

# RESEARCH FELLOW



<b>Job Title:</b>	<b>Research Fellow REACH project</b>
<b>Department:</b>	Global Health and Development
<b>Faculty:</b>	Public Health and Policy
<b>Location:</b>	Tavistock Place, London, UK
<b>FTE:</b>	1 FTE (35 hours per week)
<b>Grade:</b>	Research Fellow Grade 6
<b>Accountable to:</b>	Principal Investigator (PI) Josephine Borghi and Anna Foss
<b>Job Summary:</b>	<p>This is an exciting opportunity for a mathematics / engineering / computer science or highly quantitative social scientist / health economist to join the LSHTM REACH project team.</p> <p>The ideal candidate will have the following strengths:</p> <ul style="list-style-type: none"> <li>(i) Expertise in mathematical modelling and associated computer programming / software proficiency</li> <li>(ii) An understanding of public health/health systems and/or climate change</li> <li>(iii) Experience undertaking evidence reviews and analysing large datasets</li> </ul> <p>The REACH project is funded by the ESRC and aims to <i>Build Resilience to Floods and Heat in the Maternal and Child Health (MCH) System in Brazil and Zambia</i>. The REACH project will inform preparedness measures at the district, facility and community levels in Brazil and Zambia by co-producing locally relevant climate risk scenarios. Additionally, this study employs two systems science methods, system dynamics modelling (SDM) and agent-based modelling (ABM), to account for the complexity of healthcare systems and their dynamic interaction with climate hazards. Using these approaches, the REACH project will build a hybrid SDM-ABM model to determine MCH system vulnerability to floods and heat, and identify, cost and evaluate resilience building interventions to enhance MCH outcomes.</p> <p>Specifically the project will:</p> <ul style="list-style-type: none"> <li>(iv) Quantify the relationship between floods and heat and MCH service coverage and financial protection outcomes, as well as heterogeneity in effects.</li> <li>(v) Explore drivers of primary MCH system vulnerability and resilience to floods and heat, and how they vary across settings.</li> <li>(vi) Identify and cost interventions to enhance the resilience of the primary MCH system to floods and heat.</li> <li>(vii) Build a hybrid SDM-ABM model to evaluate the effects of floods, heat and resilience building interventions on MCH service delivery and demand under different scenarios.</li> </ul> <p>The research fellow will undertake evidence reviews for the project, undertake quantitative data analysis, and develop the foundations for</p>

a hybrid modelling framework before developing the hybrid model for REACH. The research fellow will be involved in multi-directional capacity building between all project partners.

The post holder will be based in London, travelling, as required to Vienna, Brazil and Zambia

## General Information

The London School of Hygiene & Tropical Medicine (LSHTM) is one of the world's leading public health universities.

Our mission is to improve health and health equity in the UK and worldwide; working in partnership to achieve excellence in public and global health research, education and translation of knowledge into policy and practice.

Staff and students are committed to helping create a more healthy, sustainable and equitable world for everyone, because we believe our shared future depends on our shared health.

We embrace and value the diversity of our staff and student population and seek to promote equity, diversity and inclusion as essential elements to improve health worldwide. We believe that when people feel respected and included, they can be more creative, successful, and happier at work. While we have more work to do, we are committed to building an inclusive workplace, a community that everyone feels a part of, which is safe, respectful, supportive and enables all to reach their full potential.

To find out more please visit our [Introducing LSHTM page](#).

## Our Values

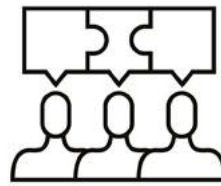
Our values establish how we aspire to achieve our mission both now and in the future - demonstrating what it means to work and study at LSHTM. Please visit our [LSHTM Values page](#) for further information.



**Act with  
integrity**



**Embrace  
difference**



**Work  
together**



**Create  
impact**

# Faculty Information

## The Faculty of Public Health and Policy (PHP)

The Faculty of Public Health and Policy (PHP) aims to improve health in the UK and worldwide. We do this through research, teaching and consultancy in the areas of health policy, health systems and services, and public health. We run a range of popular and respected MSc courses, research degrees, short courses and CPD.

The faculty has over 250 academic staff and 250 doctoral students. We are the largest multi-disciplinary public health group in Europe, and one of the largest groups world-wide of social scientists working on health. We use multidisciplinary and multi-method approaches to generate new knowledge to improve health in specific contexts and inform transferability of approaches across contexts. We engage with people, policymakers and service providers to ensure our research is inclusive, relevant, and informs policy and practice.

Our research, teaching and consultancy are inter-disciplinary, encompassing anthropology, economics, epidemiology, geography, history, international relations, mathematics political science, psychology, public health medicine, sociology and statistics.

The faculty is fully committed to the Athena SWAN Charter and holds a silver award. PHP is comprised of three departments:

- Department of Global Health and Development which focuses on health policy and systems research, economic evaluation, gender violence and violence in childhood, and medical humanitarianism, all primarily in low and middle income settings.
- Department of Health Services, Research and Policy which focuses on improving the quality, organisation and management of health services and systems.
- Department of Public Health, Environments and Society which focuses on the social and environmental influences on health and how these are addressed.

