

# Overview of

## ENACTS

ENHANCING NATIONAL  
CLIMATE SERVICES

INITIATIVE

Targeted climate  
information  
for impactful  
decision making



International Research Institute  
for Climate and Society  
EARTH INSTITUTE | COLUMBIA UNIVERSITY

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# I. Why ENACTS?

**Enhanced**  
**Climate Services**  
**for**  
**Enhanced**  
**Contribution to**  
**National**  
**Development**

**Sustainable  
Development**

**Climate  
Information**

**Climate Services**  
**NMHS**

**Climate Data**

Management of the risks of climate variability and change and adaptation to climate change

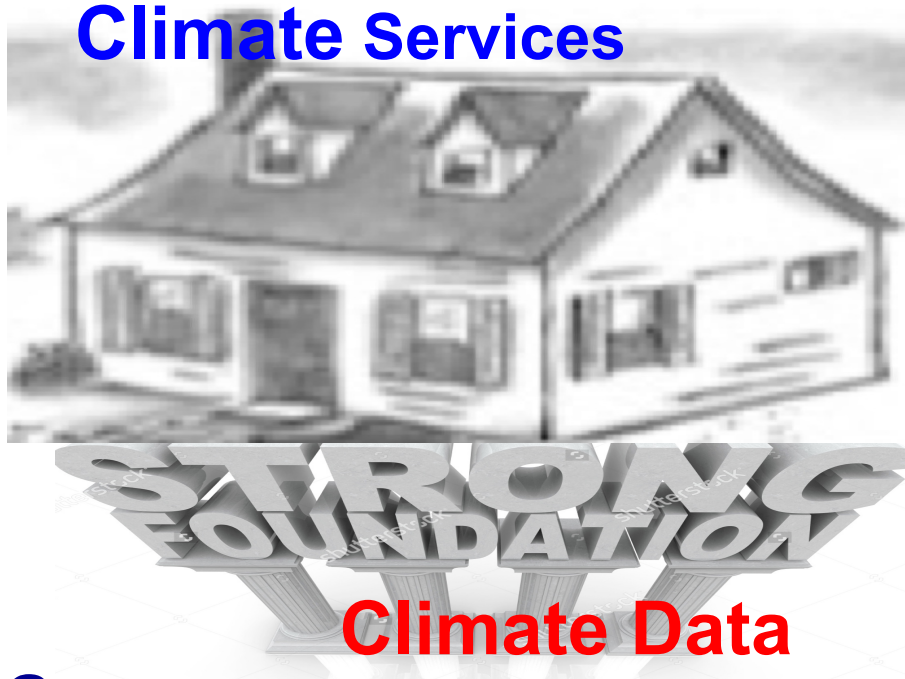
On past, present, and future climate is one of the critical inputs

**ENACTS**

**ENACTS**

# Climate data is the **foundation** of Climate Services

## Climate Services



**Good data:**

- Strong foundation
- Reliable climate information services

## Climate Services



**Bad/No data:**

- Weak foundation
- Unreliable climate information services

## II. What is ENACTS?

- Strives to simultaneously improve availability, access and use of climate information.
- Works with NMHS to quality-control all available station data and combine them with satellite and reanalysis products.
- Supports global and regional efforts:
  - Lays the foundation for the implementation of **GFCS** (Global Framework for Climate Services) at national level.
  - Supports the realization of the **AMCOMET Integrated African Strategy on Meteorology**



# The Three Pillars of ENACTS

## Enhance Access

Develop online tools for data analysis and visualization



## Improve Data Availability

- Build capacity of NMHS
- Quality Control station data
- Combine station data with proxies
- Improve seasonal forecast



