



UNIVERSITY OF LEEDS

## CANDIDATE BRIEF

Research Fellow in Modelling Forest-Climate Interactions

Faculty of Environment



**Salary: Grade 7 (£41,064 – £48,822 p.a. depending on experience)**

**Reporting to: Dr Jess Baker**

**Reference: ENVEE1876**

**Fixed term for 3 years (external funding)**

**We are open to discussing flexible working arrangements**

## Overview of the Role

**Do you have a strong background in climate or atmospheric modelling? Do you have a proven track record developing international research collaborations? We are seeking an enthusiastic and committed researcher to identify how tropical forests can contribute to climate change adaptation.**

Finding solutions to climate change is urgent and essential for the future of humanity. Tropical forests have the potential to contribute to climate change adaptation, but there are crucial knowledge gaps on how intact and regenerating forests interact with climate and how well these processes are represented in global climate models. Existing models struggle to capture the complexity of tropical forest-climate interactions, limiting our ability to reliably predict the climate impacts of future land-use change, including tropical reforestation scenarios.

This role is an exciting opportunity to transform our understanding of tropical forests in the climate system and deliver science that will directly impact international land-use policy. You will build a pan-tropical research network and co-develop methods with project partners to develop the UK Earth System Model (UKESM). You will apply process-based evaluation tools to global and regional convection-permitting simulations to produce the first detailed evaluation of forest-climate interactions. You will deliver updated regional climate projections based on the improved UKESM and bespoke land-use scenarios. Your work will directly inform international policies on how future land use can support climate resilience.

You will have (or be close to obtaining) a relevant PhD and have expertise in an area of Climate or Environmental Science. You will have experience of collaborating with a wide range of tropical forest stakeholders and demonstrate commitment to publication of original results at an international level. Working within a vibrant and internationally recognised research team, the project offers generous opportunities to travel and work alongside international experts in the field, to participate in international climate change conferences, to receive highly-specialised training to grow your technical research skills, and will provide an excellent springboard for a thriving research career.

## Main duties and responsibilities

- Undertaking original research into forest-climate interactions and analysing and evaluating representation of these processes in global UKESM;
- Running new convection-permitting simulations over three tropical domains and analysing model representation of land-atmosphere feedbacks;



- Producing updated projections of regional climate change over the next century based on improved UKESM and novel land-use scenarios;
- Developing productive international research collaborations through meaningful engagement with tropical partner countries (Brazil, Tanzania and Indonesia) in line with the University of Leeds' decolonising framework;
- Preparing papers for publication in leading international journals and independently writing reports;
- Disseminating research results widely through project meetings, national and international conferences and policy engagement activities;
- Evaluating methods and results of other researchers and relating such evaluations appropriately to your own work;
- Working both independently and also as part of a larger team of researchers, engaging in knowledge-transfer activities where appropriate and feasible;
- Maintaining your own continuing professional development and contributing to the training and mentoring of less experienced colleagues as appropriate;
- Contributing to the research culture of the Biosphere Atmosphere Group and the wider School community, where appropriate.
- Using your initiative to identify new areas for research, develop new research objectives and methods, and extend the research as dictated by initial results;
- Where appropriate prepare proposals for funding in collaboration with colleagues;
- Contributing to the training of both undergraduate and postgraduate students, where appropriate, including assisting with the supervision of projects in areas relevant to the project.

These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.



## Qualifications and skills

### Essential

- A PhD (or close to completion) in Climate or Environmental Science;
- Demonstrated experience of conducting research analysing and running complex numerical models, including regional and global Earth system models;
- Excellent technical expertise in a programming language such as Python;
- Detailed knowledge of the local and regional climate impacts of tropical land-use change and experience of using models to evaluate these impacts;
- A track record of lead-author publications on tropical land-atmosphere interactions and climate feedbacks;
- Proven ability to independently cultivate international research partnerships;
- A strong commitment to delivering high-impact research that builds capacity in tropical partner countries;
- Excellent written and verbal communication skills including presentation skills and the ability to communicate effectively with a wide range of stakeholders;
- Good time management planning skills, with the ability to manage competing demands effectively, responsibly and without close support;
- A proven ability to work well both individually and in a team;
- A strong commitment to your own continuous professional development.

### Desirable

- Experience of pursuing external funding to support research;
- A commitment to interdisciplinary research and the ability to collaborate with researchers from different fields;
- Willingness to travel to tropical partner countries.



## Additional information

Please note: If you are not a British or Irish citizen, from 1 January 2021 you will require permission to work in the UK. This will normally be in the form of a visa but, if you are an EEA/Swiss citizen and resident in the UK before 31 December 2020, this may be your passport or status under the EU Settlement Scheme.

Find out more about the [Faculty of Environment](#).

Find out more about [Athena Swan](#) in the Faculty.

Find out more about [Equality in the Faculty](#).

Find out more about our [School](#).

Find out more about our [Research and associated facilities](#).

Find out more about [National Centre for Atmospheric Science \(NCAS\)](#).

Find out more about the [Met Office Academic partnership](#).

### Working at Leeds

We are a campus based community and regular interaction with campus is an expectation of all roles in line with academic and service needs and the requirements of the role. We are also open to discussing flexible working arrangements. To find out more about the benefits of working at the University and what it is like to live and work in the Leeds area visit our [Working at Leeds](#) information page.

### Our University

As an international research-intensive university, we welcome students and staff from all walks of life and from across the world. We foster an inclusive environment where all can flourish and prosper, and we are proud of our strong commitment to student education. Within the Faculty of Environment we are dedicated to diversifying our community and we welcome the unique contributions that individuals can bring, and particularly encourage applications from, but not limited to Black, Asian, people who belong to a minority ethnic community; people who identify as LGBT+; and disabled people. Candidates will always be selected based on merit and ability.



The Faculty of Environment has received a prestigious Athena SWAN silver award from [Advance HE](#), the national body that promotes equality in the higher education sector. This award represents the combined efforts of all schools in the Faculty and shows the positive actions we have taken to ensure that our policies, processes and ethos all promote an equal and inclusive environment for work and study.

### **Information for disabled candidates**

Information for disabled candidates, impairments or health conditions, including requesting alternative formats, can be found on our [Accessibility](#) information page or by getting in touch with us at [hr@leeds.ac.uk](mailto:hr@leeds.ac.uk)

### **Criminal Record Information**

A criminal record check is not required for this position, however, all applicants will be required to declare if they have any 'unspent' criminal offences, including those pending. Any offer of appointment will be accordance with our [Criminal Records policy](#). You can find out more about required checks and declarations in our [Criminal Records information](#).

