

Combating drought in southern Africa: from relief to resilience

A different, more sustainable response strategy is needed to increase the resilience of farming systems to acute climate change-induced drought and heat stress in sub-Saharan Africa. Governments need a comprehensive action plan to reduce short-term dependency on food aid, and increase local adaptation capacities in the long term.

Will this current El Niño provide the wake-up call to re-think donor strategies and increase much-needed funding for southern Africa?



Alarming news about the extent of an El-Niño induced drought in southern Africa, Asia and Latin America is now dominating news coverage. In southern Africa, close to 50 million people are projected to be affected and millions are on the brink of starvation, with dependency on food aid and relief.

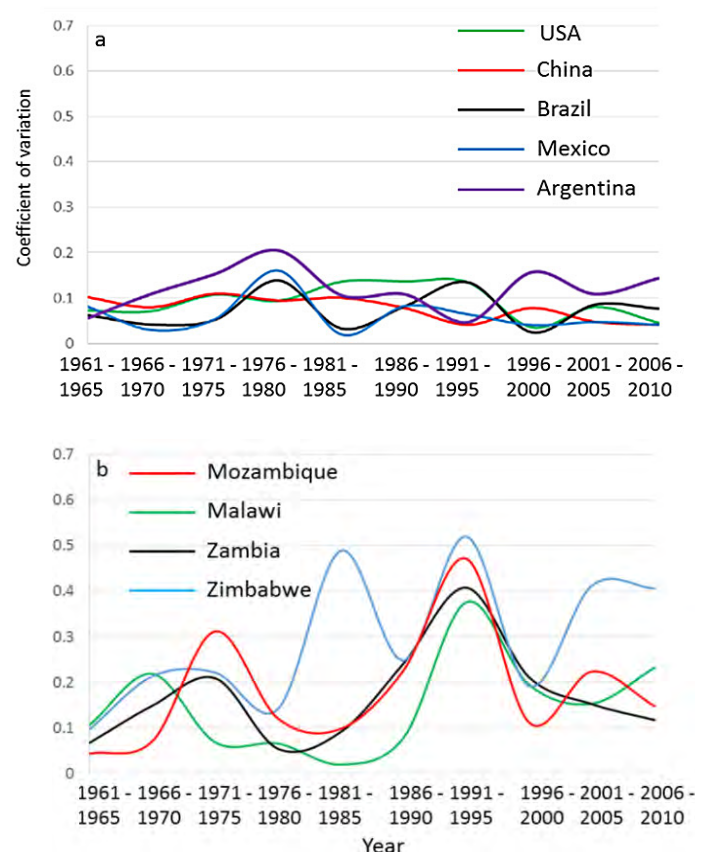
From 1900-2013, droughts have killed close to 1 million people in Africa, with economic damages of about **US \$3 billion affecting a further 362 million people**. Such droughts are a clear source of the high yield variability that prevents the escape of so many in Africa from poverty and hunger (Figure 1).

Short-term relief will again be necessary this year, but it is not sustainable and does not change the response strategy of nations in the medium to long-term. Another drought will likely occur in the next two or three years: a comprehensive response strategy must be developed.

How to reduce uncertainty and reliance on emergency response

1. Improve foresight and targeting to enhance the response capacity of local, regional and national decision makers.
2. Through new technologies develop the capacity of farmers to make better short- and long-term decisions.
3. Technologies jointly developed by the CGIAR and national partners can stabilize and increase farm productivity under drought. These must be scaled out through development and extension partners.
4. Interventions often target only the vulnerable: small-scale commercial farmers need support to maintain national food supplies.

Figure 1: High variation in maize yields in southern Africa will continue unless climate-smart technologies are widely adopted.



A new project from four CGIAR research centers and development partners aims to increase the resilience of farming systems in southern Africa, for more information contact:

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What shall we eat in September?

This is what farmers wanted to know when scientist Christian Thierfelder visited the Zaka district of rural Zimbabwe.

The long drought caused by El Niño has wiped out the first maize crop, while the second barely survived. All around, maize fields that should normally reach a height of 2-2.5 meters were stunted, just reaching the waist. The cobs, where there were any, had only a few kernels, too little to feed a family in these trying times.

What will they eat in the next few months, when a crop won't be available until at least March 2017? How will they buy seed and fertilizer when all resources have been depleted and the livestock slaughtered, eaten, and sold?

Although droughts mean that farmers in Zimbabwe will struggle to grow a crop in two of every five seasons, there is still a lack of strategies to prepare smallholder farmers.

Several CGIAR centres have worked to introduce water-saving cropping systems to improve food security and resilience. They include drought tolerant crops and varieties, conservation agriculture, and index-based insurance.

Conservation Agriculture (CA), based on the three principles of minimum soil disturbance, crop residue retention and crop rotation, can significantly help farmers resist the effects of drought.



Mrs Chinyama standing in front of her direct-seeded conservation agriculture field with drought-tolerant maize

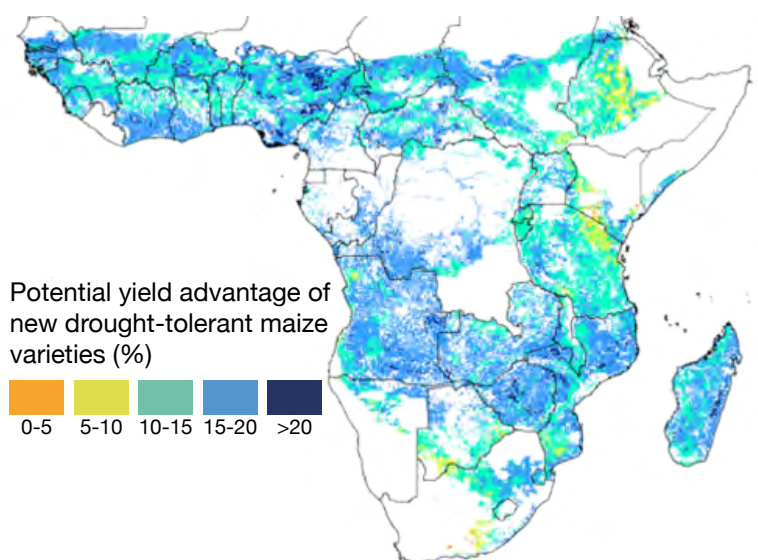
Meanwhile, more farmers are trying drought-tolerant varieties to adapt to their extreme situation.

However, the cycle of poverty is difficult to break. Crop failures induced by El Niño will not only affect the current season, but also wipe out past gains. Key financial services, insurance and other safety nets are not available when help is needed to purchase the inputs for the next season.

Only a comprehensive strategy will help farmers in Zimbabwe and other southern African countries break the vicious cycle of drought.

CGIAR approaches to end the cycle of drought and hunger in southern Africa

- Improved maize varieties that can increase farmers' yields by 20-50% under moderate to severe drought conditions, reaching over 5.4 million households through 90 African seed companies in 13 countries.
- Climate-smart agricultural technologies that can increase productivity by 30-60%.
- Integrated cropping practices that can increase productivity by 40-60% and income by 40-100% under drought conditions.
- Intensification of mixed crop-livestock farming systems.
- Weather forecasting services and variety targeting tools at district and national levels.
- Crop index insurance systems for farmers.



The International Maize and Wheat Improvement Center (CIMMYT) is a member of the CGIAR

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