## Promote Use

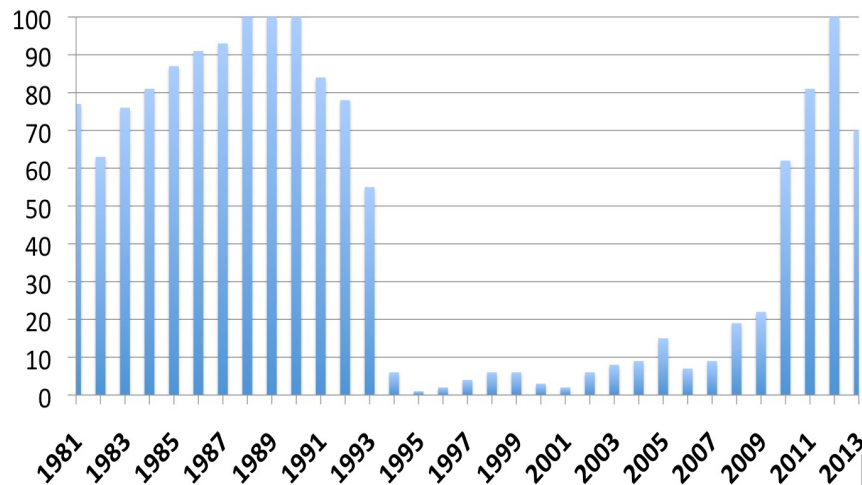
*Engage users:*

- *Raise awareness*
- Build capacity of the user community
- Involve users in product development

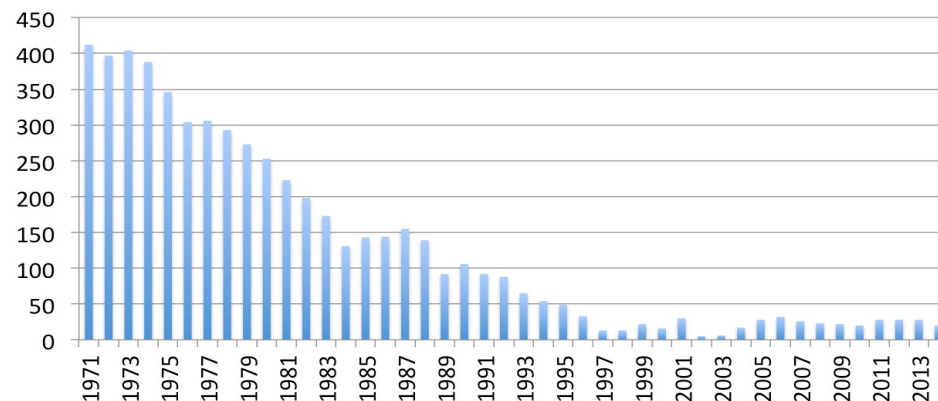
# 1. Improving availability

## 1.1. Assess Data Availability

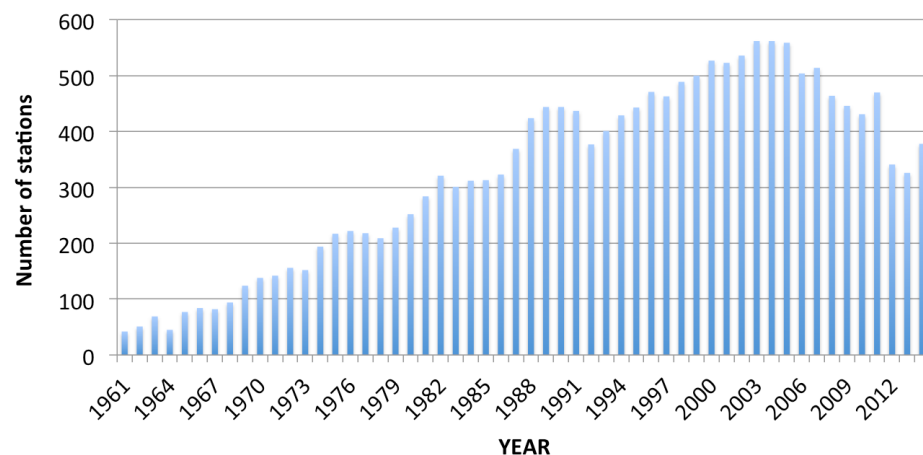
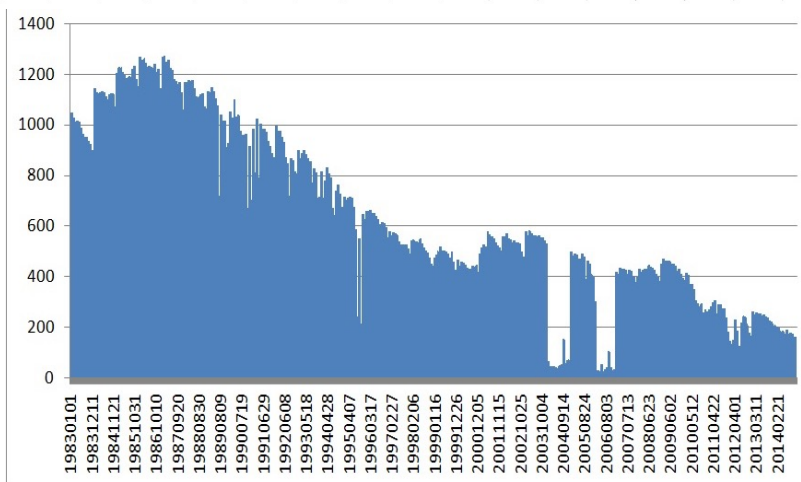
This has helped the NMS look at their own data in a different way



