

The importance of nowcasting in Africa – using satellite and other data sources



WMO OMM

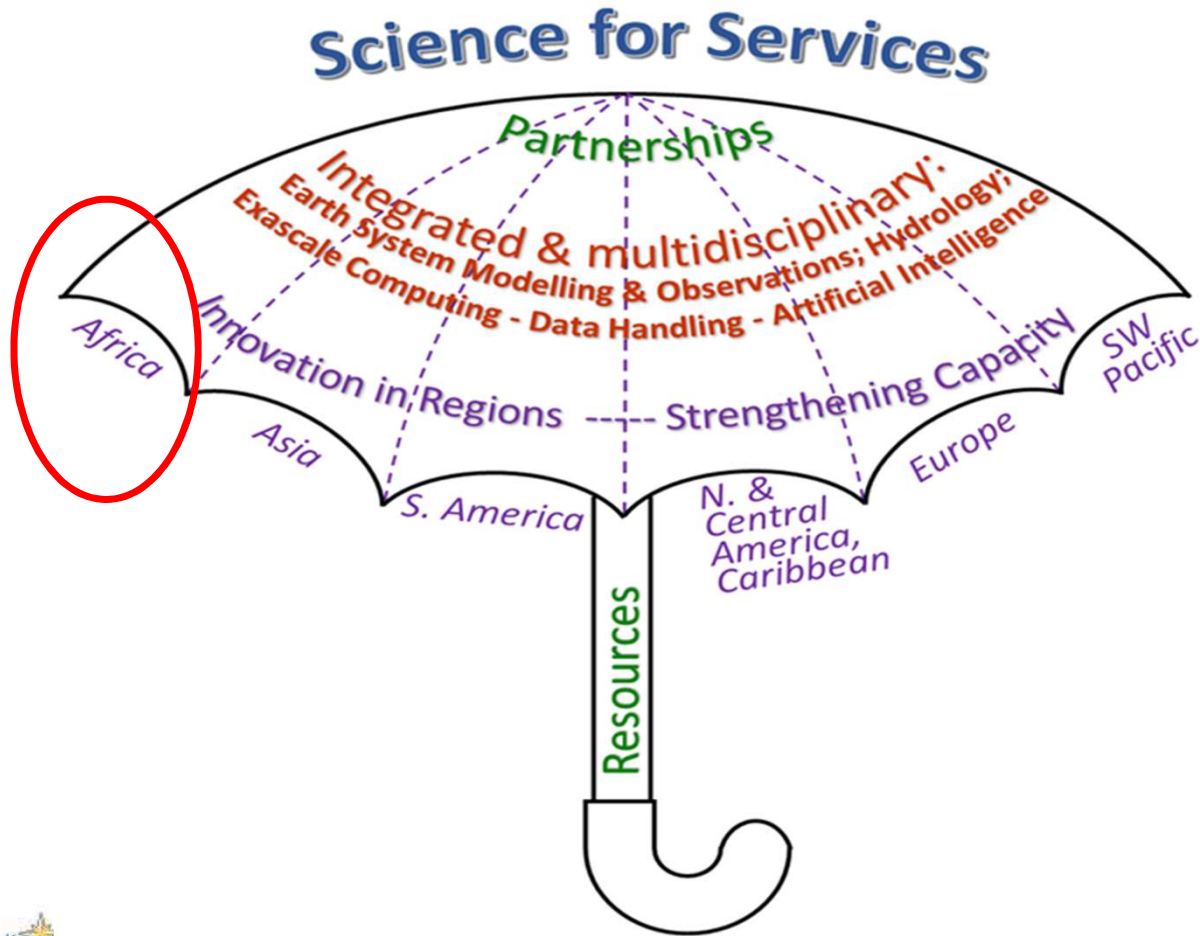
World Meteorological Organization

Organisation météorologique mondiale

Estelle de Coning,
Head of World Weather Research Programme in WMO
February 2022



WMO Research Board vision



The Research Board on Weather, Climate, Water and the Environment translates the strategic aims of WMO and decisions of Executive Council and Congress into **overarching research priorities and ensures the implementation** and coordination of the research programmes to achieve these priorities.

WWRP

**WORLD WEATHER
RESEARCH PROGRAMME**

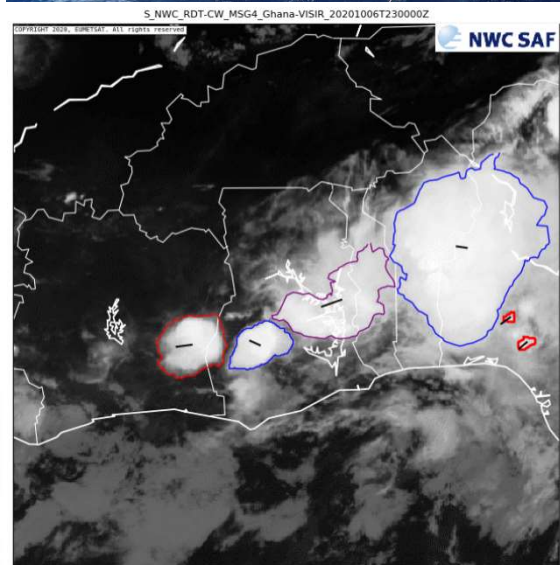
WMO's mechanism to foster and progress cooperative research for improved weather and environmental prediction services from **minutes to months**



