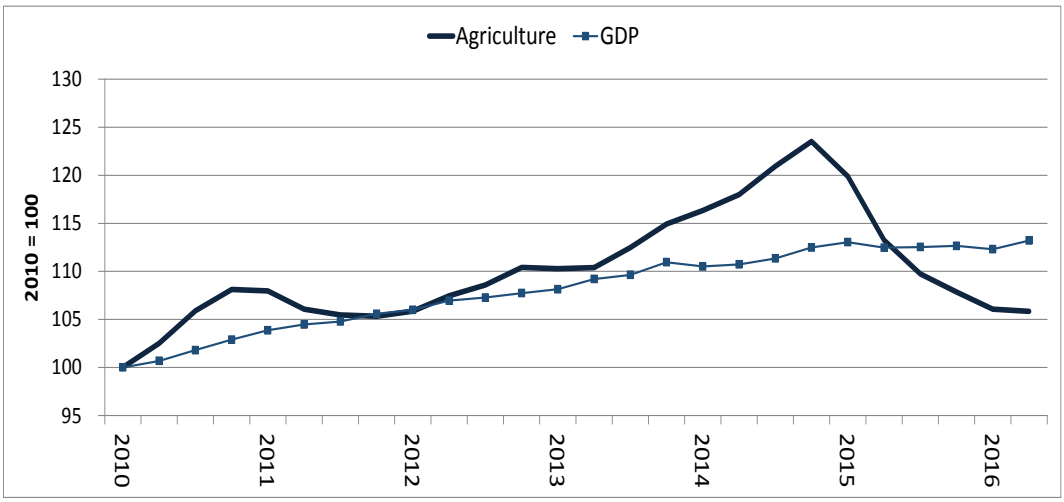
Briefing note: Impacts of the drought

By Mbongeni Michael Ndlovu

Despite the relatively strong growth in the rest of the economy in the second quarter, agriculture posted its sixth consecutive quarter of economic decline (Graph 1). Stats SA reported that, in seasonally adjusted terms, agriculture contracted by almost 15% from R78 billion in the fourth quarter of 2014 to R66 billion in the second quarter of 2016.

Graph 1: Quarterly growth in total GDP and in agriculture, 2014 to 2016



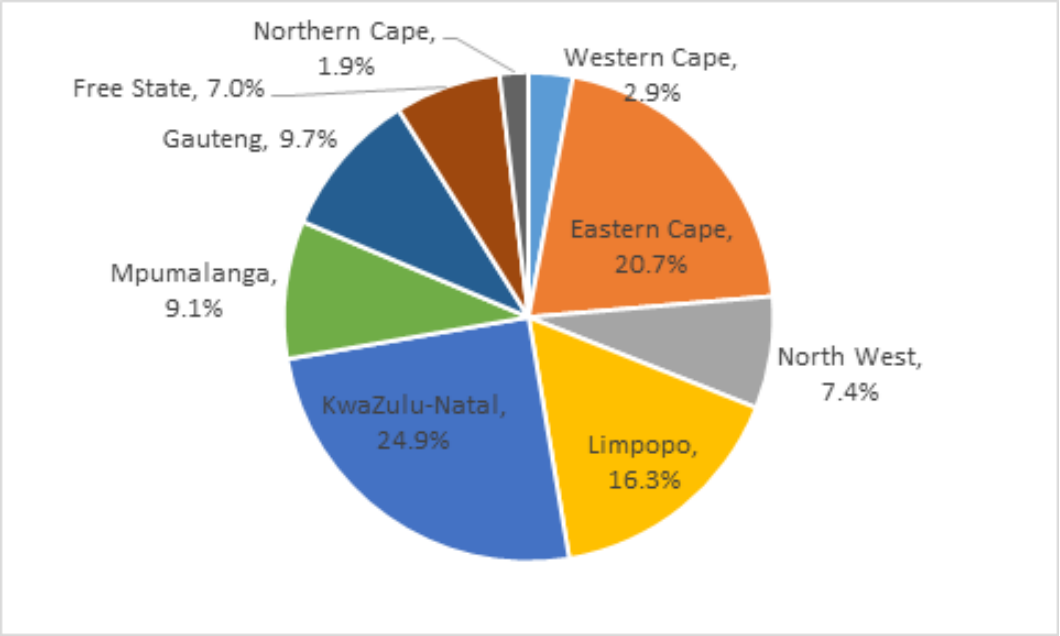
Calculated from Statistics South Africa, GDP (Quarterly) 2016 Q2. Data accessed in September 2016.

