



Future Climate for Africa: Gap Filling Fund

Announcement of Opportunity

Issued on: 9 November 2017

Closing date for full proposals: 16:00 GMT/UTC 25 January 2018

Information about your application, including the personal information provided on the forms, will be processed and stored electronically by the FCFA Secretariat and representatives of FCFA's funders (NERC and DFID). The information contained in your application may be passed on to external reviewers in confidence. Reviewers will be asked to destroy information after the review and selection process is complete.

Your application and personal information will be stored by the FCFA programme for management purposes but will not be shared with other organisations outside the FCFA partnership. We will use details provided in the application for correspondence about the call and may also use this information for future analyses of the performance of the programme.

By submitting your application to the FCFA programme you have indicated your acceptance of these data protection terms and conditions.

1. Summary

The Future Climate for Africa (FCFA) research programme is funded by the UK's Department for International Development (DFID) and Natural Environment Research Council (NERC). FCFA is an international programme which funds world-leading interdisciplinary research to enhance scientific understanding and prediction of sub-Saharan African climate on timescales to inform medium-term (5 to 40 years) adaptation, and enhance knowledge, tools and methods to better integrate this science into decision making.

This call, the gap filling fund, aims to support small projects led by early career researchers with a maximum project size of £80k cost to NERC; with UK institutions eligible for 80% FEC with the usual exceptions paid at 100% and overseas organisations eligible for 100% of direct project costs. The total available budget for this call is £250k and it is anticipated that 3-4 projects will be funded. It is expected that projects will start in April 2018 and have a maximum duration of 12 months.

Projects will be expected to focus on identified gaps within the pillar one climate science of FCFA¹. The gap filling grants should not duplicate already funded research, including current FCFA grants, but will complement ongoing activities. Applicants are expected to submit proposals which address the identified gaps in knowledge, and build upon already established results from the FCFA programme.

Full proposals should be submitted to NERC via email (fcfa@nerc.ac.uk) by 16:00 GMT/UCT on 25 January 2018.

¹ World leading scientific research to advance understanding and prediction of African climate variability and change over medium-term timescales (roughly 5 to 40 years): Advancing knowledge of African climate variability and change in areas critical to inform longer-lived decisions; develop and evaluate models with an 'African lens'; assess uncertainties and extract useful information.

2. Background

2.1 Programme background

Future Climate for Africa (FCFA) is a five-year international research programme which supports research to better understand climate variability and change across sub-Saharan Africa on timescales that inform adaptation. The programme has a major focus on climate science and modelling, underpinned by the principles of informing real decisions, emphasis on enhancing the usefulness of climate science and projections, and by adopting a multidisciplinary approach. Research for the programme as a whole is structured around three pillars, complemented by activities focused on building user-demand, knowledge and skills, and strengthening scientific capacity in Africa.

Pillar 1: World leading scientific research to build knowledge and enhance prediction: Advancing knowledge of African climate variability and change in areas critical to inform long-lived decisions; develop and evaluate models with an 'African lens'; assess uncertainties and extract useful information.

Pillar 2: Research to support better integration of science into decision making: Better understand the barriers to uptake; develop and test tools and methods to better integrate science into decision making.

Pillar 3: Targeted research to bring knowledge into use in real decisions: Working with users, conduct pilot studies to test and demonstrate the application of information and tools for real decisions.

Five major consortia have been funded under this programme and are detailed in Section 2.2 and 2.3.

2.2 Global climate model development for Africa

The global climate model development for Africa project aims to deliver a step-change in the performance of GCMs for Africa and to make a long-term contribution to model development with an African lens. Proposals were sought which delivered improved process-based understanding of climate variability and change at the pan-African scale and consequent development of GCMs with an African lens, targeting processes in GCMs that are important for climate prediction over Africa in the coming decades. One consortium was awarded:

[IMPALA: Improving model processes for African climate](#) (lead PI Cath Senior, Met Office)

2.3 Regional consortia call

The regional consortia call sought proposals which addressed all three pillars of FCFA for a defined region of sub-Saharan Africa, with around half of the effort of each project directed towards research under the first pillar of FCFA with the remainder addressing pillars two and three. Four consortia were awarded:

