Why agriculture is key to South Africa's climate change response

South Africa is a party to the United Nations Framework Convention on Climate Change (UNFCCC). When the parties to the convention met in Paris in 2015 (COP 21), member nations undertook to reduce their Greenhouse Gas Emissions (GHGs) in order to limit global warming to below 2 degrees Celsius, and preferably below 1.5 degrees, by 2100. Each country has to negotiate its Nationally Determined Contribution (NDC), which represents its commitment to reaching global goals. Developing countries such as South Africa are given slightly more leeway, but there is still a global push for all nations to increase their ambitions.

Although we may be a small player in the global economy, South Africa has one of the highest per capita GHG emission footprints in the world and our economy is very carbon-intensive. If we fail to keep up with the global push towards GHG mitigation, we may very well face 'soft' sanctions such as an aversion to financing carbon-intensive sectors of the economy. A more direct possibility is already taking shape in the EU in form of proposed border tariff adjustments, which implies tariffs on products imported from countries that do not meet the global GHG emission ambitions. This could have a very real effect on South African agriculture as the EU is a major trade partner for high-value horticultural products in particular.

South Africa is now leaning towards the goal of achieving a nett zero carbon economy by 2050. This does not imply zero carbon emissions, but rather that we capture and sequestrate as much carbon as we release into the atmosphere. Agriculture, forestry and associated land use will be affected in at least four ways; it will need to adapt to the effects of climate change, it will need to mitigate its own emissions, it will be the primary source of carbon sequestration and there are great expectations for the sector to absorb jobs that may be shed from more carbon-intensive industries. If anyone thought that climate change may not be a big issue affecting the agricultural sector, then think again!

Adaptation is perhaps the aspect of climate change that the sector is most familiar with. Climate change is set to increase the frequency of severe weather events such as droughts, floods and severe storms. Technology and innovative farming practices have already gone a long way towards building resilience to the effects of climate change.

Mitigation is a slightly more complicated topic. According to the National Greenhouse Gas Inventory, the sector is estimated to contribute 13% to the country's total GHG emissions. These figures are highly debated and I am certainly not qualified to weigh into the scientific merits of these claims. What I do know, however, is that trade-offs will be required with other sectors of the economy as South Africa's own, unique circumstances are taken into account. The livestock industry is often in the firing line due to the methane emissions it produces. That being said, extensive grazing by livestock or wildlife is the only viable form of agriculture for roughly two thirds of the country's land so the options may be limited. Likewise, irrigation uses the bulk of South Africa's raw water resources but also contributes significantly to job creation and a positive trade balance. Hence, the environmental concerns need to be balanced with the need to take advantage of the value chains in which we are globally competitive. Similarly, stream-flow reduction from forestry may also

account for a significant portion of South Africa's water resources but it is also the industry most suited to capture the carbon being emitted into the atmosphere by other industries.

Finally, it is estimated that a quarter of all jobs in South Africa are linked to carbon-intensive industries. As these industries adapt or scale down production, the workers engaged in those industries will need to be reskilled and accommodated elsewhere in the economy as part of the 'just transition'. The agricultural and tourism sectors have always been looked at but their potential to absorb these jobs may need serious conservation. Tourism was particularly hard-hit by the pandemic and whilst agriculture's contribution to GDP grew in 2020, this was not matched by new job opportunities. A realistic assessment is needed to determine the sector's ability to absorb jobs shed by carbon-intensive industries over the next 30 years.

These are merely a few of the considerations that can be used to illustrate just how critical the sector is to South Africa's climate change response.