There are also 13 cross-faculty Centres at LSHTM, with those most relevant to the REACH project outlined below.

### [The Global Health Economics Centre \(GHECO\)](#)

The Global Health Economics Centre acts as the central body for staff and students across the School who study or apply health economics. The Centre's vision is forward-looking and emphasises cutting edge methodological development, rigorous empirical research, and working alongside policy and decision-makers to achieve policy impact. We seek to improve collaborations among economists and researchers in other disciplines at LSHTM and with research groups and policymakers in the UK and around the world. Centre members' expertise places them at the forefront in building the capacity of health economists and their policy communities – and embracing respectful collaborations worldwide.

### [Centre on Climate Change and Planetary Health \(CCCPH\)](#)

CCCPH members contribute to a fast-growing body of shared knowledge, insight and understanding on planetary health, based on the highest scientific standards and

underpinned by LSHTM. They encourage and support an international community, connected for long-term change. They work together to develop and share findings and nurture the next generation of leaders. They teach students and researchers from around the world on planetary health and support sustainability initiatives across LSHTM. CCCPH members co-create imaginative and scalable solutions that can work hard for people around the world and inspire governments, policymakers, industry and civil society to engage.

### [Centre for Maternal, Adolescent, Reproductive, & Child Health \(MARCH\)](#)

March's vision is to improve women's, children's, and adolescents' health worldwide.

### [Centre for Data and Statistical Science for Health \(DASH\)](#)

DASH aims to develop and apply state-of-the-art data and statistical science to address pressing problems in global health.

### **The REACH project**

The REACH project runs over 48 months, involving an inter-disciplinary research team comprising computer scientists, mathematicians, engineers, health economists, health systems researchers and climate scientists across research partners in Zambia, Brazil, Austria, London, Sweden, Uganda and Kuwait. The project has a number of objectives including:

1. To quantify the relationship between floods and heat and MCH service coverage and financial protection outcomes, as well as heterogeneity in effects.
2. To understand drivers of primary MCH system vulnerability and resilience to floods and heat, and how they vary across settings.
3. To identify and cost interventions to enhance the resilience of the primary MCH system to floods and heat.
4. To build a hybrid SDM-ABM model to evaluate the effects of floods, heat and resilience building interventions on MCH service delivery and demand under different scenarios.
5. To build a user-friendly decision-support tool for MCH stakeholders at the subnational level for vulnerability assessment and for identification of resilience building interventions and monitoring indicators.

The project also involves working closely with research teams in Zambia and Brazil.

The portfolio of duties outlined below will vary in accordance with the academic expectations of the role, which may be varied from time to time, and agreed at the post holder's annual Performance and Development Review (PDR).

The post is based in Vienna, but will require travel to London, Zambia and Brazil.

The portfolio of duties outlined below will vary in accordance with the academic expectations of the role, which may be varied from time to time, and agreed at your annual Performance and Development Review (PDR).

## **Job Description**

### **Main Activities and Responsibilities**

#### **Knowledge Generation**

1. To undertake high quality research & scholarship, including contributing to drafting major grant proposals and/or leading on drafting small grant proposals, and evaluating teaching practice;
2. To contribute to peer-reviewed publications and other outputs, including as lead author;
3. To make a contribution to doctoral student supervision, as appropriate to qualifications and experience;
4. To manage small grants or elements of larger grants, ensuring compliance with good practice in relation to the conduct of research, the ethics policy and other relevant LSHTM policies.
5. To undertake evidence synthesis for REACH as required.
6. To undertake the REACH modelling work, including model development, parameterisation/fitting/calibration, validation, application, uncertainty/sensitivity analysis, and generalisability.
7. To liaise closely with the PI and Co-Is, partner institutions, other team members and stakeholders, ensuring that stakeholder engagement is embedded throughout the project from beginning to end.
8. To contribute to reporting, dissemination and deliverables for the REACH project.
9. To work with partners and capacity building leads to exchange knowledge/skills, building multi-directional modelling capacity across institutions.

#### **Education**

1. To contribute to the delivery of high quality, inclusive, research-informed teaching and assessment in relation to your specific subject and within the broader area covered by your department and disciplinary field;
2. To contribute to the improvement of the quality of LSHTM's education, by participating in the development of new and updated learning and teaching materials or approaches.

#### **Internal Contribution**

1. To undertake activities that support the Department, Faculty, MRC Unit or LSHTM;
2. To reflect LSHTM's EDI goals in your work and behaviour;
3. To participate in LSHTM's PDR process.

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4. To support knowledge exchange and collaboration between the LSHTM and IIASA in the field of climate and health systems.

