

El Niño - threatening food security and disrupting markets

*A Bright Africa special report from RisCura
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Table of contents

Foreword

The weather phenomenon El Niño has loomed large in recent global news reports, and while officially considered over, its economic and humanitarian impacts are still mounting, and will continue well into 2017 and beyond.

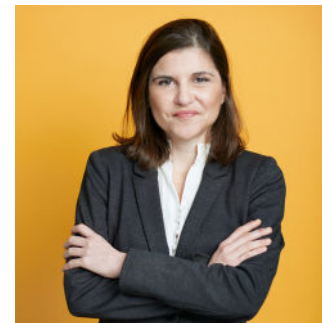
Like the archetypal bandit in a classic Western riding into town and wreaking havoc, El Niño has devastated many regions: some places left with a landscape of parched earth and animal skulls, others a soggy wasteland of flooded crops and disease. In every case, economies have been badly hurt through the knock-on effects of this 'weather bandit', and investors need to understand the direct and indirect impact on the sectors and countries they invest in, and consider both the challenges and the opportunities that have emerged.

Despite its ominous name, El Niño is a natural meteorological event that occurs every seven to eight years. While the impacts of this cyclical event are somewhat predictable, the severity of the latest episode and spill-overs into the socio-economic and macro-economic arenas have been exacerbated by current market conditions. Low commodity prices, slowing global demand, a low-growth environment, and volatile asset prices have left many of the poorest regions extremely vulnerable.

According to the United Nations, more than 60 million of the world's poorest people have been affected by extreme weather conditions, ranging from droughts to floods to forest fires. Global agencies such as the United Nations' Organization for the Coordination of Humanitarian Affairs, the Food and Agriculture Organization of the United Nations, and Oxfam, have extended numerous calls for a concerted global effort to alleviate heightened food insecurity worldwide.

The investment opportunities are myriad – the old adage that every challenge presents an opportunity – given that food security remains essential in any region. Clever investment, careful assessment of risks-and-returns, and appropriate public-private partnerships on the African continent are sure to provide a good long-term return to local and global investors.

Fran Troskie
Investment Research, RisCura

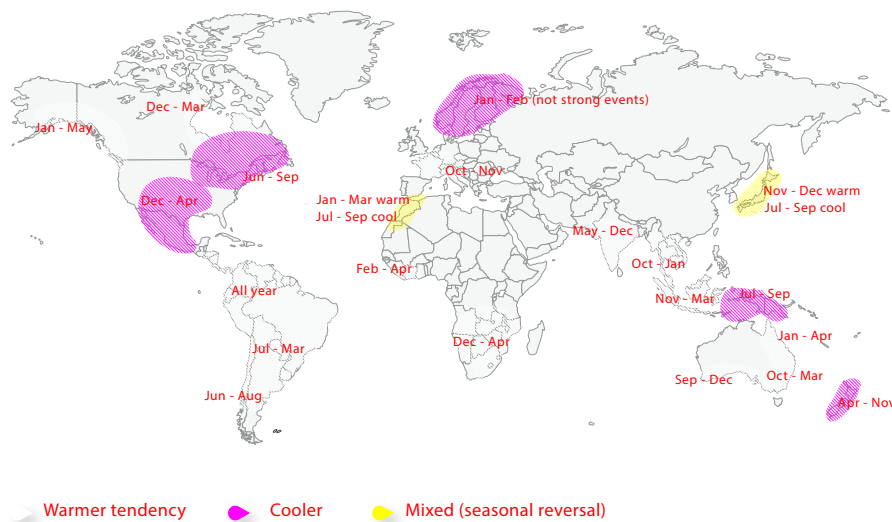


Overview

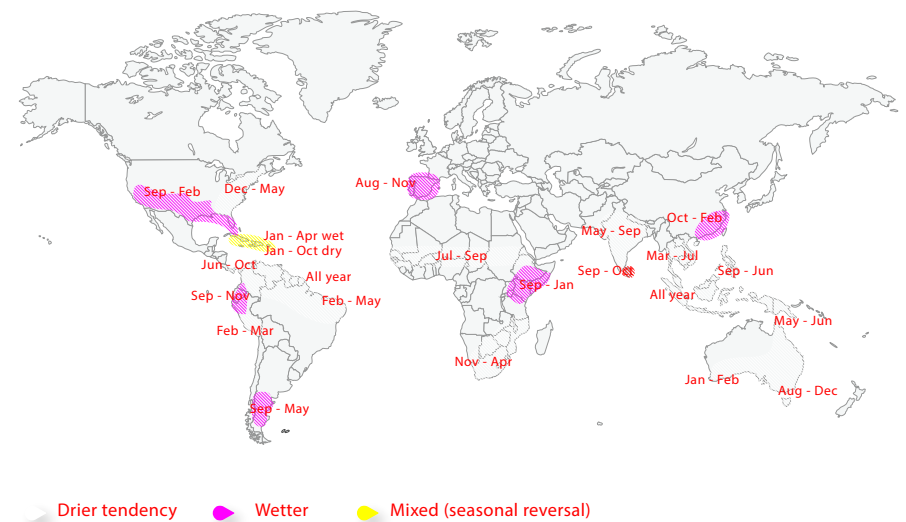
The mechanics of El Niño

Despite its ominous name, El Niño is a natural meteorological event that occurs every seven to eight years. Trade winds across the Pacific weaken, and a body of warmer water that usually lies in the Western Pacific Ocean escapes eastward. The shift in temperatures and the release of heat into the atmosphere as warm water meets cold, results in changes in weather patterns across the world. The graphic below represents some of the anticipated effects on a global scale.

Anticipated global impacts of El Niño – temperature changes



Anticipated global impacts of El Niño – precipitation changes



Source: UK Meteorological Office

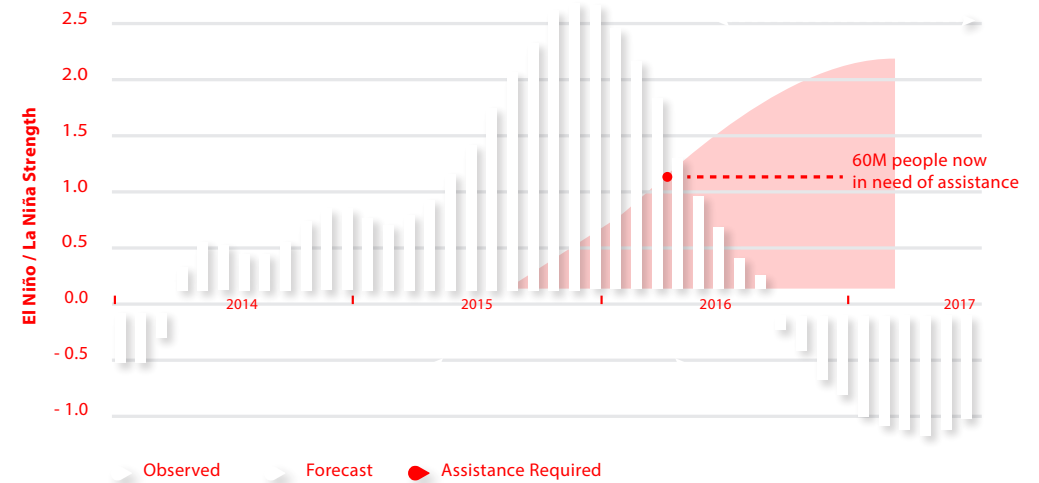
Beware the lag effect

While meteorologists indicate that the strength of the current El Niño is waning and may have ended mid-May 2016, the humanitarian impact and the economic ripple effects are still growing.

