



## **Transforming the Availability Climate Data in Africa: The ENACTS Approach**

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There are critical gaps in availability climate data in Africa. These gaps exist both in historical climate data as well as current observations. The state of the current station network is seriously inadequate with the number and quality of weather stations in many parts of the continent in decline. The available stations are unevenly distributed with most of the stations located along the main roads. This seriously limits availability of data and services, particularly to rural Africa.

The International Research Institute for Climate and Society (IRI), in collaboration with partners, has embarked on an ambitious initiative for improving the availability of climate data as well as access to and use of climate information in Africa: one country at a time. This effort, Enhancing National Climate Services (ENACTS), focuses on the creation of best quality climate data and information products that are suitable for local decision-making. Data availability is improved by combining data from the national observation network with proxies such as satellite and reanalysis products. The first step is quality control of station data. This involves checking station location, identifying outliers and checking and fixing breaks in station time series (homogenization). The quality-controlled station data are then combined with satellite rainfall estimates for rainfall and reanalysis products for temperature. The main advantage of the satellite and reanalysis products is that they offer spatially complete data and are freely available. Satellite rainfall estimates now go back over 30-years while reanalysis products go even further. The final products are dekadal (10-day) climate datasets at 4km or 5km spatial resolution going back over 30 years for rainfall and over 50 years for temperature. The main strength of the ENACTS approach is that it uses data from all available stations, most of which are not available out side the country, by directly working with the national meteorological agencies.

Access to information products is facilitated by providing online tools for data analysis, visualization, and download. This online tool is integrated into the Met Agency's web page. The use of climate information is promoted through sustained engagements with users and co-production of information products. ENACTS has so far been implemented in five countries and at regional level in West Africa. Three more countries are expected to be added this year.