



Visite de l'ACMAD par S.E l'Ambassadeur de l'Italie

Ongoing Climate Services Activities

Préparé par:

ACMAD Team

Présenté par :

Dr Andre KAMGA FOAMOUHOUE
Director General

Niamey-Niger 09 Janvier 2024

VISION FOR 2030

An African continent where all nations are benefiting from a **world class operational continental meteorological centre** to become *resilient to extremes events and empowered to support their sustainable development* with better meteorological services

ACMAD'S MISSION

Created through **Resolution 540** of the UNECA Conference of Ministers in April 1985 following the droughts of the 70s and 80s, ACMAD is established in Niamey-Niger since October 1992 to act as:

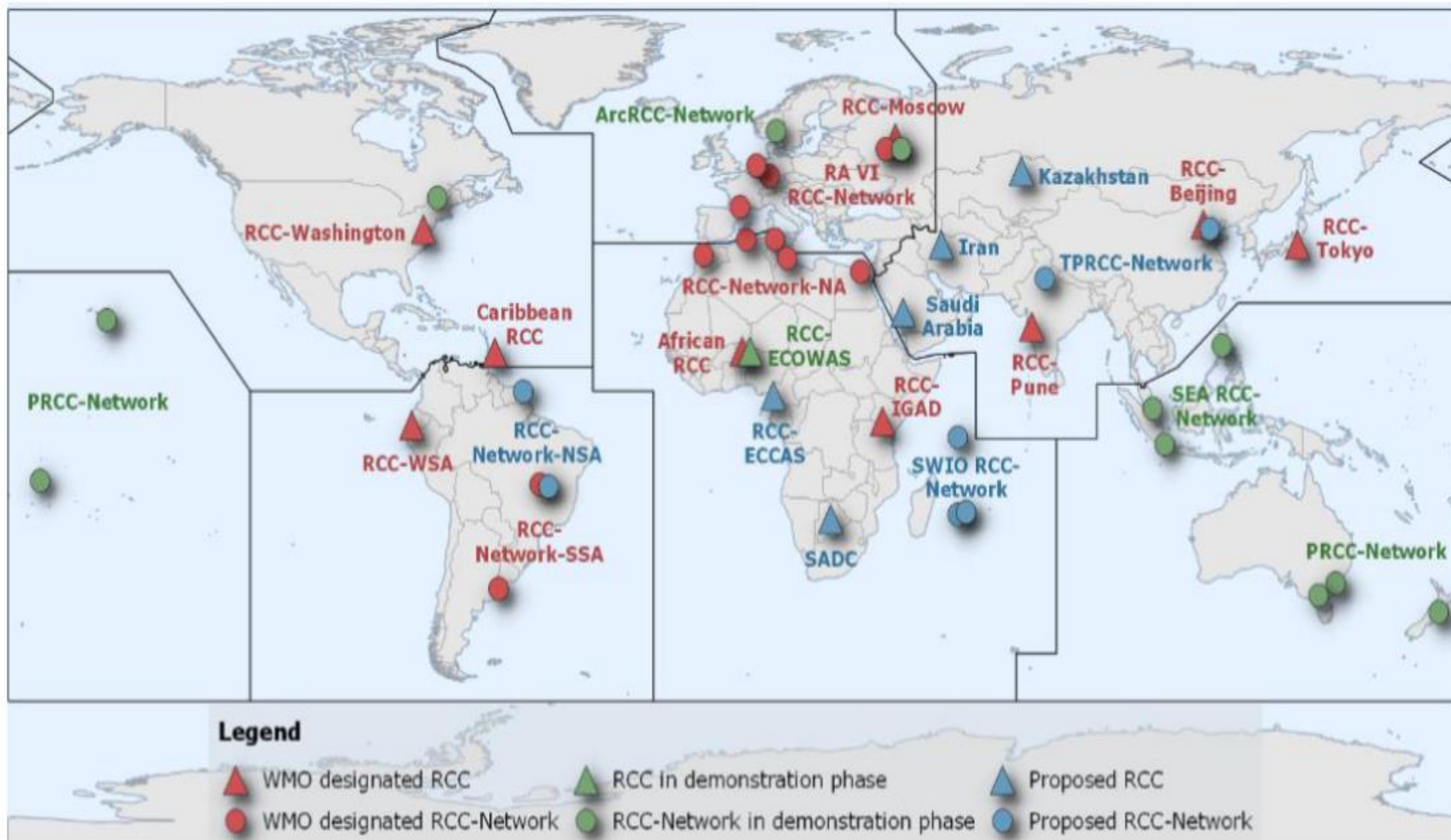
Continental Weather and Climate Watch Centre for Africa with monitoring, forecasting and early warning for droughts, floods, tropical cyclones and other extreme events as functions..

The continental **Climate Watch Centre** was achieved with ACMAD designated by the World Meteorological Organization (WMO) Congress after a successful demonstration phase as a Regional Climate Centre for all Africa in **May 2015**.

The Continental **Weather Watch Centre** was achieved with the Continental MultiHazards Advisory Centre inaugurated at ACMAD providing contributions to disaster situation reports and continental watches to the situation room operations at the African Union Commission Headquarters in Addis Ababa.

Institution of excellence for the Applications of meteorology for sustainable development with **capacity building, methods, tools and products development, contribution to global weather and climate programs, promotion of database, research and innovation as functions**

COORDINATION DES CENTRES REGIONAUX CLIMATIQUES Depuis 2015





CENTRE CONTINENTAL D'AVERTISSEMENT POUR LES PHENOMENES DANGEREUX OPERATIONNEL DEPUIS OCTOBRE 2022.



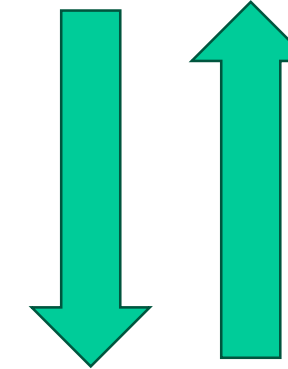


AMHEWAS Disaster Situation Room Addis Ababa

African Multi-Hazard Advisory Centre
Niamey



ACMAD generates regular continental hazard and disaster situation reports, continental climate trends, and impact-based advisories.



AUC trains Member States and issues advisories through twice weekly “Continental Watch” bulletins and monthly disaster outlooks. Subregional situation rooms feed data to the continental level.

Disaster Operation Centre
Abuja



Disaster Situation Room
Douala



Humanitarian and Emergency
Operations Centre
Nacala



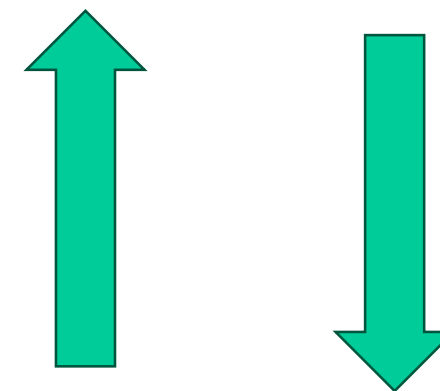
Disaster Operations Centre
Nairobi



ICPAC

National situation rooms issue national early warnings, coordinate early and anticipatory actions, and feed data to the continental system through the sub-regional situation rooms

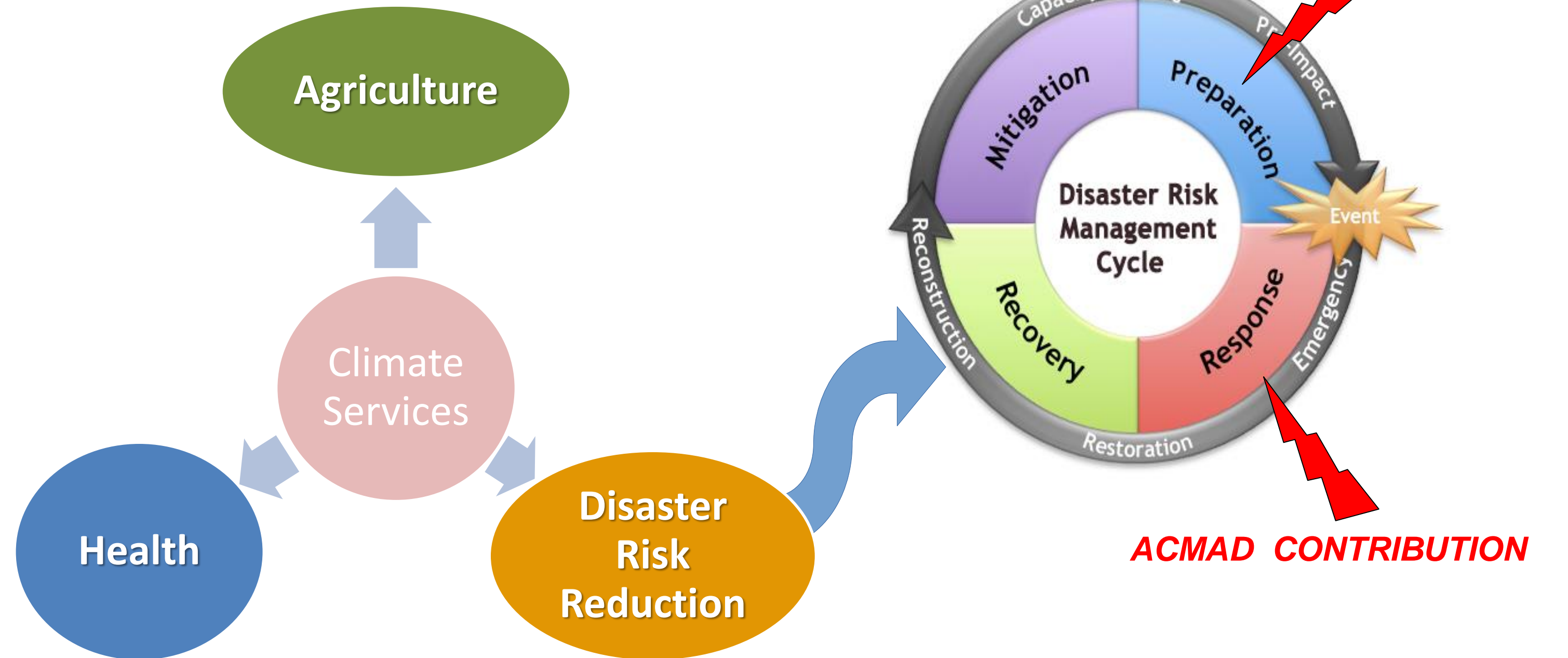
National Situation Rooms



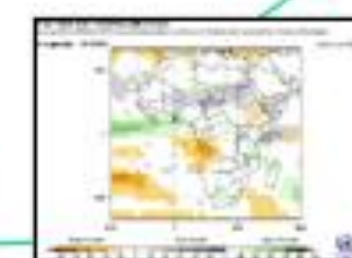
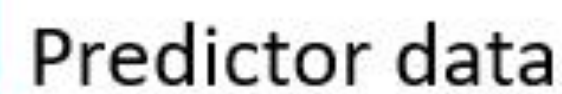
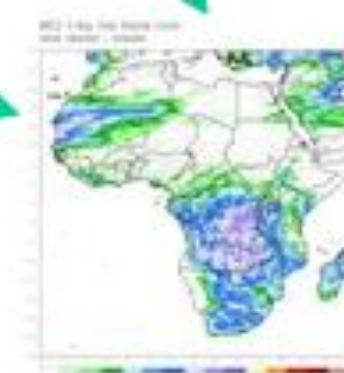
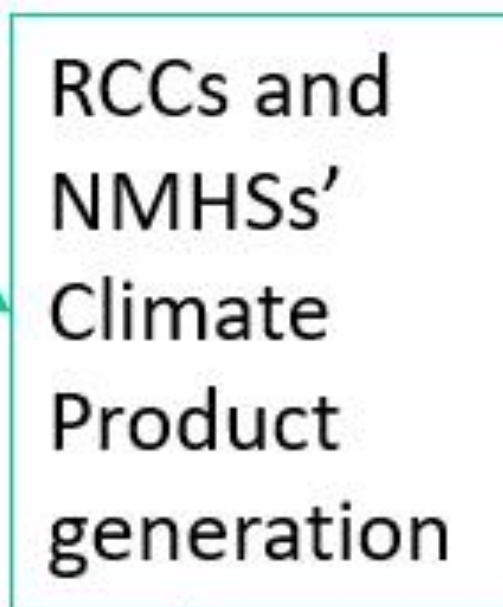
Subregional situation rooms provide hazard information and bulletins as well as capacity support for early warning and anticipatory action to the national situation rooms

Provision of climate information

Climate Services: ACMAD Priority Areas



ACMAD provide Climate services tailored with significant weather and climate phenomena, related hazards, potentials impacts , responses measures