Average number of stations reporting every year

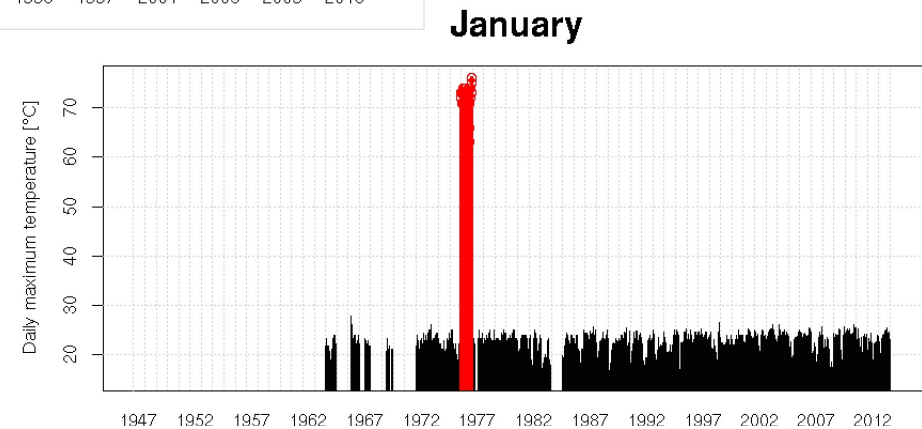
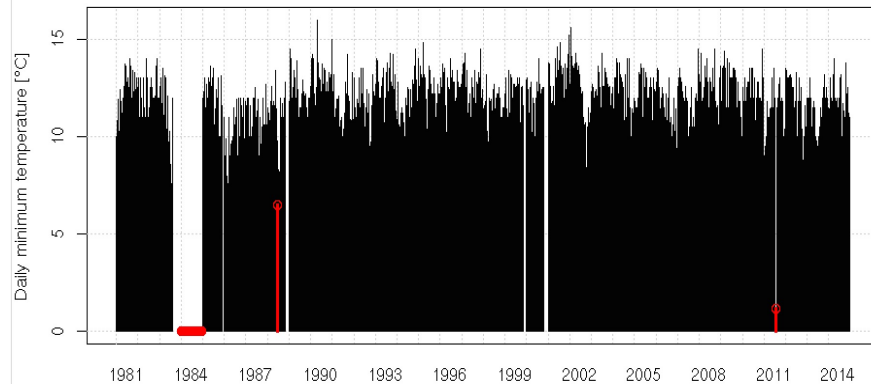
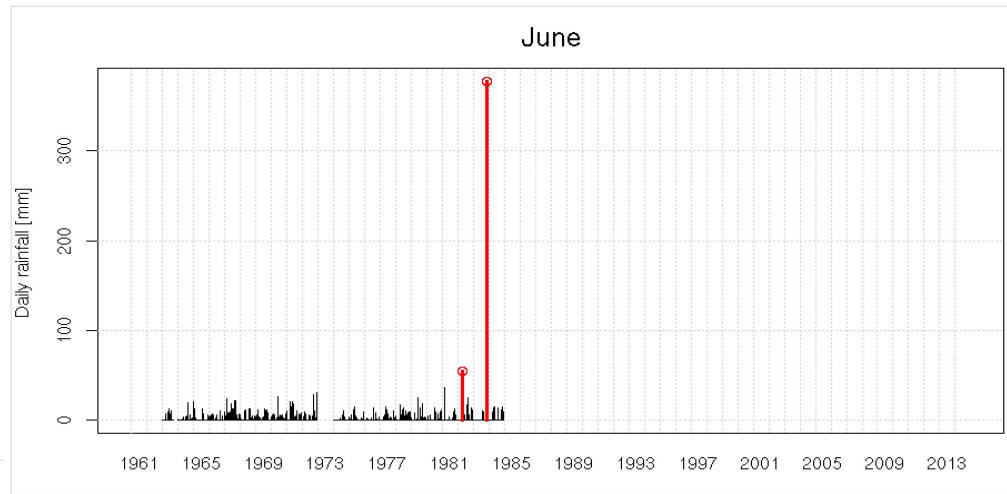


