POLICY BRIEF

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‘Godzilla’ El Niño on Its Way? Implications for Southern Africa

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Photo credit: 2010CIAT/NeilPalmer

Rainfall and temperature forecasts

Many of the top weather forecasting agencies are predicting an extremely strong El Nino event in the latter part of 2026 and continuing into 2027 – a Godzilla el Nino, with severe impacts on rainfall and temperature. Across Southern Africa, temperatures are predicted to be higher than normal in the early growing season (October through to January). Rainfall predications are more complicated, with Northern Zambia and Northern Malawi expected to receive above-average rainfall, while southern parts of those countries could be expected to have below-average rainfall. For Zimbabwe, most of the country is expected to be below-average in rainfall. Flash flooding is also likely in all three countries.

Zimbabwe’s Meteorological Services Department has issued an urgent preliminary warning that an El Niño event is likely to emerge during the 2026/27 rainy season. Predictions by Zambia’s Disaster Monitoring and Mitigation Unit foresee a recurrence of the 2023-24 drought. The Ministry of Natural Resources in Malawi issued a El Niño Preparedness Brief pointing to a higher risk of below-normal rainfall in southern districts during the planting season, with Northern and parts of central Malawi more likely to see normal to above normal rainfall in the planting season. Zambia and Malawi have opportunities for good crop production in their northern regions to partly offset the challenges in the rest of the country.

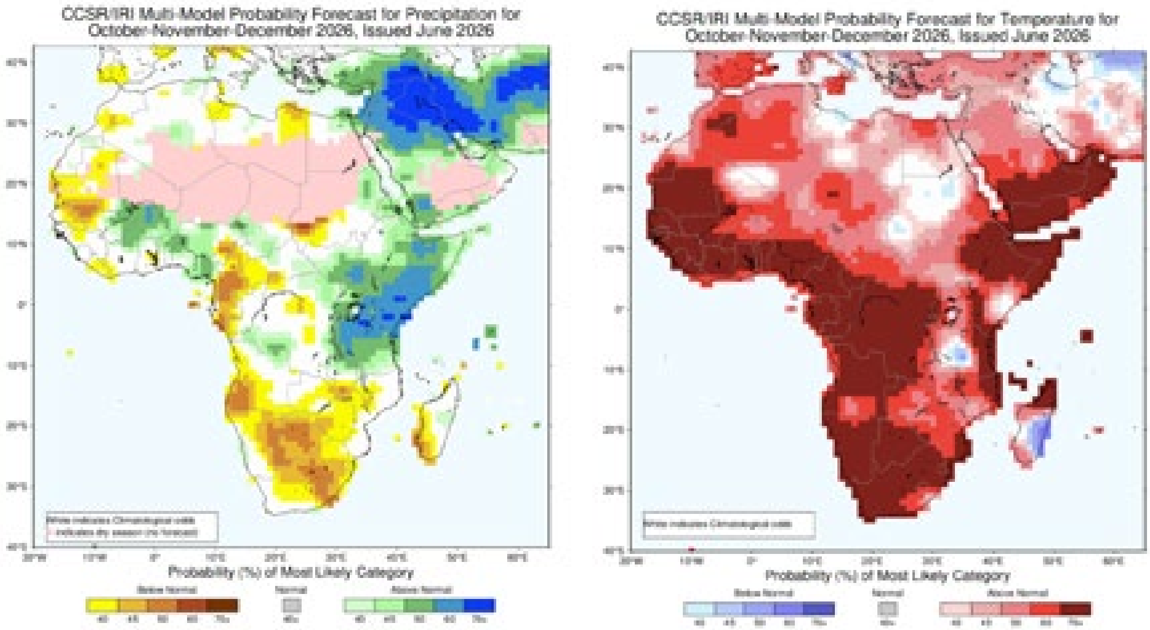

Figure: CCSR/IRI seasonal forecast issued in June for the period Oct-Nov-Dec 2026.

El Niño ’s can be devastating

Past El Nino’s point to the pain that is approaching, with this next El Nino expected to be as bad or worse than previous El Nino’s.

