

# ENHANCING NATIONAL CLIMATE SERVICES

## Targeted Climate Information for Decision Making

Ensuring development interventions consider the effects of a changing climate is critical across a range of sectors to demonstrate impact and sustainability. Enhancing National Climate Services (ENACTS) is a unique initiative developed by the IRI and partners to provide reliable and readily accessible climate data at high resolution to decision makers in Africa. The ENACTS initiative delivers robust climate data, targeted information products and training specifically relevant to user needs, enabling them to apply climate information to decision making with confidence.

## Observations Make All The Difference

Ground observations are essential for ensuring robust climate data for national decision making. Observations capture small-scale geographic variability in precipitation and temperature that can have a significant impact on development outcomes. Climate information produced at the global level does not fully exploit information from national observational data. Despite significant advances, even the highest-definition satellite data may not provide the level of detail required for the smaller scales of government decision making.

In many African countries, gaps in observational records result in poor quality data, undermining the reliability of climate analysis, short-term forecasts and long-term projections. By integrating local observations and global monitoring data, the ENACTS initiative strengthens policy analysis by providing national coverage with greater accuracy at smaller spatial and temporal

scales while building local capacity. This higher definition in climate data assists targeted decision making to consolidate development gains in the face of climate variability and change and improve the resilience of vulnerable communities.

## Understanding the Past, Monitoring the Present, Forecasting the Future

ENACTS enables analysis of climate data at multiple scales to enhance development decisions.

### It uses detailed historical climate data to:

- + Understand natural variability in temperature and precipitation over national, regional and district scales and assess the impacts on development outcomes.
- + Understand climate sensitivity to map populations and systems at risk of climate variability and change.
- + Improve the timing and scale of climate-sensitive interventions and design early warning systems.

It provides the ability to monitor current climate and to develop forecasts to:

- + Trigger early warning systems to alert for potential food insecurity, infectious disease epidemics and hydro-meteorological disasters.
- + Strengthen activities to support climate-smart development, such as climate-resilient crop planting, weather index-based agricultural insurance, and improve efficiency in energy and water usage.

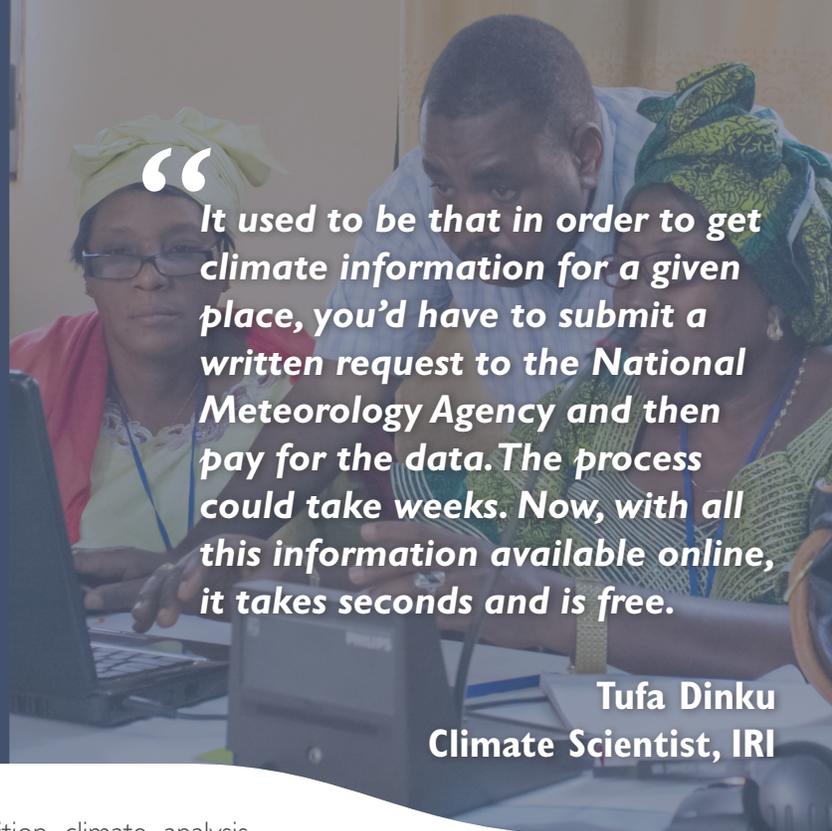
By integrating observations with proxy data, ENACTS overcomes issues of data scarcity and poor quality and introduces



Training workshop on climate data management and seasonal forecasting held in Niamey, Niger.  
Francesco Fiondella/IRI

## A Solid Track Record

Working alongside national meteorological agencies, regional climate centers, the World Meteorological Organization, government ministries and sectoral partners, ENACTS has so far been implemented in Ethiopia, Madagascar, Tanzania, Rwanda and Sahelian countries in West Africa via a regional collaboration with the AGRHYMET Center. Work will soon start in the Gambia and Burkina Faso, with Mali to follow.



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*It used to be that in order to get climate information for a given place, you'd have to submit a written request to the National Meteorology Agency and then pay for the data. The process could take weeks. Now, with all this information available online, it takes seconds and is free.*

**Tufa Dinku**  
Climate Scientist, IRI

quality-assessed and spatially complete data services into national meteorological agencies. One of the strengths of ENACTS is that it harnesses all local observational data, incorporating high definition information that globally produced or modelled products rarely access. The resulting spatially and temporally continuous datasets allow for the characterization of climate risks at a local scale. Once ENACTS is implemented, the data can be used for multiple purposes from delivering practical information about climate sensitive sectors, to providing researchers with robust data for detailed analysis.

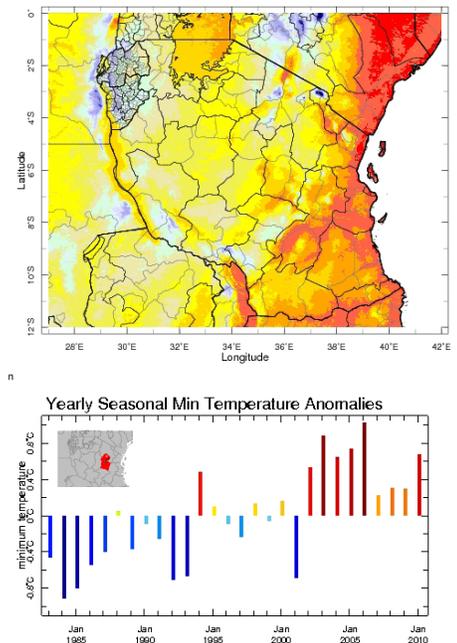
## Making Data Work

**Availability of data** is enhanced by blending data from the national observation network with satellite and climate reanalysis and elevation maps. This process produces spatially complete rainfall and temperature data for up to a 4km grid over a 30-year time series. The products derived from these data can be made freely available, en-

abling high definition climate analysis from community to national levels.

**Access is improved** by making information available online. An online mapping service, populated and customized using the powerful IRI Data Library, is installed at national meteorology services with user-friendly tools for the analysis, visualization and downloading of climate information. Maprooms enable users to analyze the average climate at any location at national and sub-national scales, monitor the current season, compare the current season with the mean or with recent years, and translate seasonal forecasts.

**Use of climate information is enhanced** by having practitioners and decision makers identify climate information needs and by developing information products and user-specific training on how to interpret climate information for policy making and implementation. This user-led approach ensures ENACTS builds capacity, empowering decision makers to apply climate information with confidence.



Example of ENACTS map room tools driven by nationally robust data from Tanzania.

## CONTACT

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