Press Release

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WIND ATLAS FOR SOUTH AFRICA (WASA) PHASE 1 – FINAL SEMINAR

South Africa's renewable energy efforts have reached another important milestone with the finalization of the Wind Atlas for South Africa (WASA) Project for Western Cape and parts of Northern and Eastern Cape. The results were presented at a Final Seminar at the River Club in Cape Town on 8 April 2014.

WASA resulted from the implementation of the South African Wind Energy Programme and Global Environment Facility (GEF) with UNDP support. WASA is implemented as a research and capacity building project with SANEDI as the Executing Agency and the Implementation partners: CSIR, SAWS, UCT (CSAG) and DTU Wind Energy (Denmark).

The primary objective of WASA is to develop and produce numerical wind atlas methods and develop capacity to enable planning of large-scale exploitation of wind power in South Africa, including dedicated wind resource assessment and siting tools for planning purposes, i.e. a Numerical Wind Atlas and database for South Africa.

In 2013, the South African government through the Department of Energy signed an MOU with the government of Denmark for the implementation of renewable energy programme within which WASA phase 2 will be one of the deliverables. The Government of Denmark is making further financial support available in the expansion of WASA (Phase 2) to cover the remaining areas of the Eastern Cape, KwaZulu-Natal and parts of the Free State Provinces. SANEDI is also the Executing Agency for WASA Phase 2 and the same implementation partners as WASA Phase 1 will continue the collaboration for the execution and implementation of WASA 2.

The Ambassador of Denmark, Mr René Dinesen said *"The cooperation between South Africa and Denmark in renewable energy is close and fruitful. It provides useful exchange and transfer of knowledge, skills, and technologies. With the successful completion of the first phase of the wind atlas in the Eastern and Western Cape I am confident the second phase being implemented over the next three years will assist developers, planners, and communities to identify optimal sites for wind farm development."*

In addition to the above, this is what Mr Walid Badawi (UNDP Country Director: South Africa): had to say, *"UNDP is pleased to be associated with the first numerically verified wind atlas in the Southern African region. Through the South African Wind Energy Program Phase 11, a $3.5 million GEF funded project, UNDP is ready to continue its partnership with the Department of Energy and the Royal Danish Embassy to further promote WASA objectives of mapping wind resources in remaining provinces like Northern Cape and contribute towards building skills capacity for small scale wind operators as part of contributing to green jobs".*

The WASA is being achieved through 6 work packages ranging from physical wind measurements that are being used to gauge and verify modelling and the application thereof with tools, guides and databases.

The progress, activities since the launch of the 1st Verified Numerical Wind Atlas by the Deputy Minister of Energy in March 2012 can be summarized as follow:

- 3 Years of high quality wind measurements by October 2013 with a data recovery above 90% for all 10 WASA wind measurement masts
- Launch of the 1st Large Scale High Resolution (250 m) Wind Resource Map by the Minister of Energy on 31 July 2013. The WASA high resolution Wind Resource map offers the following important cost and time saving benefits for planners, policy makers, Eskom and industry:
- Levels the playing field between small or large industry player to identify and develop project sites for wind farms;
- Estimation of the potential yield of the wind energy resources;
- Identification of potential wind development zones in line with the strategic environmental framework or assessments studies; and
- Long-term grid planning.
- Development of an updated and enhanced Numerical Wind Atlas NWA based on the Weather Research and Forecasting (WRF) model
- Development of an updated and enhanced High Resolution Wind Resource Map based on the WRF NWA and more accurate topography input data
- Development of a 1:50-year wind speed and gust Extreme Wind Atlas.

An Extreme Wind Atlas is important for South Africa:

- Wind constitutes most critical environmental loading affecting structural design of built environment in South Africa;

- Information on extreme winds essential in the design of wind farms – situated in areas with relatively strong winds;

The updated and enhanced Numerical Wind Atlas, High Resolution Wind Resource Map and Extreme Wind Atlas was presented at the Wind Seminar on 8 April 2014.

In addition to the core project outputs mentioned above WASA has had an impact outside South Africa, which amongst others includes:

- South Africa as a partner Global Solar and Wind Atlas initiative led by the International Renewable Energy Agency (IRENA) on behalf of the Clean Energy Ministerial (CEM), which is facilitated by WASA that makes results available for verification of the Global Wind Atlas,
- WASA is being used and referenced in other countries (e.g. the World Bank ESMAP program) wind resource assessment programs,
- Presentations at international conferences and research publications, latest at the European Wind Energy Conference in Barcelona March 2014.

With the presentation of the final results of the achievements of the six work packages, that completes phase 1 with WASA phase 2 expected to be completed in 2018.

This Statement is issued by the Department of Energy

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