



World Meteorological Organization

Weather • Climate • Water

# WMO Programmes in Africa in support of Early Warning

Roundtable Event on strengthening development of  
weather, climate and hydrology related EWS in Africa

20-21 May 2014  
Nairobi, Kenya



# Introduction

- WMO core business is Weather, Water and Climate Services and related Early Warning Systems and most of WMO programmatic activities are focused on this.
- WMO engages in project based activity generally in order to demonstrative new approaches, innovations and improvements in Service delivery in all of these areas.
- In Africa, the implementation of Core Programmes and Projects is at both national and regional levels. WMO generally has a strong regionalization focus with Regional Centres supporting National Level and especially those in lower state of capacity.



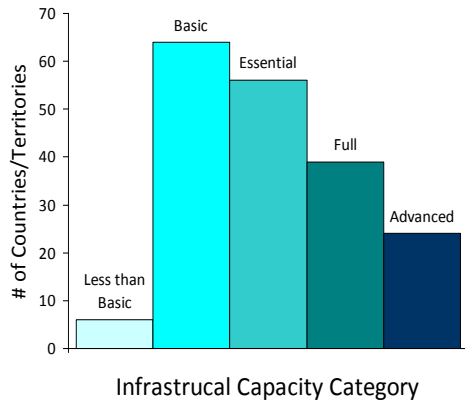
# WMO core business is Weather, Water and Climate Services and related Early Warning Systems

- **In Africa**
- African Ministerial Conference on Meteorology and Integrated African Strategy on Meteorology (Weather and Climate Services)
- Regional Specialized Meteorological Centres
- Regional Climate Centres
- National HydroMeteorological Services
- RA I – Regional Association Africa
- Regional Climate Outlook Fora
- Capacity Development Programme



# Where does it all start.....

*Infrastructural Capacities of Countries as of Aug 2010 to provide Basic, Essential, Full and Advanced Climate Services.*



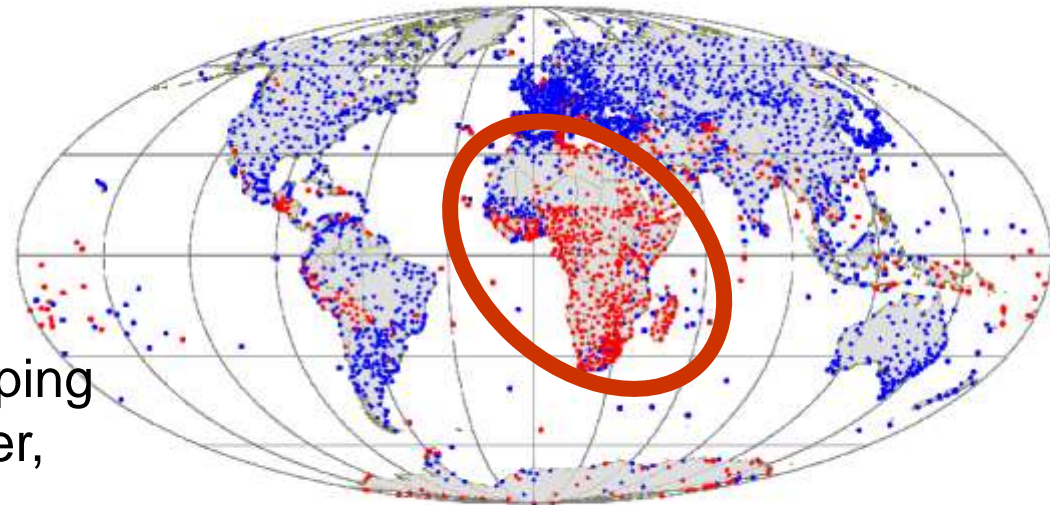
A key focus for WMO is Capacity Development of NMHS in developing countries to better deliver Weather, Water and Climate Services and related Early Warning Systems

- Many countries lack the infrastructural, technical, human and institutional capacities to provide high-quality climate services.

Availability of CLIMAT reports from RBCN stations

Monitoring period: 1 to 15 October 2011

(CLIMAT reports September 2011)



■ report received (2110)  
■ no report received (860)

The designations employed and the presentation of material in this chart do not imply the expression of any opinion whatsoever on the part of the Secretariat of the World Meteorological Organization concerning the legal status of any country.

