



Economic Commission
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African Development
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An Assessment of Africa's Climate Observing Networks and Data, Including Strategies for Rescuing of Climatic Data

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Outline

- Introduction
- African Climate Observation Networks and Data
- Coordinating Mechanisms
- Data Rescue and Strategies for Filling Gaps
- Role of New Investments and Initiatives
- Recommendations



Introduction

- In a number of African countries weather and climate observations started prior to their independence;
- The continent has always been referred to having poor meteorological observations network (density and coverage) and telecommunication (data exchange) ;
- African climate data Issues have been discussed in different meetings and venues such as those of WMO,GCOS and UNFCCC and others; and
- This paper addresses data issues those that ACPC can address through its programmes.

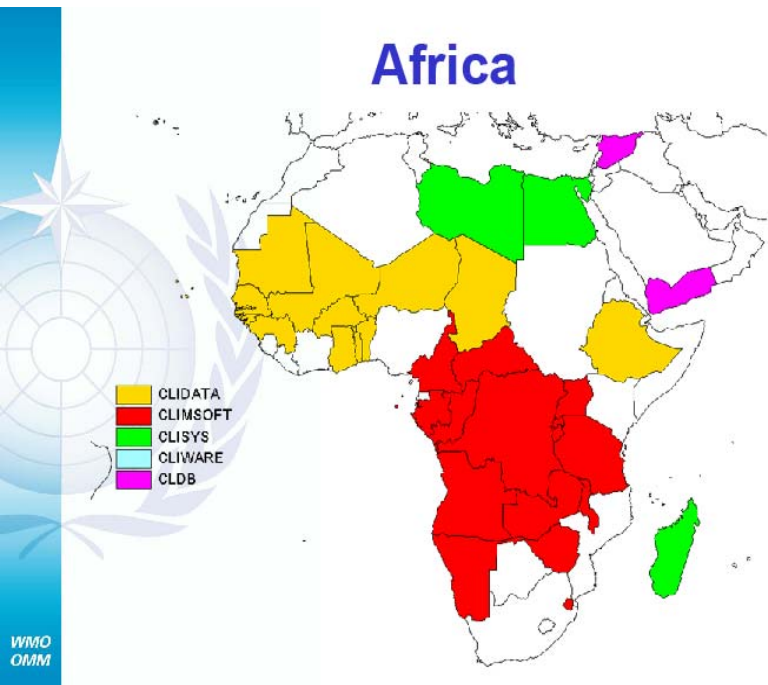
Situational Analysis of Climate Observations Network

**GCOS Surface Network (GSN)
stations reported from Nov.
2010 to April 2011**



- Calls for a need to improve the climate observations network have been made at relevant different venues;
- The WMO RBCN and RBSN for Africa is sometimes better covered than other continents but the spatial coverage of the network varies widely from country to country;
- This disparity and unevenness in national network coverage introduce bias to the data especially when using in studies, research and development activities;
- Less than 10% of data from NMHSs is reported to WMO and other channels;
- Effort be made to improve the infrastructure of stations, data archive and rescue, and communications network.

Availability and Need for Quality Controlled Data

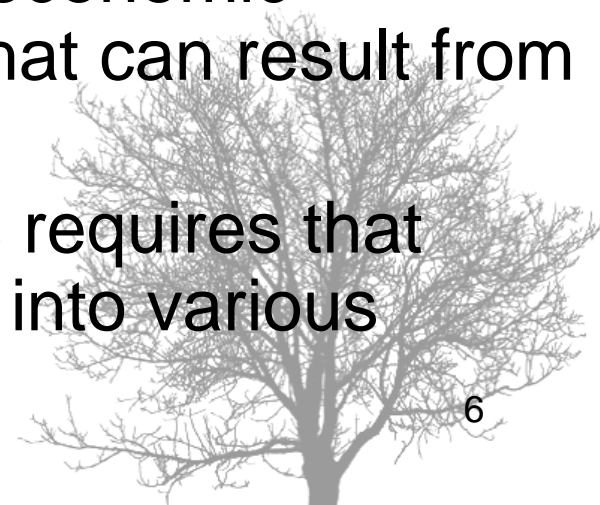


- Climate data are available at the NMHSs, regional institutions and others;
- Data is archived either in paper or soft copies;
- WMO with some partners have developed Climate Data Management Systems (CDMSs);
- African countries use different CDMSs and to some, maintaining them is a challenge;