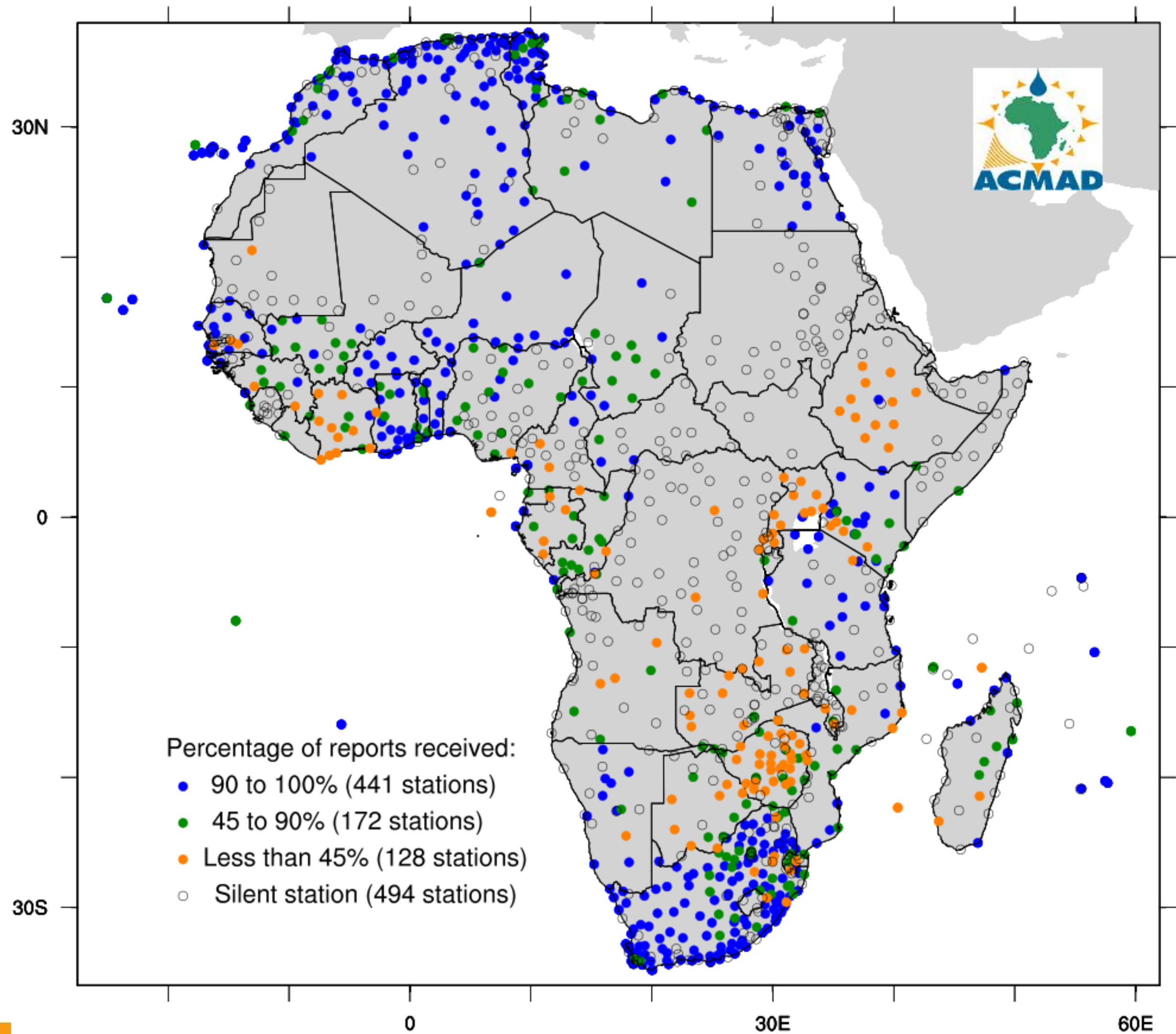


Online Seasonal Forecast



SOURCE DE DONNEES

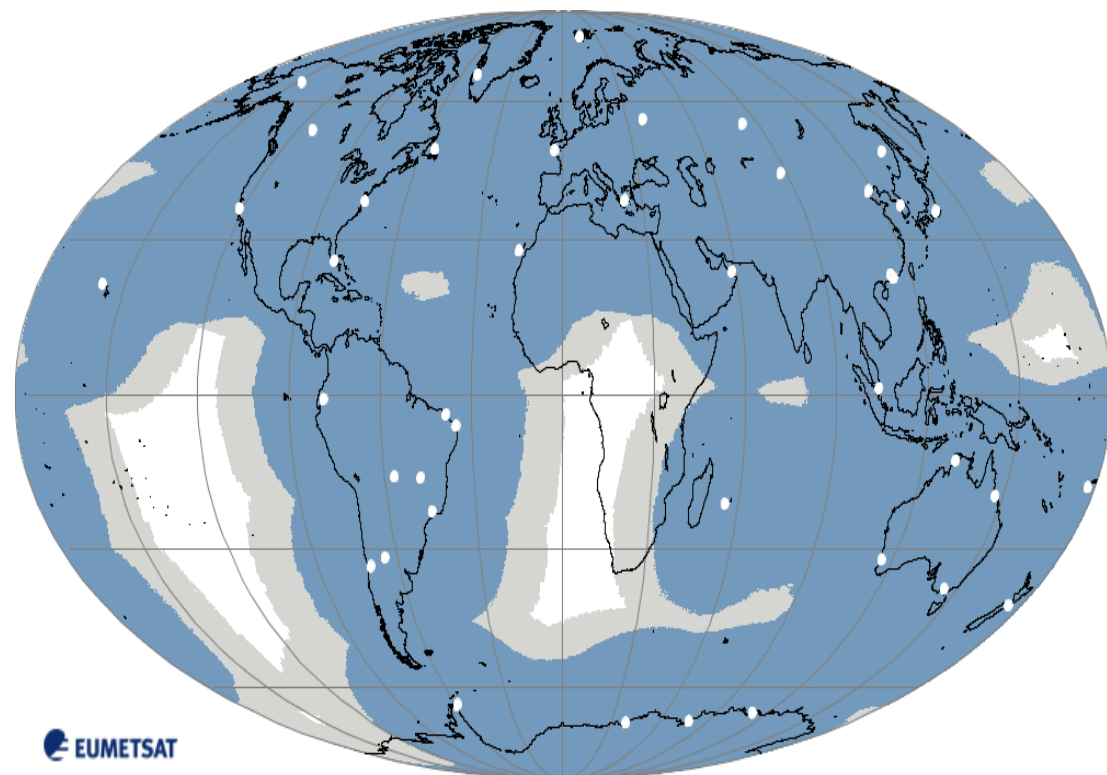
Monthly monitoring of SYNOP reports for November-2023



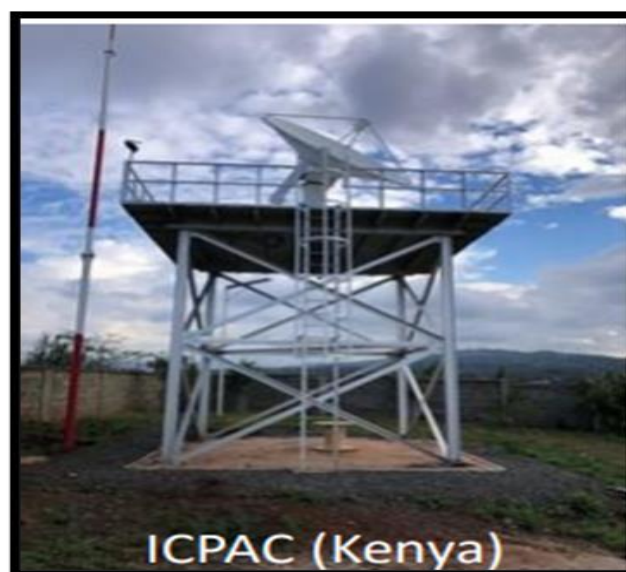
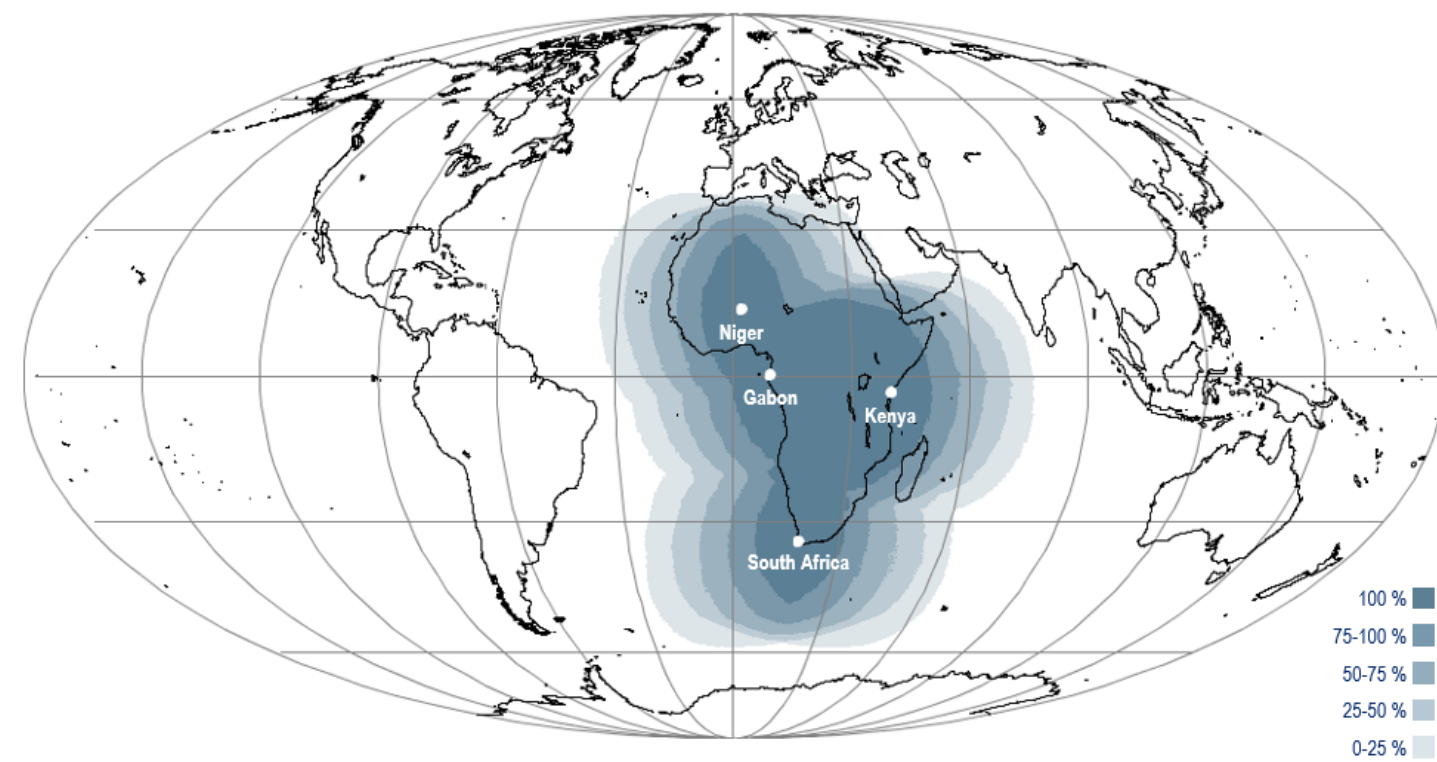


SOURCE DE DONNEES

BEFORE

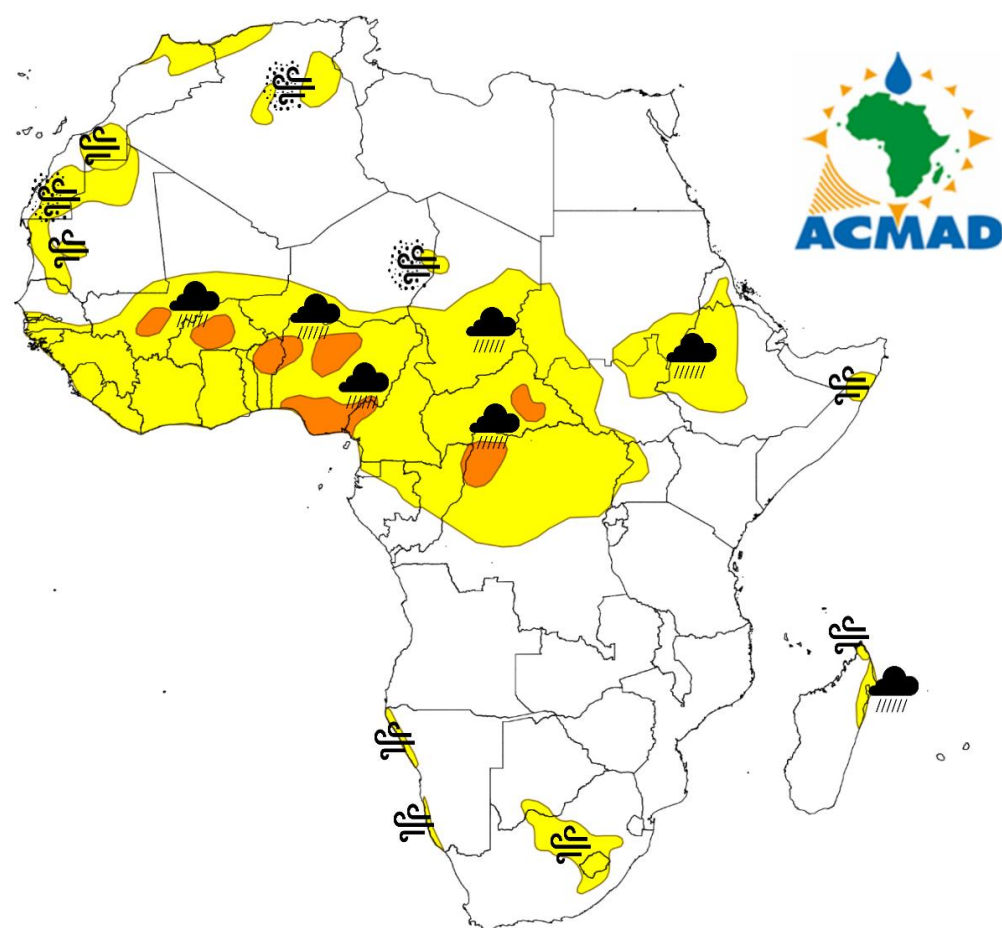


AFTER



PRODUITS & SERVICES





Seasonal	Monthly	1-10days
Planning	Monitoring and plan review	Action
1	Short range weather forecasting (1-5 days)	
	<ul style="list-style-type: none"> Support to Countries Sahel medium range forecast 7-10 days (during the monsoon season) 	
2	Medium range weather forecasting (7-10 days) ; Sahel medium range forecast 7-10 days (during the monsoon season)	
3	Seasonal rainfall predictions At Continental Level : - Provide consensus forecast for Regional Climate Outlook Forums	
5	Climate Monitoring Bulletins	
	<ul style="list-style-type: none"> Ten Days Climate Bulletin Monthly Bulletin 	
6	Specific Bulletins	
	<ul style="list-style-type: none"> Climate and Health Weekly Rainfall forecast 	



MULTI-HAZARD OUTLOOK

Validity: 2023-09-02

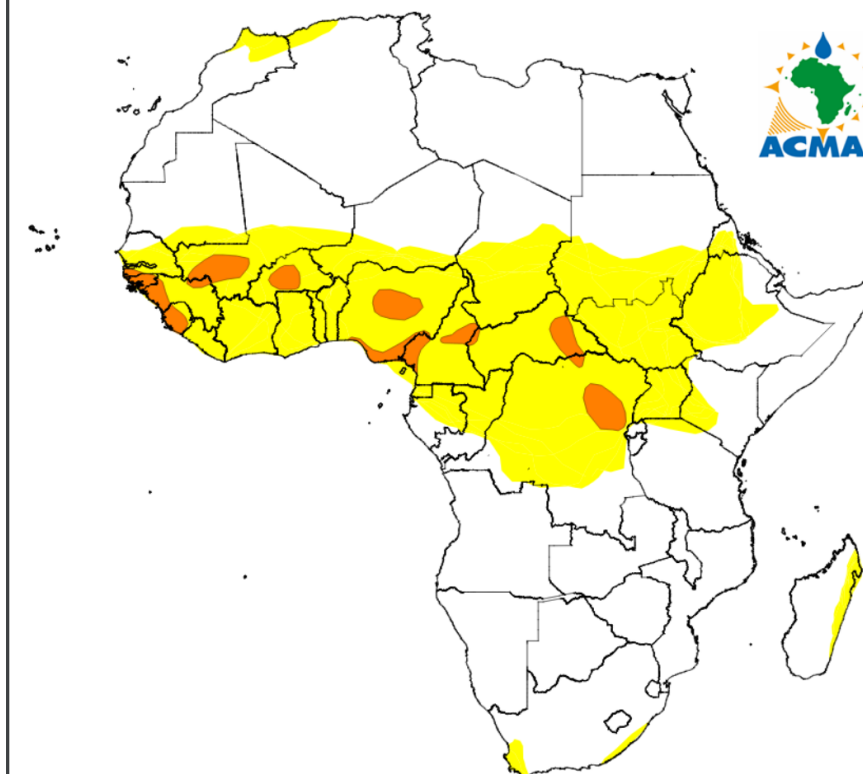
issued on 2023-08-31

 Rain	 Wind	 Dust	 Meningitis
Very heavy >100mm	Very strong >80kmh ⁻¹	Very heavy >1000µg m ⁻³	Very likely
Heavy 50-100mm	Strong >65kmh ⁻¹	Heavy >600µg m ⁻³	Likely
Moderate 10 - 49mm	Moderate >50kmh ⁻¹	Moderate >400µg m ⁻³	Less likely
Light 1 - 10mm	Light <50kmh ⁻¹	Light <200µg m ⁻³	

Valid From September 1 to 5, 2023

Issued on August 31, 2023

HIGHLIGHT: Heavy rainfall is expected in Senegal, Guinea Bissau, Guinea, Sierra Leone, Mali, Burkina Faso, Nigeria, Cameroon, C.A.R and D.R.C



	Phenomenon	Hazard	Potentials Impacts	DRM Measures / Advices
	In next 5 days accumulate d rainfall (50-100mm) is likely,	Moderate rainfall, flash flood, riverine flooding, landslides, soil erosion and lightning likely	Displacements of people due to floods, outbreak of water borne diseases, damage of infrastructures (roads, bridges, ...)	DRM authorities to keep informed about the development of the meteorological situation and raise awareness, taking action is more likely, the situation needs to be monitored closely with NHMSs
	In next 5 days accumulate d rainfall (100 – 150mm) is very likely,	Heavy rainfall, flash flood, riverine flooding, landslides, soil erosion and lightning, strong winds,	Displacements of people due to floods, outbreak of water borne diseases, damage of infrastructures (roads, bridges, ...)	Update Flood contingency plans, Improve water management in reservoirs and dams, DRM authorities be ready to take adequate actions, DRM to be continuously in touch with NHMSs to be informed of the detailed expected meteorological conditions.
	In next 5 days accumulate d rainfall (>150mm) is very likely,	Extreme heavy precipitation, flash flood, riverine flooding, landslides, soil erosion and lightning, strong winds, severe thunderstorms	Loss of lives, Injuries, Displacements of people due to floods, outbreak of water borne diseases, damage of infrastructures (roads, bridges, ...)	Civil Protection service and DRM authorities to activate contingency plan for disaster preparedness and emergency response (awareness, assistance to victims, search & rescue operations), and be in close touch with NHMS for further accuracy at the national level.

