the Rift Valley, learning from them about their experiences of water resources and their use. They will also undertake a range of measurements of trace metal content in water resources (groundwater, aquifer, well and run-off) and open water bodies. They will use a combination of social methods, including semi-structured interviews with officials responsible for water resources, development actors and members of the public; and also participatory focus groups with citizens in the town. These could include walking interviews and photo journals. They will also undertake water and geological sampling around the town and in a wider regional field campaign, to obtain a geographical overview of variations in trace metal and fluoride distribution. Finally, meteorological modelling will be used to establish the likely impact of a volcanic eruption from a nearby volcanic centre (Corbetti, in the case of Awassa).

Theoretically, this project will contribute to existing work on the politics of geology in development contexts, looking at how issues of water quality are managed when development is rapid and local people have limited social capital. It will also contribute to understanding the spatial distribution of trace metal pollution and its impacts in the region.

The student will attend the appropriate sessions from the Social Science Methods Research Programme (SSRMP), particularly focussing on qualitative methods (semi-structured interviews, focus groups, participant observation) in the first year of the PhD. This year will be spent reviewing the literature and finalising the research plan and methodology.

Cambridge ESRC DTP studentships are open to all students who meet the required academic conditions.

An ESRC DTP studentship will cover Home rate fees and provide £15,609 p.a. in living costs (current rates). DTP students also receive a personal allowance for additional training costs, and can apply for further funding to pursue fieldwork, academic exchange, and collaboration with non-academic partner organisations.

What to do next

You can find out more about the Cambridge ESRC DTP at: <https://www.esrcdtp.group.cam.ac.uk/about/onoffer> and read about some of the opportunities that will be available to you.

You can find out more about the Department of Geography at www.geog.cam.ac.uk and the Department of Earth Sciences at www.esc.cam.ac.uk. Please address any questions about this studentship to **Dr Amy Donovan** at ard31@cam.ac.uk.

All Cambridge ESRC DTP applicants follow the University's standard admission process. Applications for this studentship should be made to the Department of Geography. Please go to our [Postgraduate Admissions Portal](#) to start your application and ensure you indicate the project title as the proposed research title and Dr Amy Donovan as the proposed supervisor on the online application form.

Applicants' research proposal should explain their motivation for applying, including why their prior skills/knowledge make them a good fit for the studentship, as well as offer preliminary reflections on how they might tackle the studentship topic/methods.

The closing date for applications will be Thursday **6 January 2022** (if applicants would like to be considered for any other funding available via the [University funding competition](#), applications **must** be made by 2 December 2021).