The United Nations World Food Programme projects that food insecurity (perhaps the most readily apparent and widely reported effect) has not yet hit its worst levels, and is only likely to peak by December 2016. The graph below depicts that the actual numbers of people needing assistance continue to rise, even as the severity of the meteorological episode ebbs.

The strength of the El Niño episode, an aggregate measure of effects on the variance in rainfall, vegetation and growing seasons, is tracked by the bar graph on the vertical axis. The episode is indicated to have peaked in strength in the fourth quarter of 2015. The blue area tracks the number of people who required assistance from 2015. It is clear that humanitarian aid is typically not required right from the start of the episode (with most crops and countries able to withstand shorter-run weather disruptions), but it is equally clear that it extends well beyond the duration of the phenomenon.

Strength of El Niño and people in need of aid over time



Source: United Nations Office for the Coordination of Humanitarian Affairs

La Niña threatens

Also illustrated in the chart, is the potential onset of a La Niña event (experienced when the tropical Pacific cools-off again) threatening further weather disruptions. Meteorological agencies predict a 75% probability that a La Niña will develop before the end of 2016. The impact of La Niña is typically less widespread than El Niño, but can be equally disruptive to agricultural commodities. She brings drier-than-usual weather in some US states and South America. On the other hand, much of Australia and Central America, and countries in Asia, such as India and Indonesia, experience abnormally wet conditions. The direct impact on African markets is, therefore, likely to be limited – although supply and demand dynamics, and price fluctuations may spill over and continue to affect food security on the continent.

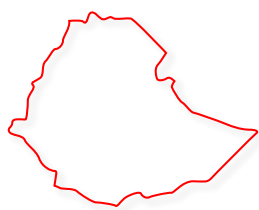
El Niño in Africa

The current El Niño phenomenon, according to the World Meteorological Organization, is one of the three strongest since 1950. A number of African countries, including some of South Africa’s neighbours (Lesotho, Swaziland and Zimbabwe) have announced national states of emergency, with the Southern African Development Agency declaring a regional drought disaster in March 2016.

From a humanitarian perspective, immediate assistance is required beyond addressing food security and basic nutritional needs. El Niño-related extremes (due to the displacement of people or localised conditions such as flooding) heightens the incidence and spread of infectious diseases, and affects the provision and quality of water and sanitation services.

Social safety nets to support the most vulnerable requires significant capital to maintain and expand. Few African governments have been able to plug the El Niño-exacerbated gaps in their social budgets; hence the numerous calls from global relief agencies to step-up intervention efforts in the humanitarian crisis.

Measures to alleviate food insecurity either by building and storing buffer stocks, or by importing staple foods from elsewhere, require secure physical infrastructure for warehousing and distribution. Africa is notorious for its poorly maintained road networks, with many of the most vulnerable people living in rural areas that are particularly difficult to reach. In a number of countries, civil unrest (for example Central African Republic and in conflict-ridden Sudan, and the presence of Boko Haram in Nigeria) introduces additional safety considerations in storing and distributing emergency assistance. Cash-strapped African governments are likely to need to allocate greater percentages of the national budget until at least 2018, potentially detracting from other much-needed longer-term physical and human capital investment projects, such as infrastructure and education.



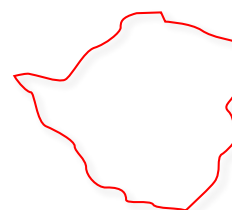
ETHIOPIA

10.2 million people need food assistance, 6.8 million require emergency medical assistance and water



SUDAN

More than 4 million people at crisis levels of food insecurity expected March - September 2016



ZIMBABWE

30% of the population (2.82 million people) affected by food insecurity



SWAZILAND

Nearly a quarter of the population currently needs food assistance

The high-level impact and ongoing effects of El Niño

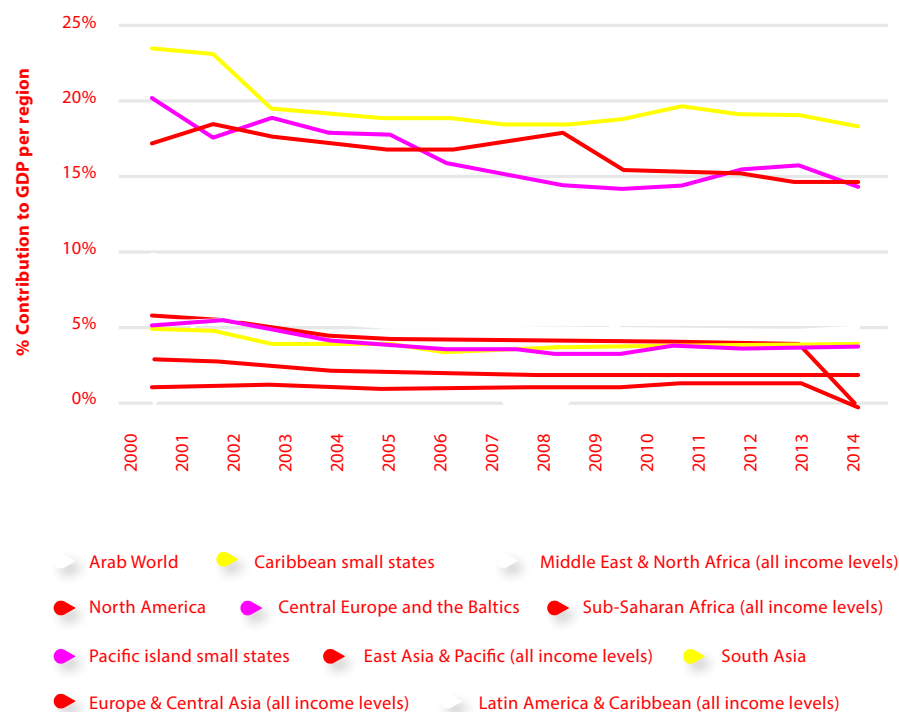
The humanitarian impact and the economic ripple effects of El Niño are both numerous and interlinked. In an increasingly globalised and integrated world, disentangling and insulating individual effects on a country, population segment, or sector-basis is, therefore, difficult. However, a number of higher-level conclusions and forecasts can be made regarding agriculture, food security and food prices, the (disproportionate) impact on the poor, and the second-order effects on inflation, government spending and government policy, the labour market and investment opportunities.