Disclaimer: The presentation of country boundaries on the map does not imply any opinion whatsoever on the part of ACMAD concerning the legal status of any country, territory or area, or concerning the delimitation of frontiers or boundaries.



Algeria – Deadly Flash Floods Following Heavy Rain in North West

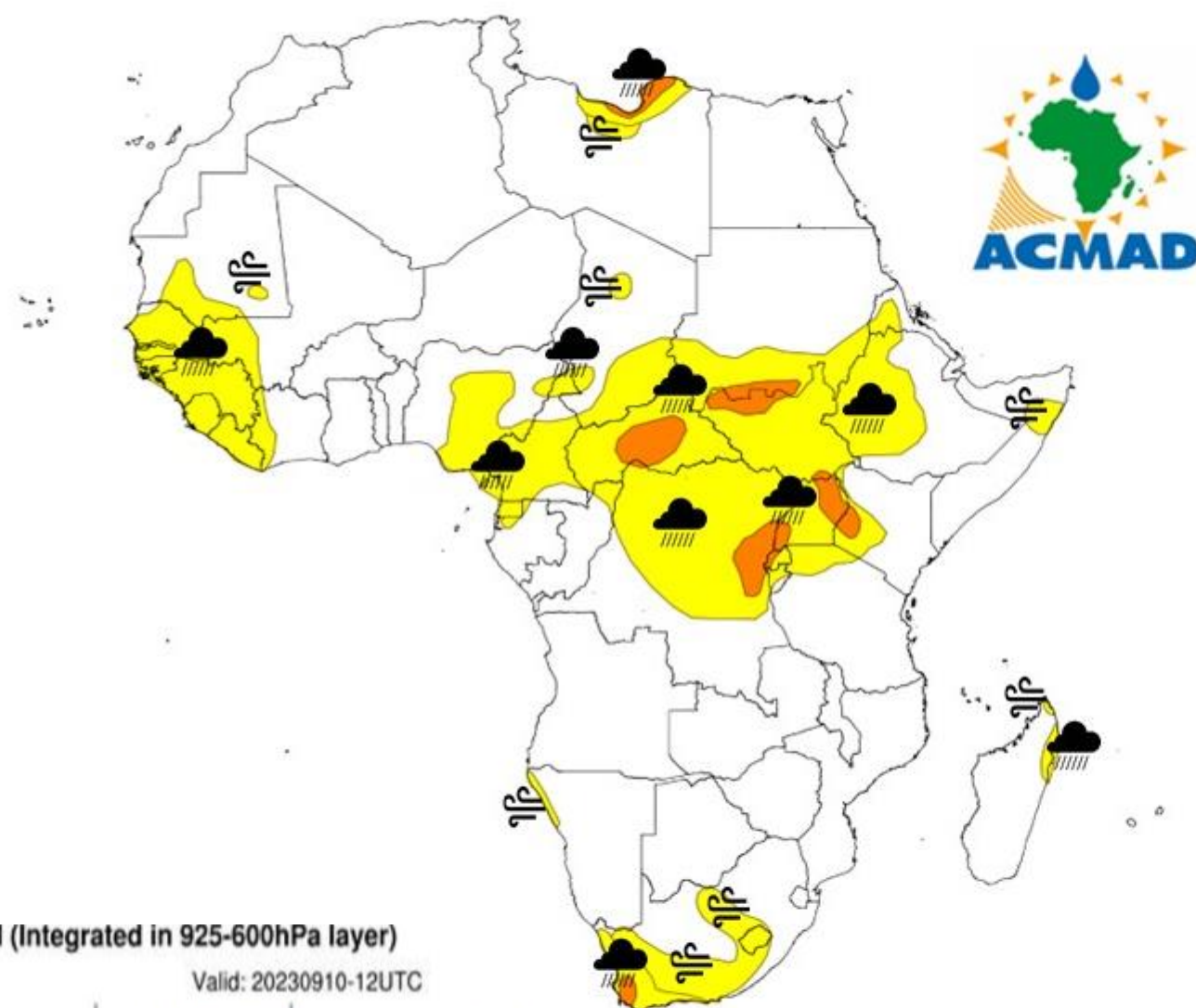
4 SEPTEMBER, 2023

Severe flash flooding swept through areas of northwester Algeria after heavy rainfall from 02 to 03 September 2023. Authorities report at least 8 people have lost their lives as a...

<https://floodlist.com/africa>



PRODUITS POUR ACTION ANTICIPATOIRE cas de Libya : Cyclone Daniel du 04 au 10 Septembre 2023



MULTI-HAZARD OUTLOOK

Validity: 2023-09-10

issued on 2023-09-07

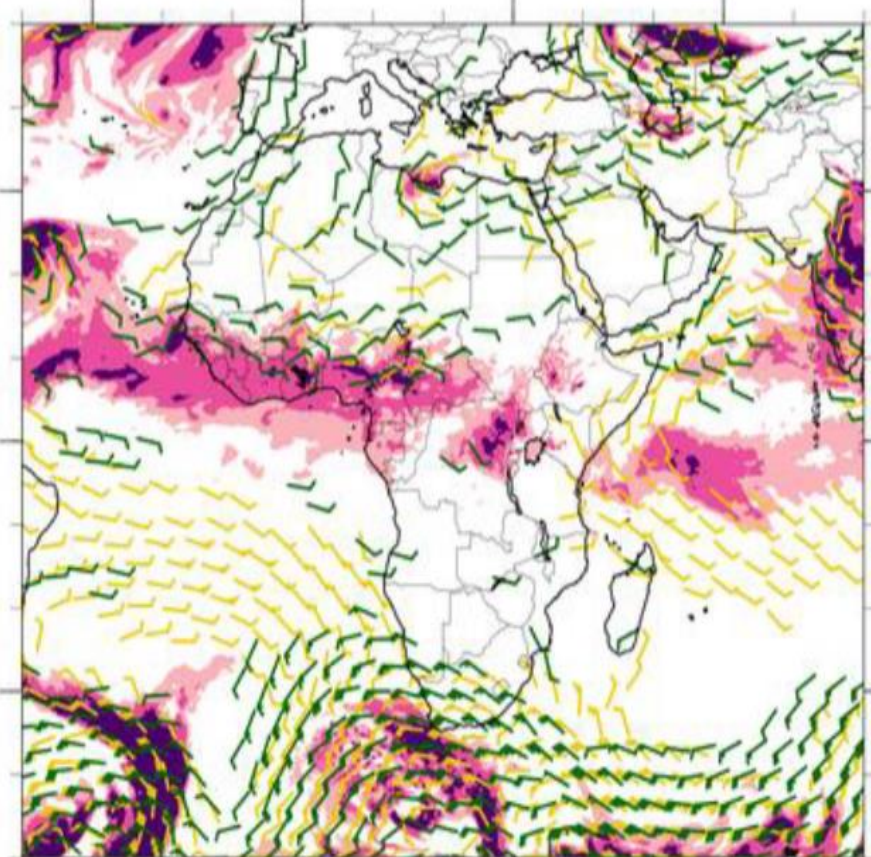
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**VIGILANCE FOR HEAVY PRECIPITATION
AND OTHER HAZARDS UP TO 5 DAYS
AHEAD SUPPORTING PREPARATION
AND EARLY RESPONSE TO DISASTERS**

Wind (925 and 700 hPa), RH (Integrated in 925-600hPa layer)