[AMMA-2050: African monsoon multidisciplinary analysis 2050](#) (lead PI Chris Taylor, Centre for Ecology), focussed on West Africa

[FRACTAL: Future resilience for African cities and lands](#) (lead PI Bruce Hewitson, University of Cape Town), focussed on southern Africa

[HyCRISTAL: Integrating hydro-climate science into policy decisions for climate-resilient infrastructure and livelihoods in East Africa](#) (lead PI John Marsham, University of Leeds), focussed on East Africa

[UMFULA: Uncertainty reduction in models for understanding development applications](#) (lead PI Declan Conway, London School of Economics), focussed on Central and southern Africa

2.4 Coordination, capacity development and knowledge exchange (CCKE) unit

The CCKE Unit is based in South Africa and works to complement the activities of the five consortia through targeted pan-African cross-programme research, capacity development and knowledge exchange activities. The CCKE has a clear mandate to ensure FCFA maximises its impact.

3. Scope of the gap filling fund

Proposals will focus on identified gaps within the pillar one climate science of FCFA and will be expected to address the specific scope described in this section.

Proposals will aim to increase understanding of climate variability and change in Africa. Potential research gaps to be addressed could include, but are not limited, to:

- increased understanding of radiative feedbacks such as changes in clouds, atmospheric stability, or atmospheric humidity to understand dominant processes which will lead to future radiation/temperature changes over Africa
- improved understanding of circulation (e.g. structure of African Easterly Jet, ITCZ/tropical rain belt, monsoon systems) or convection changes under climate change
- increased understanding of the impact of urbanisation or other landscape changes (e.g. artificial lakes, rubbish dumps) on local climate
- improved understanding of atmosphere-ocean coupling and changes to ocean upwelling systems under climate change and implications for regional climate
- increased understanding of the implications of future sea surface temperature changes on regional African climate
- increased understanding of potential changes to tropical cyclones impacting on Africa under climate change
- increased understanding of the role of ENSO on African rainfall under climate change
- increased understanding of the drivers and processes contributing to long term drought, including land-atmosphere interactions and the impacts of land cover change.

Proposals submitted to this call must have a specific geographic focus, with proposals with a focus on neglected regions in sub-Saharan Africa (such as poorly understood boundary regions found at the interface between regional climate systems) considered desirable. Examples of neglected regions include Ethiopia, Guinea Coast, Chad or Malawi, but this list is not exhaustive and applications focussed on other regions, sufficiently justified as neglected, are welcomed.

Proposals focussed on non-neglected geographic regions within Africa may also be submitted. In all cases, proposals should clearly identify the unanswered research questions to be addressed, how the proposed project will add distinct value to already-funded climate science within FCFA, and how it will increase understanding of climate variability and change in the identified region.

Within proposals, novel and innovative approaches to address the identified research questions leading to increased understanding of climate variability and change in Africa are welcome. Potential approaches could include:

- the exploitation of existing, but underused, observational data
- comparisons of station data, gridded data products and model data
- different methods of model evaluation and their usefulness
- analysis of the contradictions between different model products.

The funded gap filling grants should not duplicate already funded work (through FCFA or other programmes), but will complement and build upon these activities. Each project should comprise coherent activities to address one or more of the identified knowledge gaps and should be of a relevant scale for the size and duration of the grant. The funders will seek to build a balanced portfolio of projects.

FCFA, and this call in particular, strongly promotes African leadership and meaningful international partnerships between/with sub-Saharan African researchers in the proposals, particularly those from low and lower-middle income countries.

FCFA promotes gender balance within the programme wherever possible.

Successful projects, along with proposing excellent scientific research that fits the objectives and scope of this call, are expected to also provide excellent value for money. This includes fully justified and reasonable financial requests, appropriate time commitments of all research participants, and clear plans which aim to provide the maximum output of science excellence and impact from the monies requested.

Any queries about the scope of this call should be directed to fcfa@nerc.ac.uk at an early stage.