Agricultural production and employment

Growing seasons, harvests and crops will remain affected well into 2017, with shortages in key agricultural commodities likely to persist even longer. Corresponding contractions in the agricultural sector, and its ability to contribute to employment and GDP growth on a country level, will have a number of knock-on effects. This especially in countries where agriculture is a key component of GDP, as is the case in Sub-Saharan African countries.

As can be seen from the chart, the more industrialised regions, such as North America and Europe have limited reliance on agriculture as a component of GDP, or as a source of economic growth. Southern and Eastern Asian nations, after periods of rapid industrialisation and technological leapfrogging, have seen steady declines in the percentage contribution of agriculture to GDP, while the Arab world, Middle East and North Africa are increasingly driven by oil- and oil-related activities. Sub-Saharan Africa, however, still hovers near the 15% mark, levels matched only by small island states in the Pacific and Caribbean. This speaks to some extent to the lack of diversification and industrialisation still prevalent on much of the African continent.

Contribution of agriculture to GDP on a regional basis



Source: World Bank, World Development Indicators

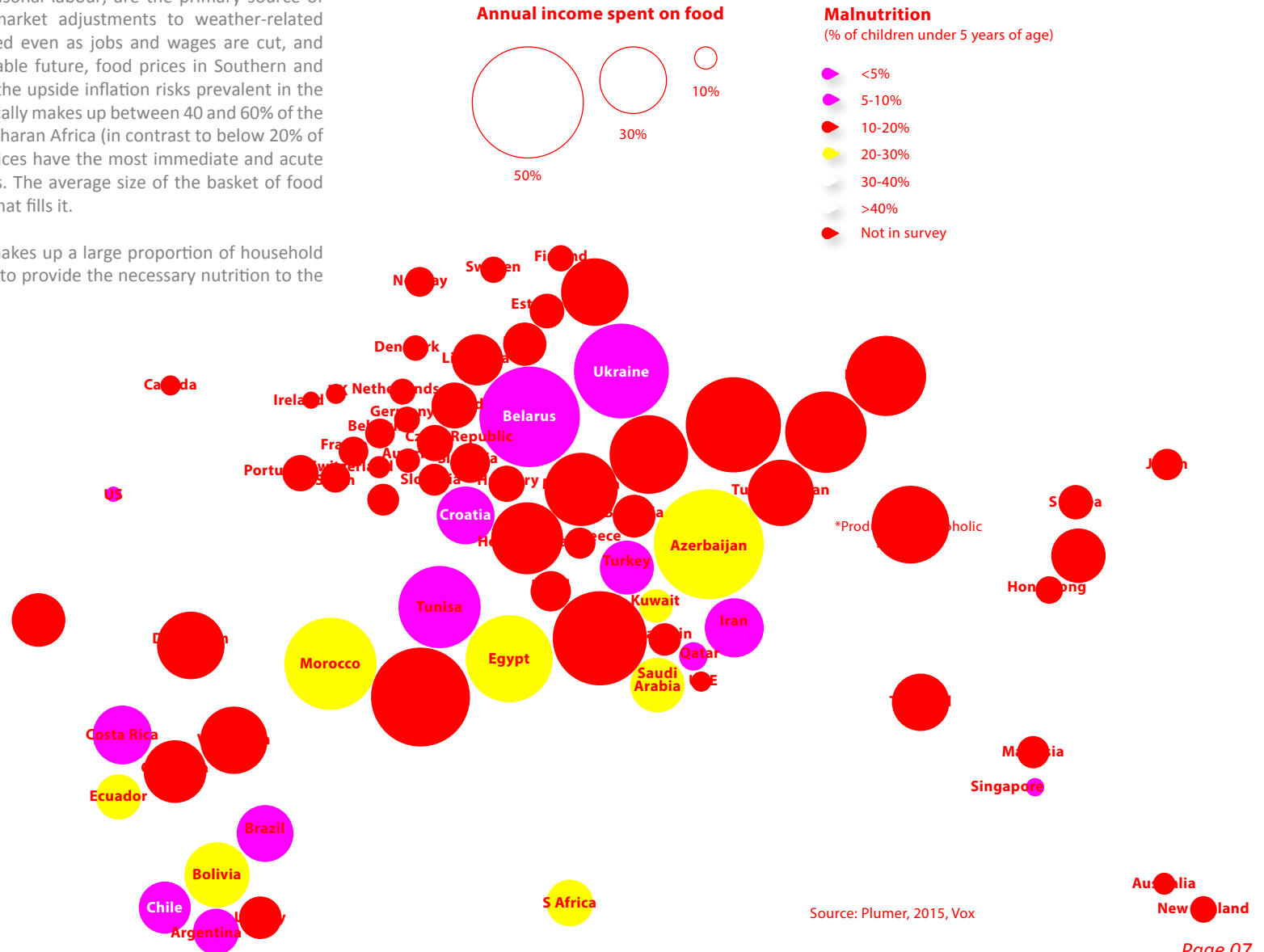
Note: Where data was not available, it has been interpolated.

Food prices and food security

Farming and related activities, including seasonal labour, are the primary source of income in many poor communities. As market adjustments to weather-related headwinds play out, food prices are affected even as jobs and wages are cut, and disposable income shrinks. For the foreseeable future, food prices in Southern and Eastern Africa will remain raised, adding to the upside inflation risks prevalent in the majority of African countries. Since food typically makes up between 40 and 60% of the consumption basket of the poorest in Sub-Saharan Africa (in contrast to below 20% of the highest income segment), rising food prices have the most immediate and acute impact on the most vulnerable communities. The average size of the basket of food shrinks significantly, as does the quality of what fills it.

The map below shows that although food makes up a large proportion of household budgets on the continent, it is not sufficient to provide the necessary nutrition to the poor.

Food spend and the effect on malnutrition



Balance of payments and government spending

When domestic production slows due to adverse weather, food exports (if any) are curtailed, while food imports rise. The size of the impact on a country's balance of payments depends on the extent to which it previously relied on food imports, versus attaining additional revenue from the export of agricultural commodities. In South Africa, it is estimated that the loss of revenue from maize exports could have a direct impact of nearly R4.7 billion (USD 319 million) on the export side only. The bill from importing between 3 and 5 million metric tonnes of maize will exert further pressure on the balance of trade, especially given the volatile and vulnerable local currency.

In Southern Africa, South Africa and Zambia were previously net grain exporters, mainly to other African countries. As the impacts of El Niño linger, their ability to bridge trade deficits will be severely squeezed with both countries needing to import essential staples, such as maize, themselves. Sourcing staples from further afield, and potentially in dollar terms, adds significantly to the trade bill.

The current global commodity slump, despite some moderation, and the relative strength of the dollar, sees the majority of African governments' budgets already under pressure. The need to expand social safety nets will only further stress governments' fiscal positions.

Other socioeconomic considerations

The 'weather bandit' holds individual households hostage: While the immediate needs of a populace affect government spending decisions, behavioural changes occur at household level as well. These changes are at times more subtle than simply reducing the size of the food basket.