Init Date: 20230907-00UTC

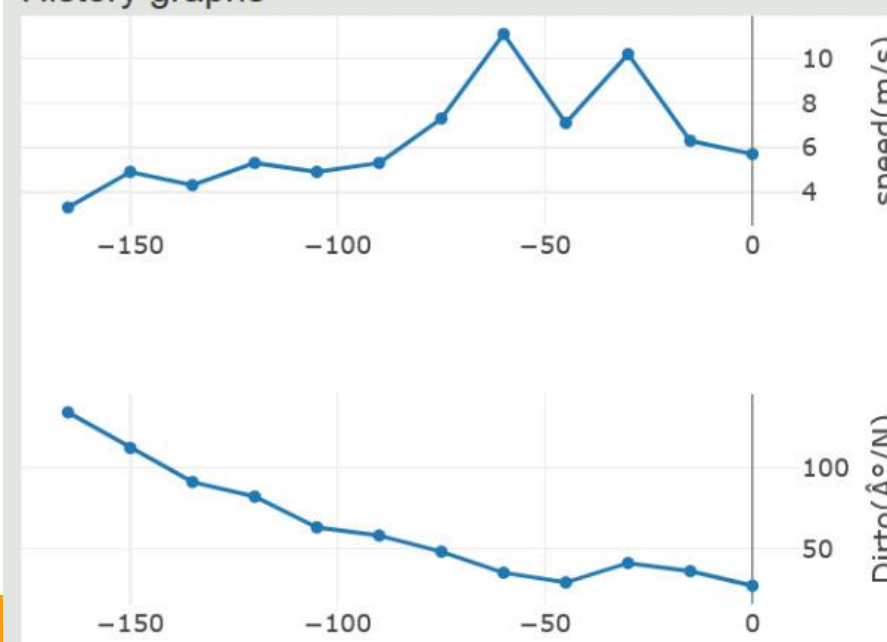
Valid: 20230910-12UTC



MSG 2023-09-10T06:15:00Z : RDT-CW_v522__ and overshoot



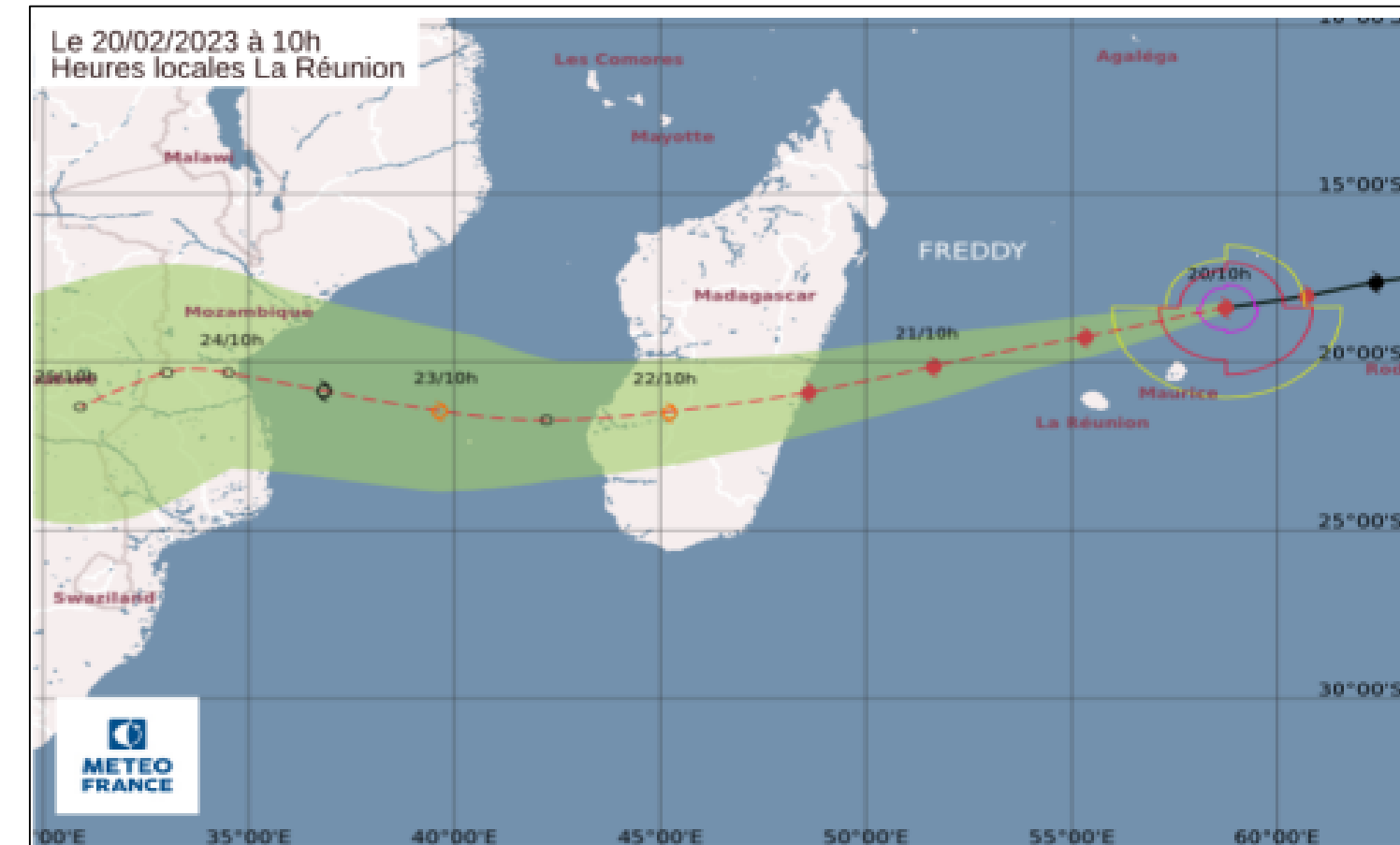
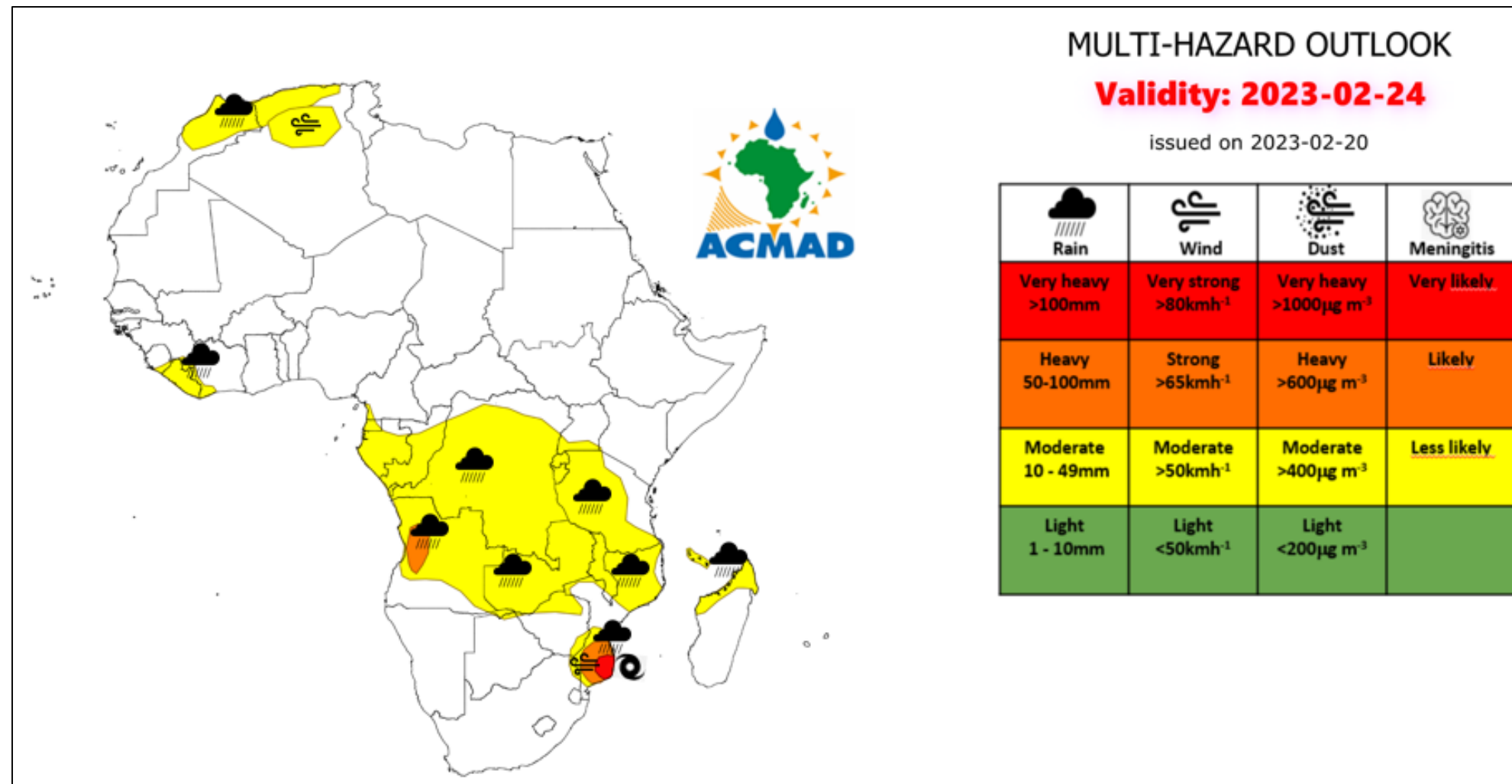
History graphs



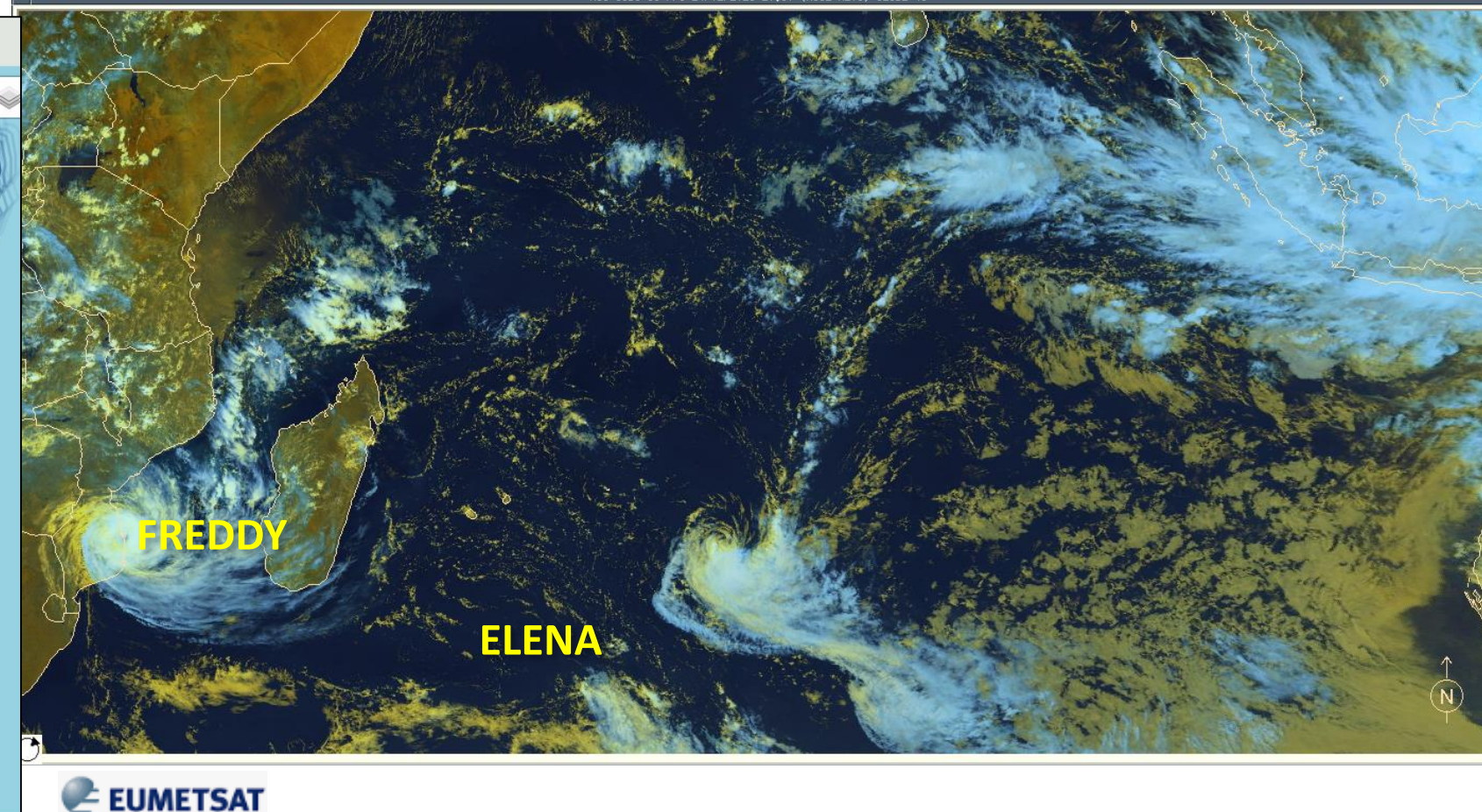
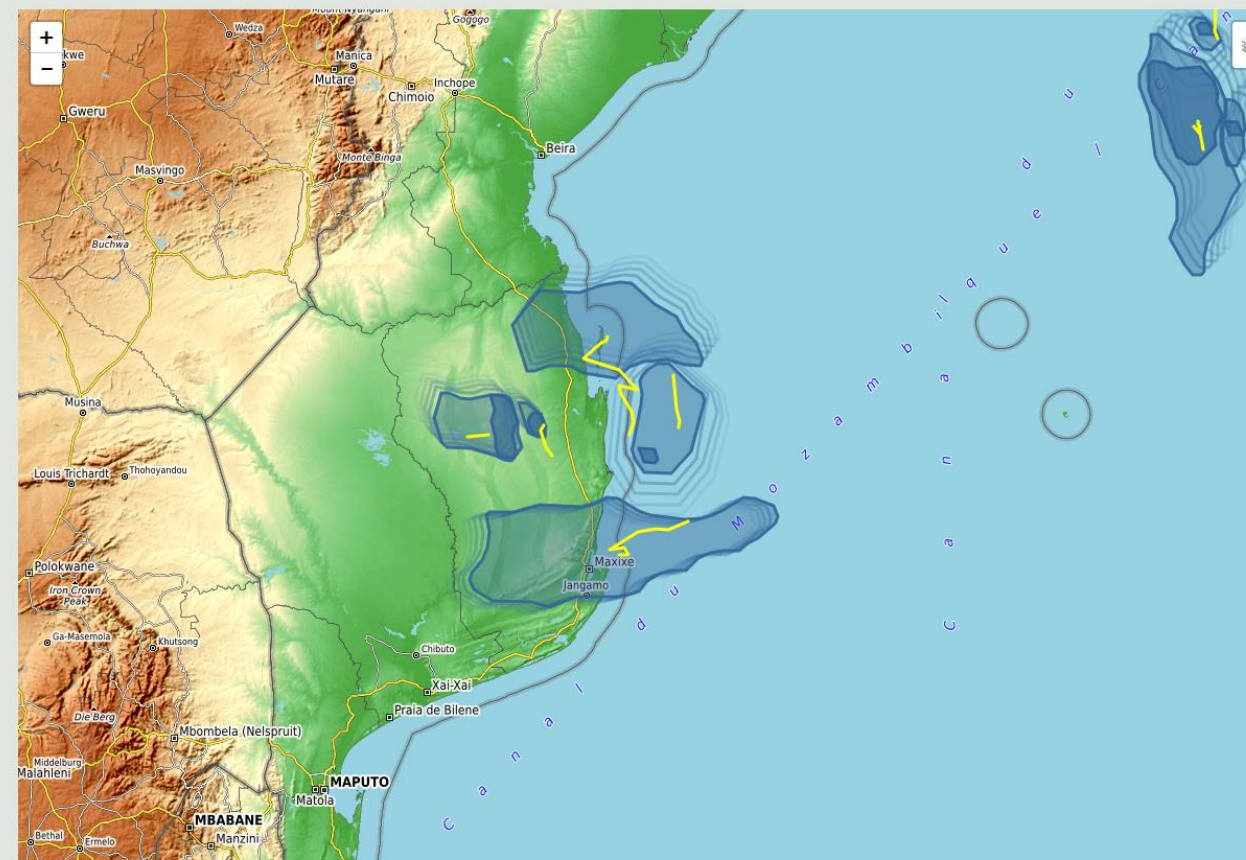
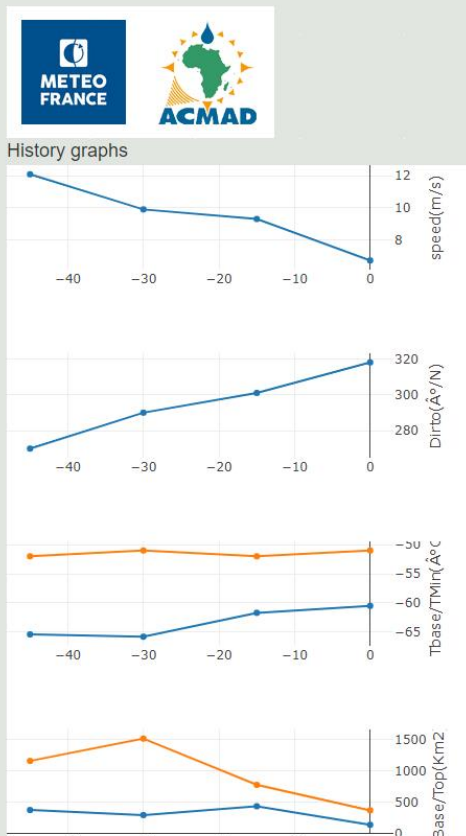


