

## African Climate & Development Initiative

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### VACANCY: POST DOCTORAL RESEARCH FELLOW – PROCESS-BASED BIOGEOCHEMICAL, LAND SURFACE AND/OR HYDROLOGICAL MODELLING

Closing Date: 31 January 2021

The [African Climate and Development Initiative](#) (ACDI) wishes to appoint a Postdoctoral Research Fellow (PDRF) to support the integrated land surface and hydrological modelling component of the TES-NbS (Towards Equitable and Sustainable Nature-based Solutions in Southern Africa's Water Towers) project funded through the [International Development Research Centre](#) (IDRC).

The TES-NbS project aims to answer the following questions: will the Nature-based Solutions (NbS) that have been proposed, planned, and/or implemented in Southern African Water Towers be equitable in terms of the distribution of global versus local benefits; and will the intended benefits be sustained under future climate conditions? The research will focus on elevated landscapes that are important water sources for rivers in 11 Southern African countries, namely Angola, Botswana, Eswatini, Lesotho, Madagascar, Malawi, Mozambique, Namibia, South Africa, Zambia, and Zimbabwe.

The successful candidate will model global carbon versus regional/local water trade-offs of NbS under a changing climate with a focus on landscape restoration and protection in headwater catchments. The Postdoctoral Research Fellow will form part of an inter-disciplinary research team from the University of Cape Town ([Dr Petra Holden](#), [Professor Sheona Shackleton](#), [Professor Mark New](#), [Professor Gina Ziervogel](#), [Dr Piotr Wolski](#), [Dr Vernon Visser](#), [Dr Chris Trisos](#)), Stellenbosch University ([Professor Cang Hui](#)), Oxford University and the UK Centre for Ecology and Hydrology ([Professor Simon Dadson](#)).

#### Qualifications, experience and skill criteria:

##### **Required**

- A PhD, awarded within the previous four years, within the field of natural science.
- Demonstratable experience in one or more process-based biogeochemical, land-surface and/or hydrological models
- A strong publication record, given the applicant's career stage
- Desire and/or ability to work in an interdisciplinary research team setting
- Excellent organizational capability and ability to work under pressure and meet deadlines
- Excellent written and verbal communication skills in English

##### **Desirable**

- Experience in data pre-processing and post-processing
- Experience in the use of environments such as R, Matlab or Python, as examples, for scientific data analysis
- Experience in running process-based models in a high-performance computing environment
- Experience in translation of research into knowledge for policy and practice

#### Value and tenure:

- The value of the fellowship is R300,000 per year, payable as a tax-free stipend.

- The fellowship is valid for three years, with continuation into a second- and third-year conditional on achievement of agreed outputs.

**Conditions of award:**

- Applicants may not previously have held a full-time permanent academic post.
- The successful applicant will be required to register as a Postdoctoral Research Fellow at the University of Cape Town and will be expected to commence preferably in **March 2021**.
- The successful applicant will be required to comply with the university's approved policies, procedures and practices for the postdoctoral sector, and be based at ACDI, UCT, Cape Town.

**Application requirements:**

Applicants should submit, *combined into a single PDF* (i) an application letter that includes a short description of their expertise and research interests, and how these relate to the position, (ii) a CV, including a publication list, (iii) copies of academic transcripts and/or certificates, (iv) email addresses of at least two references who have been directly involved in their PhD and/or previous postdoctoral research, and v) proof of experience in process-based biogeochemical, land-surface and/or hydrological modelling e.g. thesis, working papers, and/or peer reviewed publications.

**Selection process:**

- Only eligible and complete applications will be considered by the selection committee.
- If you have not heard within one month of the deadline, please assume your application has been unsuccessful.
- Interviews of short-listed candidates are likely to take place in **February 2021** and the successful candidate is expected to start as soon as possible from **March 2021**.

**Closing date:** Applications received before **31 January 2020** are guaranteed to be considered. Applications received thereafter may be considered if the position has not been filled.

Contact details for submission of applications: Ms Adiola Floris, [adiela.Floris@uct.ac.za](mailto:adiela.Floris@uct.ac.za)

Contact details for enquires about the research topic and project: Dr Petra Holden, [petra.holden@uct.ac.za](mailto:petra.holden@uct.ac.za)

Additional information on ACDI and UCT can be found at: [www.acdi.uct.ac.za](http://www.acdi.uct.ac.za) / [www.uct.ac.za](http://www.uct.ac.za)

*The University of Cape Town reserves the right to disqualify ineligible, incomplete and/or inappropriate applications. The University of Cape Town also reserves the right to change the conditions of the award or to make no awards at all.*