



## African Climate & Development Initiative

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## PhD Scholarships in Emerging Climate Risk, Agriculture and Food Security

Applications for up to two PhD Scholarships in Emerging Climate Risk, Agriculture and Food have been sought by the African Climate & Development Initiative, with funding from the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Climate information is used in agriculture and food security on a range of timescales, from days (weather), months (seasonal outlooks) to decades (climate change scenarios). Providing forecast information between seasonal and decadal timescales has proved difficult, falling into the period where traditional forecast skill dies away and the climate change signal is difficult to detect against natural variability. Yet much policy, planning and investment decision-making falls into this time horizon.

Both the seasonal forecasting community and the climate change scenario community have developed techniques and methods for provision and communication of climate information, as well as the use of climate information in impacts assessment, planning, risk mitigation, and adaptation. Decision-making on 1-10 year timescales may require a hybrid approach that draws on techniques from both fields, and on new climate data, and new approaches to managing climate risk.

One PhD will assess the characteristics of agriculture and food security that are sensitive to climate on timescales of 1-10 years, including questions such as: What is current end-user understanding of climate change and variability on 1-10 year time scales? What are the current climate stressors on agricultural output? What are the thresholds in these stressors that may require different practice or shifts in practice? What agricultural decisions take place on different timescales (1-10 years, 10-20 years), and how might these decisions be sensitive to climate information?

A second PhD will evaluate different sources climate data, including climate change projections from global and regional climate models, decadal forecasts, attribution experiments, and observed data, to assess the potential for providing information for adaptation decision making on 1-10 year timescales. Lines of enquiry might include: At what time scales does a climate change signal emerge from background variability, and therefore at what decision time-horizons should climate change be part of the planning process? How large is the variability in key agricultural climate diagnostics/drivers of agricultural risk on time scales from interannual to decadal scale, and therefore how important is variability on each time-scale as a component of the climate projection (or forecast)? What is the potential forecast skill of new modelling outputs such as initialised climate change projections on different timescales? Can large-scale indices, especially those related to ocean variability, provide regional near-term climate change information, and if so where and when are they most useful?

### Value and tenure:

Each Scholarship valued at **R100,000** per annum, and is tenable for three years. Continuation in the second and third years will be contingent on satisfactory progress through the previous year. The PhDs will be supervised by Professor Mark New and Dr Peter Johnston.

### Conditions of award:

Applicants should satisfy the following criteria:

- (i) a Masters degree in a relevant subject;
- (ii) ability to work in a multi-disciplinary team;

(vii) the successful candidate will be required to comply with the policies and practices for the Postdoctoral Research Sector at the University of Cape Town, and

(viii) the successful candidate will be required to register at the University of Cape town as a PhD Student Research Fellow and will be expected to commence the required research at a mutually agreed data that is **no later than 1 July 2012.**

**Application Procedure:**

Suitable candidates apply online at (<http://acdi.uct.ac.za/2012/02/climate-risk-posts>), where the following will need to be provided:

- (i) a letter of application;
- (ii) a CV which includes full details of publications;
- (iii) copies of academic transcripts or certificates for the Master's degree\*, and
- (iv) the names of two referees, who are academics with whom the applicant has worked.

**Closing date for applications is 23:59 GMT, 29 Feb 2012**

Selection will be made by academics involved with the African Climate and Development Initiative.

\*The successful candidate will be required to provide certified transcripts and certificates prior to registration for the Fellowship.