PRODUITS POUR ACTION ANTICIPATOIRE cas du Cyclone FREDDY

ACMAD ADVISORY VERIFICATION FOR D+4 FROM 20 FEBRUARY 2023



MSG 2023-02-24T10:30:00Z : RDT-CW_v515_

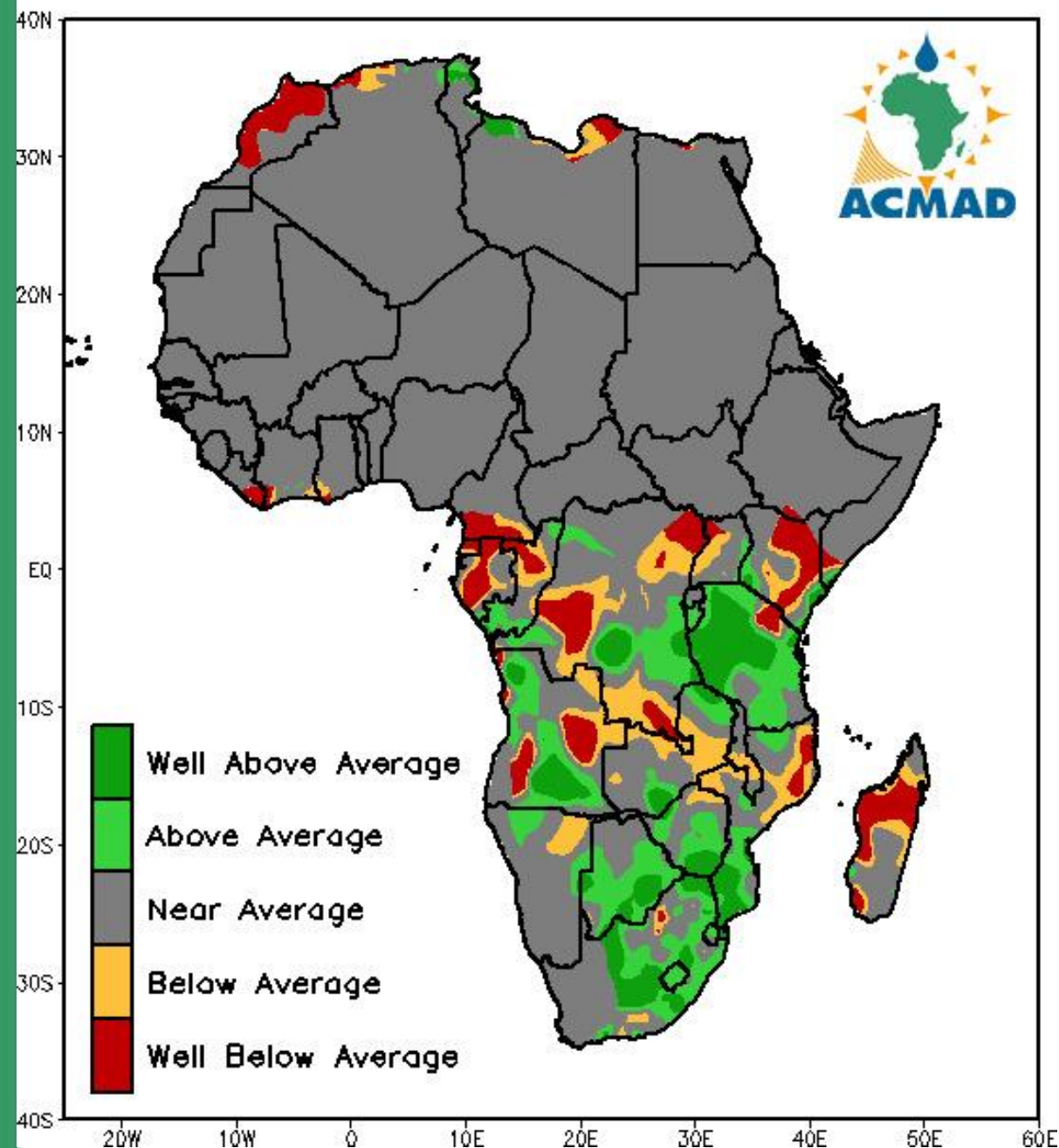


RDT FOR 24-02-2023 , 1030UTC

24-02-2023 , 1030UTC

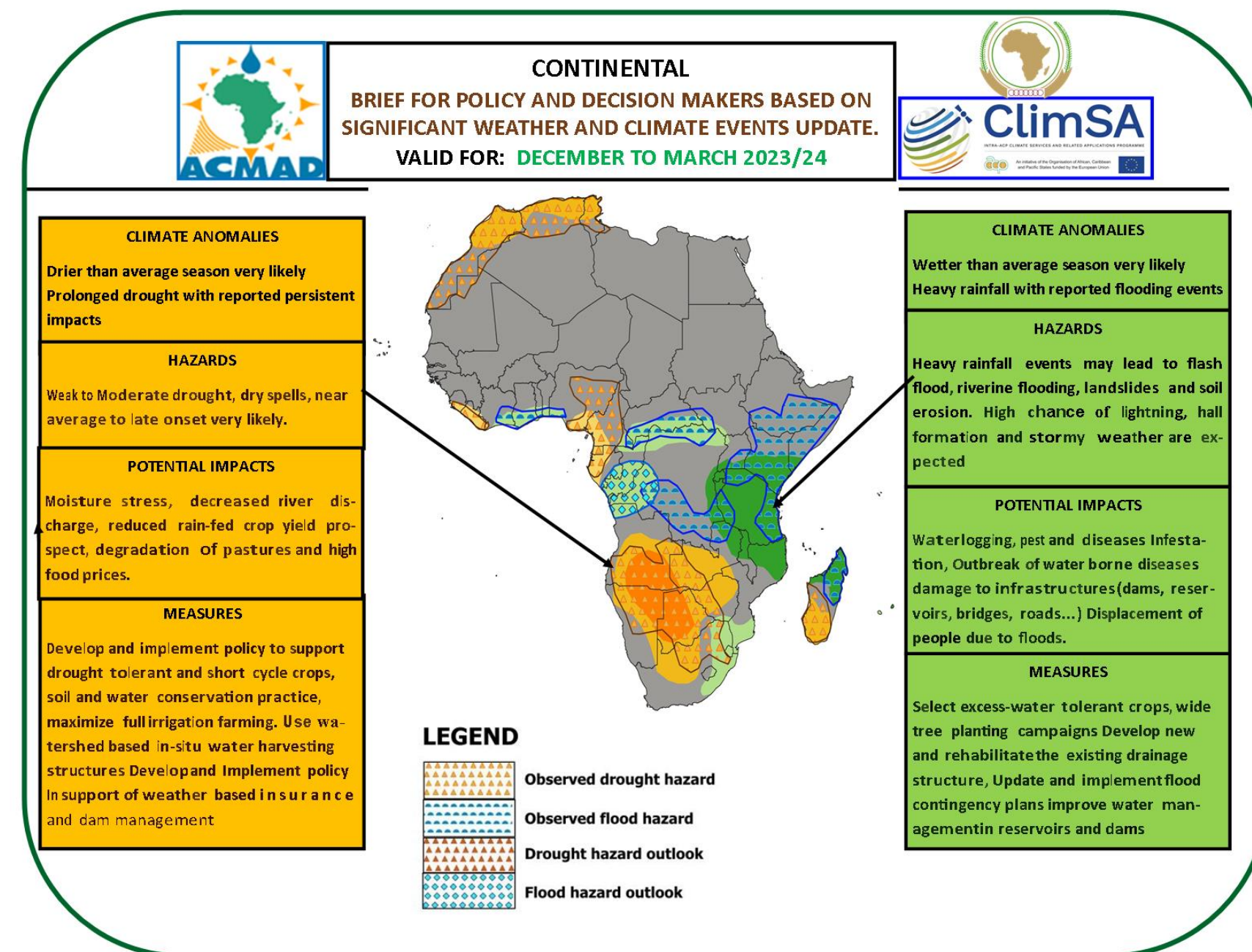
PRODUITS POUR LE SUIVI CLIMATIQUE

CPC—Uni 31—Day Precipitation in Percent of Average (%)
Period: 01Dec2023 to 31Dec2023



Disponible: Chaque Mois

PRODUITS POUR LA PRISE DE DECISION

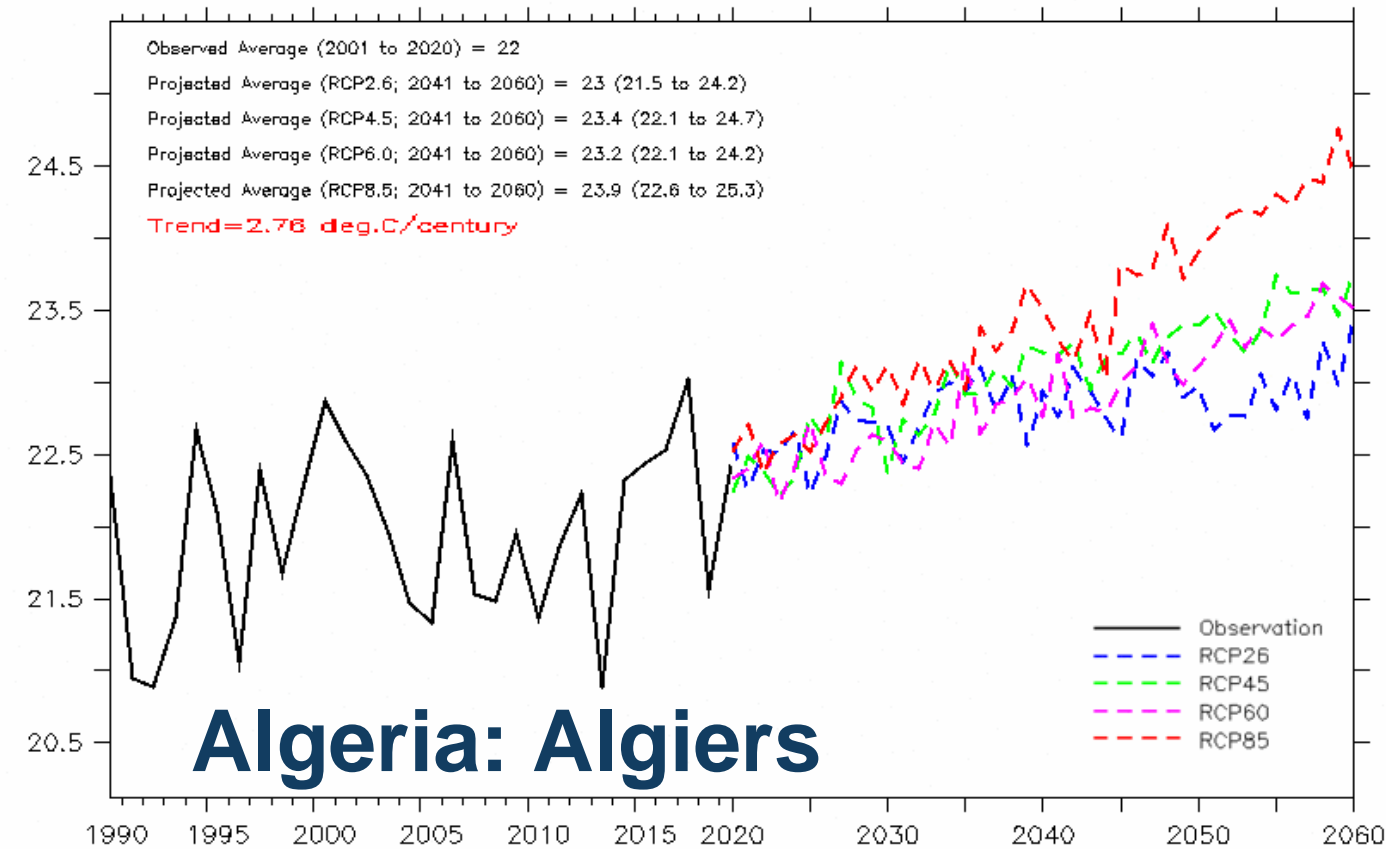


Disponible: Chaque Mois

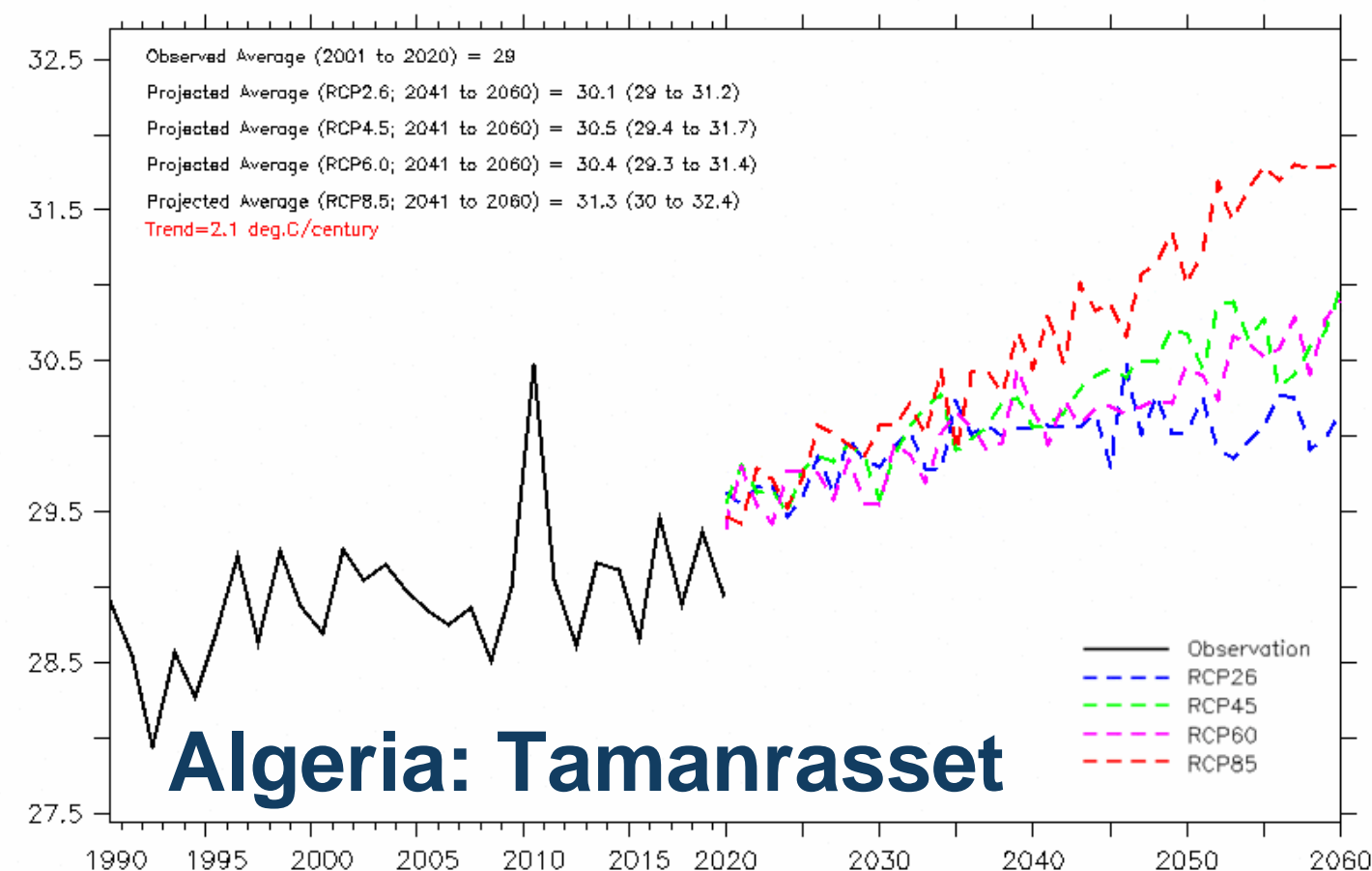


Observed and Projected of surface maximum temperatures over Algiers

Observation and Projections of Max. Temperature (Deg. C)
Algeria_ALGIERS
Lon=3.1 : Lat=36.46666

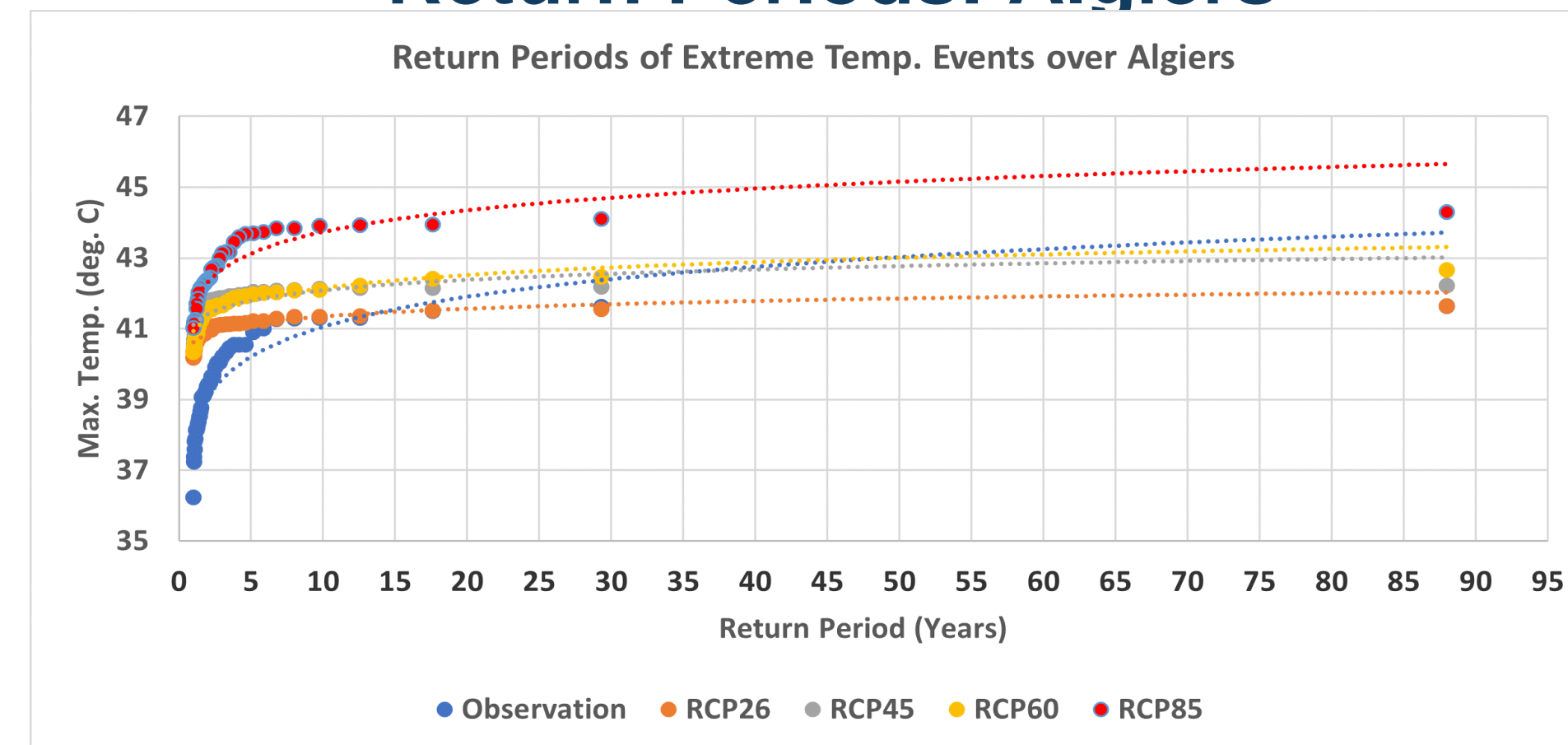


Observation and Projections of Max. Temperature (Deg. C)
Algeria_TAMANRASSET
Lon=5.43 : Lat=22.8