### External Contribution

1. To demonstrate good external citizenship by contributing to learned society/conference events, journal and grant reviews etc;

### Professional Development and Training

1. To keep up to date with the latest research/thinking in your academic field and with changes to pedagogic practice within LSHTM and more generally;
2. Where the length and nature of the position permits, to apply for and, if accepted, undertake a doctoral degree (if not already acquired);
3. To undertake and successfully complete the mandatory training required by LSHTM as appropriate to the role.

### General

All academic staff are free within the law to question and test received wisdom, and put forward new ideas and controversial or unpopular opinions, to enable LSHTM to engage in research and promote learning to the highest possible standards.

All staff at LSHTM are also expected to:

1. Act at all times in LSHTM's best interests;
2. Treat staff, students and visitors with courtesy and respect at all times;
3. Comply fully with LSHTM policies, procedures and administrative processes relevant to the role, including when acting as Principal Investigator, accepting academic, managerial, financing and ethical responsibility for a project
4. Uphold and support LSHTM's values (as set out in the LSHTM Strategy);
5. Act as ambassadors for LSHTM when hosting visitors or attending external events.

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## Academic Expectations

All academic roles have a statement of academic expectations attached to each level. Please ensure that these have been read and understood. For further information please refer to the [Academic Expectations page](#).

*The above list of duties is not exclusive or exhaustive and the role holder will be required to undertake such tasks as may reasonably be expected within the scope and grading of the role.*

*Role descriptions should be regularly reviewed to ensure they are an accurate representation of the role.*

## Person Specification

This form lists the essential and desirable requirements needed by the post holder to be able to perform the job effectively.

Applicants will be shortlisted solely on the extent to which they meet these requirements.

### Essential criteria:

1. A postgraduate degree, ideally a doctoral degree, in a relevant topic.
2. Relevant experience in public health / health systems and/or climate change
3. Contributions to written output, preferably peer-reviewed, as expected by the subject area/discipline in terms of types and volume of outputs.
4. Proven ability to work independently, as well as collaboratively as part of a research team, and proven ability to meet research deadlines.
5. Evidence of excellent interpersonal skills, including the ability to communicate effectively both orally and in writing
6. Evidence of good organizational skills, including effective time management.
7. Expertise in mathematical modelling techniques and approaches
8. Expertise in computer programming / software proficiency in relation to complex systems modelling

### Desirable Criteria

1. Some experience of contributing to research grant applications.
2. Some experience of teaching and assessment.
3. Some experience of supervising and supporting junior researchers and/or research degree students, and non-academic staff.
4. Experience of building and using agent-based modelling and/or systems dynamic modelling
5. Prior experience undertaking evidence reviews and knowledge of related methods.
6. Experience managing and analysing large datasets (including statistical analyses)
7. Knowledge of the effects of climate change relating to heat and/or flooding
8. Knowledge of maternal and child health
9. Contextual knowledge of Zambia and/or Brazil and/or Portuguese language skills
10. Experience with engaging stakeholders in the process of model development and/or in developing user-friendly model interfaces for stakeholders



## Salary and Conditions of Appointment

The post is fixed term until 30 June 2026 and full-time 35 hours per week, 1.0 FTE. The post is funded by ESRC and is available from 1 July 2024. The salary will be on the Academic scale, Grade 6 scale in the range £43,947 - £49,908 per annum (inclusive of London Weighting).

The post will be subject to the LSHTM terms and conditions of service. Annual leave entitlement is 30 working days per year, pro rata for part time staff. In addition to this there are discretionary "Wellbeing Days". Membership of the Pension Scheme is available.

LSHTM has a Hybrid Working Framework, which alongside agreed service requirements, enables teams to work more flexibly (if the role allows), promoting a greater wellbeing and work/life balance.

## Application Process

Applications should be made on-line via our [jobs website](#). Applications should also include the names and email contacts of 2 referees who can be contacted immediately if appointed. Online applications will be accepted by the automated system until 10pm of the closing date. We regret that late applications cannot be accepted. Any queries regarding the application process may be addressed to [jobs@lshtm.ac.uk](mailto:jobs@lshtm.ac.uk).

The supporting statement section should set out how your qualifications, experience and training meet each of the selection criteria. Please provide one or more paragraphs addressing each criterion. The supporting statement is an essential part of the selection process and thus a failure to provide this information will mean that the application will not be considered. An answer to any of the criteria such as "Please see attached CV", "Yes" or "No" will not be considered acceptable and will not be scored.

Please note that if you are shortlisted and are unable to attend on the interview date it may not be possible to offer you an alternative date.

## Asylum and Immigration Statement

LSHTM will comply with current UKVI legislation, which requires all employees to provide documentary evidence of their legal right to work in this country prior to commencing employment. Candidates will be required to email a copy of their passport (and visa if applicable) to HR prior to their interview and if appointed will be asked to bring the original documents in to be copied and verified before their start date.

Applications from candidates who require sponsorship to work in the UK will be considered alongside other applications. Applicants who do not currently have the right to work in the UK will have to satisfy UK Visas & Immigration regulations before they can be appointed.

Further information about Sponsorship and eligibility to work in the UK, can be found on the [government immigration rules page](#).

Date amended: Jan 2024