4. Programme requirements

4.1 Programme funding

This is a closed call for proposals i.e. it is only open to pillar one researchers currently (or previously) funded by FCFA. This call aims to support 3 to 4 small projects. The total budget available for this call is £250k. The maximum project size is £80k cost to NERC (with UK institutions eligible for 80% FEC with the usual exceptions paid at 100% and overseas organisations eligible for 100% direct project costs). Projects will be expected to start in April 2018 and have a maximum duration of 12 months.

Proposals submitted to this call should show ambition appropriate to the size and duration of the proposed project.

4.2 Eligibility

Principal investigator (PI):

Each application submitted will have one named PI. As an exception for this call only, the principal investigator for each project is required to be an early career researcher, currently (or previously) working under the pillar one climate science of FCFA. The normal rules on NERC PI eligibility do not apply.

The lead applicant must hold a PhD (or have equivalent research experience) and have a maximum of eight years of full time postdoctoral experience from the PhD award certificate date to the closing date of this call. The eight year window is based on full-time working. Where applicants

have worked part-time or had research career breaks, the eight year window would be extended accordingly. Applicants currently holding permanent positions are eligible to apply for this call as long as they meet the other eligibility criteria.

If you have any queries about your eligibility to apply to this call as a PI you should contact NERC at an early date (fcfa@nerc.ac.uk).

This call is open to all qualifying ECRs within FCFA pillar one, regardless of nationality or location.

NERC will not pay for more than 100% of time of any individual (1650 hours a year, equivalent to 37.5 hours a week, 44 weeks a year) over all the grants that individual is involved in. ECRs who already have their time fully funded through FCFA (or other research council grants) should not apply for any additional salary support.

Mentor:

Each PI is required to identify a formal mentor in their application. The mentor should be a more senior pillar one researcher within FCFA, who is not eligible to apply for the call as the PI.

The role of the mentor will be to provide guidance, support and scientific leadership through the application process and duration of the project. The mentor will be expected to have significant involvement in guiding the PI through developing the scientific scope of the proposed project and applying for funds. This support will continue as successful projects progress, with the mentor providing continued guidance to enable successful completion of the proposed research. The mentor should be identified as a Co-I on the application.

Other research roles

With the exception of the PI, normal eligibility applies for other staff working on the gap filling projects. Full information on individual eligibility and role descriptions can be found under section C of the [NERC grants handbook](#). There are no geographic restrictions on where researchers are located or their nationality, but they must be employed by the same organisation as one of the PIs/Co-Is on the grant. Investigators may be involved in no more than two proposals submitted to this call and only one of these may be as the Principal Investigator.

FCFA, and this call in particular, strongly promotes African leadership and meaningful international partnerships between/with sub-Saharan African researchers in the proposals, particularly those from low and lower-middle income countries. It is not essential for any project teams to include researchers or research institutions based in the United Kingdom or any other developed countries.

FCFA promotes gender balance within the programme wherever possible.

No associated studentships can be requested under this call.

Grant holding organisation:

FCFA gap filling projects will be awarded through the addition of an extra funding stream to an existing component (i.e. an organisation receiving FCFA funds directly from NERC) of one of the existing five consortia.

For the grant for which the PI wishes to have the additional funds added to they must have the assurance of the grant holder that they will accept this additional funding stream and facilitate the

disbursement of funds. The end date of the grant may need to be extended to cover the full duration of the gap filling project.

The research organisation holding the additional funds is responsible for the conduct and administration of the grant. It is accountable for the effective use of public funds, and must therefore ensure that all grant monies are subject to proper financial management processes. It is the research organisation's responsibility to ensure that expenditure on collaborations in the UK and abroad is subject to robust controls to ensure value for money and propriety and that all costs should be fully vouched and maintained for possible inspection and checks by, or on behalf of, the funding organisations (NERC and DFID). If the research organisation receiving the funding from NERC wishes to disburse funds to another overseas research organisation then the grant holding organisation must undertake due diligence checks to ensure that the funding will be appropriately used.

4.3 Programme Level Coordination and Integration

FCFA is a strongly integrated programme and the expectation is that PIs of funded projects will work together with the existing PIs of the five research consortia and the CCKE Unit. This includes participating in programme-wide activities and outputs.

