



UNIVERSITY OF LEEDS

## CANDIDATE BRIEF

**Weather Forecast Development and Co-Production Scientist**

**National Centre for Atmospheric Science, Faculty of Environment**



**Salary: Grade 7 (£36,333 – £43,155 p.a.)**

**Reference: ENVNC1011**

**Fixed term to 30 June 2025 – due to external funding**

**Location of the post is University of Leeds (with scope for hybrid working)**

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

## **Weather Forecast Development and Co-Production Scientist – Early Warnings for Southern Africa (EWSA), National Centre for Atmospheric Science, School of Earth and Environment, Faculty of Environment**

**Would you like to advance the delivery and uptake of African storm forecasting systems? Are you interested in pro-actively working with African partners to increase the effectiveness of severe weather alerts? Would you like to be part of an experienced team and contribute to capacity-building with African partner organisations?**

Through the application of innovative meteorological research to harness satellite data, we are developing solutions to deliver nowcasts of high-impact storms to Tropical Africa. The Early Warnings for Southern Africa (EWSA) project has been funded to provide the capabilities needed for African national weather services to enhance their delivery of short-range (0-48 hour) weather forecasts and nowcasts (0-6 hour) and ensure access to high-quality weather information for African populations. Ultimately, better preparedness and informed decision-making using nowcasting information will improve climate resilience and save lives and livelihoods.

The project will focus on the delivery and effectiveness of warnings for marginalised urban communities in Zambia, Mozambique and South Africa. We will conduct two forecasting “testbed” events, in November 2023 and February 2025, bringing together forecasters, researchers and users to co-produce and co-evaluate effective warnings of severe rainfall or flooding.

As Weather Forecast Development and Co-Production Scientist for the EWSA project, you will contribute to the development and uptake of the short-range forecasting systems. In particular, you will support transdisciplinary development of the project, engaging with scientists, forecasters, users and customers to co-produce nowcasting systems and enable better decision making.

The severe weather predictions incorporate the use of weather forecast models, geostationary satellite data, ground-based observations and the production of nowcast products in near-real-time. Warnings are disseminated through a range of media, including web pages, social media, voice radio, a mobile application and API.



You will be working as part of a team including experienced colleagues at the National Centre for Atmospheric Science (NCAS) at the University of Leeds and within partner organisations in the UK (including the UK Met Office) and Africa (led by the South African Weather Service). In addition to your position, at Leeds the project team will comprise: (1) a research scientist, formerly working 100% in this role, but now 10%; (2) a more senior research scientist who has led the successful testing of new forecast algorithms, and is now contributing 20%; (3) a mobile application developer (60%); (4) a computational modelling specialist who is working on the real-time data handling (10%); and (5) a project coordinator (60%). Within this team, we will oversee a transdisciplinary approach and will bring together the underpinning science and needs of users and clients, to enable an effective co-production and co-evaluation of solutions.

You will form part of [the FASTA team](#) which has long-term support to provide nowcasting products for Africa, and for which we are actively seeking further funds for sustainable expansion. If you wish, you will be encouraged and supported to seek funding for expansion of the activity, working with the Director and other members of the team to write proposals.

## What does the role entail?

As Weather Forecast Development and Co-Production Scientist, your main duties will include:

- Adapting and innovating the scientific methods and software for the satellite nowcasting algorithms and outputs to better meet the needs of users;
- Participating in user-engagement and co-production events in Southern Africa, to bring our scientific expertise to the table when products are being designed to meet the needs of communities;
- Working with all partners, so that the project can co-produce, design and prioritise improvements to the forecasting and nowcasting tools;
- Contributing to design of the evaluation of the services;
- Analysing user feedback and other evaluation measures, and using this to improve relevance, performance and communication of products;
- Contributing to capacity-building with African partner organisations;
- Contributing to the preparation of contracts and other strategic documents;
- Preparing documents and presentation materials.





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.

## What will you bring to the role?

As Weather Forecast Development and Co-Production Scientist, you will have:

- A PhD in a physical science, or equivalent professional experience;
- Excellent scientific and computational skills needed for the advancement of forecasting and nowcasting solutions, including near-real-time information delivery;
- Evidence of enthusiasm for transdisciplinary, solutions-focussed research and development, including collaboration with social scientists and economists;
- An appreciation of the scientific principles of weather prediction and the basics of remote sensing of the atmosphere, to the extent that you can communicate the strengths and limitations of these methods with non-scientists, and feedback innovative ideas;
- The ability to write lucid and persuasive documents, quickly if necessary;
- The ability to communicate verbally in groups and in formal presentations;
- Good organisational skills with evidence of the ability to coordinate projects and teams;
- Experience of working as part of a team with multidisciplinary expertise (e.g., technical experts, professional services, researchers from different disciplines and external partners);
- A pro-active, solutions-focussed attitude;
- A flexible approach, with the ability to listen to the views of others and compromise;
- Willingness to travel to Africa to liaise with clients and partners.

You may also have:

- Experience of weather forecasting, nowcasting and satellite data analysis;
- Experience coding in the python language;
- Experience of co-production of solutions with users;
- An understanding of delivering projects in a developing world / African context.



## How to apply

You can apply for this role online; more guidance can be found on our [How to Apply](#) information page. Applications should be submitted by **23.59** (UK time) on the advertised closing date.

## Contact information

To explore the post further or for any queries you may have, please contact:

**Professor Doug Parker, Science Co-ordinator for NCAS at Leeds**

Email: [douglas.parker@ncas.ac.uk](mailto:douglas.parker@ncas.ac.uk)

## 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.

### Additional information about the National Centre for Atmospheric Science

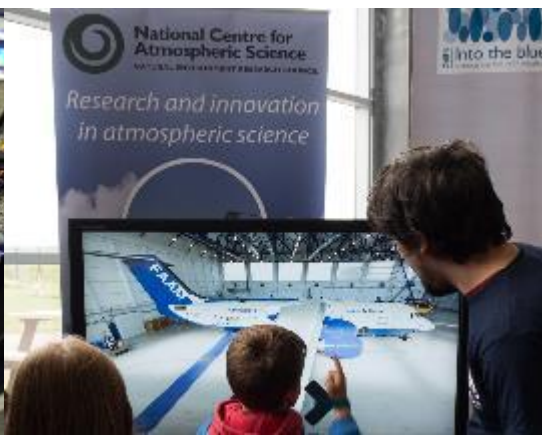
Find out more about the [National Centre for Atmospheric Science](#) and [its relationship with the School of Earth and Environment](#)

NCAS is committed to proactively encouraging an environment where diversity is celebrated and everyone is treated fairly, regardless of gender, gender identity, disability, ethnic origin, religion or belief, sexual orientation, marital or transgender status, age, or nationality.

Applications from under-represented groups in science research and administration are especially encouraged.

### Additional information about the University

Find out more about the [School of Earth and Environment](#)



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

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

Find out more about [equality](#) in the faculty

## **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 and ethnically diverse people; people who identify as LGBT+; and people with disabilities. 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.

## **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.

## **Candidates with disabilities**

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

## **Criminal record information**

### **Rehabilitation of Offenders Act 1974**





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.