Lower nutritional value foods used to bulk up food basket

Alterations to the components of the basket are usually inevitable. When faced with higher prices for some staples, consumers swap them out for others. Quite often, these belly-filling items have less nutritional value: white bread, for example, is typically cheaper (and often subsidised) than maize, and less nutritious and processed meat such as polony (a highly

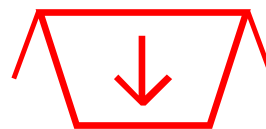
processed meat sausage) may be cheaper than beef, pork or poultry. Other examples are women in Ethiopia picking seed pods to eat, while children in Malawi are given porridge made from maize husks. This substitution effect is likely to be reversed quickly, as the impact of El Niño recedes, but nonetheless adds to concerns about the nutritional status of the present generation of affected children.

Rising food prices also means that fewer goods can be purchased. The size of the basket shrinks. Some households respond by simply reducing the number of meals each household member has per day. Cultural norms in some countries dictate that women are at the back of the queue when it comes to the size and regularity of meals – having fewer meals can take a very heavy toll on pregnant and nursing women, adding to potential intergenerational impacts (increased incidence of infant mortality, malnourishment and delayed childhood development).

Non-food spending cut back to maintain size of food basket

Households may also be forced to undertake precarious budget-balancing acts. Education and ongoing health needs are often neglected, as are longer-term financial safety measures. With many of the poorest unable to save in the first instance, dissaving is a lesser concern in comparison to increased indebtedness. For example, surveys suggest that already nearly 70% of South African adults do not save at all. The aggregate savings rate in South Africa, already low, will, therefore, decline at least temporarily as a response to deferring savings decisions or dissaving behaviour, since 36% of respondents report that the reason for not saving is that it is simply not affordable.

Households with access to the formal financial sector are often already indebted. These debts require regular repayments, which are not kept up when food expenses soar. For the remainder of the population, limited access to the formal financial sector means that debt is at times incurred through more risky, informal mechanisms including illegal garnishing of wages and the use of loan sharks, adding to household vulnerability. Seasonal workers report that even more risky options – including informal/illegal agreements that put up physical assets as collateral or to allow lenders access to social grants – are often their only recourse. The legacy of this debt will linger long after El Niño is forgotten.



In households with higher disposable income, there is some decision-making room in allocating the budget between different necessary items (beyond subsistence) and discretionary items. In such cases the portion of the pie is allocated to non-subsistence areas (such as household equipment and clothing) shrinks.

In wealthy households, spending on leisure and recreation tends to decline when belts are tightened. At the lower end of the spectrum, however, it is more likely to mean that cash is reallocated from other fairly essential expenditure items. This is likely to mean sacrifices or deferments in household services, health and education spending.

The resulting inter-budget-segment substitution can have longer run impacts on households' human capital. If one views 'savings' as a household budget item, it too suffers.

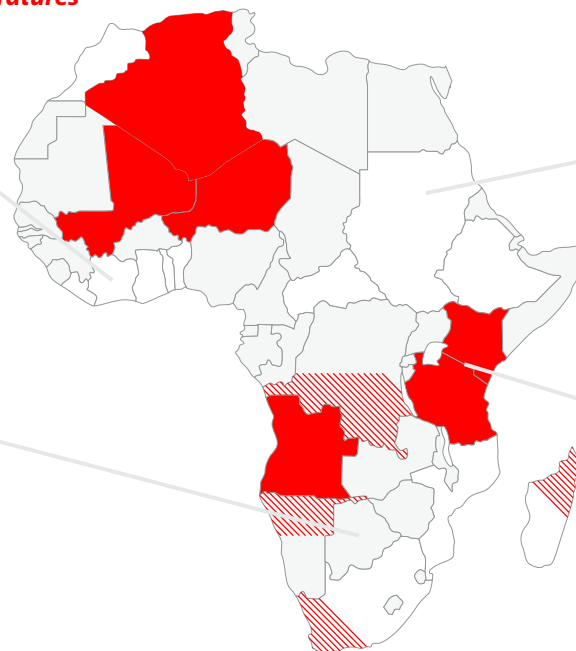
While allocation decisions are likely to revert to mean, the recovery takes time and the longer run impact on human capital and productivity is difficult to foretell.

Impact on the production of key agricultural commodities

The map below illustrates some of the anticipated impacts in Africa at a country level. While drought conditions have affected Southern and Eastern Africa, a number of areas have experienced above-average rainfall. High rainfall may favour the production of certain crops, but an erratic pattern complicates planting and harvesting seasons, and flooding introduces a different set of humanitarian challenges.

High-level impact per region – precipitation and temperatures

Low precipitation High precipitation



West Africa: Least affected. Some dryness in Ghana expected to impact planting of second seasons crops. DRC – average and above average rainfall, but late-onset heavy precipitation caused localised crop losses.

East Africa (Sudan, Ethiopia and Uganda): Drier than average, drought in both Ethiopian growing seasons and limited prospects of recovery in time for next growing season.

Southern Africa: Drought conditions, poor harvests and cereal deficits, poor prospects for recovery.

Horn of Africa: Higher than average precipitation, flood risks for Kenya and Somalia. Displacement of people and spread of disease. Favourable pasture and recovery prospects.

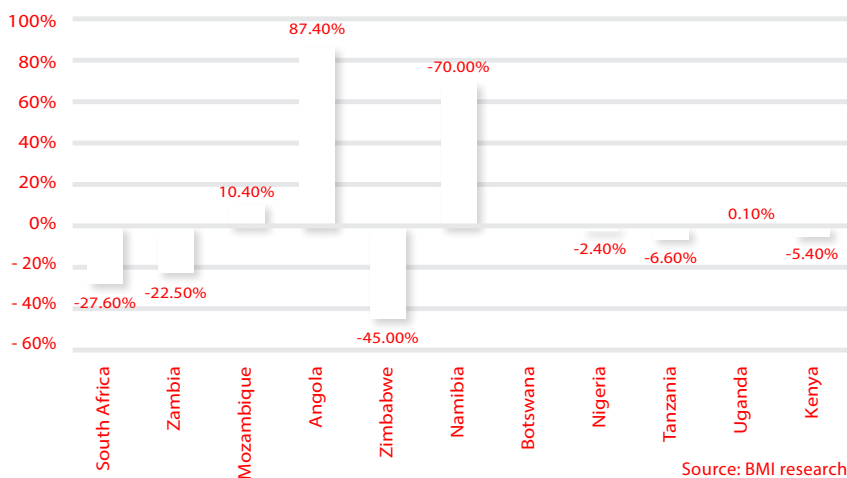
Source: United Nations Environment Programme (UNEP)



Maize

Despite country-level variations in the production of maize (with Namibia and Angola experiencing above-average production levels), the deficits in the main African exporting countries (South Africa and Zambia) have resulted in a substantial shortfall.

Changes in production levels of maize, production year ending 2015



Year-on-year South African maize production fell by 28%, while Zambia and Zimbabwe fell by 23% and 45% respectively. South Africa and Zambia are normally major exporters of maize in Africa, but this year both countries will need to import it. Already prone to food insecurity, El Niño has left Zimbabwe needing USD 1.5 billion in food aid. Nigeria, Tanzania and Kenya have also shown declines in maize production.

