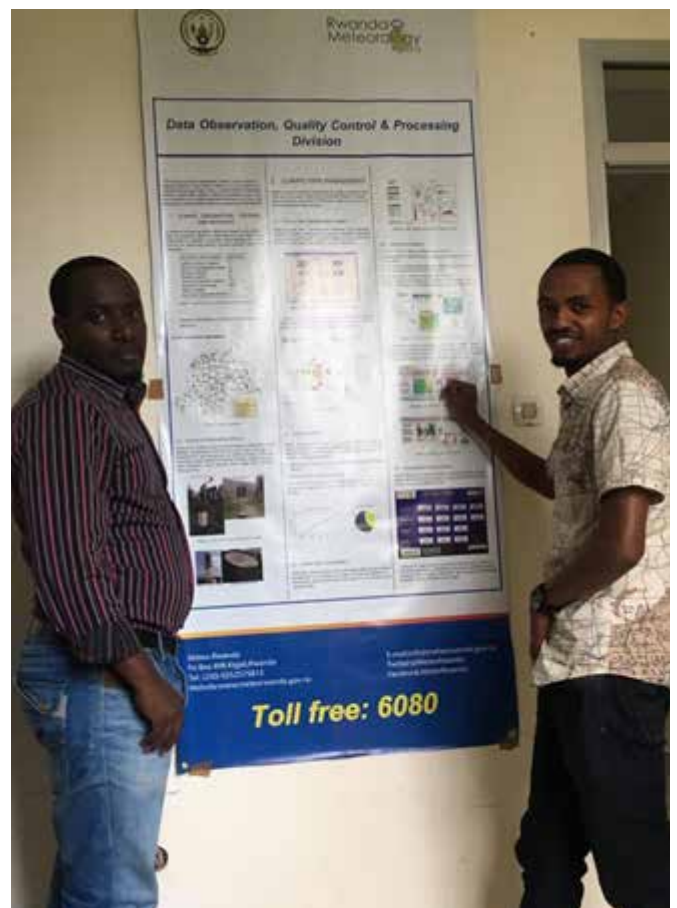


Enhancing climate data management to aid climate resilience



The Challenge

Meteo Rwanda had previously used a Climate Data Management System, however this system became obsolete and outdated with the improvement in technology and was no longer supported by developers. To fill this gap, Meteo Rwanda had to look for another fully integrated and supported Climate Data Management System. A system that would ultimately help to deliver services to users on all timescales to better understand climate patterns, risk assessments and impacts on socio-economic scenarios, that meet World Meteorological Organization (WMO) guidelines, and was capable of integrating observations from automatic and manual observing systems in the same database.



Felix Mucyo, Meteo Rwanda, explaining climate data flow

Solution

Meteo Rwanda and the Met Office worked in partnership with an expert consultant from Kenya Meteorological Department (KMD) to deliver an effective integrated Climate Data Management System called Climsoft.

Felix Mucyo, in-charge of Climate Data Management section of Meteo Rwanda, said:

“Using Climsoft has really transformed how we manage our observation data and the services we deliver to our users.” “Climsoft is being used to collect, manage and store both automatic and manual weather observation data and generates tailored climate products for users, It has been very helpful to us”

he added.

“We have managed to upgrade to the latest version of Climsoft and migrate all our data in the new version, The new version is very easy and user friendly. Observers at our agro-synoptic stations are now able to observe and share data with the Headquarters through Climsoft immediately after observations, this makes data available more quickly for forecasting, and creating more timely services. The paper archives facility in Climsoft version 4 is enabling us to scan, archive and retrieve images of data via Climsoft. It is also possible to compare digitised data values with the scanned paper without going into the physical archive it is now possible to link both Climsoft with R-Instat to produce varieties of climate summaries and reports (including wind rose, time series plots, trend analysis graphs, calculations of the start/ends of rain, length of the season, spell length (dry/wet), etc.)”



Meteo Rwanda agromet station



Meteo Rwanda physical and digital archives



Joint Climsoft and R-Instat training, Kigali, Dec 2019.

Benefits

Climsoft, and the more effective management of national climate data, has had an impact in many areas.

Provision of quality meteorological services is a crosscutting issue. It helps decision makers to better plan their daily activities as well as development strategy and framework in the sectors such as agriculture, fishery, water, aviation, tourism and health..

Using Climsoft in the agriculture sector

Historical climate data received from Meteo Rwanda provides vital information for agriculture especially during the planting period, irrigation, harvesting and during the post harvesting period.

Climate information provides relevant information on dry spell conditions, on seasons using water balance model, analysing the conditions during the dry and rainy days, as well as predict the lengths of the seasons and risks of crop varieties in order to cope with the weather of an area. This information is then used to advise farmers and insurance companies to plan and act accordingly

Through the Participatory Integrated Climate Services PICSA approach, agricultural extension staff, development NGOs and other intermediaries have

also been trained to integrate climate services into their ongoing work with farming communities across Rwanda's districts.

Climsoft used to assess disaster risk

Weather and climate information received from Meteo Rwanda is also used for disaster risk reduction and preparedness, helping to establish a comprehensive end-to-end early warning system for hydro-meteorological hazards, inform the disaster risk management planning processes and to conduct comprehensive risk assessment. This information also feeds into communication systems for disaster monitoring, elaboration of disaster contingency planning for major disasters and preparedness and response plans such as El Nino and assists the different end-users in awareness creation and education on disaster preparedness and readiness.

The development of Climsoft has been supported by input from developers from, Zimbabwe, Kenya, Guinea and others.

www.climsoft.org



Smallholder farmers are trying to understand the best time for planting using climate information (training workshop.)

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