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El Niño is showing its head again and presents risks for the 2023/24 season

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Wandile Sihlobo
Chief Economist
+27 12 807 6686
wandile@agbiz.co.za

www.agbiz.co.za

As the deepening energy crisis continues to present problems for different parts of the agricultural sector, another major challenge that could confront South Africa's agricultural sector in a few months is a change in weather conditions from favourable rains to drier and hot conditions. This would be a switch from a prolonged period of La Niña to El Niño.

South Africa has had a good four seasons of La Niña induced heavy rains from 2019/20 to 2022/23. These above-normal rains supported agriculture leading to higher yields across various field crops, fruits and vegetables. The livestock industry also benefitted from improved grazing pasture. Importantly, having four consecutive La Niña seasons was an unusual occurrence. The typical cycles are two seasons of higher rainfall followed by normal-drier seasons. Excluding the current trend, the only other period in the recent past with three successive years of conducive weather conditions and a large crop harvest ran through 2007/08, 2008/09, and 2009/10 production seasons. This period brought a sizeable agricultural yield to the country.

But the scientists at the International Research Institute for Climate and Society at Columbia University see a protentional occurrence of an El Niño later in the year. In its recent update of January 19, the International Research Institute for Climate and Society stated, "The likelihood of El Niño remains low through May-Jul 2023 (44% chance), but becomes the dominant category after that with probabilities in the 53-57% range."

Such a weather phenomenon would bring below-normal rainfall and hotter temperatures in South Africa. If it is intense, this could resemble the bleak agricultural conditions we witnessed during the last El Niño drought in the 2015/16 season, where staple crops such as maize dropped to 8,2 million tonnes, well below South Africa's consumption levels of 11,8 million tonnes. This shortfall necessitated imports of maize to supplement domestic needs. Other field crops, fruits, vegetables and livestock also experienced severe losses. But if the El Niño is mild, crop declines could resemble the 2018-19 episodes, where the reduction in staple crops such as maize was not aggressive. The total maize harvest that year was 11,8 million tonnes, in line with the annual consumption level. For comparison, in the past three seasons (excluding the current 2022/23), South Africa's maize harvest averaged 16,8 million tonnes and ensured that South Africa remains a net exporter of maize.

South Africa's agriculture is mainly rainfed, meaning it is not under irrigation, particularly in the field crops. For example, roughly 20% of maize, 15% of soybean, 34% of sugarcane and nearly half of the wheat production are produced under irrigation. The rest is rainfed. Under a possible drought season, a large share of the country's agriculture would be strained. In fruits and vegetables, however, a sizable area relies on irrigation. In the livestock sector, specifically dairy, irrigation is just as necessary. This shows that a possible drought would present major risks to food security.

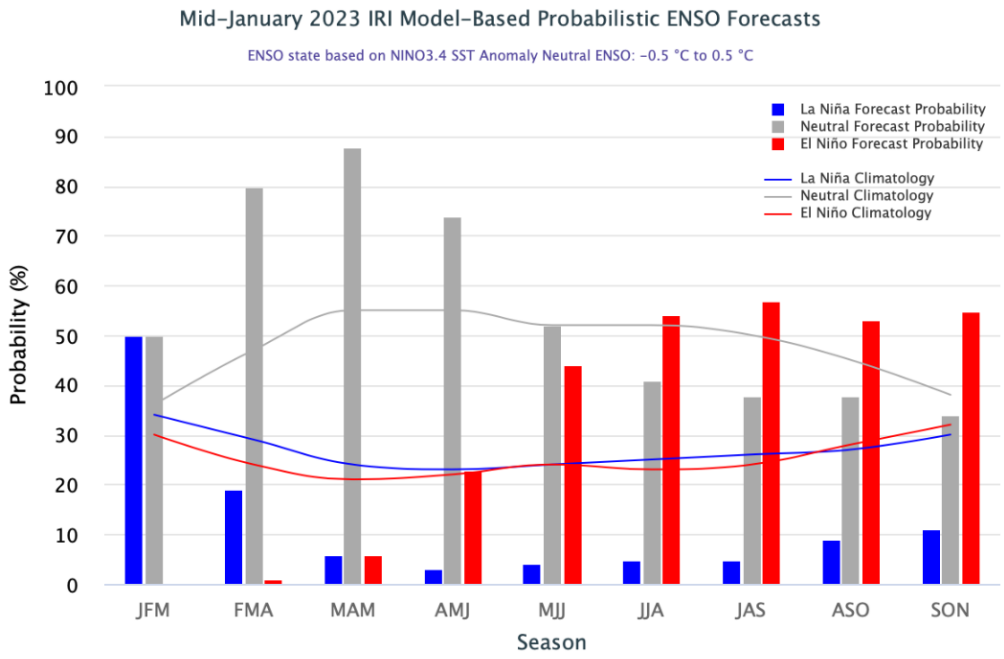
Even more worrying now is that the agricultural regions that irrigate face continuous interruptions because of load-shedding. The organized agriculture groups, the department of agriculture, land reform and rural development are working on near-term and long-term

interventions to assist the sector. The one option that should receive serious consideration is incentives for self-generation, even if covering a few critical parts of each business. The window for this option is limited, about eight months before we see the potential intensification of El Niño. But for regions that already irrigate, reducing load-shedding is the only option as farmers see losses by the day. The same extends to livestock, aquaculture (mainly the abalone farms), dairy and poultry businesses, and various food, fibre and beverages value chain businesses.

Notably, the challenge of El Niño induced-drought will not be limited to South Africa but across the Southern Africa region. The last intense drought cycles led to increased food insecurity in the region. This is a risk if the upcoming 2023/24 summer season is dominated by drought or below-normal rainfall in Southern Africa. This is a challenge that policymakers in the region should be aware of and plan accordingly to support communities that heavily rely on agriculture.

In sum, we see some worrying signs that the period of higher rainfall, which has supported agriculture in South Africa, and the broader Southern Africa region in the past four seasons, could soon be over. At a time when there are rolling blackouts in South Africa, this presents an even bigger challenge as irrigation regions also face water shortages while damns, at least for now, are overflowing. If this materialises, this scenario presents a negative picture for South Africa's food security (and the broader region) and farming businesses' financial conditions. The long-term planning of the agribusiness should factor this change in climatic conditions as a possible risk for the next season.

Exhibit 1: El Niño occurrence possibilities (red bar)



Source: International Research Institute for Climate and Society at Columbia University