
The Effects of Climate Change on South Africa

CMP7 News Centre

If nothing is done about climate change and we continue, among other things, to burn fossil fuels and chop down our forests at current rates, the followings are predicted for South Africa

South Africa's coastal regions will warm by around 1-2°C by about 2050 and around 3-4°C by about 2100

South Africa's interior regions will warm by around 3-4°C by about 2050 and around 6-7°C by about 2100.

There will be significant changes in rainfall patterns and this, coupled with increased evaporation, will result in significant changes in respect of water availability, e.g. the western side of the country is likely to experience significant reductions in the flow of streams in the region.

Our biodiversity will be severely impacted, especially the grasslands, fynbos and succulent Karoo where a high level of extinction is predicted.

Small scale and homestead farmers in dry lands are most vulnerable to climate change and although intensive irrigated agriculture is better off than these farmers, irrigated lands remain vulnerable to reductions in available water.

Some predictions suggest that maize production in summer rainfall areas and fruit and cereal production in winter rainfall areas may be badly affected.

Commercial forestry is vulnerable to an increased frequency of wildfires and changes in available water in south-western regions

“Because of our already poor health profile, South Africans are specifically vulnerable to new or exacerbated health threats resulting from climate change.”

Rangelands are vulnerable to bush encroachment which reduces grazing lands. Alien invasive plant species are likely to spread more and have an ever-increasing negative impact on water resources.

Although strong trends have already been detected in our seas, including rising sea levels and the warming of the Agulhas current and parts of the Benguela, we are not yet sure what impacts these could have on our seas, the creatures living in the seas or on the communities dependant on the sea.

Because of our already poor health profile, South Africans are specifically vulnerable to new or exacerbated health threats resulting from climate change. For example, some effects of climate change may already be occurring due to changes in rainfall (droughts and floods) and temperature extremes and Cholera outbreaks have been associated with extreme weather events, especially in poor, high density settlements.

Agricultural Business Chamber hosts Workshop on Land Reform Green Paper

Dr John Purchase at the ABC.
Email: john@agbiz.co.za

The Agricultural Business Chamber (ABC) hosted a most successful Workshop on Tuesday, 27 September to develop agribusiness' position on the Green Paper on Land Reform. Mr Sunday Ogunronbi, Chief Director of Policy Research and Legislation for the Department of Rural Development and Land Reform, introduced the Green Paper to the Workshop and clarified issues around government's thinking and rationale behind the paper.

Prof Nick Vink, Head of the Department of Agricultural Economics at Stellenbosch University and an expert on land issues and rural development, assisted the Working Group in developing its position and options.

Participants identified and discussed the major deficiencies in the Green Paper from an agribusiness perspective, such as: that land ownership should be the end result - not the point of departure; it should emphasise that it will be impossible for everybody to have access to land; the challenge of the global agro-food system should be taken into account;

and that the capital base and land market must not be compromised in order to ensure optimal economic activity and food production.

The international experience indicated in the Green Paper is recognised, however the agribusiness sector is of the opinion that Land Reform should be managed within South African context.

ABC will actively participate in the six National Reference Group (NAREG) Work Streams established by the Department of Rural Development and Land Reform, and will involve members for certain expertise.

The ABC will finalise a position paper to articulate ABC's position, which will be circulated to ABC members for comment. The final paper will be mandated at the next ABC Council Meeting on 15 November 2011, which falls within the 60-day comment period provided for in the gazetting of the Green Paper.

Minister Meets Labour for Climate Talks

Bua News

South Africa's International Relations and Cooperation Minister Maite Nkoana-Mashabane says the role of labour movements in helping government to mitigate the effects of climate change will be crucial as South Africa prepares to host the COP 17 climate summit later this year.

Nkoana-Mashabane met with various labour representatives on Monday, headed by the country's two major unions - the Congress of South African Trade Unions (Cosatu) and Federation of Unions of South Africa (Fedusa). According to the department, the meeting was called to brief labour on government's position ahead of the Durban climate conference.

South Africa is this year's host to the Conference of the Parties to the United Nations Framework Convention on Climate Change, and the country hopes to follow on the relative progress made at last year's negotiations in Cancun, Mexico. It is expected that approximately 20 000 people will attend the COP 17 event.

Experts have argued that previous climate talks have been weakened by the lack of a formal role for businesses and labour.

Authorities say there is a growing appreciation of the emerging role that labour and business can play in mitigating and adapting to climate change. We want to work with you because together, we believe we can address common concerns and without labour, we cannot achieve adaptation and mitigation goals, Nkoana-Mashabane said. The meeting with labour follows similar gatherings between government, the business sector and civil society in the past few of weeks.

