

Regional Network of Agricultural Policy Research Institutes



The 2015/2016 drought and its impact on staple maize markets in Southern and Eastern Africa



The 2015-2016 El Nino events resulted in severe drought conditions and flooding in Southern Africa. In some areas, the drought reached record levels, not seen in 35 years. Speculation about the impacts of El Nino played out in the media and at times without facts and figures. This tended to fuel panic via non-factual interpretation of the situation leading to knee-jerk policies in some countries. Policy makers were worried and were compelled to respond to the impending threat. As in the past, the response included immediate grain export ban, imposition of export taxes, deep-sea grain imports, price controls and reductions in import duties.

The urgency in addressing food insecurity and food shortages exposes the current short-comings in the regional trade market: lack of proper warning systems, ad-hoc trade policies, and underdeveloped infrastructure.

The El Nino phenomenon means that average climatic patterns do not prevail. In terms of amount of rainfall, it may mean less, more or even about average. The trouble with El Nino is that it does not have a predictable pattern. Due to this uncertainty, in most countries, this phenomenon generated great anxiety leading to ad hoc responses as many speculated about how their crop season was to unfold. Nevertheless, as an event, El Nino occurrences seem to have become relatively common, occurring every 2-7 years. This allows policy makers to approach the phenomenon as an inevitable strain on agricultural production, rather than an unforeseeable disaster. This policy brief explores the impact of the drought on the maize markets, the impact on maize prices and trade flows; as well as make policy recommendations to continuously prepare for drought scenarios through: informative data analysis to better equip policy makers and the importance of investment into infrastructure.

Key Messages

- Since El Nino events are relatively predictable, policy-makers and agricultural stakeholders can prepare for El Nino's impact on agriculture production.
- Preparing for El Nino events include accurate and regular crop estimates, along with proper warning systems and assessment of commodity balance sheets.
- Continuous maintenance and upgrading of infrastructure will ensure the efficient handling of grain trade (imports and exports) during trade flow influxes.
- In spite of political pressure to ban exports during times of regional food insecurity, open border policies can benefit farmers and consumers.

Table 1: Regional Import Prices for White Maize in 2016/17 Marketing Season

| | Importing Country | Import Locale | Price at Port (US\$/Ton) | Cost of transport and insurance (US\$/Ton) | Import Costs US\$/ton |
|---|----------------------------|--------------------|--------------------------|--|-----------------------|
| 1 | South Africa (Randfontein) | US Gulf via Durban | 245 | 67 | 312 |
| | | Zambia (Lusaka) | 225 | 121 | 346 |
| 2 | Zimbabwe (Harare) | US Gulf via Durban | 245 | 167 | 412 |
| | | Zambia (Lusaka) | 225 | 67 | 292 |
| 3 | Malawi (Lilongwe) | US Gulf via Durban | 245 | 203 | 448 |
| | | US Gulf via Beira | 245 | 60 | 305 |
| | | Zambia (Lusaka) | 225 | 52 | 277 |
| 4 | Mozambique (Maputo) | US Gulf via Maputo | 245 | 20 | 265 |
| | | US Gulf via Durban | 245 | 110 | 355 |
| | | Zambia (Lusaka) | 225 | 95 | 320 |

Source: ReNAPRI; FAO GIEWS; BFAP, 2016; IAPRI, 2017.

Table 1 compares the cost of importing from the US Gulf (Mexico or USA) or importing from Zambia. Gulf imports enter the region via South Africa or Mozambique, which makes this option more favorable to South Africa and Mozambique. Importing from Zambia is more favorable for Zimbabwe and Malawi since transport costs are lower. However, Zambia export ban could not allow for this option. The role of trade in dealing with shocks to food security is yet to be fully appreciated.

Impact on markets and trade policies

El Nino weather events normally create dry and hot conditions in the Southern regions of the continent and wet conditions in the Central and Eastern regions. During this past El Nino event, some countries such as Tanzania and Uganda maintained their grain production. However, in South Africa, they experienced their worst drought since 1904. Lesotho, Malawi, Mozambique, and Zimbabwe have also faced severe grain shortages leading to heightened levels of food insecurity and the need for international aid and assistance.