Climate Change Services

Return Periods: Algiers



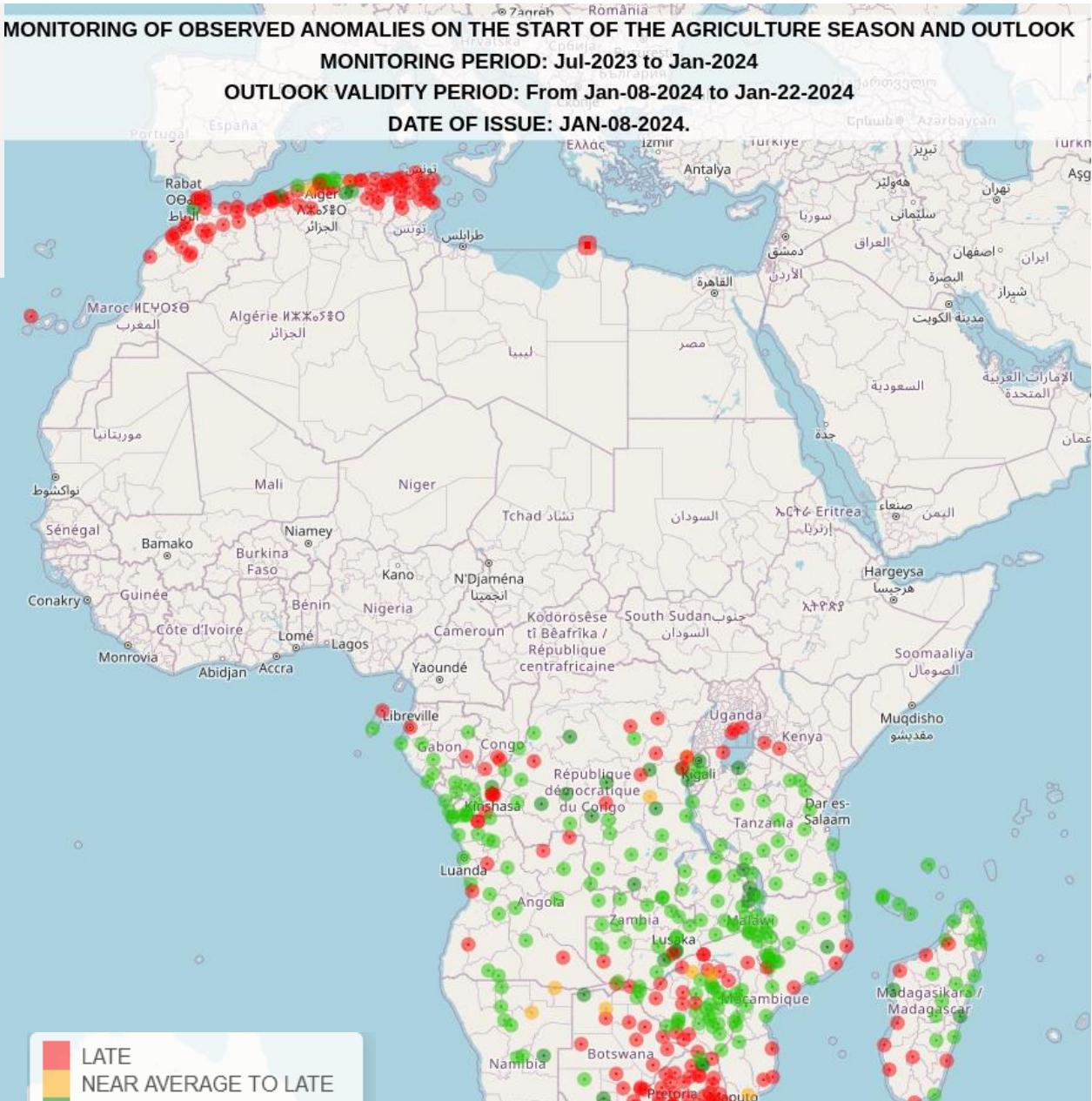
Extreme temperatures of > 40degC will in the near future be more frequent every 1 to 3 years contrary to 37 – 39degC that are presently frequent.



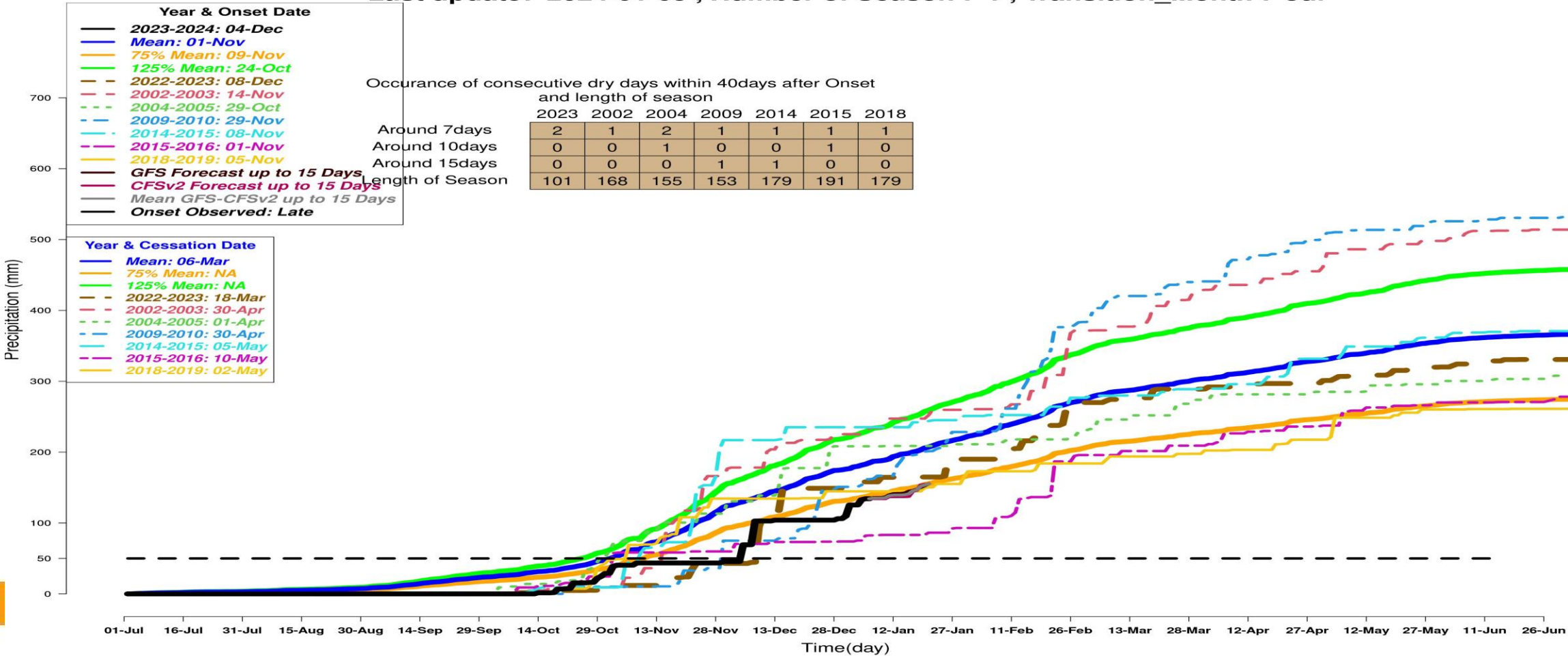
Contribution to the Food Security Value Chain – Monitoring and forecasting of the start of the agricultural season

Prediction of the start of the agricultural season, dry and wet periods to support farmers in planning their activities

Future development projects should integrate the production and dissemination of this information in real time to rural areas.



Algeria : Cumulative precipitation for ORAN-SENIA , Data source: TAMSAT
Last update: 2024-01-05 , Number of Season : 1 , Transition_Month : Jul



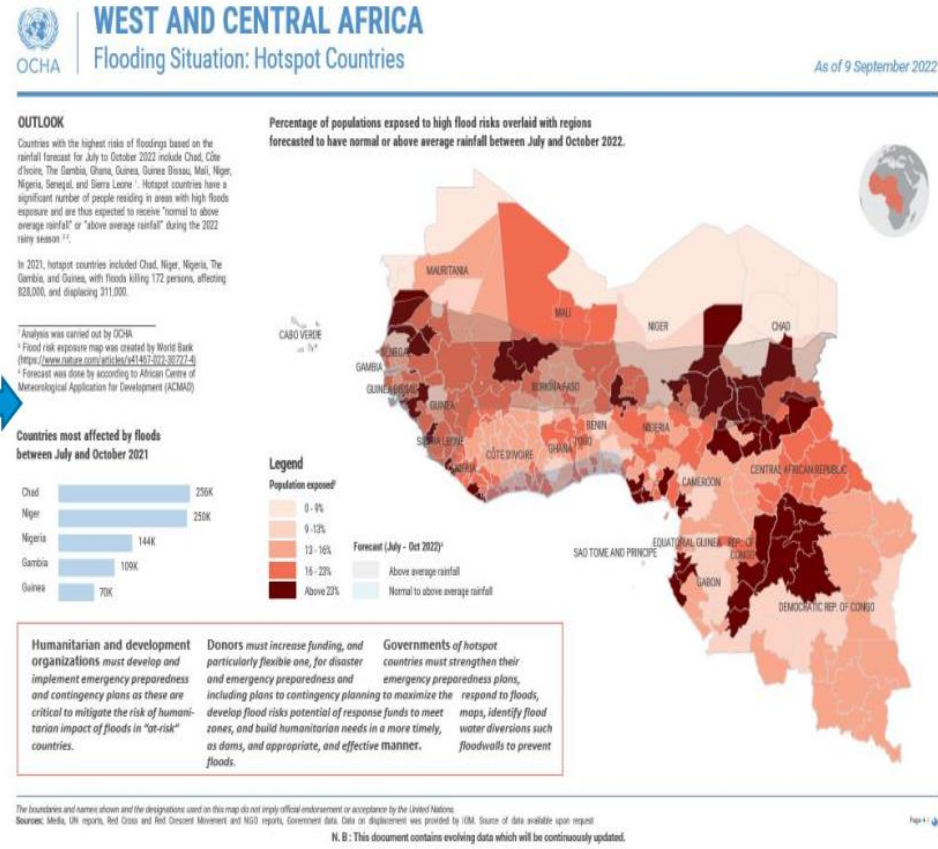
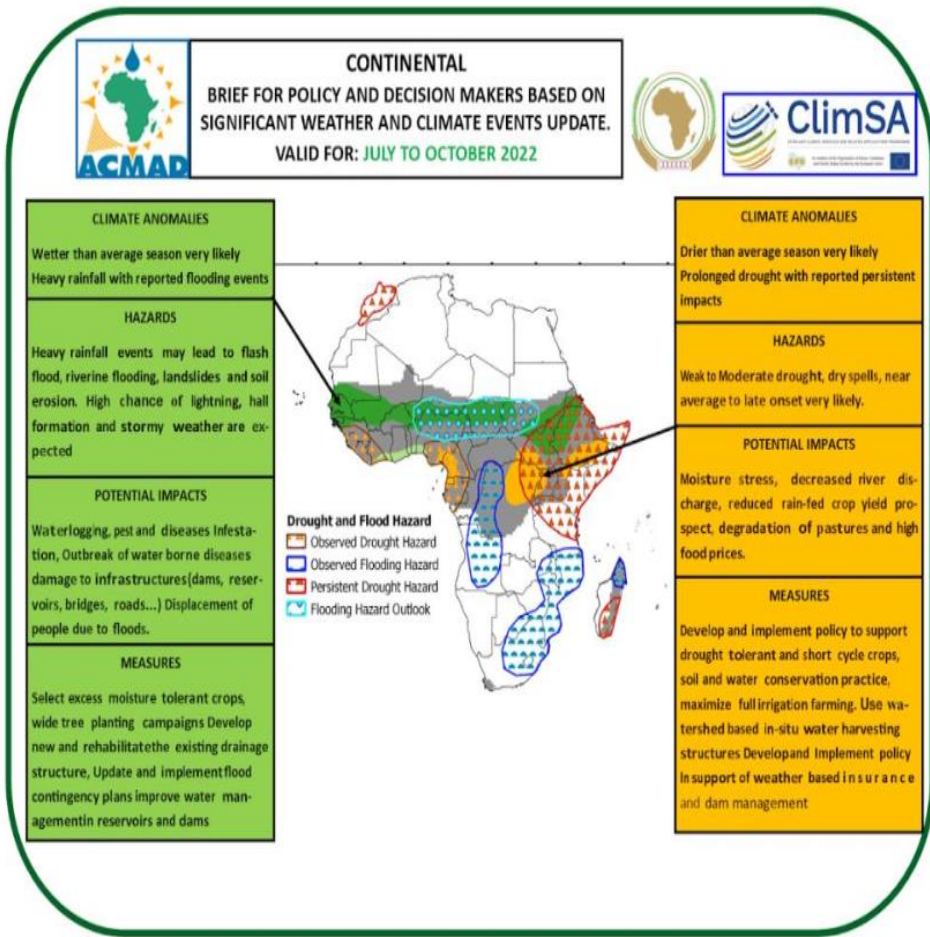
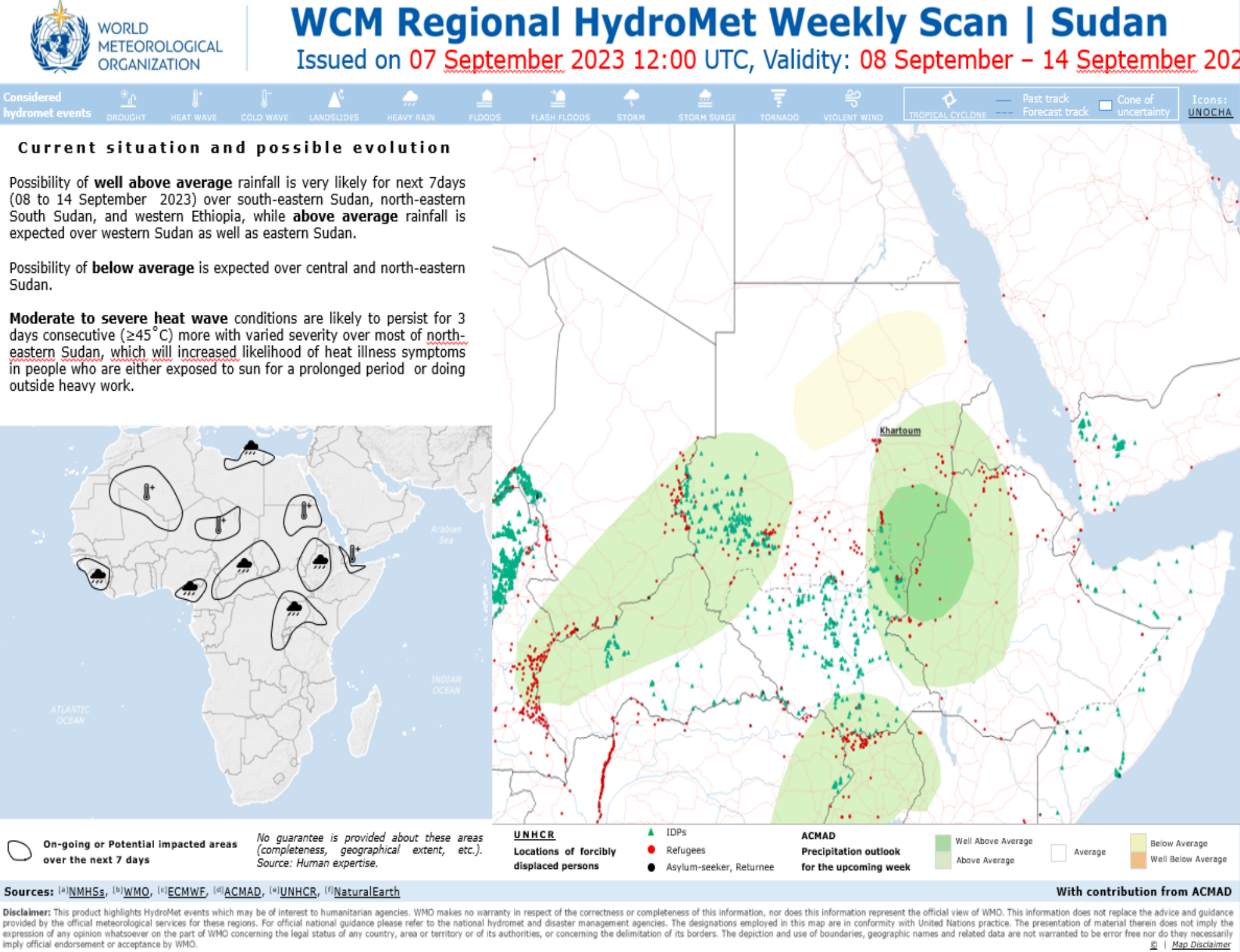
OPERATIONAL SERVICE CO-DESIGNED AND CO-DEVELOPED WITH UN and HUMANITARIAN AGENCIES