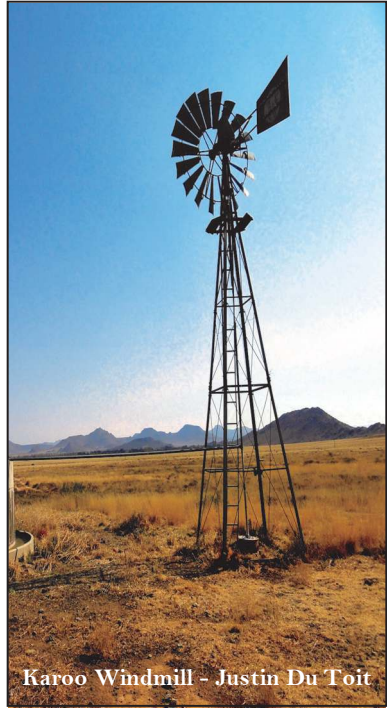
We are of the view that the majority of people who will have to adapt to climate change is the workers themselves and it is important that we have many robust engagement in ensuring that we bring out the strongest Team South Africa to take us to Durban, said Nkoana-Mashabane. She highlighted the need for trade unions to mobilise their members towards a common climate deal that will benefit all of us.

People are looking at us as country and it is therefore imperative that when we leave Durban, we have a fully fledged adaptation committee that labour can be part of, COP 17 presented South Africa's labour movements with an opportunity to address the concerns of workers on issues of climate change that have led to massive job cuts in the agricultural sector.

We are all aware that the changes in environment are directly affecting the agricultural sector, particularly subsistence farming. It is therefore crucial for government and labour and indeed business that we work together to find solutions to the current challenges that we are facing as a country and as the world, Nkoana-Mashabane said. Cosatu's David Macati accepted that the involvement of labour organisations in climate negotiations was crucial to address both mitigation and adaptation.

Climate change talks start and end with the unions. Any decision that is taken after the talks directly affects the workers and we say you don't do anything for us without us, he said. The conference in Durban takes place at a time when the 1997 Kyoto Protocol, which bound nearly 40 countries to specific emission reductions targets, is set to expire in 2012.

Both labour and the department agreed that the Durban summit should, among others, result in countries signing up for a second commitment period to cut emissions beyond 2012.



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SAEON, CIRAD and SANParks Team up to Resist the Alien Invasion of the Kruger National Park

Rob Taylor and Dr Dave Thompson, SAEON Ndlovu Node

Invasion biology has become a hugely important scientific field worldwide as invasive species increasingly threaten to decrease biodiversity and modify ecosystems. The same is true in South Africa, where plants establishing outside of their natural distribution ranges represent one of the major threats to ecosystems and their functioning. For these reasons, SAEON considers alien organisms - both plant and animal - to be among the most important agents of anthropogenic change.

Areas dedicated to the protection and conservation of natural ecosystems and biodiversity, such as the Kruger National Park (KNP), are particularly threatened by alien plants which establish along watercourses, 'escape' into the protected area from adjacent gardens and are inadvertently introduced through road hardening. It is therefore imperative that more be done to recognise and prevent the spread of alien plants in this, and other parks. SAEON's Ndlovu Node is collaborating with members of Scientific Services (South African National Parks) and the French Centre for International Cooperation in Agronomic Research for Development (CIRAD)

in compiling a database of the 400+ alien plant species - from notorious Category 1 invaders to ornamentals currently restricted to gardens - which are known to occur within KNP. The outcomes of this collaboration will be detailed descriptions (including their invasiveness, habitat, origin, vernacular names and documented control methods) of as many of these alien plants as possible, supported by clear photographs and illustrations of various diagnostic plant features.

Interactive Identification Tool

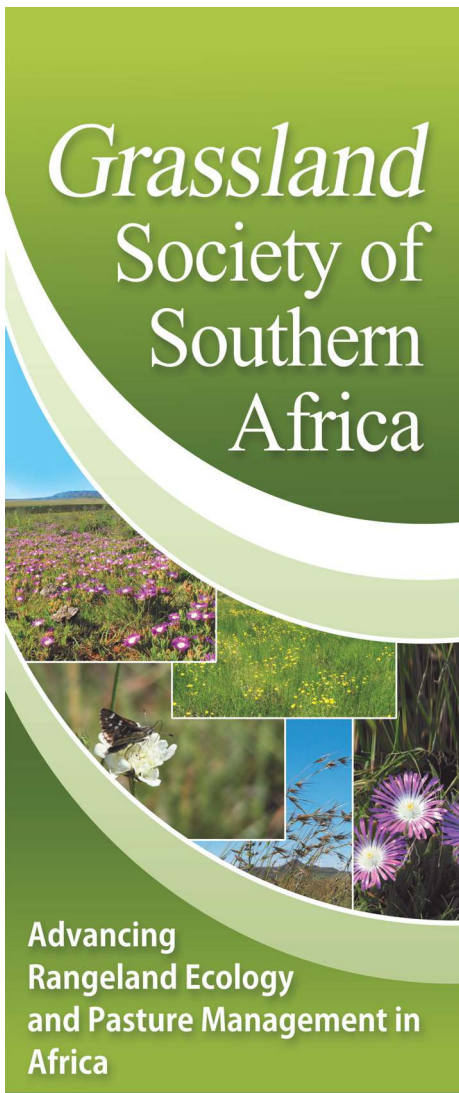
Unique to this project will be the Phase 2 development of an interactive identification tool (IDAO) from the 400-odd species accounts. The IDAO technology (a multimedia approach to computer-aided identification) was developed by members of the CIRAD team and uses an identikit to reconstitute species identity. This process has already been used to produce similar resources for the weeds of the Indian Ocean Islands (Principales mauvaises herbes des îles de l'Océan Indien; Advent-OI) and for other places such as Central Africa, Laos, Cambodia and New Caledonia.