The aggregate data potentially hides a more nuanced picture: The production of white maize has declined more sharply than yellow maize. In a number of countries, such as South Africa, cultural preferences and norms dictate that white maize is seen as food for human consumption, while yellow maize is suitable for livestock. Shortages in white maize are therefore more acutely felt. Moreover, supplemental sources of white maize are limited.

The new surplus producers in Africa (Uganda, Tanzania) are likely to export their surplus to other countries in the East African Community, still leaving Southern Africa significantly short of Maize. Central America, usually an alternative producer of

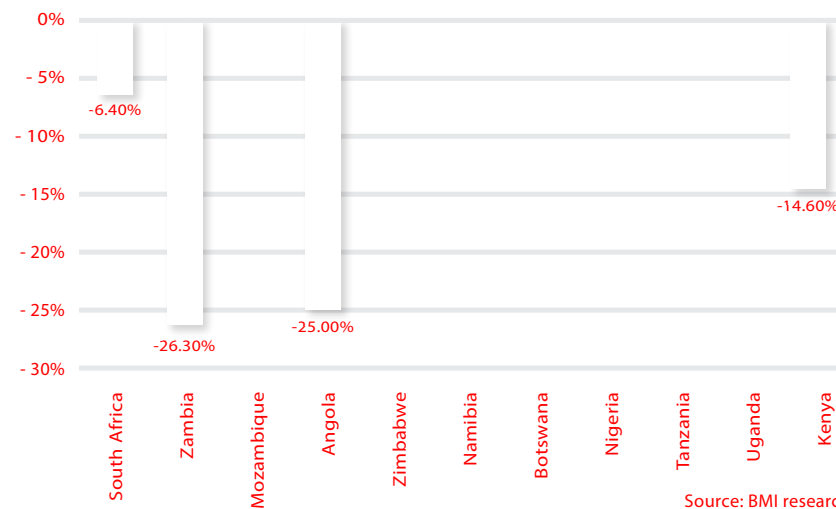
suitable stocks, has been hit by successive droughts, both in the current El Niño episode and in the run-up to it. Prices for both white and yellow maize are already elevated, and supply is tight. Any available dollar-denominated imports are likely to come with a hefty price tag, with currency weakness and volatility an added consideration.



Wheat

Wheat is the second most important food crop in Southern Africa after maize, which is the main staple for the majority of households. Kenya, the largest and only significant producer of wheat in East Africa, suffered a 15% fall in production in 2015.

Changes in production levels of wheat, production year ending 2015



Rice

Rice is another staple, albeit mainly in West African countries. Local production is supplemented with imports from Southern Africa and Asia. However, the effects of El Niño have hampered planting operations in a number of Southern African countries. El Niño also delays the onset of monsoons in East Asia, thereby reducing yields in India and Indonesia. Favourable conditions elsewhere, however, mean that shortages are still more easily supplemented with imports (albeit with the notable caveat of adding to the import-bill and potentially fuelling inflation).



Beef and veal

With feed and grazing for livestock severely reduced in drought-stricken countries, the impact of El Niño on the production of beef and veal has had a more surprising dynamic, with larger declines expected after the initial peak of the drought conditions. Many farmers in Southern Africa were forced to reduce herd sizes, at times before animals would normally be considered ready-for-market. An initial uptick in availability of meat belies the fact that current herd sizes are well below average. Cash-strapped farmers are unlikely to be able to purchase new livestock in the medium term, and production is likely to remain depressed.



Cocoa

Global cocoa production is concentrated in West Africa, which accounts for in excess of 70% of global output with Cote d'Ivoire and Ghana being the largest producers; Cote d'Ivoire accounts for 41% of global production. The dry weather as a result of El Niño, coupled with the severe Harmattan wind, has negatively affected the 2015/2016 harvests, resulting in a weaker harvest outlook for all of West Africa. Prices dropped significantly at the beginning of 2016, from the multi-year highs achieved in 2015, but are rebounding on the estimated production shortfalls due to the weather. The short-term after-effects of El Niño could result in growers struggling to establish new crops of high-yielding, disease resistant trees in depleted ground.

Although the tail-end of the harvest season in West Africa for the smaller, mid-year crop, has been impacted by the after-effects of El Niño, rains have started hitting the area, giving hope that the drought conditions will not impact the main crop, which will be harvested in the fall. If the yields are good, it could help compensate for shortfalls from the past crop.



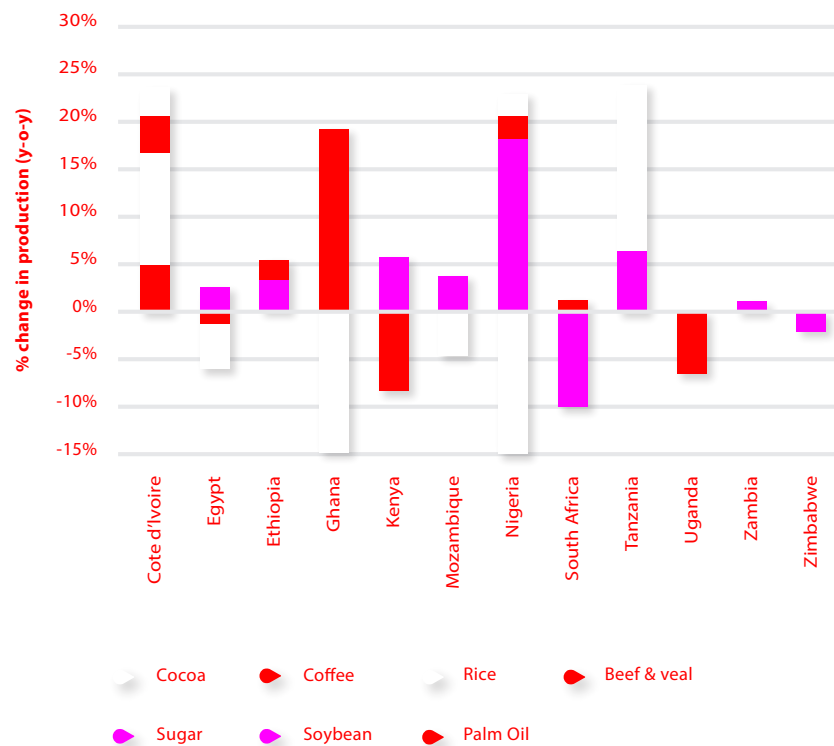
Coffee

African coffee producers (Ethiopia, Ivory Coast, Uganda, Kenya, Rwanda and Tanzania) account for only 12% of global production, yet African beans are highly sought after, and the crop provides an essential revenue-diversification mechanism for these countries. The ongoing drought in the world's main producers in South America has seen a decline in production and in the quality of beans from that region.

Over the short-to-medium term, depressed supply and ever-increasing global demand are likely to fuel price increases. East African producers, however, are unlikely to benefit, as crops are still recovering from El Niño-related disruptions such as heavy rains in Kenya and Uganda that damaged 2015's crops, with localised flooding heightening the incidence of fungal diseases such as Coffee Berry Disease.

