

**SOUTH AFRICAN ENVIRONMENTAL OBSERVATION NETWORK (SAEON) BOOK LAUNCH,
STELLENBOSCH INSTITUTE FOR ADVANCED STUDIES, 22 AUGUST 2011**

Programme Director;

President and CEO of the National Research Foundation;

South African Environmental Observation Network Management;

Chairperson of the SAEON Advisory Board;

SAEON collaborating networks/partners;

Fellow scientists and researchers;

Distinguished guests;

Ladies and gentlemen:

The Department of Science and Technology plays a key cross-cutting role in the South African Government. We support and develop science and scientific capacity with the excellent cooperation of our science councils, other departments and the wider scientific community. In the field of environmental science, we have taken our cue from the Constitution, which guarantees our citizens a quality environment.

Since 1994 we have been developing groundbreaking initiatives such as the 1996 White Paper on Science and Technology, and the 2002 National Research and Development Strategy, both of which emphasised the importance of environmental research and capacity development. In addition, the former Department of Arts, Culture, Science and Technology took the lead in the establishment in 2002 of the South African Environmental Observation Network, known as SAEON, the tangible fruits of which we celebrate here today. More recently, we launched the Department's Ten-Year Innovation Plan, which includes the Global Change Grand Challenge, to which the publications we are launching here today are important contributions.

I am very pleased with the way in which SAEON is functioning as a true multidisciplinary network organisation within the National System of Innovation. Today, with a staff complement of 50 permanent employees, SAEON has a physical presence in Phalaborwa, Pietermaritzburg, Grahamstown, Cape Town, Kimberley and Pretoria, from where it currently runs 64 long-term environmental observation projects. These projects contribute publicly accessible data, and the data systems developed by SAEON support other important initiatives such as the South African Earth Observation Strategy and the South African Risk and Vulnerability Atlas.

SAEON's education outreach programme involves schools in science camps and environmental monitoring programmes. SAEON also plays an important role in higher education by providing field-research platforms for university researchers and their students, a primary example of which is the unique coastal-inshore monitoring platform that SAEON has established in Algoa Bay.

Ladies and Gentlemen, as a pertinent example of the work that my Department supports, the book that is to be launched here today, *Observations on Environmental Change in South Africa*, provides a comprehensive overview of our current understanding of how global change is affecting the South African environment and, by extension, South African society.

This book is a significant publication that will have a long-lasting effect on science and environmental policy. More than 100 authors from 32 local and eight international organisations joined the South African Environmental Observation Network in bringing the book to life. The project took more than three years to complete and is a good example of what is possible when scientists collaborate. What is remarkable is that all their efforts were voluntary, which has

enabled us to make the book available, free of charge in the interests of the broad dissemination of global change research results.

This well-illustrated book covers topics such as "People and Environmental Change" and "Atmospheric Systems and Climate Change", and includes phenomena observed in the terrestrial, freshwater and marine and coastal environments. Among the issues raised is the projection that South Africa's population will reach 57 million by 2050, but that sheer population size is not the main driver of environmental change. It is, in fact, unsustainable land-use practices and inadequate management policies that should concern us.

Since up to 90% of rural households use locally harvested natural products for domestic needs, income generation and "safety nets" when times are tough, it is clear that sustainability planning and policies are becoming critically important. The livelihoods of rural households are therefore severely threatened by the uncertainties brought about by a changing climate.

Global-scale Earth systems, namely the biogeochemical cycles of the atmosphere, oceans and land, are dynamic and support all life on Earth. These systems interact in a complex and integrated way, and are affected by natural and human forces acting on multiple scales.

Collectively, our human activities can drive changes in the Earth's systems, and ecosystems, to create new transformed states. The consequences of the rapidly changing conditions are already being felt in Southern Africa. Environmental changes are particularly grave for poverty-ridden sectors of society, which either depend directly on natural resources or have little protection against environmental hazards.

Therefore, as a nation, we are already forced to adapt to environmental change by changing the pattern of our socio-economic behaviour. Adaptation to environmental change can often take the form of intuitive self-regulation, but more often it is to the advantage of all that the government plays a preventative and regulatory role by creating and enforcing national policy. To do this, government requires reliable, continuous and relevant information systems, similar to the management information systems that companies use to improve their business processes for increased profitability. The South African Government therefore relies on science for its

environmental information needs, and it is in this that the Department of Science and Technology plays a key role.

When there is scientific evidence that the ice on Marion Island has already melted by 60% in the past 50 years, and the surrounding oceans have got warmer by some 1,5 degrees Celsius over the past 40 years, who can still deny that climate change should be taken very seriously by scientists and policy-makers alike?

Although rich in scientific content, *Observations on Environmental Change in South Africa* is written in an easy-to-read style which makes it accessible to a broad audience, including decision-makers in government, civil society and business. As suggested by my Department, SAEON has also produced a booklet, *Combat Change with Change*, to translate the scientific meaning of the book into policy language. This booklet is a valuable and rather unique "bridge" to span the omnipresent divide between the natural sciences and public policy.

As Minister of Science and Technology, one of my roles is to demonstrate the public value of science, so that the National Treasury can make appropriate financial resources available in

support of scientific research and capacity development. This is not always an easy task, but I am very pleased that today we are able to launch products of substance that will assist me greatly in this endeavour. I congratulate each and every one involved in taking this innovative step to bridge the science-policy divide.

I also urge my colleagues in government to study and debate, in all seriousness, the issues and recommendations highlighted through the publication of *Observations on Environmental Change in South Africa* and *Combat Change with Change*.

South Africa hosts COP 17, the seventeenth Conference of Parties to the United Nations Framework Convention on Climate Change in Durban between 28 November and 9 December 2011. The UNFCCC is an international treaty that was established to consider what could be done by countries to reduce global warming and to cope with inevitable temperature increases. South Africa is one of 193 countries that are signatories to this Convention. There is wide acknowledgement that science and technology could play a significant role in meeting the specific needs and concerns of individual countries and the global community at large in addressing challenges posed by climate change. The DST is a crucial partner in terms of participation in the

UNFCCC, particularly with regard to managing the Subsidiary Body on Scientific and Technical Advice and taking the lead on cross-cutting issues on the Subsidiary Body and COP agenda, such as technology development and transfer; research, and systematic observation. Hosting COP 17 presents a momentous opportunity for South Africa, and particularly the Department of Science and Technology, to showcase its science, technology and innovation work that may help respond to climate change impacts. In this regard, the Department of Science and Technology, in conjunction with its public entities and programmes, is planning a number of activities that will demonstrate and highlight the importance of science, technology and innovation in curbing emissions and adapting to the adverse impacts of climate change. This launch is, indeed, one of those events.

Ladies and gentlemen, today I am proud to present you with a clear example of how well science is serving South Africa. Allow me to leave you with a serious consideration to take from today's proceedings:

Our life-supporting systems are evidently changing drastically; therefore, isn't it high time that we change the way we go about our business?

I thank you, ladies and gentlemen.

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