WMO Secretariat



# Global/Regional Operational Network of WMO

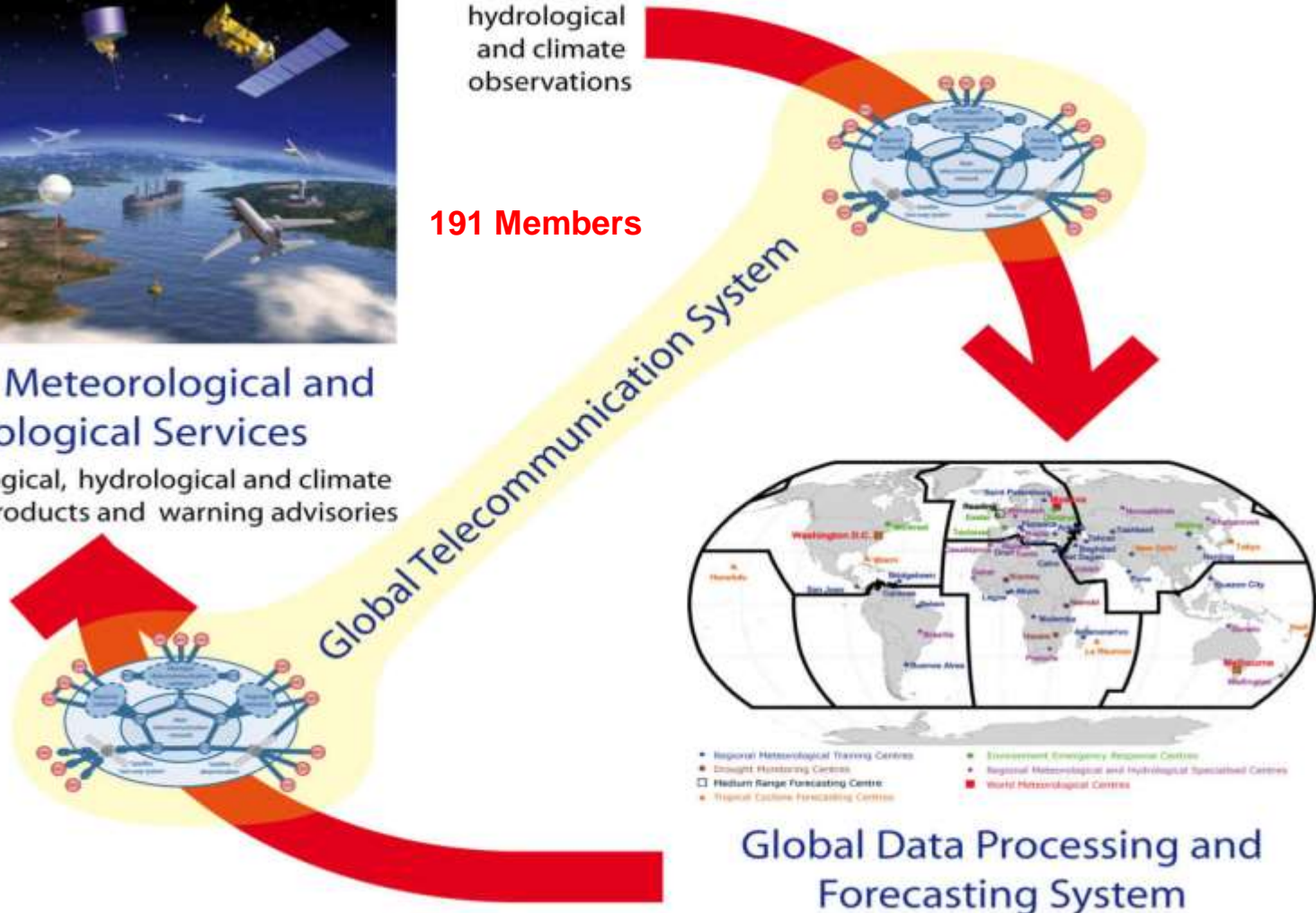


## National Meteorological and Hydrological Services

Meteorological, hydrological and climate value-added products and warning advisories

Meteorological, hydrological and climate observations

191 Members



- Regional Meteorological Training Centres
- Drought Monitoring Centres
- Medium Range Forecasting Centre
- Tropical Cyclone Forecasting Centres
- Environment Emergency Response Centres
- Regional Meteorological and Hydrological Specialized Centres
- World Meteorological Centres