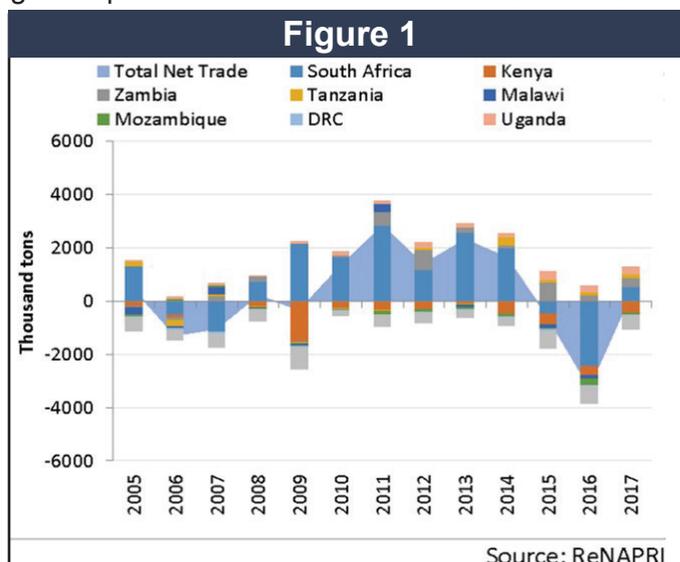
Amid regional food shortages, Tanzania maintained an open trade policy, which allowed farmers near borders to benefit from the higher regional maize prices. Mozambique also kept its borders open. This allowed imports into drought-affected southern Mozambique, while continuing to export from the northern region of the country where they experienced a surplus of maize. Farmers and consumers benefited because transporting maize from northern Mozambique to the south would have been cost-prohibitive.

Zambia produced a surplus in maize during the 2015/2016 season. However, food insecurity in the region and political pressures led the government to impose export ban and later a 10% export tax. Malawi, facing a 30% decrease in maize production, also banned exports. Both Zambia and Malawi exemplify the need for options that addresses policy makers concerns and political pressures. This calls for the research community in the region to improve their data analysis and making it available well-ahead of the food crisis and ensuring the analysis effectively communicates to policy-makers.

Impact on prices and trade-flow

Due to the maize shortage, several countries experienced substantial price increases. Mozambique prices increased by more than 40%. Zimbabwe prices increased by 30%. Malawi and South Africa saw a 50% increase in maize prices. Traditionally, South Africa had been the largest supplier of grain to most of the Southern Africa region. However, the drought had created a deficit in South Africa's production. Figure 1 shows regional trade flow since 2005, with projections into 2017. The decrease in trade was driven by South Africa's severe drought, and inability to meet the regional demand. Countries that previously relied on South Africa's maize have needed to source it from outside the region.

Although yellow maize is widely available in the world market, white maize represents a small share of total global production. Mexico and the United States





are potential sources for white maize. However, in the case of the US, their GM certification was not compatible with the South African system. Until this issue can be resolved, Mexico remains the most likely alternative for white maize imports.

A developed infrastructure plays a key role in allowing access to maize imports, and keeping food costs down. Mozambique has been increasing its port capacity for the last twenty years, and as result has been able to manage higher traffic and cargo volumes. Over a ten-year period (1998 – 2008) Mozambique could manage a 16% increase in number of port calls and a 60% increase in tonnes shipped per day. During the drought, South Africa prepared for the anticipated increase in maize imports by confirming the capacity of their ports and notifying port management that staff will need to be increased to prevent bottlenecks.

Tanzania has also begun investing in port infrastructure and construction following a report on inefficiencies in the Dar es Salaam port costing upwards to \$2.6 billion a year. During the drought, Tanzania did not experience the expected increase in volume from global imports. This could be due to multiple factors, one of which being the issue of over-congestion, which creates delays and increases food prices. Other factors could be Tanzania's new VAT on port goods or the devaluing of the South African Rand, both of which would make Tanzania a less financially appealing option.

The impact of the drought on regional prices, together with trade policies and the capacity of the infrastructure, directs regional trade flow patterns.

Comparing the three port options presented, Mozambique, South Africa and Tanzania, their ports' capacity illustrates the importance of continuous investment into infrastructure order to be prepared for inevitable fluxes in these regional trade flow patterns.

Recommendations

- Governments should avoid export bans as a short-term response to El Nino since the bans have been shown to have negative consumer effects among the poorest households, and exacerbate price volatility.
- Governments and collaborative stakeholders should promote long-term interventions among farmers to counter El Nino effects. These include: irrigation, climate smart agriculture, conservation farming, and the use of drought resistant crop varieties.
- Governments and cooperating partners should leverage technical support efforts to strengthen: early warning systems, investment in irrigation facilities, crop diversification, strategic management of grain reserves, policy formulation processes, expansion of maize marketing options through warehouse receipting systems, and the creation of coordinated domestic market information systems.

Suggested Readings

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