

Climate services go local in Western Kenya

From its rain-soaked hills to the sweeping Masai Mara, Western Kenya has a vast and varied landscape. But forecasting its equally varied weather has always been a real challenge. A project within the Weather and Climate Information Services for Africa (WISER) programme has made much more accurate climate information available at a local level, making a real difference to the region's farmers, families and local businesses.

In Kenya, heavy rainfall can have as devastating an effect as no rainfall. Recently-planted crops or newly-dug roads can be washed away by storms and floodwater. Until recently, this was the reality for many people living in Western Kenya. With only very generalised forecasts to depend on, they were often caught out by extreme weather, losing money – and vital infrastructure – as a result.

It stepped the Kenya Meteorological Department (KMD). Realising that a much more localised weather service was badly needed, the KMD partnered with the Met Office and the WISER programme to set up decentralised forecasts and deliver the weather and climate information that local Kenyans would both trust and put to use.

“We weren't getting to know what type of information people wanted on the ground, so we had to put a plan of action in place,” says Ayub Shaka, Senior Assistant Director of Public Weather and Media Services at KMD. This plan came at exactly the right time. Kenya's new constitution called for governmental services to be devolved to a local level, with 47 counties of administration created across the nation. The KMD had the determination – and now the resources – to give each county its own tailored weather services.

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Building on success

The Met Office had already been working closely with the KMD, collaborating on a pilot project to build climate change resilience in northern Kenya's arid and semi-arid areas. This initial project had already delivered effective weather services that were focused on the needs of local communities. But as Shaka explains, "We wanted to find out what issues people were facing in the highland and rainy areas, too, so we decided to pilot WISER in western Kenya."

The WISER Western project team chose four counties to focus on: Kakamega, Siaya, Kisumu and Trans Nzoia, with the aim of delivering weather services where there was more rainfall and unpredictable weather. They pinpointed a range of people from across the counties who were most likely to feel the effects of this service, including personnel from the county governments through to forestry businesses, sugar companies and farmers.

Providing critical training

The project began by looking at the key skills the County Directors needed for it to be a success. "We realised that our officers didn't yet have the ability to deliver these kind of weather services," explains Ayub Shaka, "so they needed skills-improvement training." The WISER Western team trained them in climate modelling, communications and how to develop forecasts that end users could use and benefit from. The first training course took around three weeks, split between one week of online modules and two weeks of face-to-face training in Nairobi.

WISER Western also provided the essential equipment and software – including laptops, cameras and smartphones – the County Directors needed to document events and feedback. This allowed them to not only communicate easily with end users, but to produce the weather services and forecasts specific to each county. KMD issued a 36-hour fishermen forecast at 16:00 every day – and a simple traffic light system was developed to signify potential hazards.

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Spreading the message

Developing the forecasts was one thing, but getting them out to remote communities across a vast geographical area was another. To be effective, it was crucial that the forecasts were delivered as soon as possible.

Without the budget to pay for much radio or television coverage, the WISER Western team turned to local communities to learn how best to reach them. After a survey of community and focus groups, the team identified an ingenious way to get forecasts out there. End users were already receiving emails and messages from third parties, such as farm input and advisories suppliers. The WISER Western project team simply piggy-backed these communications. For instance, they added a weather forecast to a regular farming suppliers' email. This approach meant that forecasts could be disseminated across a wide area without the need for extra investment apart from the initial minimal cost to suppliers.

Enabling informed decisions

Through radio, SMS messaging and the internet, WISER was able to reach up to 400,000 people across western Kenya, transforming the quality of climate information and expectations across the counties. "It marked a paradigm shift in service delivery," enthuses Shaka. "There was initially some resistance amongst the County Directors of Meteorology to change the ways of service delivery, but after seeing the way stakeholders appreciated the service, they embraced it wholeheartedly."

At its most fundamental level, the new service meant that end users could make informed decisions that would have lasting economic and social benefits. In the past, county governments had lost money when roads were washed away by torrential rainfall. With improved local forecasting, they could plan ahead and avoid any financial losses. Farmers too were able to take timely action to increase crop yields, ultimately leading to greater food security. Anecdotal evidence shows that the accuracy of forecasts has had a huge impact, with reports of agricultural production across Trans Nzoia increasing by up to 20%.

The project has done wonders to raise the profile and status of KMD and accurate forecasting in general. "It's proved to be very useful and there is ongoing demand for

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the service,” says Shaka. Most importantly of all, WISER has illustrated that, for weather forecasting to be truly effective, it has to be locally-based and focused on people’s needs.

March 2019

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