The graph below presents an overview of the change in production numbers (year-on-year) for selected commodities, including coffee, rice and sugar. It's notable that Ghanaian coffee production benefited from the somewhat wetter 2015 season. Countries such as Cote D'Ivoire in West Africa benefited from seeing the only limited fall-out from El Niño. As noted, livestock production in South Africa ticked up on the slaughter of animals.

Change in key commodity production by country, production year ending 2015



Source: BMI research

La Niña and its potential influence on commodity production

The advent of the La Niña, while it will have limited direct impact on African agricultural production, potentially adds to price distortions in some commodities. The hovering presence of a La Niña over Central America (including Brazil and Argentina), Australasia (including Australia, Indonesia and Malaysia) and some US states (including the Midwest) means that supplies of corn, soybeans, sugar, oil-seeds, cotton and coffee are likely to tighten.

On a regional and sector basis, production of oil-seeds in the US Midwest and India; palm-oil in Indonesia and Malaysia; and sugar, soybeans and coffee in Central America (Brazil and Argentina) will be depressed. The resultant price adjustments feed into the ripple effects experienced by the broader market, including in food prices and food insecurity. Simultaneously, it presents opportunities for African producers to position themselves to grow their future market share and take advantage of higher current prices (for instance in coffee, sugar, oilseeds).

The effect of El Niño on key Southern African countries

The following section has a strong South Africa focus (the country considered best prepared, and where data is most readily available), which is used to illustrate some of the ripple-effects. Similar analyses can be applied on a regional or country basis.

The chart below shows the World Food Programme’s projected timeline for how El Niño will continue to impact food insecurity, food prices and humanitarian needs well into 2017.

On 16 March 2016, the Southern African Development Community (SADC) declared a regional drought disaster with Zimbabwe, Lesotho and Swaziland in the grip of the adversity.

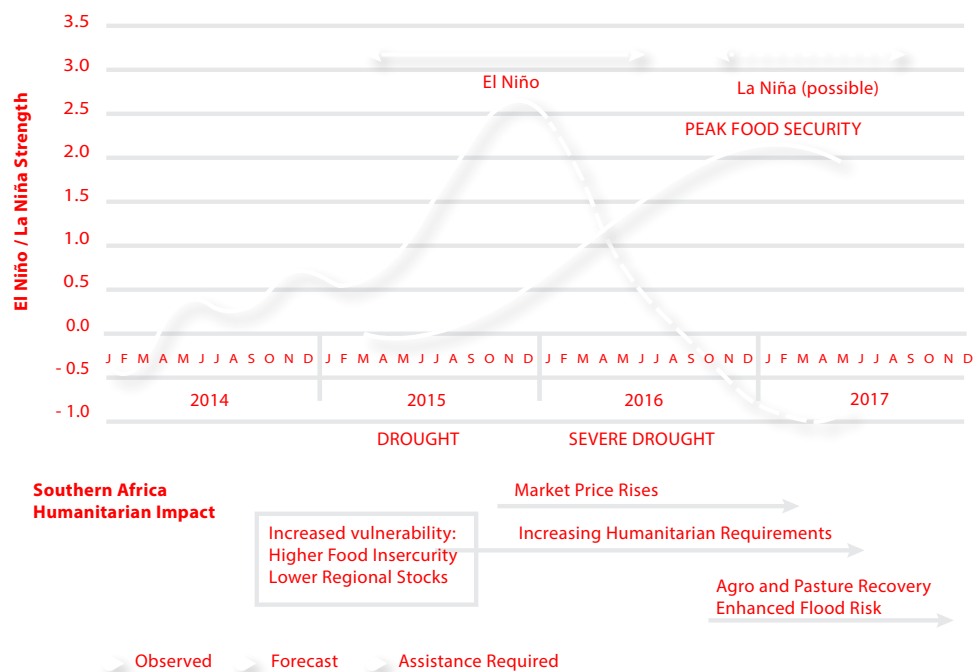
Zimbabwe

Zimbabwe, having earlier declared a state of emergency, had for an extended period been appealing to global agencies and receiving food aid. Agriculture on a commercial scale in Zimbabwe is severely limited, and the impact of declining production on government revenue and overall job creation is therefore muted. The fragmented nature of agriculture and the prevalence of subsistence farming have left the country reliant on imports from neighbours – imports that have largely dried up. Rising food prices are fuelling already rampant inflation, and further exacerbating food insecurity. An uneasy political situation, the reluctance or inability of leaders to implement reforms, and an already challenging economic environment has meant that the government is struggling to plug any gaps.

Lesotho

In Lesotho, more than 25% of the population is estimated to remain food insecure until June 2016, with further deterioration of the situation expected into the beginning of 2017. This small nation is dependent on food imports from neighbouring South Africa, with limited local production. The current depressed commodity outlook and close ties to the South African mining industry as a source of remittances, has already seen household budgets under strain. Reduced availability of imports, rising food prices, reduced remittances, and inadequate safety nets have seen poor households experience a nearly 44% decline in their food and cash income compared to normal levels.

Timeline of events and impacts of El Niño





Swaziland

Swaziland is facing widespread water scarcity, and local production of the staple food, maize, is expected to decline by nearly 64% over the extended period. Some 300 000 people, again nearly a quarter of the population, require food assistance. Added to the challenges the Swazi government faces, water scarcity is affecting sanitation and health facilities. Water authorities in Namibia and Botswana, as in Swaziland and elsewhere, have imposed water restrictions. As well as the direct impact of rising grain prices, both Namibia and Botswana have felt the effects of El Niño related feed shortages in livestock production.



Malawi

Malawi has been hit by a double-whammy, with the combined effect of drought and flooding resulting in the most severe food crisis in a decade. The country declared a State of National Disaster on the 12th of April 2016, with the President citing a projected deficit of over 1 million metric tonnes in the staple food (maize). Maize prices have already increased by more than 75% from last year, as production continues to suffer.



Zambia

Zambia, previously a net exporter, has banned grain exports. The country is using fast-dwindling currency reserves to import maize, further squeezing already strained government resources. Due to the low water levels in the Kariba dam (between Zimbabwe and Zambia), authorities in both these countries have been forced to limit hydro-electric generation, causing wide spread power outages, and exacerbating the effects of the slowdown in both economies.



South Africa

Apart from South Africa, the region has proven ill-prepared for both the immediate and ripple impacts of El Niño-related weather disruptions. While South Africa had better response plans in place, the country hasn't escaped the effects of El Niño.

Impact on inflation

The largest producer of maize on the continent, South Africa has been forced to import both the yellow and white varieties (1.73 million and 72 000 tonnes respectively as at end April 2016). A shortfall of 3.8 million tonnes is anticipated for this year. Maize prices have been peaking with the staple fetching nearly 20% more per tonne than a year ago, at R4000 – R5000 per tonne (USD 270 – USD 340). The knock on impact on overall food inflation, and headline inflation has been somewhat delayed for at least two reasons: In the first place, processed items (such as samp and maize meal) typically have a lag of 6 to 9 months before reflecting input-price hikes, and the lag for dairy, eggs and meat are slightly longer.

