African scientists gain access to developed earth systems

CSIR senior researcher and ACCESS supervisor Neville Sweijd

Earth system scientists in South Africa and the rest of Africa can now make use of the newly-launched Africa Centre for Climate and Earth System Science (ACCESS) to hone their talent and expand their skills.

ACCESS is the soon-to-be 8th Centre of Excellence (CoE) funded by the National Research Foundation and hosted at the CSIR. The centre was launched initially as a community network in 2007 to promote understanding of climate change in Africa and contribute to the global earth systems science.

The centre is supported by advanced high speed computing facilities at the Centre for High Performance Computing (CHPC) and provides young South African scientists with a platform for development.

"In the centre, scientists have the opportunity to develop a robust, scientifically-based programme that will support an African and developing world perspective on global change (including climate change) with a focus on African regional and local scale earth system processes," says CSIR senior researcher and ACCESS supervisor Neville Sweijd.

Sweijd says they are excited about what this initiative will give to many young researchers around the country, the region and Africa as a whole.

ACCESS represents a group of scientific entities including the CSIR, the South African Weather Service, the Department of Environmental Affairs and Tourism, the South African National Biodiversity Institute, and Marine and Coastal Management. These scientific entities also include several university-based research groups and institutions such as the University of Pretoria, University of Cape Town, Witwatersrand University and the University of the Western Cape.

The ACCESS CoE will have three core areas focusing on education, operational outputs and research.

Sweijd says the education programme will see the development of a national postgraduate course in earth systems science. A number of expert and public workshops on a range of relevant scientific and policy topics will also form part of the scientific and public educational programmes.

"The operational programme seeks to produce a range of useful and sensitive indices that comprise a tractable set of global and environmental change indicators including oceanographic, terrestrial, long-term weather and climate change measures," explains Sweijd.

The third wheel of ACCESS, the research, will stimulate and implement a series of research projects that will focus on understanding the southern African (earth) system in order to reduce the uncertainties of regional climate change projection.

"This will make those projections operationally more meaningful and lower the risk to society through mitigation and adaptation strategies. The research will be undertaken on a variety of scales in the oceanic,

atmospheric and terrestrial domains to study processes, mechanisms and systems that impact on and drive earth system dynamics."

The centre intends to ensure that the programme becomes a true African centre with the main goal being to harness the range of talent and expertise in earth system science that exists in Africa. This will serve as the basis for long-term strategic cooperation agreements. ACCESS will form an important part of the Department of Science and Technology's global change grand challenge, as contained in its 10-year plan.

The programme will also host a number of international collaborations. The CSIR's Warren Joubert recently left for Princeton University in one such collaboration between the CSIR and Princeton University.

He will stay there for a 10-month extended contract period attending postgraduate teaching programmes while working on his PhD for which he is registered at UCT. These opportunities are also being taken up by other scientists in the observational and modelling fields of southern African systems science.

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