

Climate change: the South African scenario

 By [Cindy Peters](#)

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On Tuesday, 23 September, more than 120 world leaders will meet in New York to announce how they each intend to tackle climate change. Two days before the summit, billed as the 'largest mobilisation on climate change', the People's Climate March will demand for urgent action.

On 21 September the [People's Climate March](#) will take to the streets of New York, supported by satellite events across the world. In South Africa, Avaaz member Simone Innes will be leading a group of volunteers in Joburg. "Our plan is to make it easy for everyone and anyone interested in protecting our planet to make an everyday heroic gesture in support of our Turn your Heart Green campaign and the People's Climate March ahead of the Climate Summit," says Innes. For more information on the campaign, go to www.facebook.com/greenheartSA.

UN Climate Summit

UN Secretary General Ban Ki-moon will host the UN Climate Summit with one of the aims being to mobilise political will for a successful COP21 set for Paris in 2015.^{[1](#)} A provisional list of leaders who have asked to speak at the summit has been announced; the list includes many African representatives including South Africa.^{[2](#)}

We spoke to WWF SA's National Climate Change Officer, Louise Naudé, about next week's summit, South Africa's vulnerability to the potential effects of climate change and their resulting human and economic impacts, South Africa's response to climate change, and, finally, how South Africans can influence the government's response to climate change.

Separate from the meetings of the Conference of the Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC), which aims to negotiate a legally binding international agreement, countries at the extraordinary UN Climate Summit will make voluntary commitments irrespective of a global legal agreement to address the problem.

"Ban Ki-moon is calling government leaders, business leaders and civil society together to say 'We're not making progress at the UNFCCC summits - we are, but it's very, very slow - let's get on with seeing what we can do that is real implementation.' The UNFCCC COPs are negotiating a legally binding international agreement, which you can understand means countries are very cautious about what's going to go into legal language; this means a lot more resistance from some countries," explains Naudé.

In effect since 1994, the UNFCCC has been widely criticised for being slow and ineffective in reducing GHG emissions. The objective ([Article 2](#)) of the convention itself is vague in that it doesn't specify what level of emissions would lead to dangerous levels of climate change - each country has a different measurement as danger is relative to circumstance. Another factor that makes the UNFCCC processes cumbersome is that there are no rules about decision making, so decisions, in principle, require full consensus - and objections to decisions are, effectively, vetoes.³ Without a legally binding agreement to enforce mitigation measures, very little has been done by the big emitters to curb emissions.



Image courtesy of Idea go / FreeDigitalPhotos.net

Unmitigated global warming will have consequences for all nations - with Africa being particularly vulnerable to the effects of climate change, South Africa is no exception. In 2012, the South African government commissioned a study called the Long-term Adaptation Scenarios (LTAS) (2013), which takes the work of the Intergovernmental Panel on Climate Change (IPCC) and translates it within a South African context.⁴ The study, spearheaded by the South African National Biodiversity Institute (SANBI), put forth four scenarios that fall into two main groups: unmitigated (unconstrained) and mitigated (constrained) future energy pathways.

Mitigated:

1. warmer (<3°C above 1961-2000) and wetter, with greater frequency of extreme rainfall events.
2. warmer (<3°C above 1961-2000) and drier, with an increase in the frequency of drought events and somewhat greater frequency of extreme rainfall events.

Unmitigated:

3. hotter (>3°C above 1961-2000) and wetter, with substantially greater frequency of extreme rainfall events.
4. hotter (>3°C above 1961-2000) and drier, with a substantial increase in the frequency of drought events and greater

frequency of extreme rainfall events.

According to the study: "The effect of strong international mitigation responses would be to reduce the likelihood of scenarios 3 (hotter/wetter) and 4 (hotter/drier), and increase the likelihood of scenarios 1 (warmer/wetter) and 2 (warmer/drier) during the course of this century."

The LTAS study applied the four scenarios on the six hydrological zones of South Africa and looked at the model rainfall patterns in those areas:

Scenario	Limpopo/ Olifants/Inkomati	Pongola/ Umzimkulu	Vaal	Orange	Mzimvubu- Tsitsikamma	Breede-Gouritz/ Berg
1: warmer/ wetter	spring and summer	spring	spring and summer	in all seasons	in all seasons	autumn, winter and spring
2: warmer/ drier	summer, spring and autumn	spring and strongly summer and autumn	summer and spring and strongly autumn	summer, autumn and spring	in all seasons, strongly summer and autumn	in all seasons, strongly in the west
3: hotter/ wetter	Strongly spring and summer	Strongly spring	spring and summer	in all seasons	Strongly in all seasons	autumn, winter and spring
4: hotter/ drier	Strongly summer, spring and autumn	spring and strongly summer and autumn	summer and spring and strongly autumn	summer, autumn and spring	all seasons, strongly in summer and autumn	all seasons, strongly in the west