Average number of stations reporting each year



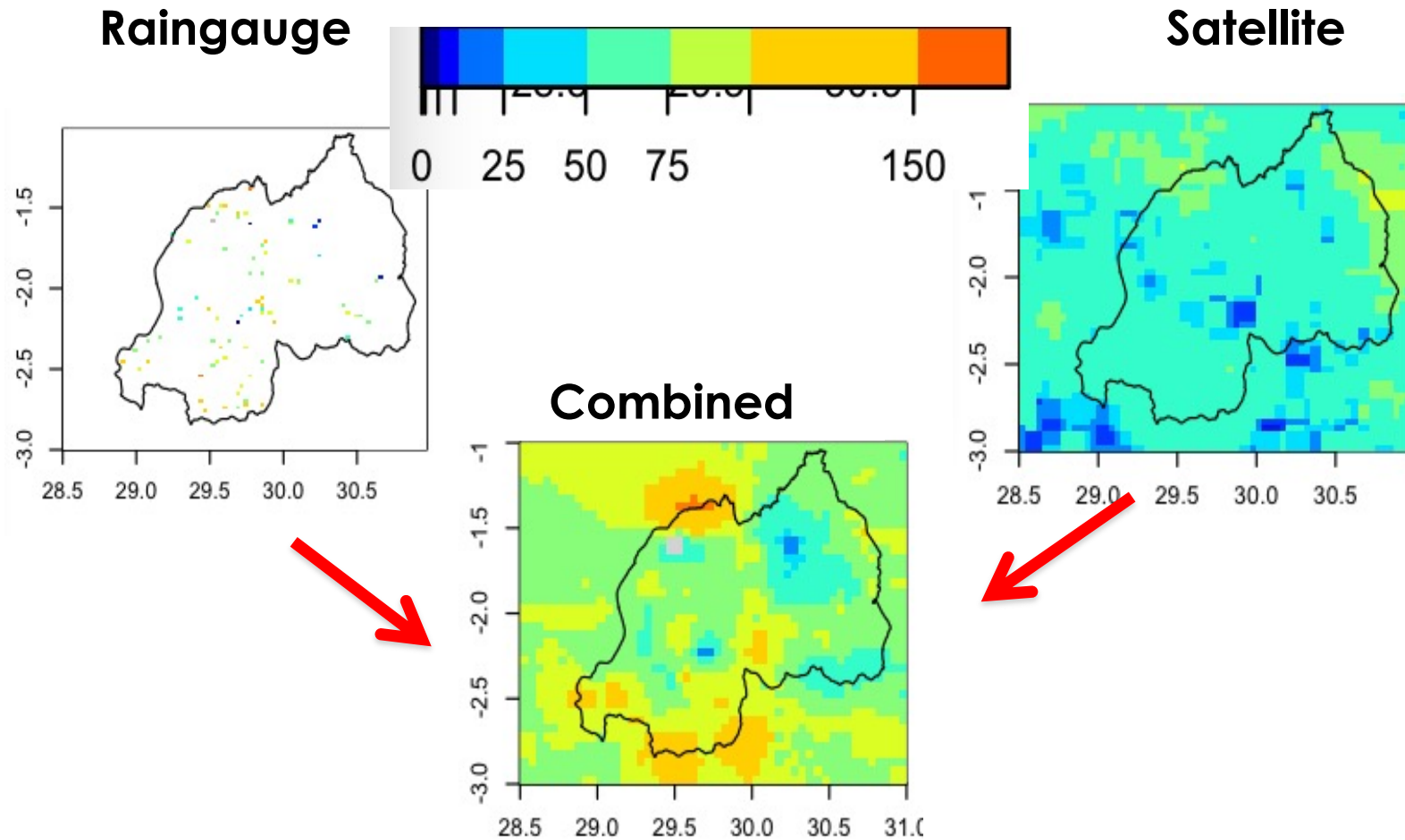
# Improving availability

## 1.2 Assess Data Quality



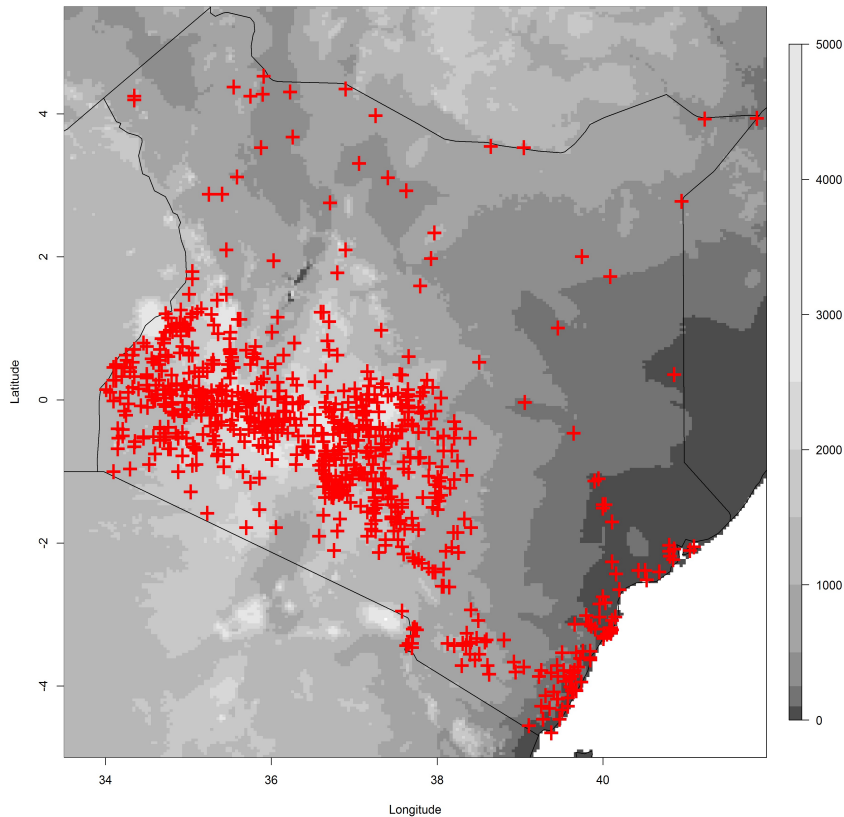
# Improving availability

## 3. Combining station data with proxies: **Rainfall**

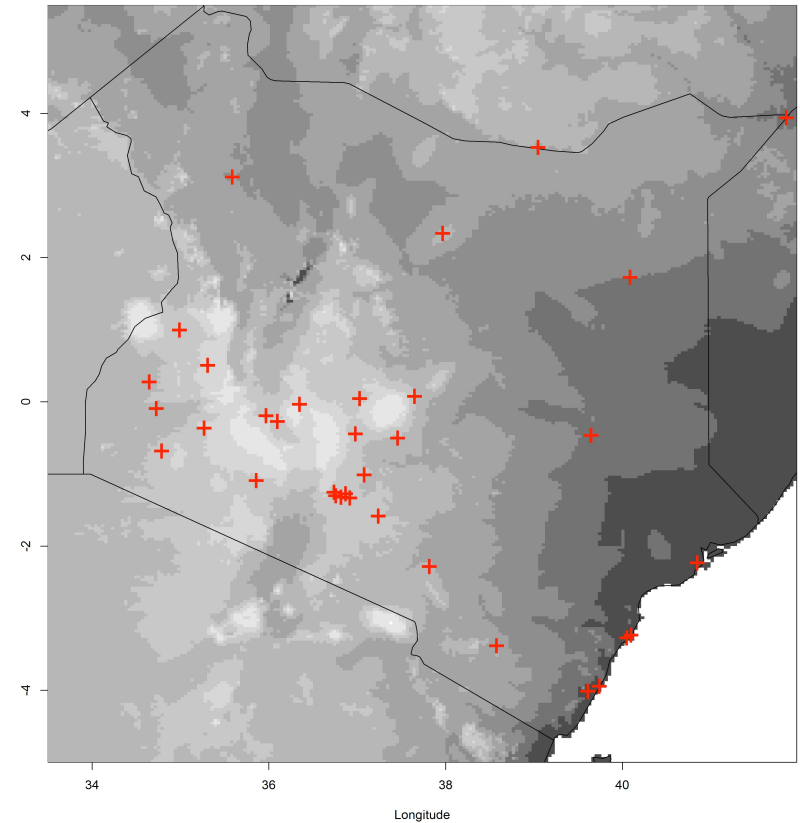




# Advantages of ENACTS Data



**Rainfall Stations used in ENACTS**

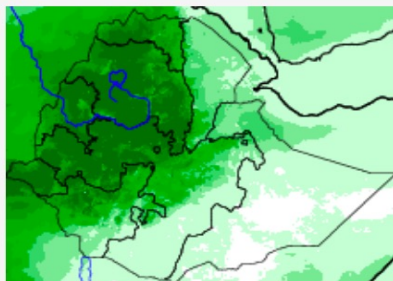


**Rainfall Stations available globally**

# 2. Enhancing Access: Maprooms

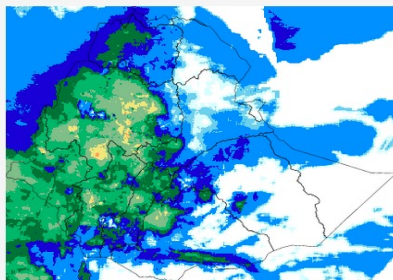