For example, during the 2015/2016 season, the El Niño led to a decline in food crop production by up to 66% in various Southern African countries leading to widespread food insecurity.[1] Dry spells of more than 21 days in Malawi and Zambia during the 2023-24 El Nino led to maize yield losses of 70-90%.[2] A study in Zimbabwe demonstrated a wide range of impacts of the El Nino-induced drought: significant decline in crop yields, food insecurity, economic instability, increased reliance on external assistance, negative impact on nutrition and health and psychological and emotional distress.[3] In Zambia, ca. 40% of the country experienced drought in the 2023-24 El Nino with widespread losses in crop production.[4] Over 9 million people were affected by the dry spell in 84 out of the 117 Zambian districts. By June of 2024, Zambia recorded a nationwide spike in severe acute malnutrition cases compared to the same period in 2022 and 2023.[5] The 2016 El Niño event led to more than 643,000 livestock deaths in southern Africa.[6] At the other extreme, El Nino linked floods in Kenya were devastating for agriculture, often interspersed with droughts.[7] El Nino events also impact the broader agricultural economy. For example, maize prices are significantly impacted by El Nino events, as shown for South Africa; with price impacts and volatility continuing after the El Nino because of depletion of stocks during the El Nino.[8]

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[1] Ainembabazi, J.H., 2018. The 2015-16 El Niño-induced drought crisis in Southern Africa: What do we learn from historical data?

[2] Chiduwa, M.S., Omondi, J.O., Masikati, P., Ngoma, H. and Nyagumbo, I., 2025. Empowering farmers with digital El Niño advisories: Insights from Malawi and Zambia. CIMMYT. https://hdl.handle.net/10883/35637

[3] Deu, T., 2025. *The impact of 2023–2024 el nino disaster on food security in Goromonzi District*. Dissertation, Bindura University of Science Education.

[4] Ghosh, S., Kour, S., Taron, A., Kaywala, K. and Rajakaruna, P., 2025. Assessing El Niño-induced drought in Zambia and its effects using earth observation data. Natural Hazards, 121(4), pp.4505-4530.

[5] https://www.unocha.org/publications/report/mozambique/humanitarian-impacts-el-nino-southern-africa-september-2024

[6] FAO. 2016. El Niño: Preparedness and Response. https://www.fao.org/fileadmin/user_upload/emergencies/docs/FAOElNinoSitRep_APRIL2016b.pdf

[7] AWeesie, R.V., Rohse, M., Van Loon, A.F., Koehler, J., Barendrecht, M.H. and Mwangi, M., 2025. Floods after drought: storytelling with agro-pastoralists in a Kenyan dryland. *Frontiers in Water,* 7, p.1524554.

[8] Pretorius, A. and Geyser, M., 2025. The Impact of El Niño-Southern Oscillation Events on Price Volatility: The Case of South African Maize. Agriculture, 15(22), p.2361.

Building resilience through pre-season preparedness

1. **Step up early El Nino messaging,** particularly through radio and television as these are the main sources of information for farmers on El Nino, but also through public extension agents and agrodealers.[9] Such messaging should warn of the El Nino and provide possible solutions.

2. **Early warning and early action.** Strengthening early warning systems for flash floods. Short lead times mean farmers need very rapid, localized alerts. SMS and radio flood warnings can be tied to river-gauge or rainfall thresholds.

3. **Prepare contingency plans,** that could include plans for:

    - Unconditional cash transfers. While cash transfers help in times of disaster they also build longer term resilience. In Zambia, after three years of a cash transfer program, household spending was on average 67 percent larger than the value of the transfer received.[10] This positive impact works through increased non-farm activity and agricultural production.

    - Cash for work programs. A successful example in Ethiopia, saw widespread work on water catchment rehabilitation that in turn rendered communities more resilient to future droughts.

    - Strategic food reserves.[11]

4. **Improved targeting and tailoring of input subsidy programs** based on agro-ecological zones (e.g. Northern Malawi and Southern Malawi ideally should have different input programs). It is likely that inorganic fertilisers will produce good yields in Northern regions but not in Southern regions.

5. **To prepare for drought, build up stocks of drought tolerant seeds,** through interaction with the private sector (e.g. Semi-arid areas of Zimbabwe should have an input package based on small-grains and subhumid areas should have an input package based on shorter season maize varieties, all supported by soil moisture conservation techniques).

6. **Shift inputs subsidy programs to make them stress-tolerant**, that could include:

    - Promoting diversification (e.g. through providing subsidies or loans for drought-adapted legumes, cassava, goat production)

    - Making the subsidies conditional on the implementation of climate-resilient practices (e.g. conservation agriculture; no-till or reduced tillage; maintaining crop residues on the surface; applying organic amendments; mulching; water harvesting methods such as box ridges). In Zimbabwe the government has shown how input subsidies can be conditional. Its Pfumvudza initiative required that subsidy beneficiaries implement conservation agriculture.

