

International coordination for capacity development in satellite-based nowcasting for Africa



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World Meteorological Organization

Organisation météorologique mondiale

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Weather Research Programme in WMO

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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**



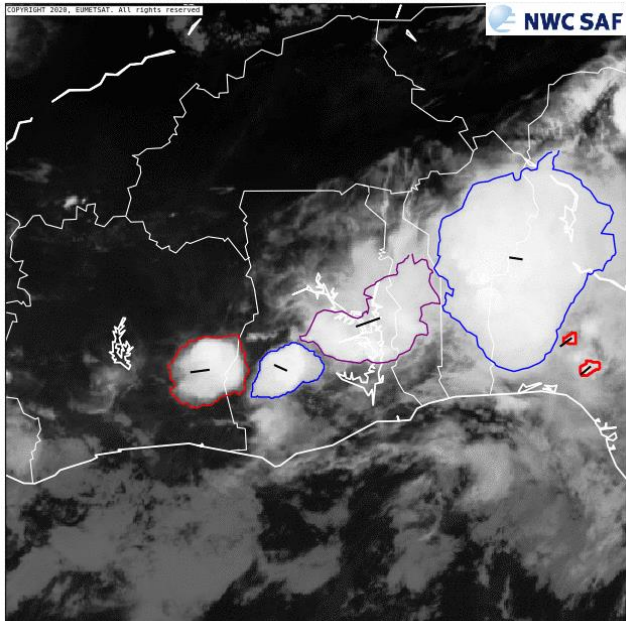
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Using MSG data in Africa



S_NWC_RDT-CW_MSG4_Ghana-VISIR_20201006T230000Z



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

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



SENDAI FRAMEWORK

FOR DISASTER RISK REDUCTION 2015-2030

SUSTAINABLE DEVELOPMENT GOALS



PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21-CMP11

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.



Guidelines for Nowcasting Techniques

2017 edition



WORLD
METEOROLOGICAL
ORGANIZATION

WMO-No. 1198

WEATHER CLIMATE WATER

WMO Satellite-Based Guidelines for Nowcasting in Africa

The WMO Guidelines will take a cross-continental capacity-development approach, building on momentum that has developed in the last few years.

The guidelines will present the pros and cons of different nowcasting approaches, and direct NMHSs to resources, key skills and capacity needed to make nowcasting BAU.

Co-production of nowcasting services has begun through project-based initiatives, such as HIGHWAY and SWIFT, which will be advocated for within the guidelines.

Funding is being sought from new programmes investing in climate adaptation in Africa with the aim of developing capacity building activities and ultimately, sustainable nowcasting services across Africa

WMO Satellite-Based Guidelines for Nowcasting in Africa

Contents:

1. Purpose of the guidelines
2. Background to the initiative
3. Observations
4. Essential operational data supply
5. Nowcasting algorithms and methods
6. Operational services
7. Capacity development and training
8. Towards regional and national service sustainability

The new guidelines can enable African NMHSs to sustainably build nowcasting services specific to their regions and users

We look forward to an exciting future for nowcasting and forecasting applications in Africa!



Thank you

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