In the second place, retailers have been absorbing the brunt of the extra costs over the course of the past year, effectively subsidising cash-strapped consumers. It is clear, however, that retailers, particularly in the current domestic economic environment, can only withstand so much margin-squeeze. Rising costs at producer level are increasingly likely to be passed through to the consumer.

Changing food prices

The chart below shows the progression of food price inflation on a monthly basis since 2012. Food prices are notably volatile; nevertheless, prices have escalated sharply since December 2015. This coincides with the estimated timeline for the worst of the ongoing and after-effects of the El Niño-related drought.

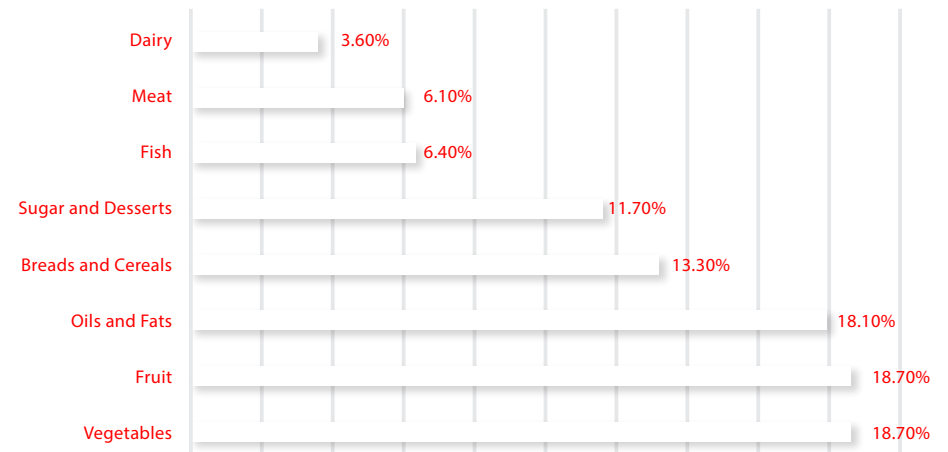
South African food price inflation: food and non-alcoholic beverages



Source: StatsSA

Looking at the chart below, the relatively benign increase in meat prices is largely attributable to the forced thinning out of herds, as feed became in ever-shorter supply. As at January 2016, farmers had been forced to cull 225 340 livestock. Economists expect that food price inflation will peak at about 13% later this year.

Food price hikes, as at March 2016



Source: StatsSA

Agricultural Production and Employment

Declines in agricultural production saw the gross value of the agricultural sector contract by 12.5% in the third quarter of 2015, with further declines anticipated as the episode subsides. While agriculture contributes a relatively small share to overall GDP in South Africa (roughly 2.5%), it is one of the key sectors providing employment, particularly to rural households. Official measures of unemployment indicate that sector employed about 700 000 people in South Africa as at September 2015. This labour-intensive industry, therefore, accounted for roughly 4.6% of total employment. Statistics SA suggests that the agricultural sector shed 37 000 jobs in the last quarter of 2015, due to the ongoing drought, with losses set to continue as the reduced summer crops are harvested. The country, already burdened by a record-high unemployment rate of 26.4% (March 2016), can ill afford further cutbacks.

Farmers in rural areas are particularly concerned about the potentially underestimated impact on seasonal employment, and the effects on businesses in agricultural communities. Seasonal work is the main source of income in many rural communities, while a number of small businesses, particularly in the service industry, are built on the custom of farmworkers. Even larger traders, who sell chemicals, fertiliser and seeds, are faced with declining demand or are feeling their balance sheets strained by delayed payments by cash-strapped farmers.

Farmers face increasing levels of debt, often having borrowed against the expectation of future yields. The Land Bank estimates that Total Farm Debt increased by nearly 20% between December 2014 and June 2015, with further delays in payment likely to exacerbate the current trend. Anecdotally, farmers confirm having nearly decimated their savings in efforts to alleviate the current dry spell. They also indicate that lack of access to insurance and further formal sector funding mechanisms present a serious problem.

Rising cost of the drought – debt and government spending

Insurance companies that would traditionally have provided multi-peril crop insurance (MPCI) have been unwilling to accept new applications for the 2015/2016 planting season. From their perspective, new applicants present a poor risk profile, given the poor previous season and gloomy prospects, and are only electing to participate in drought-affected times, making the business model for long-run insurance provision unsustainable.

The government will also be required to budget for the cost of providing interim assistance and for the cost of getting farms back on track. The ministry for Agriculture, Forestry and Fisheries has thus far allocated R1 billion (USD 68 million) to agricultural drought relief and indicates that it is still awaiting further injections from national coffers, but that R24.6 million (USD 1.67 million) had already been spent on assisting farmers in drought-stricken areas (at end April 2016). Within the context of the timeline – with El Niño impacts still to play out well into 2017 – direct assistance, the mitigation of the effects of rising food prices, alleviating job insecurity, and addressing future funding needs will continue to drag on government finances.

Country responses

Country responses to El Niño have differed, with some limiting water usage, banning exports of maize, applying for emergency assistance, as highlighted in the preceding sections. Some additional measures implemented by Eastern and Southern African governments are highlighted below, with a view to illustrating the need for coordinated efforts, and the opportunities present for public-private partnerships to address the current crisis and safeguard against the weather bandit in future.

In East Africa, the Ethiopian government has implemented water restrictions and undertaken public-private partnerships to drill new boreholes and rehabilitate dysfunctional water schemes. School feeding schemes are being rolled out in partnership with international aid agencies, in order to combat rising drop-out rates and absenteeism. The state has committed to increasing capacity at various warehouses, and to provide additional trucks to ease transportation bottlenecks and improve the distribution of aid.

In Southern Africa, the SADC declared a regional drought disaster on the 16th of March 2016, with plans to establish a regional coordination and logistics centre to fast-track the regional response. At a country-level, some governments have established national response plans (e.g. Lesotho's Government Response Plan, and Zimbabwe's National Drought Relief Plan), but due to economic and political obstacles, and the extent of the crisis, plans have lacked in execution or simply proven insufficient.

'Team South Africa'

The South African government has come up with an integrated response. 'Team South Africa' is made up of the Department of Water and Sanitation, the Department of Agriculture, Forestry and Fisheries, and the Department of Rural Development and Land Reform.

Team South Africa has taken a regional approach, starting with the hardest-hit, agriculturally-significant regions, which include KwaZulu-Natal, the North West and Free State. R524 million (USD 35.6 million) has been allocated by the government to undertake drought relief projects such as the drilling and rehabilitation of boreholes, the purchase of 18 thousand litre water tankers for residential and agricultural distribution of water, water conservation and demand management strategies, as well as ensuring access to food for affected rural and agricultural communities.

In addition, funding vehicles have been opened up to support commercial and subsistence farmers to weather the losses made from crop failure and loss of livestock (DFIs). This has been facilitated through a collection of development finance institutions including the Industrial Development Corporation, the Land Bank and others.