Credit: 2016CIAT/NeilPalmer

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[9] Chiduwa, M.S., Omondi, J.O., Masikati, P., Ngoma, H. and Nyagumbo, I., 2025. Empowering farmers with digital El Niño advisories: Insights from Malawi and Zambia. CIMMYT. https://hdl.handle.net/10883/35637

[10] Handa, S., Natali, L., Seidenfeld, D., Tembo, G., Davis, B. and Zambia Cash Transfer Evaluation Study Team, 2018. Can unconditional cash transfers raise long-term living standards? Evidence from Zambia. *Journal of Development Economics,* 133, pp.42-65.

[11] Pretorius, A. and Geyser, M., 2025. The Impact of El Niño-Southern Oscillation Events on Price Volatility: The Case of South African Maize. *Agriculture,* 15(22), p.2361.

- Moving away from inorganic fertiliser subsidies when economic returns are unlikely to be achieved (e.g. shifting to Mbeya organo-mineral fertiliser in southern Malawi).

7. **Ensure timely availability and delivery of inputs** to catch early rains in the growing season. As rainfall is likely to be limited, it is essential to plant when there is sufficient moisture.

8. **Empower school feeding programs to procure climate-resilient products** that can be locally produced (eggs, small grains, cassava, cowpea). This would strengthen local markets, improve the resilience of school meal supply chains, and increase access to diverse, nutritious foods for children.

Building resilience through farming practices in the planting and growing season[12]

1. **Increased farm and field diversification.** Diversification increases resilience as it reduces the risk of a total collapse in the case of crop failure of a monoculture.

In the case of drought:

2. **Use of drought tolerant short season varieties.**

3. **Shifts to small grains,** cassava and other more drought adapted species.

4. **Use of practices that conserve moisture.** No-till or reduced tillage minimizes soil disturbance and preserves soil structure; maintaining crop residues on the surface and mulching reduces evaporation and protects against wind erosion; applying organic amendments like compost or manure improves soil structure, infiltration rates and soil water holding capacity; water harvesting methods capture available water where it is needed.

5. **If the yields in a drought do not justify the costs of inorganic fertiliser**, reduce the amounts used or replace inorganic fertiliser with organo-mineral blends or organic amendments.

6. **Optimise crop production on irrigation schemes** where water resources have not been depleted by the drought, for example in Zimbabwe.

7. **Build on-farm reserves for livestock feed.**

In the case of floods:

8. **Flood-resilient farming.** Farmers could change their field management for expected flood exposure instead of business as usual.[13] Fixed planting calendars, limited

[12] Mugiyo, H., Magadzire, T., Choruma, D.J., Chimonyo, V.G.P., Manzou, R., Jiri, O. and Mabhaudhi, T., 2023. El niño's effects on southern African agriculture in 2023/24 and anticipatory action strategies to reduce the impacts in Zimbabwe. Atmosphere, 14(11), p.1692.

[13] FAO, UNDP, & UNITAR. (2018). Massive Open Online Course National Adaptation Plans: Building Climate Resilience in Agriculture. Module 4: Identifying and prioritizing climate adaptation options. Food and Agriculture Organization of the United Nations & United Nations Development Programme. https://openknowledge.fao.org/items/ac-ca57b1-c299-42cd-a9a8-402edd2dd377

drainage, and a failure to adopt water-tolerant crops or adjust crop cycles directly increase losses, particularly for the most vulnerable, such as women farmers.

9. **Moving livestock and feed/grain** stores to higher ground or flood-proof storage ahead of anticipated heavy rainfall event.

10. **Staggered/successive planting dates to spread risk**, so that not all crops are at a vulnerable growth stage if flash flooding hits.

11. **Avoiding low-lying, flood-prone plots for high-value or long-season crops;** reserving these areas for flood-tolerant or rainy-season-adapted species (e.g. rice, some legumes)

Longer term planning for the inevitable future events, some even more extreme

This brief focuses on actions needed to deal with the impending el Nino. Given climate change this is not the last extreme event that countries in Southern Africa will face, and it is likely that future events could be more frequent and more extreme. Thus, it is necessary to build for the future. This could involve:

- Improving early warning systems so they reach farmers and promote early action
- Expanding irrigation where possible to deal with droughts
- Shifting agricultural systems so that drought adapted seeds become available in bulk when needed
- Building flexible systems that allow quick and appropriate response to seasonal forecasts, because preparing for good seasons and facilitating bumper crops is as important as preparing for droughts

Citation

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