

## **AMS abstract: Climatology analysis from a new multi-decade high-resolution rainfall and temperature dataset for Rwanda**

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Meteorological station coverage over the nation of Rwanda dropped dramatically in the mid-1990s following the 1994 genocide, which was a factor for the decline in meteorological station coverage, and remained limited for years afterwards and has only recently begun to rebound. The ENACTS (Enhancing National Climate Services) initiative implemented in Rwanda has reconstructed rainfall and temperature data by combining station data with satellite rainfall estimates for rainfall, and with reanalysis products for temperature. The generated datasets covers the period from the early 1980s to the present and are available at spatial resolutions of 5km. Due to the nation's highly varied topography and East Africa's complex meteorology, there is considerable spatial heterogeneity in rainfall. This paper will explore the temperature and rainfall climatology of Rwanda using this new dataset, with particular focus on the variability of the March-May and September-December rainy seasons at high spatial resolution. As with many other locations in East Africa, the September-December season has some SST-related predictability and both rainy seasons are indispensable for Rwanda, in which 80% of the total population are engaged in agriculture. The sector meets 90% of the national food needs and generates more than 70% of the country's export revenues.

Climatologies and summary statistics, including the mean, variance, and trend for the abovementioned temperature and rainfall variables will be analyzed at multiple time scales (full seasonal time scale, monthly and dekadal), along with relationships with sea surface temperature variations.

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