Each project is also expected to feed into the FCFA programme level reporting requirements. This includes feeding into the CCKE Unit on progress periodically for the NERC biannual programme reporting and the DFID Annual Review. Projects may be required to respond to other ad hoc queries for information from NERC and DFID.

4.4 Knowledge exchange and impact

Knowledge exchange (KE) is vital to ensure that environmental research has wide benefits for society, and should be an integral part of any research.

All applicants must consider how they will or might achieve impact outside the scientific community and submit this with their application as a [Pathways to Impact](#) statement (see section 5 on how to apply), with associated delivery costs where relevant. Pathways to Impact activities do not have to be cost-incurring; it is not a requirement to include funded activities. An acceptable Pathways to Impact Statement is required before a successful grant may start.

The Pathways to Impact will identify those who may benefit from or make use of the research, how they might benefit or make use of the research, and methods for disseminating data, knowledge and skills in the most effective and appropriate manner.

4.5 Data management

It is expected that applicants will work with the lead PI of the grant to which their funds will be added to ensure that the [NERC Data Policy](#) is adhered to for these projects, as part of the data management plan for the larger consortium. If significant new data will be generated which cannot be accommodated within this then applicants should include an outline data management plan as part of their application.

4.6 NERC facility use

It is not expected that the gap filling projects will require use of NERC facilities. However for those projects wishing to use a NERC service or facility, applicants must contact the facility prior to application to seek agreement that they could provide the service required. Further information on [NERC services and facilities](#) can be found on the NERC website. The cost of any NERC Facilities should be included within the £80K budget.

Applications for NERC shiptime or aircraft will not be accepted as part of this Call.

5. How to apply

Proposals must be submitted to NERC via email to fcfa@nerc.ac.uk by 16:00 GMT/UCT on 25 January 2018.

5.1 How to apply: Full Proposals

Full proposals must be submitted directly to the FCFA mailbox (fcfa@nerc.ac.uk), making clear in the email title that they are applying to this call. Proposals must complete the pro forma contained in **Annex A** and abide by all guidance contained in this announcement in relation to additional attachments.

Applicants must ensure that their proposal is received by NERC by 16:00 (GMT/UCT) on the closing date. Any proposal that is incomplete, or does not meet NERC's eligibility criteria or follow NERC's submission rules (outlined in this announcement and the [NERC grants handbook](#)) will be rejected and will not be considered.

All applications (both text within the pro forma and additional attachments) must be submitted using single-spaced typescript of minimum font size 11 point Arial font or other sans serif typeface of equivalent size to Arial 11 with margins of at least 2 cm. References must also be presented in minimum font size 11 point. Arial narrow and Calibri are not allowable font types. Applicants referring to websites should note that referees may choose not to use them.

The expected start date for projects funded under this Announcement of Opportunity is 1 April 2018.

5.2 Required documents

Applications are comprised of the completed pro forma (Annex A) and additional attachments, which are described here.

The pro forma has a series of sections which must be completed:

- Title of the proposal
- Applicants
- Objectives
- Summary
- Impact summary
- Summary of resources requested

Additional attachments are required as follows:

Case for support:

- i. Previous track record – **up to 2 sides A4** including the composition and experience of the research team
- ii. Description of proposed research – **up to 4 sides A4** including the following information:

- Underlying rationale and scientific issues to be addressed;
- Specific objectives of the project, including their relevance to objectives of the call;
- Methodology and approach;
- Risks and mitigation strategies;
- Programme and/or plan of research, evidence of access to required facilities, data, collections;
- Management of both project and resources.

Outline Data Management Plan (if needed):

- **Up to 1 side of A4** (see Data Management section above)

Justification of Resources:

- **Up to 2 sides of A4** to explain why the requested costs from NERC and DFID are required.

Pathways to Impact:

- **Up to 1 side of A4** to include an outline of: a) those who may benefit or make use of the research; b) how they might benefit and/or make use of the research; and c) Methods for disseminating data/knowledge/skills in the most effective and appropriate manner.

Funding organisation letter of support:

- A short (**up to 1 page A4**) statement from the grant holding organisation to which the additional funding stream will be added, providing assurance that they will take responsibility for the responsible disbursement of funds. No further letters of support will be permitted.

CVs:

- A CV of **up to 2 sides A4** for each named PI, mentor, Co-I and research staff post.