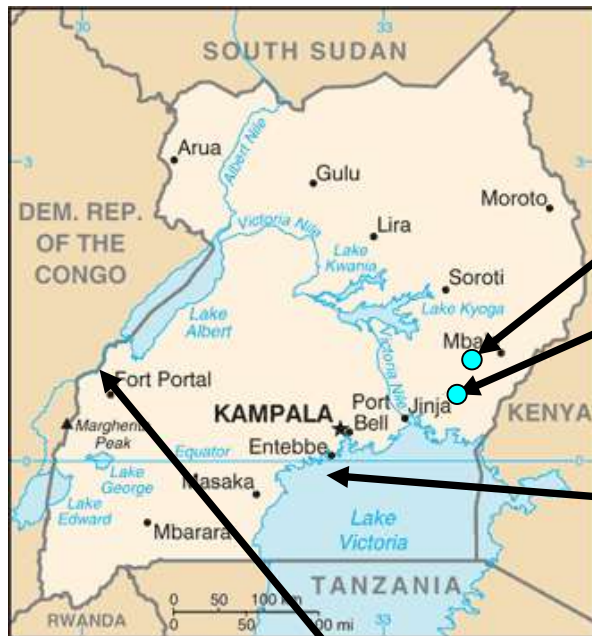
## Global Data Processing and Forecasting System



# Project Highlights in Africa

## Mobile Weather Alert (MWA): Uganda & Tanzania

- On the application of mobile weather alerts for fishermen and farmers around Lake Victoria



Kampala (HQ)



Entebbe  
(Forecasting Office)

fishers

Sesse Islands (Severe Weather  
Warning Service for fishermen)

Kasese District (Seasonal climate forecasts  
and agricultural advisories for farmers)

farmers



# Communication via mobile phone

fishers

farmers

Colour coding		Green	Yellow	Orange	Red
Hazard thresholds	Mean Wind	0 – 5 KT	6 – 10 KT	11 – 20 KT	Over 20 KT
	Wind gusts	5 – 10 KT	11 – 20 KT	21 – 30 KT	Over 30 KT
	Thunderstorms	Light	Moderate	Strong	Severe
	Visibility	> 1 Km	500 – 1000 m	100 – 500 m	< 50 m
Response Level		Appropriate individual response under BAU.	Some multi-agency response but mostly BAU.	Multi-agency response needed.	Multi-agency Strategic response needed, mutual aid necessary perhaps national co-ordination.
Implications for users of Lake Victoria		Business as Usual (BAU)	Forecast weather may lead to hazardous conditions. Be aware	Weather conditions are likely to lead to hazardous conditions. Be prepared should the situation worsen	Weather conditions will lead to life threatening conditions on the Lake. Take action.
Public Advice		Nil	Be Aware	Be Prepared	Take Action



1,000 fishermen and traders from Ssese Islands have registered for the mobile alert service and receive a forecast every morning around 4am



- **Improvement of Agro-meteorological information for small-scale agricultural production in Ethiopia**
  - Tigray region, work starting in SNNPR in 2015.
  - Capacity building of Regional Branch Offices of NMAE.
  - Increasing dissemination channels for weather information (radio and mobile phones).
  
- Pilot Projects for the establishment of the **Frameworks for Climate Services at National Level** in Africa: Burkina Faso, Mali, Niger, Senegal, Chad



