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*MEDIA RELEASE*

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10 October 2017

**MEMORANDUM OF AGREEMENT SIGNED BETWEEN THE SOUTH AFRICAN WEATHER SERVICE AND THE CENTRE FOR HIGH PERFORMANCE COMPUTING**

The South African Weather Service (SAWS), an entity of the Department of Environmental Affairs, and the Centre for High Performance Computing (CHPC, funded by the Department of Science and Technology) have signed a Memorandum of Agreement (MOA) aimed at supporting the two organisations in delivering on their mandates. This signed MOA will help strengthen the relationship between the two organisations in terms of knowledge and skills transfer, as well as joint research projects that can result in the development of weather and climate products and services through the use of High Performance Computing (HPC) facilities.

The mission of the CHPC is to provide world-class High Performance Computing to scientific and academic institutions in South Africa that enables cutting-edge research with high impact on the country's economy. SAWS is the mandated national meteorological service which has a vision of a WeatherSMART Nation, where the quality of life, resilience to extreme weather events and the mitigation of climate change impacts can all be enhanced through the use of reliable weather and climate data provided by the organisation.

In order to produce weather forecasts and climate predictions and projections, SAWS uses mathematical models that run on big computers to allow simulations to be produced timeously for decision making. SAWS uses a CRAY XC30 supercomputer to produce its every day, operational forecasts that are subsequently issued by SAWS' forecasters to the public through various dissemination methods that include radio and television.

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The supercomputer at SAWS is, however, inadequate to conduct the necessary research to improve on its modelling forecasts and applications research in a bid to stay up to date with other international organisations. It is for this reason that SAWS and CHPC have joined forces to ensure that SAWS stays relevant on modelling research that will eventually translate into even better and more reliable weather forecasts and climate predictions.

The CHPC hosts the largest and fastest computer in Africa which is called Lengau. Lengau comprises 1368 nodes each with 24 Intel Xeon® E5-2690 V3 CPU Cores, and 5 fat nodes each with 5 Intel Xeon® E7-4850 CPU cores. CHPC also provides a total of 4PB for temporary storage. SAWS scientists will utilise Lengau to run weather and climate models for research purposes. The CHPC cluster will also serve as a fail-over or business continuity system for SAWS' operations, which will ensure that model forecasts are issued and disseminated in the event of a system failure at SAWS. The SAWS head office in Pretoria is already on the South African National Research Network (SANReN) which means data can be downloaded and uploaded onto the CHPC cluster in Cape Town in near real time.

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