

Atelier de Conception et mise en oeuvre des déclencheurs pour le financement efficace des risque de catastrophes au Sahel

PRODUITS ET SERVICE DE L'ACMAD POUR L'ACTION ANTICIPATOIRE

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initiative of the Organisation of African, Caribbean and Pacific States funded by the European Union



Dakar – SENEGAL 14 -16 May 2024



Brief presentation of ACMAD

Who are we?

Created trough 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 with mandate

Continental Weather and Climate Watch Centre

Institution of excellence for the Applications of meteorology for sustainable development

WMO Designated Regional Climate Centre for Africa since May 2015

ArcRCC-Network

RCC-Washington

RCC-Network-NA

African RCC-RCC-Network

RCC-Network-NSA

RCC-Network-NSA

RCC-Network-NSA

RCC-Network-NSA

RCC-Network-NSA

RCC-Network-NSA

RCC-Network-NSA

RCC-Network

RCC-Network-NSA

RCC-Network

RCC-

Figure 5: Established Regional Climate Centres (WMO, 2022)

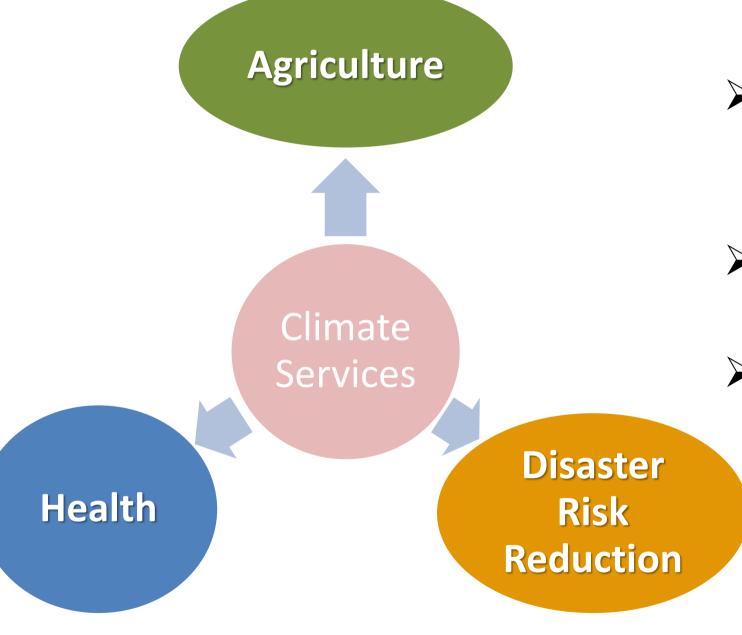
Continental Multi Hazards Advisory Centre for Africa inaugurated in October 2022 as part of the Institutional Infrastructure of the African Union Multihazards Early Warning and Early Action System (AMHEWAS)





Brief presentation of ACMAD

Climate Services: ACMAD Priority Areas



- Monitoring, forecasting and early warning for extreme events
- Contribute to the disasters situation Report and Continental watch in the framework of AMHEWAS
- Build capacities for its Member State's National Meteorological and Hydrological Services (NMHSs)
- Research and transfer of technology
- ➤ Vision: An African continent where all nations are benefit from a world class operational continental meteorological centre to become resilient on extreme events and empowered to support the sustainable development with better meteorological service.

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

3



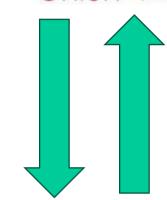
AMHEWAS Disaster Situation Room Addis Ababa





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

African Union



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

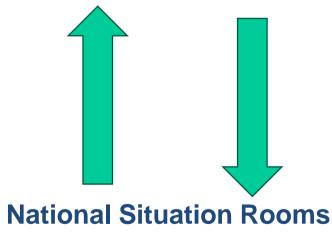


Disaster Operations Centre Nairobi



ICPAC

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

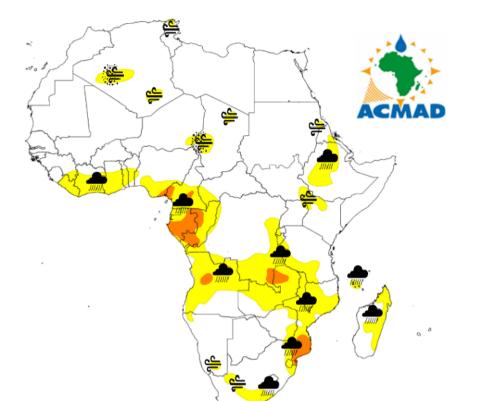


Comment ces services peuvent-ils être utilisés efficacement pour soutenir le développement de mécanismes basés sur des déclencheurs au niveau national ?

