Providing high resolution quantified seasonal forecasts in East Africa

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CCAFS Outcome Case

Center	International Maize and Wheat Improvement Center (CIMMYT)
Year	2015
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Flagship	Climate Risk Management
Geographic focus	East Africa

Summary

The food security of millions of people in East Africa is threatened due to climate events that shock the mainly agricultural system. Under a changing climate, these shocks will increase in severity and frequency, further destabilizing food security in the region. In the past, climate and food security forecasting systems in the region only supplied seasonal climate forecasts, consisting of three general expected rainfall categories: 'above normal', 'near normal' and 'below normal'. This type of forecast was limited in scope and did not provide sufficient detail of how much rainfall was expected and when, which is important information for rural communities and their support services.

The Intergovernmental Authority on Development (IGAD) Climate Prediction and Applications Centre (ICPAC) was set up in order to equip member countries with climate early warning and relevant information. This helps in addressing devastating, serious climate events like floods or droughts in the Horn of Africa. In support of ICPAC, the Integrated Agricultural Production and Food Security Forecasting System for East Africa project led by scientists at the International Maize and Wheat Improvement Center (CIMMYT), developed a forecasting system that is robust, user friendly and scientifically reliable. It integrates improved seasonal climate, production and food security forecasts. As a result, ICPAC is now able to forecast the amount of rainfall on both a seasonal and monthly basis, as well as effectively communicating this information to national and regional policymakers, agriculturists, meteorological and hydrological services, disaster management and food security offices and non-governmental organizations. The project also provides early warnings to local and national governments and relief agencies, enabling them to respond to climate crises in a timely and efficient manner. The warnings allow these agencies to respond effectively to climate change shocks, reducing costs, saving lives and enhancing long-term climate risk management and policy options in the region.

Key facts
- In September 2015, 17.9 million people were in elevated food insecurity in East and Central Africa.
- By 2025, 30 million farmers, at least 8 million of which are women, will improve their capacity to adapt to climate related risk through effective climate services and climate informed safety nets.

Lessons: key elements of success

- The project undertook a participatory planning approach with its key partners. A common understanding was created amongst partners on the objectives and activities of the project. Partners were then encouraged to identify their respective roles in achieving the project's objectives, and the proposed work plan was refined based on their inputs.
- The project ensured that agencies at all levels are able to access and use research-informed food security forecasting tools, in order to provide valid and reliable early warning information.

Further reading

- [Weather forecasts support food security and disaster management in East Africa](#)
- [Accurate, timely early warning systems for east African policy makers now possible](#)
- [CIMMYT-CCAFS initiative seeks to achieve food and nutrition security in east Africa by 2025](#)

Related research outputs

- Coffey K, Menghestab H, Halperin M, Wamukoya G, Hansen J, Kinyangi J, Tesfaye Fantaye K. 2015.*Expanding the contribution of early warning to climate-resilient agricultural development in Africa.* CCAFS Working Paper no. 115.Copenhagen, Denmark. CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

RESEARCH IMPLEMENTED IN COLLABORATION WITH