An online alien plant database is being developed in an effort to curb the spread of invasive species. The 'Pl@nt-Inv Kruger' collaboration is a further refinement and validation of this technology. Ultimately the simple platform produced will guide users towards identifying an unknown alien plant through a series of step-wise choices and simple schematics concerning morphological, habit and habitat characteristics. Final identification is based on the similarity (expressed as a ranked percentage probability) of the unknown specimen to so-called 'type' specimen information databased during Phase 1 of the project. Pictures and text can then be accessed to confirm the identity of the alien plant.

Open Source and User Friendly

In keeping with the mandates of SAEON, KNP and CIRAD, the IDAO-associated software and 'raw' database will be open-source and freely available online to all interested parties and potential users. It is also planned for the application to be compatible with a range of mobile electronic storage devices such as smart phones, PDAs and tablets, thus allowing for easy and convenient use under field conditions. Further, it will be linked to a web-based collaborative platform where people can share information, knowledge and questions on invasive plants. This 'one-stop' product will assist managers, conservationists and technical crews within Kruger Park and beyond, to identify alien plants and will suggest appropriate methods for eradication in situ.

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Grassland
Society of
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Advancing
Rangeland Ecology
and Pasture Management in
Africa

The graphic features a green background with a white curved line. Below the title is a collage of nature photographs: a field of purple flowers, a field of yellow flowers, a butterfly on a white flower, a blue sky with a bird, and a close-up of purple flowers.



GRASSLAND SOCIETY OF SOUTHERN AFRICA
www.grassland.org.za

Fynbos Forum 2011 Fynbos and Human Heritage

George Sekonya, Intern, SAEON Fynbos Node

Picturesque Still Bay provided the venue for this year's Fynbos Forum, which attracted some 250 local and international delegates. Among the international delegates were SAEON-sponsored guest Dr Nathalie Philippon (France), Professor David Ackerly (United States), Professor Curtis Marean (US) and Martina Ernszt (Germany).

The Forum was held at the Still Bay community hall on the banks of the Goukou River along the Southern Cape coast. The theme for this year's event, "Fynbos and human heritage", was reflected in the Forum's poster sessions, workshops, keynote address and symposium.

The Forum plays a critical role in the evaluation of scientific knowledge and research, which involves taking into account various aspects of conservation such as socio-economic issues, resources and institutional capacity. This is important especially when dealing with issues which require a holistic approach such as alien invasive species management and control.

This year attention was focused on climate change, alien invasive species, sustainable resource use, restoration ecology and public participation in conservation.

A good take-home message for delegates was the large-scale conservation initiatives undertaken by the community



The staff of SAEON's Fynbos Node participated in the Forum under the leadership of Node Manager Dr Nicky Allsopp. Nicky and Victoria Goodall, the node's Data Manager, presented short papers titled "Can we use remote sensing to monitor invasive aliens in Sand Fynbos?" and "Analysis of long-term trends in a fynbos catchment" respectively.

Microclimates, climate change and conservation

Professor David Ackerly from the Department of Integrative Biology at the University of California, gave an interesting talk titled "Microclimates, climate change and conservation", in which he emphasised the importance of small-scale environmental monitoring. He highlighted the relationship between topographical heterogeneity, microclimate variation, plant dispersal potential and climate change, and the niches that can be provided by small-scale climate variability over short distances. This small-scale variability may provide habitat that enables plants to survive in patches across broad landscapes with the changing climate.

The Forum exhibition was well supported by local schools and the general public. Among the exhibitors were the Hessequa Heritage Initiative, WESSA's Eco school exhibition, the Hessequa Melkfontein Initiative, Hessequa Henque waste recycling project and the Still Bay Marine Protected Reserve. An afternoon devoted to field trips normally represents the highlight of the Forum.

This year was no exception, with nine field trips scheduled for the day. This saw delegates venturing out to see what Still Bay and the surrounding areas have to offer in terms of conservation, tourism and scientific research.

Local Conservation Initiatives

A good take-home message for delegates was the large-scale conservation initiatives undertaken by the community. Local Conservationist Janet Naudé gave an overview of Still Bay's conservation history, challenges and highlights. Most of the conservation initiatives are community-based and local people are actively involved through volunteering in the conservation of their rich natural and cultural heritage sites, which include the Still Bay Conservation Trust and the late Dr Tol Pienaar's Herbarium.

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