Image source: Long-term Adaptation Scenarios Flagship Research Programme: Summary for Policy-makers (2013). www.sanbi.org

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Climate impacts for South Africa

"If we continue on the current worldwide path of emissions, it's going to be significantly hotter in South Africa - from between 5 to 8°C hotter. Globally, one is looking at an average of between 2 to 4°C on the current emissions pathway, but in southern Africa it will be a lot higher than that in the interior. In the coastal zones, it's not going to increase as much as that, just because being near the sea mediates the temperature. The general pattern is that it is likely to become much drier in the south-west, and wetter in the east," explains Naudé.

"On sea-level rise, globally, during the period of 1993 to 2006, the sea has been rising about 4mm per year. That's very little, but that's going to accelerate, and in some cases half a metre's worth of sea rise will inundate a lot of coastal areas and the infrastructure.

"Looking at southern Africa, they found it will be very similar - it's that same rise per year accelerating as the temperature increases. If all those large ice shelves melt (Greenland, Antarctica), we'll be looking at several metres of sea rise. There are already some [islands starting to go under water](#), and they are talking about moving their people, so it's not some science fiction thing in the too far future," explains Naudé.

Human and economic impacts: agriculture

With a gaping gap between its rich and poor - 45.5% of the population lives in poverty; wealthiest 20% of South Africans accounted for more than 61% of consumption in the economy in 2011⁵ - South Africa's most vulnerable citizens have a low adaptive capacity to climate change.

"They can't really move and defend themselves as easily from these things, so it's not just a physical climate problem, it is a problem of poverty," says Naudé.

Linked to the potential human impact, as an example of the potential effects on the South African economy, Naudé addressed agriculture in the Western Cape, which grows a lot of fruit crops for a domestic market, as well as a large export market.

"As the weather pattern changes, if the Western Cape gets drier, the weather is no longer going to be suitable to grow

those kinds of crops, so that is going to impact quite heavily on our economy, our balance of payments, the agricultural business, the farmer's capacity to earn a living. If you think about farm workers, a lot of jobs are dependent on agriculture, and in some cases, one job can support about 10 family members in various ways, so it's a huge impact," explains Naudé.

Other potential impacts linked to agriculture include low productivity as workers may not be able to work through the heat of the day; issues of food security as cereal crops, such as maize and wheat, are expected to be impacted on; and water stress as less water becomes available for crop irrigation.

"As South Africans, what we can do about this is to look ahead at these potential changes and start to migrate the economy. Farmers can think about changing crops - there are some in the Western Cape who are already moving to olives, for example, because they can be grown in those harsher, drier climates," explains Naudé.

South African commitments

As a developing country, South Africa is only required to make voluntary commitments as a party to the UNFCCC. That said, we have made ambitious commitments to deviate from the business-as-usual emissions curve by 34% by 2020, and 40% by 2025.⁶