## Climate

Historical, current and forecast climate conditions around the country.



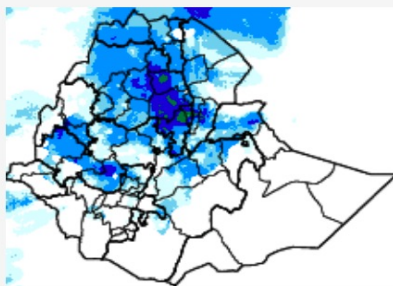
## Climate and Water

Historical, current and forecast water conditions around the country.



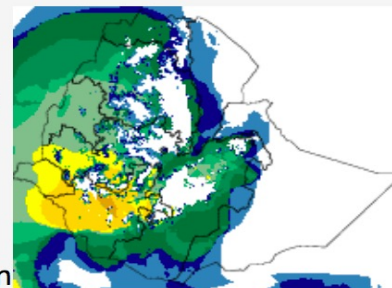
## Climate and Agriculture

The variability of seasonal precipitation, and the sub-seasonal statistics of these, play a key role in the quality and quantity of agricultural output.



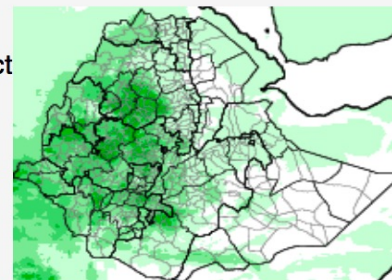
## Climate and Health

Empirically-derived thresholds of precipitation, temperature and relative humidity are used to assess the climatic suitability of malaria transmission. The interactive map initially displays the number of months during the year when climatological averages meet these requirements. Users may gain insight into how often these conditions have actually occurred during any particular month by clicking on the map at the location of interest.