The cause is the worst drought in living memory. The effects of the drought were particularly felt in the KwaZulu-Natal, Free State and the North West provinces, with sugar and maize production being the most compromised.

The agricultural sector's contribution to the economy has been in a declining trend, falling from a contribution of 4,2% to GDP in 1996 to only 2,3% in 2015.The drought, however, has clearly demonstrated its centrality to development and its linkages to the rest of the economy.

Agriculture is important for employment in South Africa, particularly in poor rural areas. Despite rapid rural-to-urban migration, South Africa's rural population is still around a third of the total population (Graph 2), and it is estimated that the agricultural sector employs around 800 000 workers in commercial farming nationally.

Graph 2: Share of rural households in South African provinces



Source: Statistics South Africa, Census (2011)

Maize is a staple diet in the country and a significant input into the poultry and beef industry. The 2015 maize crop, at just under 10-million tonnes, was the lowest in South Africa since 2007, when it fell to seven-million tonnes. Reports suggest that as a result, around 2,7-million households will be food insecure this year. Moreover, South Africa will have to import around 3,8-million tonnes of maize. The weaker rand-dollar rate will likely push prices up, with food prices overall rising by around 10% this year.

The drought was caused by the cyclical El Niño weather pattern and the country has always had variable rainfall, but the effects of climate change mean the country will continue to experience water scarcity. Without denigrating private humanitarian initiatives such as #OperationHydrate, the experience of the drought should spur more structural reforms to respond to climate change and protect the agricultural sector.

The success of the renewable energy projects demonstrated that the country can attract rapid investment in new technologies, if the incentives and institutions are structured appropriately. Policymakers should apply the same models for encouraging new technologies to save and recycle water.

The following three strategies can mitigate the impact of climate change on agriculture.

Climate resistant agricultural practices

The effects of climate change are expected to make South Africa's rainfall patterns more unpredictable, with rainfall becoming less frequent but more intense. This puts pressure on the agricultural sector to start adopting more sustainable farming practices. Climate resistant agricultural practices involve the use of drought resistant seeds and/or adopting farming and irrigation practices that minimise water use.

The need for more water-saving farming techniques has long been recognised. The challenge is to diffuse relevant technologies beyond a few pilot projects. That in turn requires appropriate extension services that can promote new approaches as well as stronger incentives to save water, especially in the commercial farming sector.

Investing in new water recycling technologies

Water recycling technologies such as desalination offer some opportunities for increasing access to water. Desalination is the process of removing salts from water to produce fresh water. South Africa is well suited to this technology as the country has around 3 000 kilometres of coastline. The country has already started investing in this technology, with the largest seawater desalination plant in the country currently operating in Mossel Bay, Western Cape.

The most significant argument against desalination is the high energy use it requires. However, South Africa is growing capacity in renewable energy so this presents an opportunity to accelerate progress in the use of this technology. The high cost of energy will, however, raise the cost of water, as well as enforcing the need to be even more water efficient.

Investing in water preservation infrastructure

A number of water and sanitation projects are part of the government's 18 Strategic Infrastructure Projects (SIPs) initiative. This is encouraging, but most of the large water projects seem to be directed towards supporting mining activities, with some spill-overs to communities. Government should prioritise developing reticulation networks in the communities surrounding dams developed as part of the SIPs. Dams and water-sparing projects should also be developed to support more agricultural production.

In addition to building mega-infrastructure projects, there should be a shift in view about the importance and benefits of rain-water harvesting, not necessarily as a substitute for providing fresh water but as a complementary system. Similarly, water recycling at the household level should be encouraged.