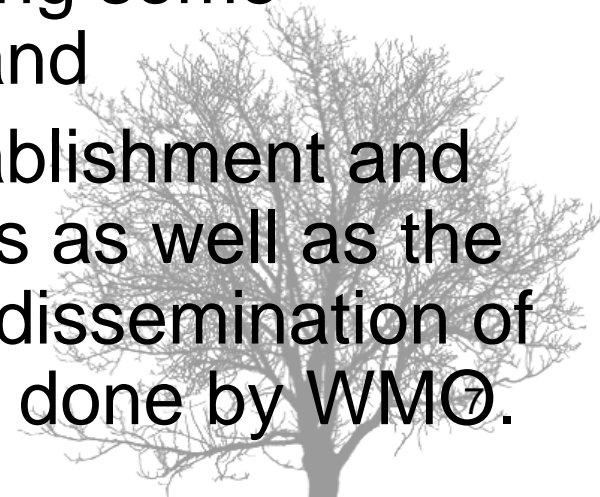
Availability and Need for Quality Controlled Data (Cont.)

- Modern data management systems minimize risk of losing climate data;
- Quality historic climate variability information, real-time monitoring and seasonal forecasting, have more value for economic and social development planning in Africa;
- Quality climate information is needed for planning and that enables climate risk to be incorporated routinely into development decisions
- Climate information helps prevent the economic setbacks and humanitarian disasters that can result from climate extremes; and
- Efficient application of climate services requires that climate information become integrated into various sectors' policies.



Coordination Mechanisms and Managing Climate Data

- Resolution 40 of WMO provides clear guidance on data sharing and exchange. WMO Member States have the obligation to share data and metadata with other members of WMO;
- Regional coordination for the collection, processing and archiving of climatological data is done between national and regional centres;
- At sub-regional and regional level there are centres that have also responsibilities of storing some climatological data and information; and
- International coordination for the establishment and maintenance of climatological stations as well as the collection, processing, archiving and dissemination of climatological data and information is done by WMO.



Data Rescue and Its Strategies

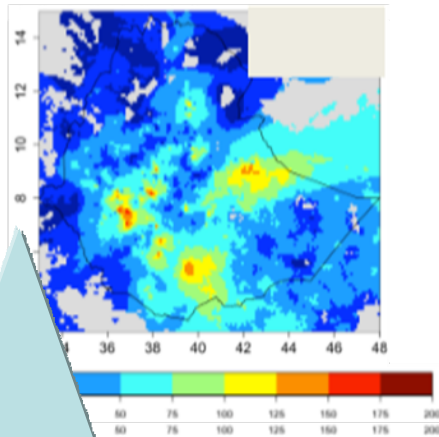
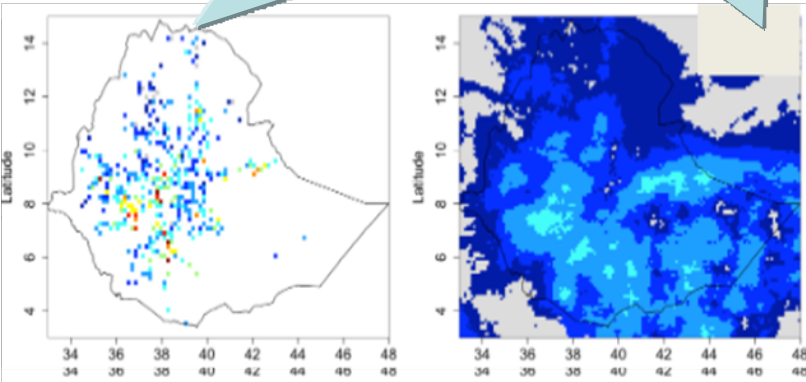


