



Lessons learned

Photo: Sokoine University of Agriculture

Coping with seasonal uncertainty in agriculture

Many CCAA projects incorporate some element of improving seasonal forecasts and their dissemination in forms useful to vulnerable groups. Observations from a number of projects reveal that efforts to improve local access to and relevance of climate information are helping build farmers' confidence in the value of forecasts. But the inability of seasonal forecasting to reliably pinpoint the location and timing of rains can still confound well informed planting and harvesting plans. This uncertainty reveals lessons for both producers and users of forecasts. Information providers are learning that they need to go further in providing regular updates and meaningful advisories, in addition to complementary information on many aspects of planting. For farmers, the limitations of forecasting have reinforced the need for a range of strategies to deal with uncertainty.

The experience of projects that aim to bridge the gap between modern and indigenous forecasting methods suggests that working with traditional knowledge providers can extend the reach of climate information to more rural farmers, in languages and

Lessons to date

- ▶ The limitations of seasonal forecasts demand farmers test a robust range of options
- ▶ Forecasts alone are insufficient – they must be accompanied by decision aids and complementary information, updated over the season
- ▶ Farmers need information in languages and forms they understand and trust
- ▶ Working with indigenous forecasters builds community trust and can widen dissemination and uptake of forecasts

forms that are useful to them. The value of these efforts may lie as much in the trust and increased uptake they engender as in any potential increase in forecasting accuracy.

Farmers are strongly motivated to use good climate information if it is in forms and languages they



William Ndegwa of the Kenya Meteorological Department instructs Migwani farmers in data collection

Photo: Kenya Meteorological Department

can use, especially if it includes relevant advice and decision-making tools. Making high quality, reliable data accessible builds trust in users and improves their use of forecasting information.

In Benin, research indicates rural farmers often attribute climate extremes to mystical causes. But through their discussions with researchers, farmers at the study sites have gained an understanding that the swings they are experiencing are related to a global process of climate change. Still, they have realized that seasonal forecasts, which are based on probabilities, do not predict the weather with the precision needed to tell them when to plant their crops or warn them of upcoming risks. For farmers and extension workers forecasts are useful, but not sufficient. They must develop options that make their system more resilient across a range of possible scenarios. The research team led by the NGO *Initiatives pour un développement intégré durable* (IDID-ONG) has thus given much attention to testing options to improve soil moisture retention and increase soil fertility.

In Kenya, farmers taking part in a project led by Tanzania's Sokoine University of Agriculture have

likewise had to confront the limited certainties of seasonal forecasts. Trials have been initiated using farmer-identified management options at five locations in Kitui, Mwingi, and Mutomo districts. The teams are using seasonal climate forecasting as the first line of information to identify the crops, varieties, and management options that make best use of a season's potential. Climate information service providers working with the teams in both Kenya and Tanzania have gained valuable feedback on how accurate and useful their forecasts are from working more directly with farmers. Researchers are seeing the need to provide updates as the season progresses.

Harmonizing modern and traditional forecasts, as the IGAD Climate Prediction and Applications Centre (ICPAC) and partners are attempting with western Kenya's Nganyi community, is another novel approach to improving the usefulness of climate information for rural users. This project attests to the willingness of traditional forecasters and user groups to try new approaches, as the severity of climate variability and change has shaken confidence in their familiar methods and strategies.

The collaboration of traditional forecasters, elders, and local officials in ensuring consensus forecasts are shared in local languages at community gatherings and through local media is helping good information reach vulnerable users, through channels they trust. In some cases, populations that have traditionally seen climate variation as a supernatural process are coming to understand climate change and variation as a global process. The collaboration between these groups in generating and sharing forecasts and advisories is helping to break down the barriers between researchers and local farmers.

Bridging approaches such as those being attempted by ICPAC may have wider application, as research teams in countries as diverse as Kenya, Madagascar, Senegal, and Tanzania are also finding evidence that vulnerable communities are questioning their traditional knowledge systems in the context of climate change.