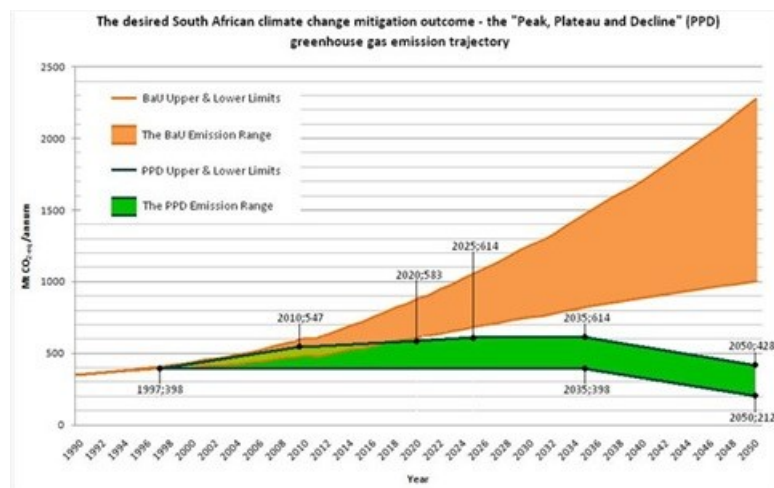


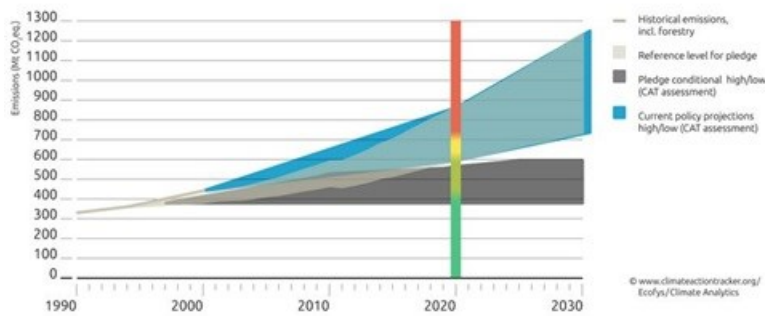
Image source: www.climateaction.org.za

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In terms of action, parliament has adopted the [National Climate Change Response Policy](#). The Department of Environmental Affairs' mandate drives the implementation, but every department in the country has some responsibility to drive action within its sector.

"I think our government is one of the ones in the world that has moved quite fast and decisively in this area, so WWF SA supports them in their efforts," says Naudé.

However, there were two areas of concern she noted: "The targets are relative to a business-as-usual trajectory, but the business-as-usual line keeps getting pushed up. So when you're talking about 34% down from a line that keeps getting pushed up, the absolute amount of emissions below your cut is actually growing. The danger in the country is that special interests drive the top line up and that leads to less of a cut in absolute emissions. At a certain point we have to actually get down to a low number, so it doesn't help if we perpetually postpone getting down there just by pushing our top line up."



Climate Action Tracker: South Africa Source: www.climateactiontracker.org

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"Those kinds of special interests in the country are the fossil fuel industry, and the WWF does not play the blame game - there's a market for those fossil fuels, so it's not as if they, in and of themselves, are creating the problem - you and I are riding around on petrol, we're all using Eskom electricity based on coal. Our economy would collapse if we switched either of those things off tomorrow, but it's about pushing for faster action, not asking for them to be switched off or done away with, but to really drive that transition very fast to a lower carbon economy," explains Naudé.

"The other big thing is our energy use. It is great that South Africa has committed 19% of any new builds of power stations to be renewables, but WWF thinks that's too little, and that it could happen faster."

People's Climate March

"In one sense we do salute those countries that are making moves to cut their own emissions, but, globally, it's not happening and not happening fast enough, so those countries are in ways the exceptions. The people who are in control of those kinds of processes and decisions in a country are politicians who are elected by us, the citizens, and somehow we are not getting our voices heard in the sense of a direct connection between what is important for people and humanity and the political action that's taking place.

"The Climate March will seriously signal to leaders to get their act together, from the Ban Ki-moon summit to the Paris COP, and hear that ordinary citizens on the ground think this is a really serious issue. We're going down a path of disaster and we must avert that. I think it is an important moment for us to raise our voices and we do hope that the outcome is that it gives the politicians a bit of a wake up," says Naudé.

Crisis or media sensationalism

The media have been known at times for pulling in readers with particularly scary headlines: '[Climate change will ruin Hawaii](#)', '[A hot spell, and forever](#)', '[Dialling 911 on climate change](#)'- these headlines, however, aren't far from reality.

"Yes, it's a crisis in the sense that it's happening faster and faster and it does have very serious consequences, but I don't think a Domsday approach is useful. I think it's much more useful to ask: Well, where are the solutions, where can we reduce emissions economically and as a citizen or in your workplace? How can we build the resilience of the economy and of the people to adapt to the changes that are coming?

"The modelling that South Africa has done in the LTAS study, the plans for renewable energy, the government's climate policy - it all looks at a period to 2050. 2050 is only 35 years away, so for most young people alive today, that's in your lifespan, so we better get moving," says Naudé.

Influencing government response to climate change

Naudé provided a few possible approaches the public can take to get their voices heard by decision-making bodies:

- Members of organisations can assert their influence within those organisations, e.g. trades unions, faith-based organisations. [The South African Faith Community Environmental Initiative \(SAFCEI\)](#), a multi-faith structure, pursues issues of climate change and other environmental issues;
- Join the [One Million Climate Jobs campaign](#) - an initiative that tackles both the unemployment and climate change crises in SA;
- Pension funds - start migrating to greener investments; and
- Engage your local councillor or mayor - find out what your ward is doing to mitigate and adapt to climate change.

Louise Naudé is the WWF National Climate Change Officer. She works on climate change policy within South Africa and leads a programme on the low carbon transition in South Africa with specific reference to the transport sector.

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