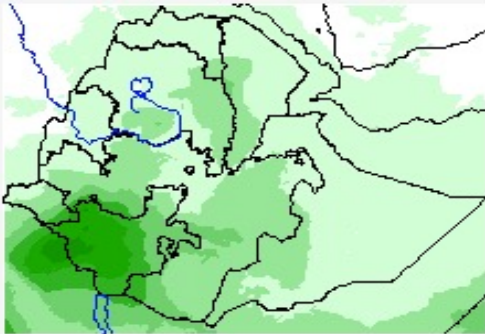
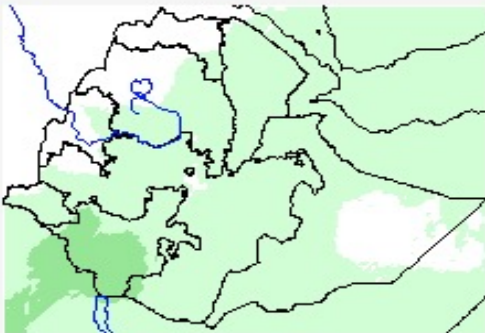


## Surveillance Suite

(1) Are there significant trends in the seasons that affect this region/zone/district (Monthly-Yearly)?



# Enhancing Access: Climate Maproom

Climate Analysis	Climate Monitoring	Climate Forecast
<b>Monthly Climate Analysis</b>		
Rainfall and temperature time series (1983-2010) reconstructed from station observations and remote sensing proxies. This interface allows users to view rainfall, maximum and minimum temperature climatologies and anomalies.		
<b>Dekad Climate Analysis</b>		
Rainfall and temperature time series (1983-2010) reconstructed from station observations and remote sensing proxies. This interface allows users to view rainfall, maximum and minimum temperature climatologies and anomalies.		

- The maprooms are just demonstrations of what can be done with improved climate data and the IRI Data library
- Many more additional climate information products can be generated