WMO Coordination Mechanism (WCM)

WCM Regional HydroMet Weekly Scan | Sudan

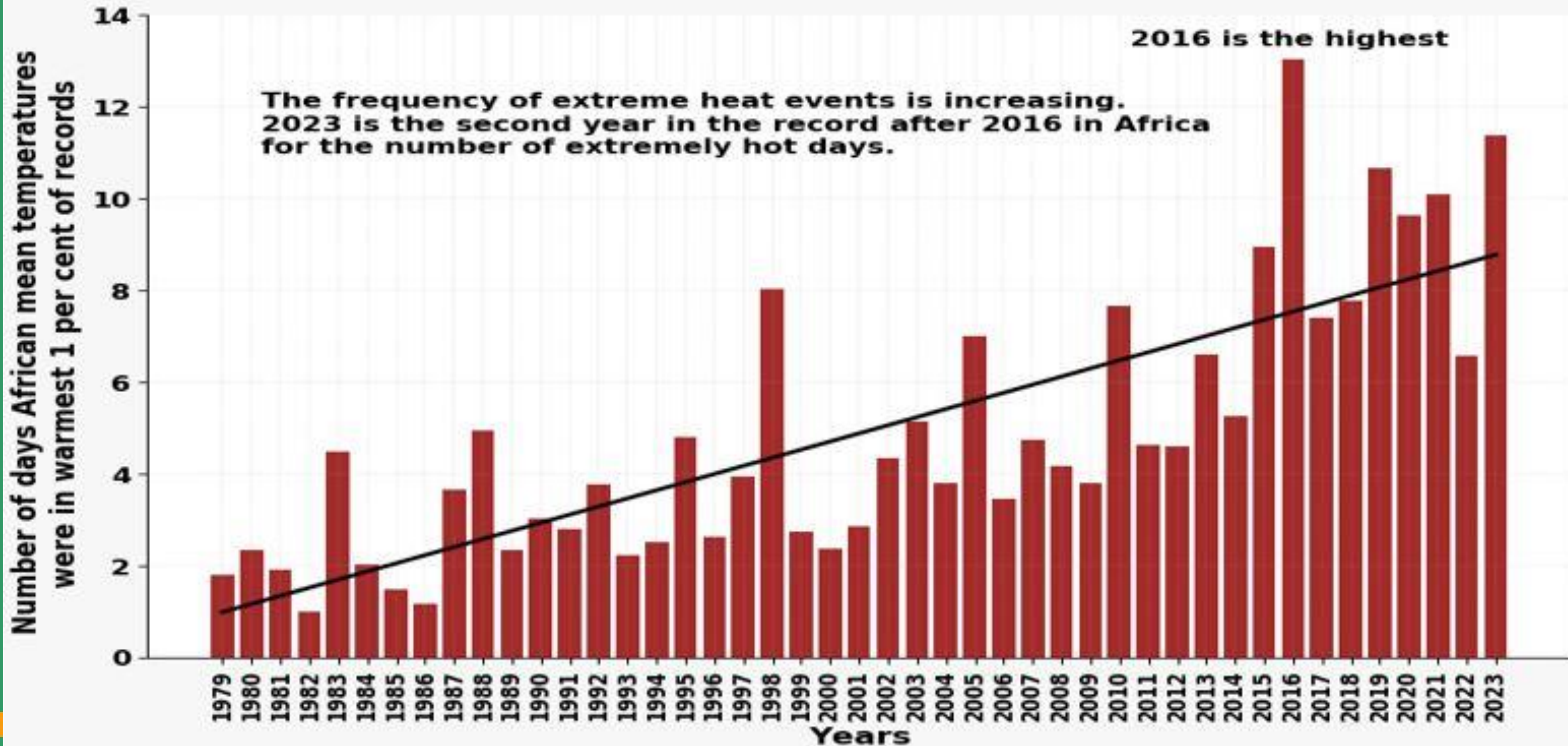
Issued on 07 September 2023 12:00 UTC, Validity: 08 September – 14 September 2023



Provision of information's on expected impacts and risk, anticipatory action preventing implementation of risk reduction measures



Extreme heat events are becoming more frequent in Africa



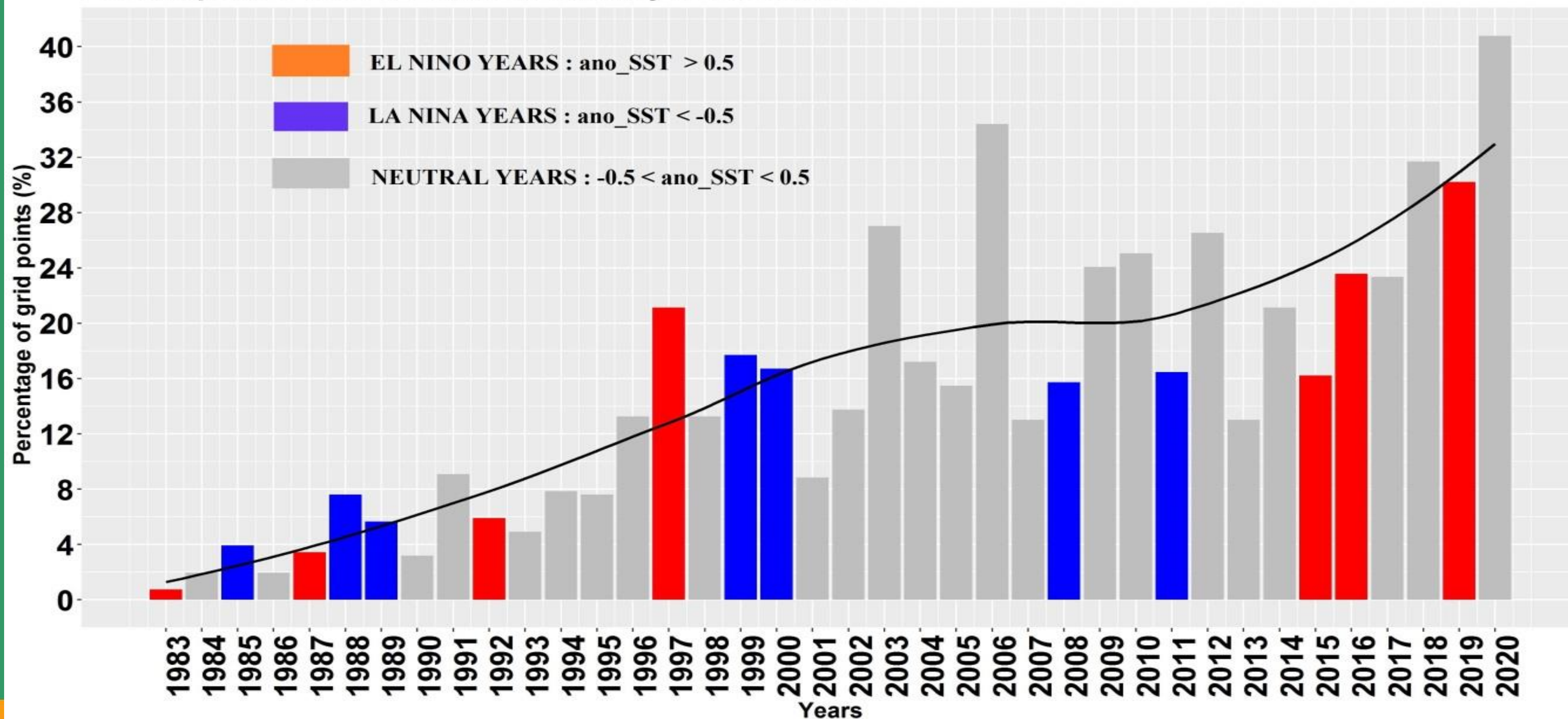


Observed Trends of Climate Change (2/2)

Precipitation

More extreme rainfall events are observed across Africa

**Percentage of grid points over African land masses with daily rainfall above the 90th percentile
For the period 1981-2020, from January to December**





Ongoing Initiative

CONTINENTAL MULTI-HAZARD ADVISORY CENTRE



ACMAD SITUATION ROOM IS EQUIPED WITH RESOURCES AND TOOLS



The Centre produce bulletin and advisories on extreme event which may occur at continental level with level of the Severity of such an event for a decision maker for the next 5 days from issued date.



The Centre use myDEWETRA platform as an integrated real-time system providing a single access point to key early warning information as well as other Tools to provide Impact based forecast twice a week to different stakeholders.

ACMAD created through resolution 540 of the UNECA Conference of Ministers in April 1985 following the droughts of the 70s and 80s, is established in Niamey-Niger since October 1992 with mandate to be:

- Continental Weather and Climate Watch Centre for Africa with Monitoring, forecasting and early warning for droughts, floods, tropical cyclones and other extreme events as functions
- Institution of excellence for the Applications of meteorology for sustainable development with capacity building, methods, tools and products development, contribution to global weather and climate programs, database, research and innovation as functions

The Centre is also tasked to carry out capacity development for its Member State's National Meteorological and Hydrological Services (NMHSs) in weather prediction, climate monitoring, Information technology, research and transfer of technology.

With the Support from UNDRR, ACMAD established the Continental Multi-Hazard Advisory Center and contribute to AMHEWS by providing Meteorological forecast twice a week in Continental Watch under the Coordination of AUC.



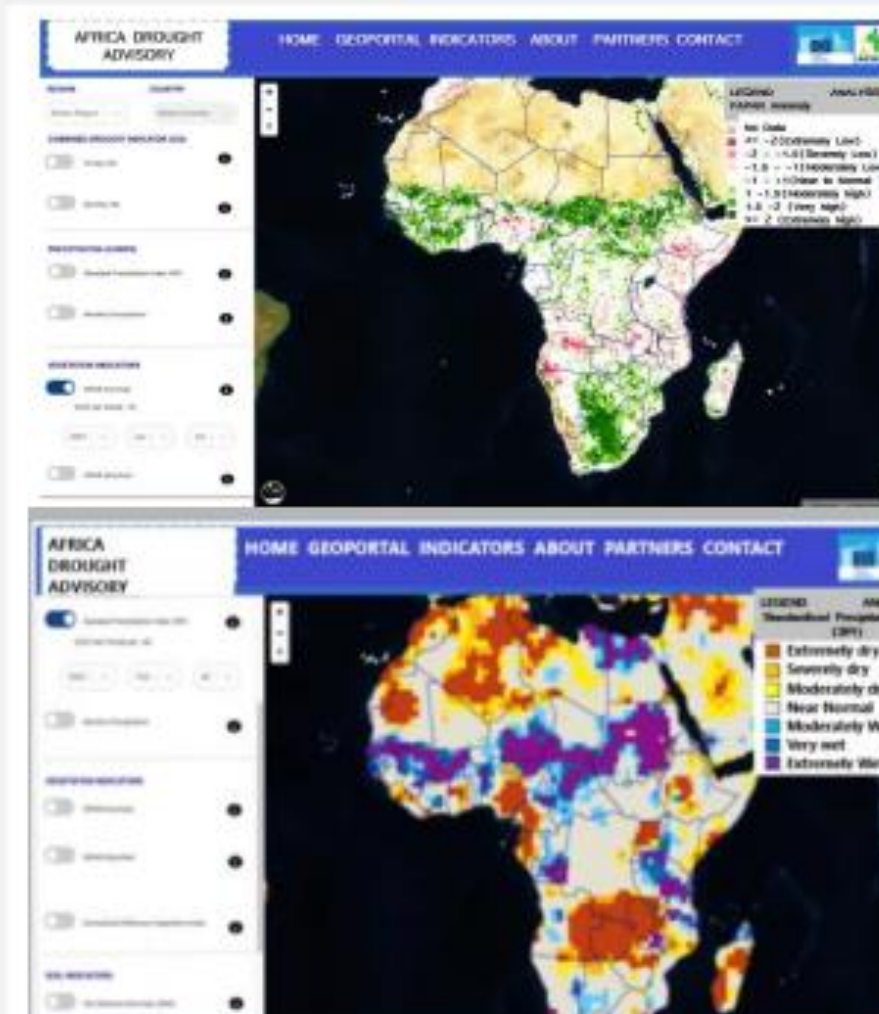
Daily rainfall observation from stations



Ensemble Mean Forecast



Africa Drought Advisory System



What does it solve?