Each proposal will additionally require the following attachments, where applicable

- Facility forms, where applicable, and a quote for the work which the facility will provide.

5.3 Project finances

Research grant funds are provided to meet the costs incurred by the specific research project. Funds may not be used to meet costs on any other project or activity. All costs associated with the project must be itemised and fully justified. Items of equipment costing more than £10k may not be requested under this call.

The financial cost of the project should be identified in the pro forma and all applicants are advised to consult their institutional finance officers when completing the financial parts of the application.

Details of eligible costs are given in the [NERC grants handbook](#). All costs should be in pounds sterling (£/GBP). The budget limit of £80k per project refers to the total cost to NERC of the proposed project. Any applications which go over the budget of £80k will be automatically rejected. UK based organisations will receive 80% (FEC) with the usual exceptions paid at 100% while non-UK organisations can request 100% direct costs.

As per normal NERC rules, NERC will not provide additional funding to cover fluctuations in exchange rates. UK and non-UK organisational budget information is indicated below:

UK Organisational Budgets:

- UK organisations will receive 80% of the full economic cost of the project, as per standard Research Council funding rules. UK universities are required to calculate the FEC using the “TRAC” (Transparent Approach to Costing) methodology.
- Other eligible UK organisations use an equivalent methodology, which has been validated by the Research Councils.
- Overseas travel and expense costs incurred by members of UK institutions will be paid at 80% and must be included as costs related to that UK institution.

Non-UK Organisation Budgets:

- Non-UK organisations are expected to be able to comply with full and transparent costing for budget elements.
- Non UK organisations will be supported at 100% of the Directly Incurred costs of the research (e.g. staff, travel, consumables).
- In addition indirect costs (including estates costs) maybe charged on staff salary and other staff-related costs (i.e. statutory contributions analogous to UK National Insurance or Superannuation contributions).
- Overheads may not be charged on non-staff related direct costs, for example, equipment, travel and subsistence, consultancies, conferences, etc.
- The following rates for indirect costs should be applied: - for applicants from low and middle-income countries, the rate is 50%; for applicants from high-income countries and CGIAR institutes the rate is 20%.
- For further guidance on what overhead budgets can be used please see [NERC grants handbook](#)
- Non-UK organisations should not enter any costs in the ‘Estates’ section of the pro forma. All overheads should be entered as an ‘Other Directly Incurred Cost’ of pro forma.
- Non-UK organisations should identify all costs as an ‘exception’ on the pro forma in the appropriate column.
- Costs from UK and non-UK organisations should be entered as separate items. For example T&S costs for field work should be entered as two separate lines i.e. that related to UK organisations payable at 80% and that related to non-UK organisations payable at 100%, by using the ‘exception’ column on the pro forma.

6. Assessment Process

All submitted proposals will be reviewed at an independent assessment panel in February 2018.

The panel will take the following assessment criteria into account when scoring the applications:

Research Excellence (0 – 10) incorporates but is not confined to:

- assessment of the problem to be addressed and how novel/exciting/ambitious it is;

- approach for addressing the problem and the identification and mitigation of risk;
- use of innovative approaches;
- suitable expertise to achieve the aims and objectives.

Fit to Call (0 – 6) incorporates:

- alignment of the proposed research with the call's objectives;
- involvement of partners from low and lower middle-income countries;
- identification of pathways to impact;
- value for money.

The funders (NERC and DFID) will take the recommendations of the panel into account, along with the FCFA portfolio and the available budget, in making their final decision. The decision of the funders will be final.

Applicants will be given feedback from the panel summarising the reasons why their application was successful or unsuccessful. No further feedback will be available.

7. Timetable

- Announcement published: 9 November 2017
- Deadline for submission of full proposals: 25 January 2018
- Moderating panel meets: late February 2018
- Latest start date for projects: 1 April 2018

8. Contact

Enquires should be directed to the FCFA secretariat:

Email: fcfa@nerc.ac.uk

Tel: +44 (0)7928 655827 (Katy Chamberlain) or +44 (0)7864 948053 (Helen Pearce)

Annex A – application pro forma

See separate annex for the application pro forma.