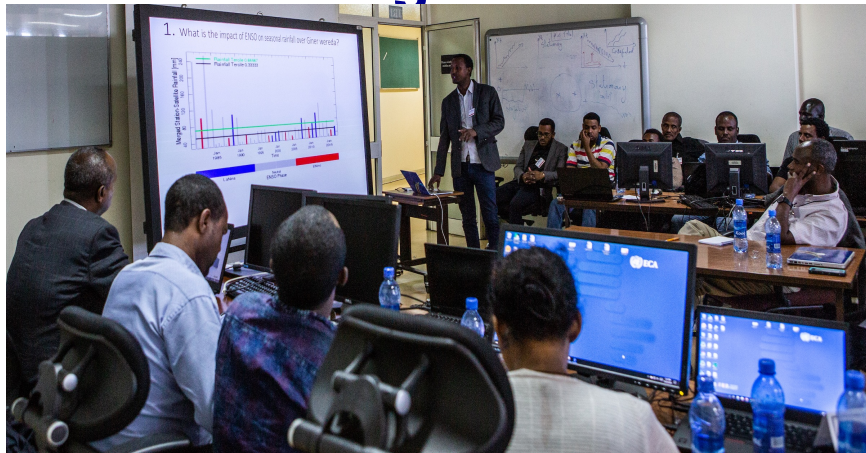


# 3. Promote Use

## i. Awareness raising



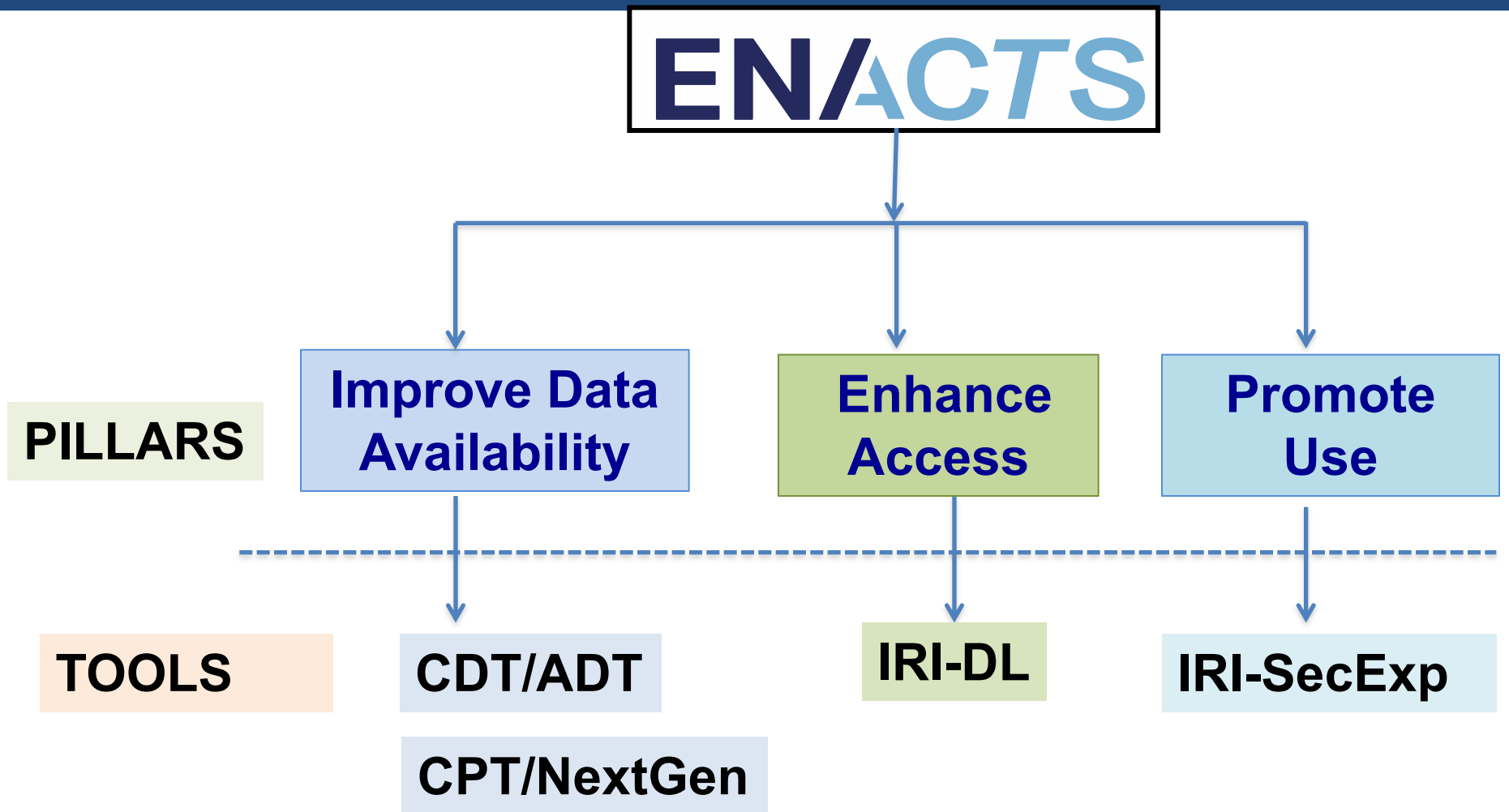
## ii. Training



## iii. Involving users in product generation



## 4. ENACTS Tools





# 5. Summary of Outputs

- **Over 35 years of climate data time series** for every 4km grid across each country:
  - Now data available where there are no stations
- **Installation of the IRI Data Library at NMHS**
  - A powerful tool for generating climate information
- **Unprecedented online access to information products:**
  - Satisfies the needs of many users
  - Overcomes (partly) the challenges of data access
- **Built capacity at NMHS and some user communities**

# ENACTS Countries and RCCs

Ethiopia  
Gambia  
Ghana  
Kenya  
Madagascar  
Mali  
Rwanda  
Senegal  
S. Sudan  
Somalia  
Tanzania  
Uganda  
Zambia  
Malawi  
Djibouti  
ICPAC  
AGRHYMET



## Outside Africa

Guyana  
Bangladesh

## Coming soon

Vietnam  
Colombia  
Guatemala



<http://iri.columbia.edu/resources/enacts>

**Thank You**

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