

## Climate-change atlas to launch

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### Online climate database will look into the future

South African scientists are about to launch a climate-change atlas capable of giving detailed long-term projections for rainfall and temperature for any town in the country.

Users of the Internet atlas — which will have a similar feel to Google Earth — will be able to zoom in on a specific location and get information about the likely state of their flower beds in 50 years' time.

Users will also be able to check on the likelihood of droughts, floods or large ocean waves affecting their neighbourhood.

Sea-level rises, changes of vegetation and expected minimum and maximum temperatures will be included in the atlas's online database, which will be updated constantly.

Initiated by the Department of Science and Technology, the atlas is being developed by a team of scientists and the Council for Scientific and Industrial Research (CSIR), who say the project is aimed at promoting public access to scientific information.

Dr Bob Scholes, the co-principal investigator, said: "What the atlas is about is a way of unblocking the pipeline of information from the scientific community into the decision-making community — and further out into the general public.

"It's not about dumbing things down. It's about giving people access to information they need."

The atlas will be particularly useful to urban planners, policy-makers and government institutions, such as municipalities, who need to make long-term land-use decisions based on environmental forecasts. It is due to come online early next year.

Until now, climate-change predictions have been made on a case-by-case basis, such as a recent CSIR study of a coastal area outside Durban that suffered major damage during a recent storm.

The study predicted the likely extent of further coastal erosion. The new atlas would make this study and every other scientific finding on climate change immediately available.

Scholes said the atlas would combine data on ground water, surface water, forests, biodiversity, human health, crops, demographics, economics and society in general in a single user-friendly format.



**WHERE THERE'S SMOKE:** Eskom's coal-fired Duvha power station outside Witbank in Mpumalanga, whose 300m chimney is among the tallest in the world, has been fitted with special technology to reduce the amount of ash released into the atmosphere. Eskom is the country's biggest producer of greenhouse gas, which has been linked to global warming. Its 26 power stations collectively pumped out 223 million tons of carbon dioxide in 2008

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"Some of it is maps, some of it databases, some briefing notes. It's a compendium of information organised in a way that people can delve into, which previously has been very difficult."

The project's other principal investigator, Dr Emma Archer, said the atlas came "at a critical point in translating climate change science into policy in South Africa".

Government policy is due to be detailed soon in two key documents, the draft Climate Change Adaption Policy Framework and the Second National Communication on Climate Change.

Once the policy is in place, the CSIR will help government come up with specific strategies to minimise both the country's contribution to climate change and its exposure to expected negative repercussions, such as more extreme weather.

Other CSIR findings to be included in the atlas are:

- The Garden Route is likely to have a warmer climate and more irregular and intense rainfall, resulting in possible water shortages;
- Communities in Limpopo are likely to be more at risk of malaria;
- Groundwater reserves are likely to become far more important in future, particularly in drier parts of the country; and
- The east of the country around Kruger National Park, home to the majority of the country's bird and mammal species, is expected to come under threat owing to the twin pressures of scarce resources and population growth.

Earlier this year, atlas project manager Dr Rebecca Maserumule said: "The atlas will become a one-stop shop for relevant climate-change findings, which would inform projections of global change, land-cover change and biogeochemical change for the region."

The atlas will also draw attention to the need to reduce the national carbon footprint, according to Dr Stuart Piketh, director of the Climatology Research Group at the University of the Witwatersrand.

He said: "The only way we can combat the main drivers of climate change is for everybody to buy into the idea that our carbon footprint should be coming down."



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