WMO OMM



Using MSG data in Africa

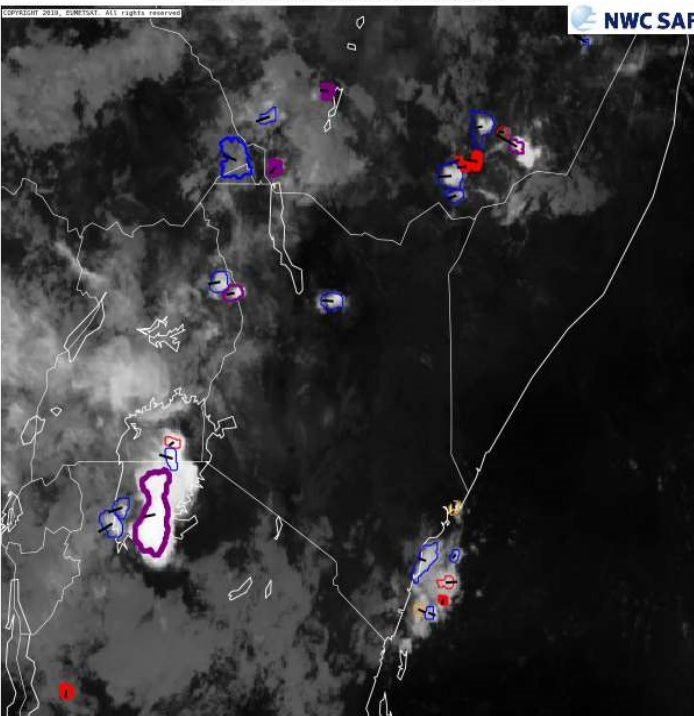


NWC GEO RDT-CW

- GEO Satellite products (MSG) for nowcasting are very good alternatives in regions where there is no/limited radar coverage
- MSG provides data/images every 15 min
- EUMETSAT Nowcasting Satellite Application Facility – led by AEMET
- WMO’s **High Impact Weather Lake System (HIGHWAY)** project, and **GCRF African SWIFT**, have added momentum in the implementation and use of satellite data for **nowcasting** and forecasting purposes

The World Weather Research Programme – HIGH impact Weather IAke sYstem (HIGHWAY) Project

S_NWC_RDT-CW_MSG4_Kenya-VISIR_20191028T034500Z



- The HIGHWAY Project helped Kenya, Tanzania and Uganda to design and communicate new/improved EWS for **improved decision making for artisanal fishermen operating from small open canoes.**
- In each country, these forecasts were **co-produced with help from working fishermen, radio journalists and local government representatives.** This ensured that the weather information was **relevant to user needs and easy to understand.** The radio stations were **keen to broadcast the information in local languages.**



- **HIGHWAY project led to a 30% reduction in weather-related deaths on the Lake.**

GCRF Africa SWIFT outcomes

- **Installation and operationalisation of NWC-SAF**
- **Build capacity and capability** through various **Testbeds**.
 - *Significant potential for NWC-SAF use and tailored product development to spread **throughout the continent**, if the access and training and collaboration activities across Africa, can be maintained.*
 - **Support and coordination from European organisations, including the WMO, EUMETSAT and NWC-SAF, plays an integral role.**
 - *This could result in thousands of lives saved from high impact weather across Africa and economic benefits amounting to hundreds of millions of dollars per year.*



MTG and African Meteorological Satellite Application Facility (AMSAF)

- MTG will provide data every 10 minutes – adding a Lightning Imager!
- Future possibilities for AFRICA for forecasting and nowcasting!!
- Africa expressed the need to capacitate Members to prepare for the products from the **(MTG)** under the umbrella of AMCOMET and in partnership with AUC and EUMETSAT through increasing support to the **Africa Meteorological Satellite Applications Facility (AMSAF)** and enhancing facilities for polar orbiting satellite data reception
- **Abidjan Declaration** signed on the **24 September 2018** to encourage and support the strengthening of African capacities and to ensure a smooth transition to MTG



The future: Optimal use of satellite data for the provision of nowcasting services in Africa

- New initiative with a vision: Supporting the implementation of nowcasting services in Africa that are timely, verified, and usable, through delivery of satellite data to African NMHSs, **building on AMSAF concept for nowcasting**
- African NMHS buy-in and co-design is thus crucial for this endeavor to move forward and succeed.
- *Guidelines for Satellite based Nowcasting in Africa under development*
- *Funding sources are being explored*
- **Collaboration**: African National Meteorological and Hydrological Services (NMHSs), EUMETSAT and its Nowcasting Satellite Applications Facility (NWC-SAF), WMO, experts and academia.
- **We look forward to an exciting future for nowcasting and forecasting applications in Africa!**

SEDAI FRAMEWORK FOR DISASTER RISK REDUCTION 2015-2030

SUSTAINABLE DEVELOPMENT GOALS



PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21-CMP11



WEATHER CLIMATE WATER

TEMPS CLIMAT EAU



WMO OMM

World Meteorological Organization

Organisation météorologique mondiale

Thank you