- Data rescue involves preserving data at risk of being lost due to deterioration of the medium and converting past and current data into computer compatible digital formats for easy access and use;
- Data rescue efforts have been undertaken by WMO for African climatological data (Belgium, DARE and NOAA Projects);
- Make inventory of data that have been rescued and that need to be rescued;
- Digitize data on available appropriate media.

Filling Climate Data Gaps

Observations

Sat. Est.

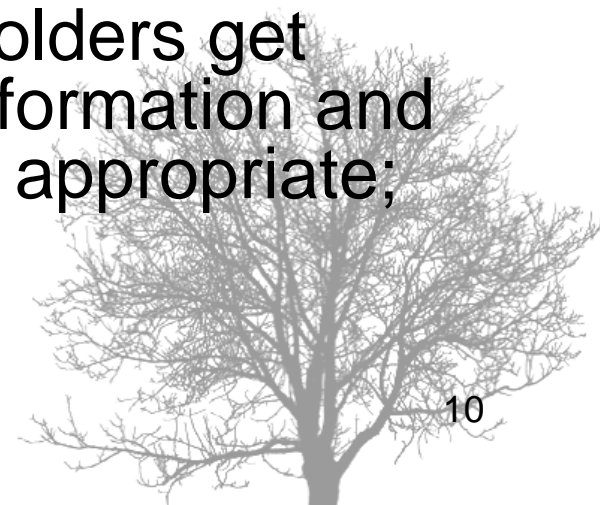


Merged data of observations and satellite rainfall estimates

- There are two types of data gaps - spatial and temporal;
- Both these gaps need to be filled for continuous climate data series;
- One approach is combining observations from all available meteorological stations with global products such as satellite proxies and climate model reanalysis data (Ethiopian merged rainfall example on the left); and
- The Ethiopian example be scaled up to other countries

Roles of New Investment and Initiative Including ACPC and ClimDev

- ACPC inform countries that climate information and products that are provided to policy makers need to be based on good climate data and good science;
- ACPC in collaboration with other stakeholders help in defining requirements for climate data for different applications and facilitate means of implementation;
- ACPC in partnership with other stakeholders get involved in the generation of climate information and products and data rescue activities as appropriate;



Roles of New Investment and Initiative Including ACPC and ClimDev (Cont.)

- ACPC help ClimDev and WMO to ensure that they meet their objectives of ensuring that the application of climate information and products is realized by many African countries;
- ACPC should encourage free sharing of data and information between countries and networking of countries on issues related to climate observations network and data; and
- ACPC should coordinate with sub-regional economic communities and countries and carryout advocacy on climate observations network and data, at the highest level.

RECOMMENDATIONS

- Climate data should be treated as public good and as much as possible disseminated to the public and international networks;
- ACPC in collaboration with other stakeholders work on modalities that would facilitate in reversing the deteriorating situation on climate observations network in Africa;
- The principles of a framework like the WMO GFCS would be well placed to coordinate climate data management and observations network across Africa;
- NHMSs should enter into partnerships with private sector and non-governmental institutions to improve their data observational networks

RECOMMENDATIONS (Cont.)

- ACPC should support the strengthening of Regional Climate Centres thus improving management of regional data banks and climate science;
- ACPC in collaboration with national governments and relevant regional and international organizations step-up efforts to build the capacities of NMHSs in terms of climate observations network, telecommunications facilities and climate services; and
- ACPC with other relevant institutions at national, regional and international levels should utilize the available African expertise in climate science.



How long should this situation be left to continue?

A technical officer at the central forecast office receiving synoptic data through telephone (Source: GMet)



THE END

ASANTENI KWA KUNISIKILIZA

THANK YOU FOR LISTENING

