African Science for Weather Information and Forecasting Techniques (SWIFT)

ICPAC
IGAD Climate Prediction & Applications Centre

SWIFT OVERVIEW

The African Science for Weather Information and Forecasting Techniques (SWIFT) project aims to develop a sustainable research capability in tropical weather forecasting to enhance the livelihoods of African populations and improve economic development. The project brings together leading research institutions in Africa and the United Kingdom and is funded by the Global Challenges Research Fund (GCRF).

ICPAC is currently involved in two research work packages (WP-R2: Forecast evaluation and WP-R6: Sub-seasonal to Seasonal (S2S) prediction) as well as in case studies, testbeds and training.

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Sub-seasonal to Seasonal (S2S) Skills

Forecast skill assessment is an essential component of weather and climate forecasting for both the producers and the users of the forecast. ICPAC evaluates the skill of global operational prediction systems using data from the recently launched WMO S2S project over the Greater Horn of Africa. The skill assessment analysis contributes for selecting a subset of models for the construction of multi-model ensemble for producing objectively consolidated S2S forecasts for the region.

S2S Drivers

In collaboration with other institutions, ICPAC evaluates the representation of the drivers of intra-seasonal variability and their modulation to the Greater Horn of Africa rainfall in operational sub-seasonal prediction systems.

Case Studies

The SWIFT team is working on different case studies over the Greater Horn of Africa including the March-April-May 2018 extremely wet and 2019 extremely dry seasons, to better understand the various systems at different scales. These case studies are very important to develop improved understanding of climate processes and to develop concepts which can be understood by different audiences.

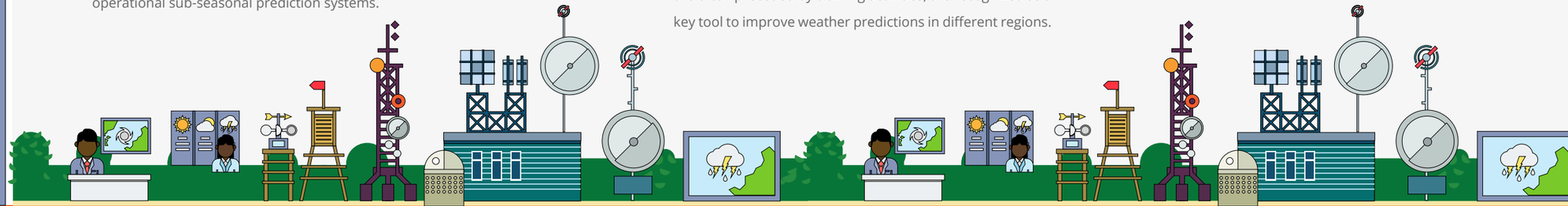
Testbeds

SWIFT supports different forecasting testbeds, where weather forecasters, researchers and identified users from different institutions come together for a limited period of time to perform operational forecasting. Testbeds, which are often preceded by training activities, are recognized as a key tool to improve weather predictions in different regions.

Key Outputs

- Reports on implementation of verification metrics for S2S and probabilistic forecasts
- Scientific papers on the analysis of operational prediction systems
- S2S forecast testbed
- Training material on S2S prediction

More information: https://africanswift.org/



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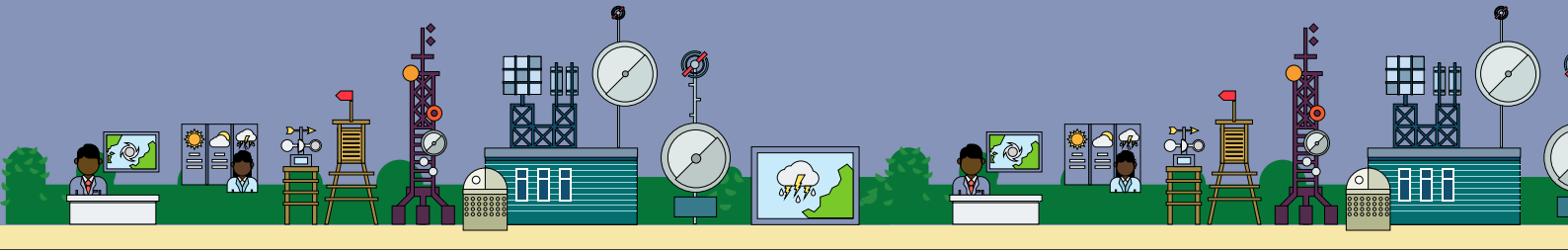
Delivering Climate Services to the Greater Horn of Africa



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