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#### **15 November 2016**

# AXA awards first research chair in Africa to UCT

AXA Research Fund has awarded its first research chair in Africa to the University of Cape Town. The new chair, in African Climate Risk, will be held by Professor Mark New, director of the African Climate and Development Initiative (ACDI). Worth R20.65 million (€1.35 million) over 15 years, the chair aims to make a significant change in the research field of African climate risk.

Please see the below story published on the UCT research website.

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African countries are among the most vulnerable to climate change. Existing developmental challenges, such as high levels of poverty, underinvestment in infrastructure and technology, increasing ecosystem degradation, and weak governance systems aggravate the burden of climate variability and change.

"The AXA Research Chair provides another established research chair in the area of climate change, alongside Bruce Hewiston's Department of Science and Technology/National Research Foundation South African Research Chair (SARChI) in Climate Change, that will help to underwrite UCT's ambition to contribute meaningfully to addressing African climate change issues," says New.

Adverse impacts of global warming in southern Africa have already been detected. They include decreases in water availability, reduced agricultural production and food insecurity, and increased social and economic costs of extreme weather events.

Assessing the impacts of climate change in southern Africa is of the utmost importance to economic and social development. However, the task is complicated by the disparity of climate model projections and the complexity of natural and societal systems. Much more expertise is needed across a wide range of areas, but the community of professionals and researchers working on climate change is relatively small throughout Africa.

### Attracting the best African research talent

In the context of these challenges, the AXA Research Chair aims to produce scientifically innovative and cutting-edge research related to the intersection of climate change risks with African development issues. Additionally, it is aligned with the long-term research strategy of UCT in that it will help attract the best African talent to return to or remain in Africa, working on African issues. A new generation of researchers will be trained.

This is a successional chair: over the next 15 years, three to four research chairs will produce scientifically innovative and cutting-edge research related to the intersection of climate change risks with African development issue. Each successional chair will be expected to propose and undertake research in their own domain of expertise, building upon the achievements of their predecessor.

As the first chair holder, New is focusing his research on quantifying and understanding the changing risk of climate on water and food security in southern Africa; his aim is to determine how extreme events like floods, droughts and heat waves are changing with global warming.

"The focus of my tenure as AXA Research Chair is extreme climatic and weather events," New comments. "These cause some of the most damaging social and economic impacts, and are a key mechanism through which some the impacts of climate change are already being felt. Understanding how extremes are changing and how to respond to them is crucial to finding the near-term responses that we need in the face of a changing climate."

#### Multidisciplinary approach

To achieve his objectives, New is using a multidisciplinary approach that brings together expertise in climate and weather risk attribution, statistical sciences, hydrological and agricultural sciences, and economics. "There are two parts to the story in my research programme," New specifies. "On one hand, we aim to figure out what proportion of the impact related to extreme events is due to global warming and what proportion is due to natural variability."

To find out, New will compare climate models of the planet with or without global warming. By adding greenhouse gas effects and ocean warming separately, he will be able to estimate the difference in the intensity and frequency of extreme events in both scenarios. "The other part of the story is trying to determine how the severity of the impact depends on human activity on the ground. Is the way that people are managing the land affecting its vulnerability to droughts or floods, for instance?"

Both approaches are very innovative in New's field of research. The overall goal is to evaluate where investment to mitigate climate change risks should be allocated in order to maximise efficiency. For example, New's results will help governments make decisions on how to build more resilience in the local systems. In this sense, his results will have crucial

implications for public, private sector and civil society organisations. Close interactions with these actors will insure maximum societal impact of the research.

The AXA Research Fund is the scientific philanthropy initiative of global insurance leader AXA dedicated to boosting scientific progress and discoveries that contribute to understand and better prepare against environmental, life and socio-economic risks. It also encourages supported researchers public engagement to help feed the public debate.

**ENDS** 

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