The Industrial Development Bank has been an active partner in a number of projects in South Africa, with a business unit dedicated to exploring opportunities in the agro-processing and agriculture sector. Such focused efforts have paid off, with sales in agro-processing increasing by 8.4% in the third quarter of 2015, despite the overall 12% contraction in agriculture for the same period.

The provision of livestock feed, as well as the opening up of state-owned farms as alternative grazing areas, has assisted farmers. Daily residential water restriction measures have also been imposed in a number of municipalities across the country to try to build up reserves in reservoirs as well as support affected areas with water delivery.

The government is also planning to import up to 6 million tonnes of maize and is strategising on delivery methods since the Transnet ports' agricultural terminals have a total of only 4 million tonnes of annual capacity. An on-going programme has been initiated to monitor food prices as well as come up with climate change adaptation programmes for the maintenance of food security in the country.

Opportunities arise from the storm

With issues highlighted by El Niño such as food and water security, poor infrastructure and lack of diversification in economies fresh in everyone's minds, opportunities exist to highlight the importance of these issues and attempt to address them. Governments in collaboration with the DFIs and the private sector can start to prepare themselves for El Niño's return.

Opportunities for DFIs and public-private partnerships

It is quite clear that a multi-pronged strategy to respond to the El Niño-exacerbated humanitarian challenges and economic difficulties cannot be funded by African governments alone. Governments have been seeking and receiving financial and technical assistance to overcome these obstacles, with many of the most vulnerable mainly reliant on international agencies. This presents a number of opportunities for developmental finance institutions to plug the investment gap where infrastructure projects are needed. Projects may include increasing dam and lake capacities, or providing alternatives to hydroelectric power (e.g. in Zambia and Zimbabwe).

Infrastructure needs also extend to the maintenance and extension of storage and distribution networks, as seen in Ethiopia. Public-private partnerships will play a more important role in strengthening the physical infrastructure scaffolding, representing an opportunity for the private sector to become involved.

Commercial opportunities

Opportunities, from a technical support perspective, also exist for specialist companies to approach governments and provide assistance in improving the viability of commercial farming. For instance, where farming is highly fragmented, consolidation adds efficiencies of scale and scope, increasing productivity and diversifying revenue streams. More sophisticated methods of farming and coordinated efforts to diversify would result in an agricultural sector better able to withstand prolonged adverse weather conditions. These diversification efforts are often presented in previously unexplored areas. Aquaculture is one such example: R 338 million (USD 23 million) in private sector investment has been committed to supplementing the R106 million (USD 7 million) in government investments in nine aquaculture farms, which produce cob, trout, abalone and oysters.

Innovative solutions in the micro-financing sphere, given the limited access to formal funding mechanisms for many rural farmers and poor households, are likely to pay dividends, especially over the longer run.

While many African governments have historically had an aversion to genetically modified seeds (which are drought and pest resistant), the current food security crisis may well see them soften their stance. The South African government has already relaxed some of its tough rules on genetically modified crops, as it seeks to encourage the US to produce for the South African market. Seed-producing companies, which are able to provide cheaper alternatives to the patent-controlled seeds that are currently marketed, would find themselves leapfrogging the incumbent competitors.

Information

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Africa's investors have become markedly more sophisticated in recent years. They understand that the continent is one of the world's fastest-growing and most rapidly-changing regions, and they need to look past the headline GDP numbers to understand what is really happening on the continent. More importantly, Africa's investors want to know the most effective ways to harness the continent's growth.

Bright Africa, an on-going research endeavour, seeks to answer some of these questions by providing insight into the drivers, enablers and managers of investment on the continent. This includes in-depth looks into:

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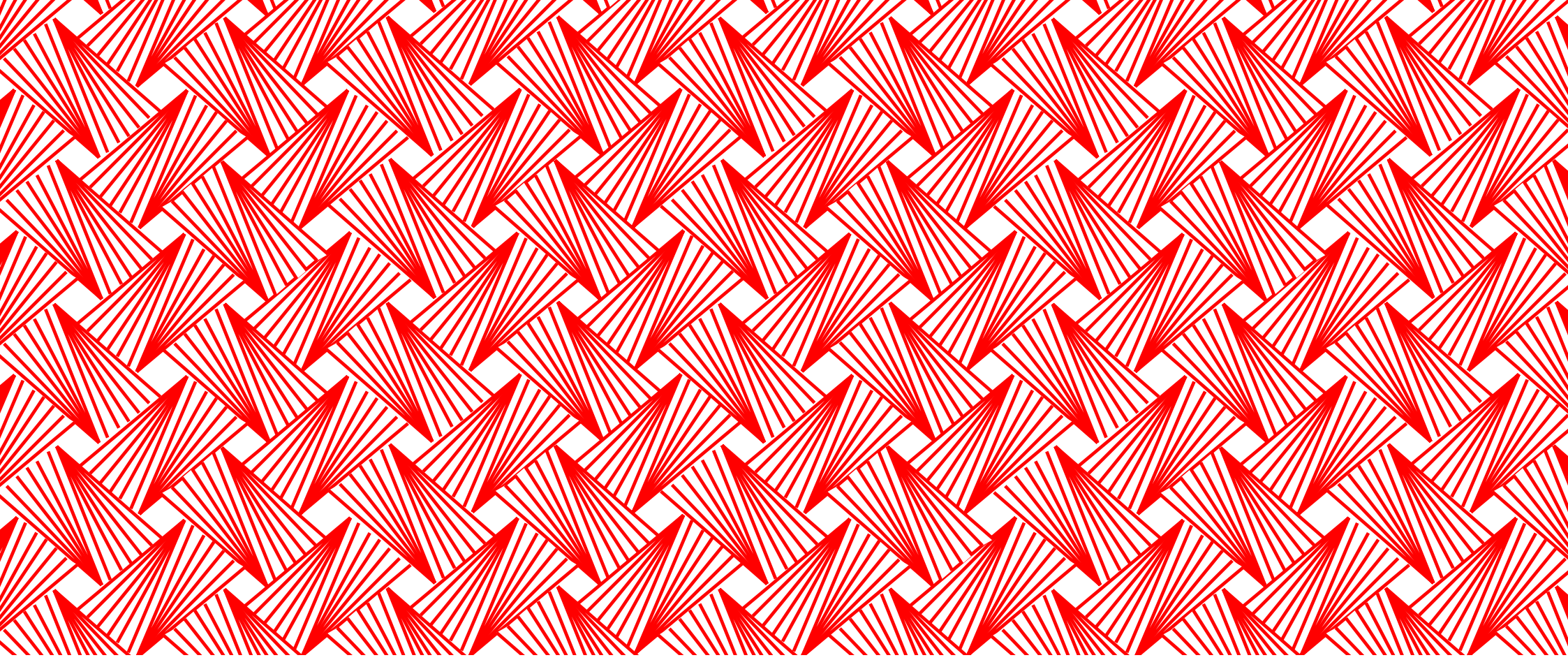
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