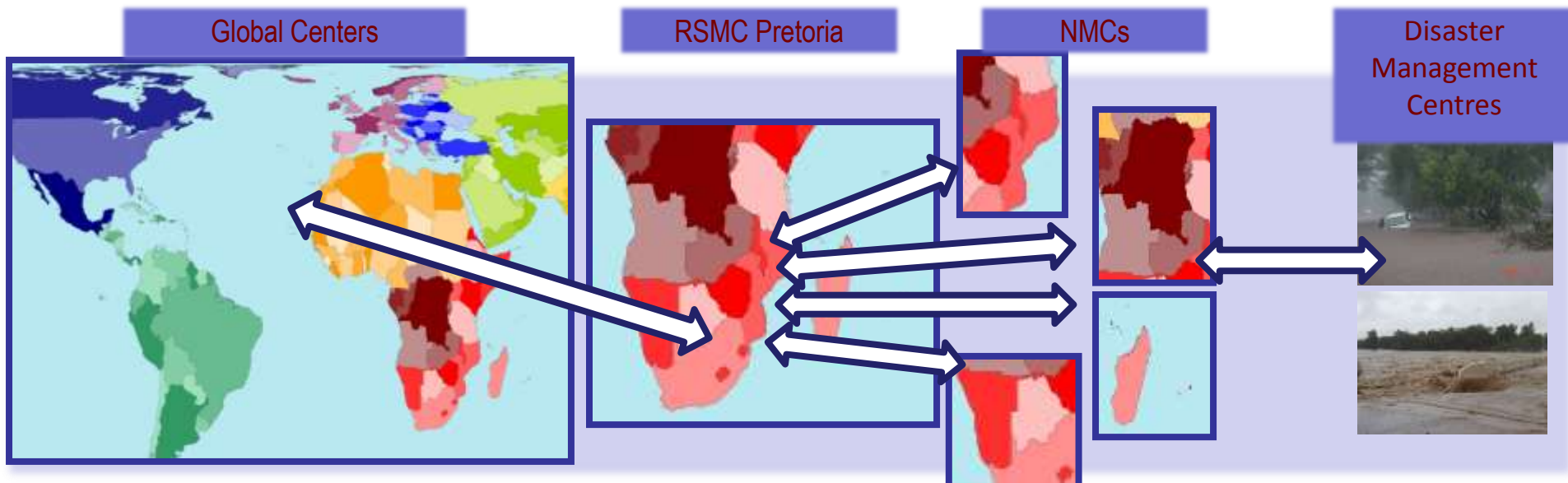




# Project Highlights in Africa (Cont'd)

- **Regional Implementation**
- **IGAD HYCOS Project**
- **Severe Weather Forecasting Demonstration Programme (SWFDP) in East and Southern Africa:** Assisting countries to reduce the technology gap in weather forecasting to support operational severe weather forecasting for multi-hazard EWS

## SWFDP Cascading Forecasting Process





# Project support to the provision of agro meteorological information in 17 West African countries – METAGRI (Norway)

- **GOAL:** To make farmers become more self-resilient in dealing with weather and climate services
- **Outputs**
- Around 146 Roving Seminars on weather and climate services held in 15 West African countries from July to September 2012
- Over 5,700 subsistence farmers have been trained, including 1,000 rural women
- 3,000 rain gauges distributed to 2838 villages
- Reduced re-sowing rate by 35% and increased crop yields average by 20 to 25%





# GFCS Disaster Risk Reduction Project in Africa 2011-2015 (Norway)

- **Operationalizing the Global Framework for Climate Services** in Southern, East and West Africa – support for the GFCS office, through which consultations were held in Belize, Burkina Faso, Chad, Mali, Niger, Senegal and South Africa to establish frameworks for climate services at national level.
- **Supporting the African Ministerial Conference on Meteorology (AMCOMET)** as a high-level mechanism for the strategic development of weather and climate services in Africa
- **Strengthening the capacity to weather forecasting** and the delivery of warning services
- Also supporting MetAgri and SWFDP



# GFCS Adaptation Programme in Africa (2014 – 2016) in Malawi and Tanzania (Norway)

- **Climate services for DRR, agriculture/food security and health** sectors to demonstrate the effectiveness of the GFCS approach to ensure that climate services are tailored to the practical needs of the user community.
- Development and use of climate services through further stimulation and support of a 2-way dialogue process in-country
- Effective interaction between selected global/regional processes and national and district level policies and practices – Building on existing work implemented by the partners in country.
- Target districts identified in both countries (Longido & Kiteto in Tanzania, Zomba, Nsanje, Lilongwe & Chikwawa in Malawi)
- Role of research partners to capture and disseminate learning – Programme seen as a model for how agencies can work together to deliver Climate Services at scale.

## Partners







# Future Projects

- Plans to scale up collaborations under GFCS umbrella:

- FAO: Farmer/Climate Field Schools



- IFRC: EWS around Lake Victoria



International Federation  
of Red Cross and Red Crescent Societies

- Improvement of climate prediction and analysis capability for MeteoRwanda funded by Korea Met Agency
  - a) Reinforcement of computing facilities,
  - (b) Further capacity development of MeteoRw to provide user oriented weather and climate product, and
  - (c) Improving the capacity of stakeholders to access to, take up, utilize and demand weather and climate information for decision making at national level
- Improvement of climate prediction and analysis capability of Burundi Meteorological Service funded by Korea Met Agency





# Conclusion and Recommendations

- Need for coordination across different projects and programmes addressing weather and climate services for EWS in Africa, in the context of GFCS implementation by various partners
- Important role of Regional Economic Communities (RECs) and Regional Climate Centers (RCCs) as key implementing partners in Africa.
- More is expected to come with the Implementation Plan of the Integrated African Strategy on Meteorology (Weather and Climate Services).
- Need to establish a framework for sharing information in order to complement existing efforts and not duplicate





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# Thank you for your attention

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