1. Structuring Web Access and Web Presence
2. Offers the possibility to automate data-inception, control, interpolation, computation of anomalies and high-quality web mapping.
3. Automatic warnings regarding developing or actual drought events every 10 days.
4. Additional indicators showing the recovery process after drought events.
5. Provides multiple ways to inform the public.
6. Structure for collaboration with local agencies
7. Text, Mapping, and Graphics integration.

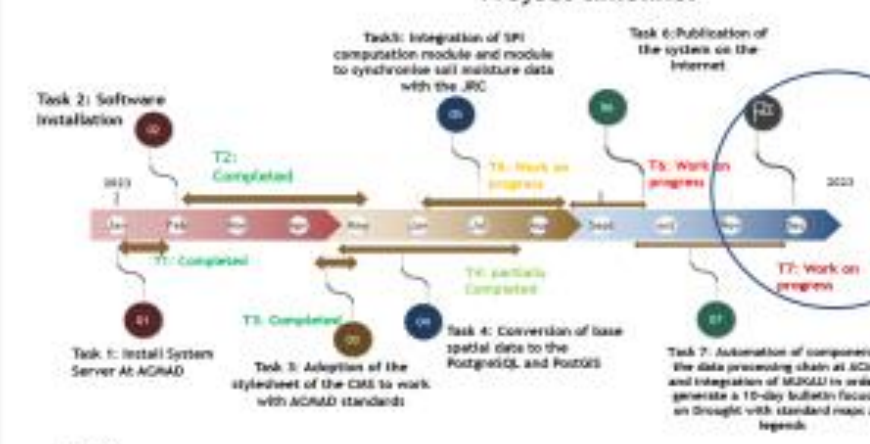
Drought is one of the climate change consequences that cause severe disruption, loss and damage to key sectors and economies in Africa, threatening to derail our ability to achieve the aspirations of Agenda 63 as well as the sustainable development goals. This demonstrates the urgent need to accelerate the climate services delivery to reduce the impacts of climate change. In this venue, the African Centre of Meteorological Application for Development (ACMAD) is implementing a Drought Advisory system- namely the Mukau system- at the continental level. The system is being developed by ACMAD as part of the Intra-ACP Climate Services Project in collaboration with the Drought group of the Natural Disaster Risk Unit at the Joint Research Centre of the European Commission (funder) and NORCAP.

The system has been successfully implemented and operationalised at the IGAD Climate Prediction and Applications Centre (ICPAC) covering 11 countries in eastern Africa.



Taken from Global Drought Observatory-JRC

Project timeline.



Monitoring the ground condition and issuing a drought earlier warning



Ongoing Initiative





CLIMate Information platform for **AG**riculature
"Customized agro-climatic information at high resolution"



Supporting a climate resilient agricultural sector by:

- **Support** climate projections and seasonal forecasts
- **Assess** threats and opportunities of a changing climate
- **Assess** with crop planning, climate adaptation strategies and international funding

Co-created with stakeholders







for meteorological services, policy makers, researchers, extension workers, NGOs, ...

Provides a wealth of agro-climatic data

- 14 x agro-climate indicators
- 3 x climate scenarios
- 15 x climate models
- 4 x time horizons
- @ 1 km resolution

Offers immediate access via an intuitive web portal

CLIMTAG™ for Africa



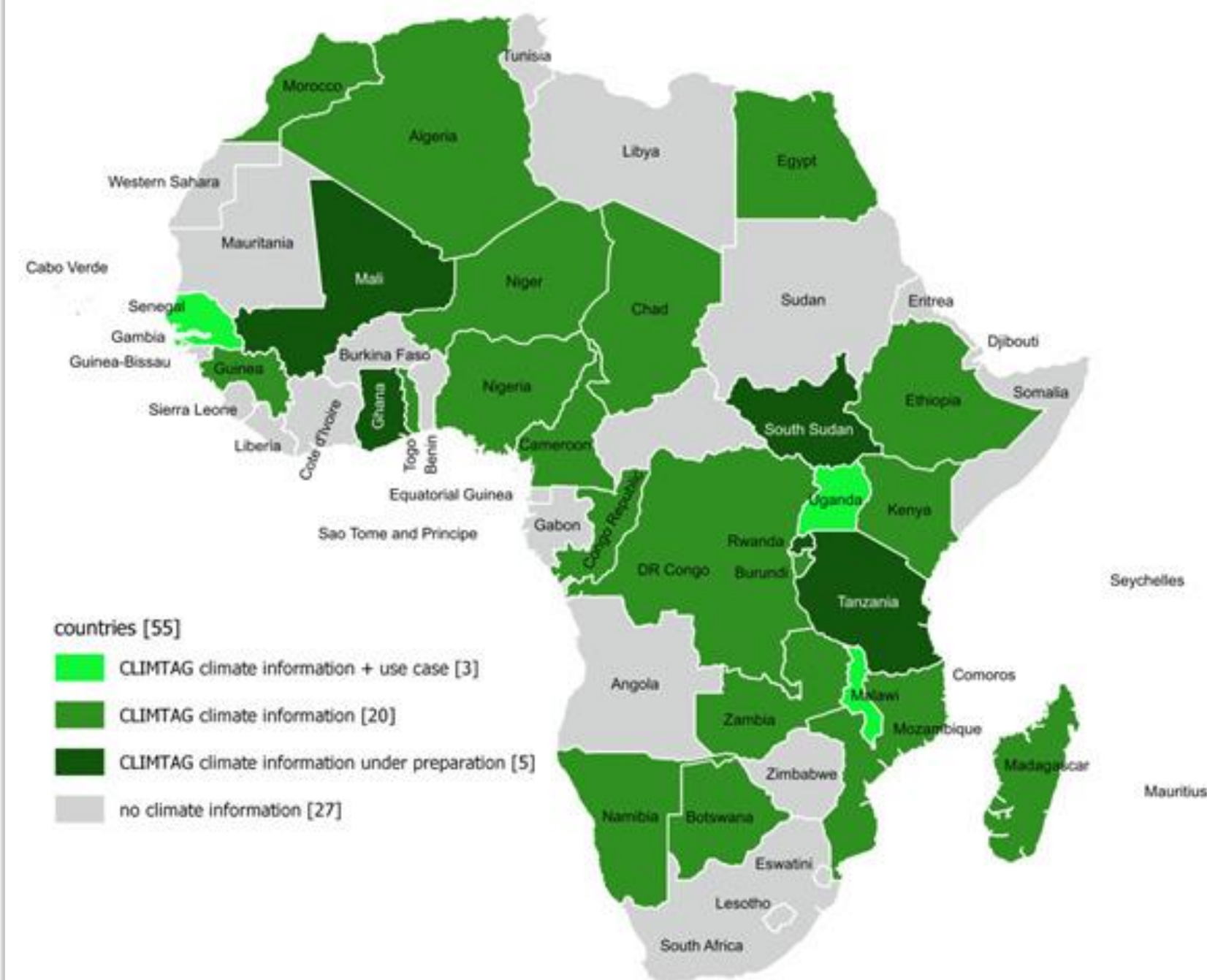
upscaling to 23 countries and counting...

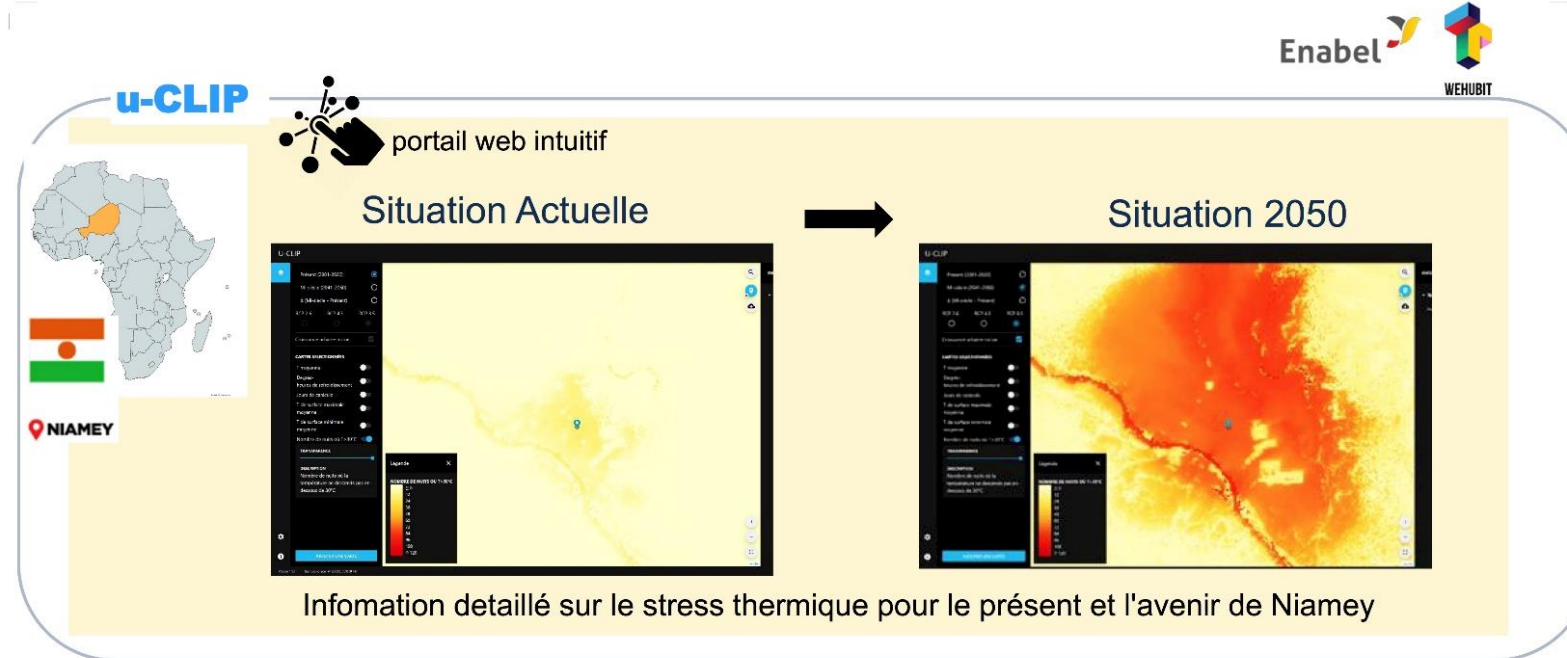


klimpala
 klimpala.vito.be









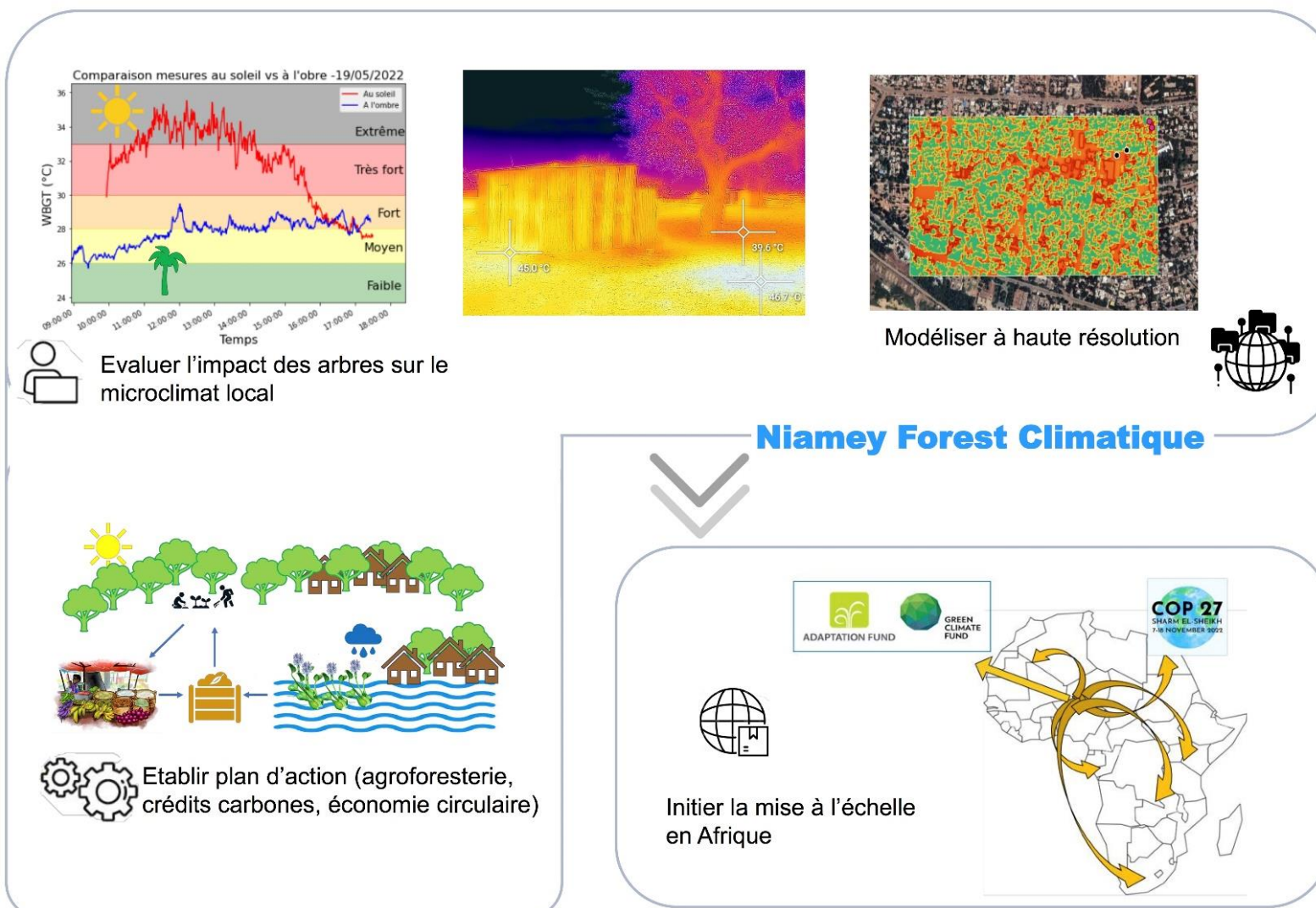
co-création avec les parties prenantes



Intégration sociale (femmes, jeunesse)



Sensibiliser informer via workshops et campagnes de mesure



THANK YOU



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