Our Coastal Areas: Newspaper Article 1

We must adapt to climate change - or die

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Published on the web by Sunday Independent on October 16, 2005

As Earth hurtles towards potentially disastrous changes in temperature, top scientists from Africa and the rest of the world will meet South African government officials tomorrow in Midrand to discuss the threat of climate change in South Africa and the sub-continent.

In South Africa, the effects of global warming are predicted to include the spread of diseases such as tick-bite fever, cholera and malaria; the extinction of plants and animals; and ruined crops.

Deputy President Phumzile Mlambo-Ngcuka is to deliver the opening address at the National Climate Change Conference, where delegates will thrash out options for responding to the crisis.

Globally, nine of the past 10 years have been the warmest since records began in 1861. Research confirms that climate change is "a real and significant threat to biodiversity in South Africa", according to Guy Midgley of the South African National Biodiversity Institute.

South Africa's botanical treasures - the succulent Karoo and fynbos biomes, recognised as specialised ecosystems of rich plant biodiversity - are under grave threat. Once temperatures rise 2,4¼C higher than they are now, the Karoo's 2 800 endemic plant species will become extinct. Above 3¼C, the Kruger National Park is projected to lose two-thirds of its animals.

Some species in the Kruger Park are already disappearing, Norman Owen-Smith, a Wits university scientist, said. "Half the species in the park may want to be somewhere else in 20 to 30 years' time."

Sable and roan antelope in particular will want to move west of the Kruger, where rainfall is higher, he said, but are unable to move beyond the park fences.

South Africa's biodiversity provides livelihoods for a significant number of rural South Africans who are victims of poverty, Midgley said.

This was confirmed by a report on the impact of climate change to be presented at the conference this week by Council for Scientific and Industrial Research scientists Graham von Maltitz and Carmel Mbizvo. They predict that in most instances, climate change will add stress to already fragile livelihoods.

Because 70 percent of Africa's population relies on agriculture for its livelihood, and because the continent includes some of the world's poorest nations, it is particularly susceptible to climate change.

Southern Africa's staple food, maize, is particularly susceptible to drought.

The southwestern tip of Africa will see less rain as the planet heats up, Von Maltitz and Mbizvo say, "and it is this area where some of the most severe livelihood consequences may result".

The United Nations Environment Programme predicts that an increase in temperature is likely to reduce soil moisture and soil quality, both of which are vital for agriculture, as well as to generate a proliferation of pests.

The UN has warned that by 2050 as many as 150 million "environmental refugees" may have fled coastlines vulnerable to rising sea levels, storms or floods, or agricultural land that has become too arid to cultivate.

In South Africa, a broad reduction of rainfall in the range of 5 to 10 percent for the summer rainfall region is predicted. This is likely to be accompanied by an increased incidence of drought and floods, with prolonged dry spells being followed by intense storms.

The department of environmental affairs and tourism says the increased temperatures and changes in rainfall can be expected to affect health, including an increase in the occurrence of strokes, skin rashes, dehydration and skin cancers.

South Africa's east coast is expected to become wetter, with an accompanying increase in the incidence of diseases such as cholera, malaria and sleeping sickness.

In a warmer world, mosquitoes and ticks could also expand their range to higher altitudes.

Peter Luckey, the chief director of the department of environmental affairs, told reporters this week that climate change science predicted more frequent and intense extreme weather conditions, and said that "in most cases, they will be changes that affect our everyday lives".

Bruce Hewitson of the climate systems analysis group at the University of Cape Town said what was needed most in this period of climate change was "following up on adaptation and responding to impact".

It was too late to mitigate the effects of climate change, Hewitson said. "There is nothing we can do to prevent climate change for this generation."