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ACMAD PRODUCTION PROCESS

METHODOLOGY

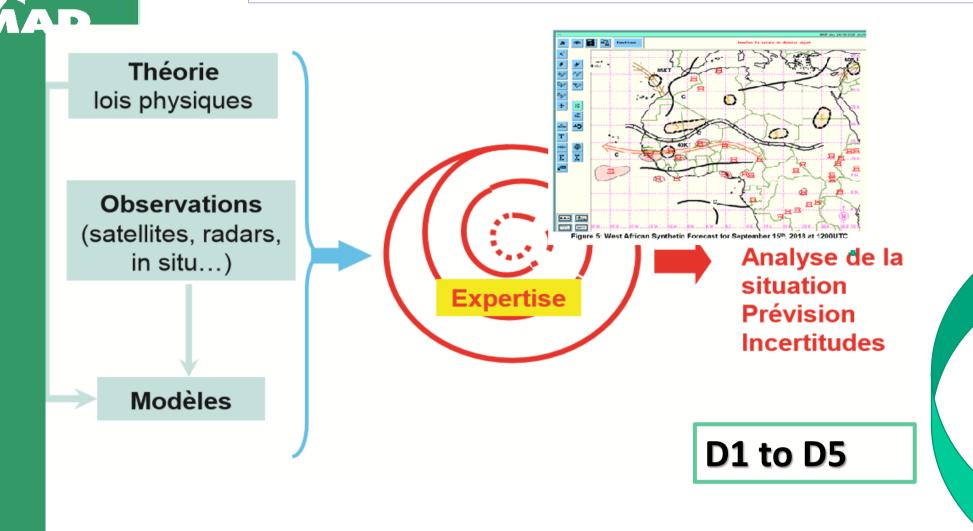


MULTI-HAZARD OUTLOOK

Validity: 2024-03-12

issued on 2024-03-11

////// Rain	ال Wind	Dust	Meningitis
Very heavy	Very strong	Very heavy	Very likely
>100mm	>80kmh ⁻¹	>1000μg m ⁻³	
Heavy	Strong	Неаvy	Likely
50-100mm	>65kmh ⁻¹	>600µg m ⁻³	
Moderate	Moderate	Moderate	Less likely
10 - 49mm	>50kmh ⁻¹	>400µg m ⁻³	
Light	Light	Light	
1 - 10mm	<50kmh ⁻¹	<200µg m³	



@ACMAD Weather forecasting is developed in three basic steps: Observation, Simulation of the evolution of the atmosphere using numerical models and Analysis of the results by forecasters







lightning, strong

be in close touch with NHMS for further

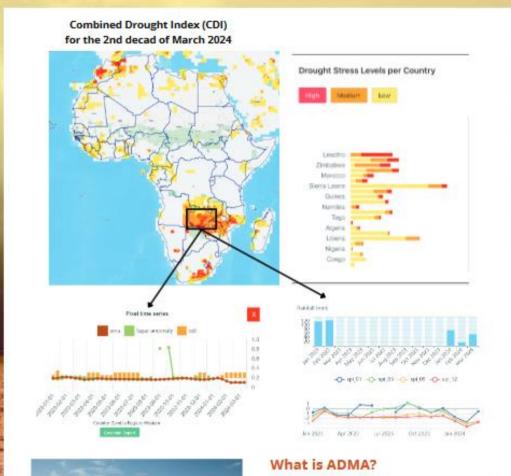
Early warning Information for Drought







AFRICA DROUGHT MONITORING AND ADVISORY (ADMA) SYSTEM





Drought impact in East Africa, 2009

It is a near-real-time system that uses Earth Observation and Weather conditions and Issue Early Warning In Africa. It contains various tools, such as graphs and maps, to display, analyse Information and generate drought reports. It provides an overview of the situation in the case of Imminent drought.

#EarlyWarningForEarlyAction





Scan Here

CLIMATE ANOMALIES rier than average season very likely

longed drought with reported persis

eak to Moderate drought, dry spells, nea

POTENTIAL IMPACTS

isture stress, decreased river harge, reduced rain-fed crop yield p

ect, degradation of pastures and hi

MEASURES

evelop and implement policy to suppor oil and water conservation practice,

aximize full irrigation farming. Use wa

ershed based in-situ water harvesting ructures Developand Implement polic

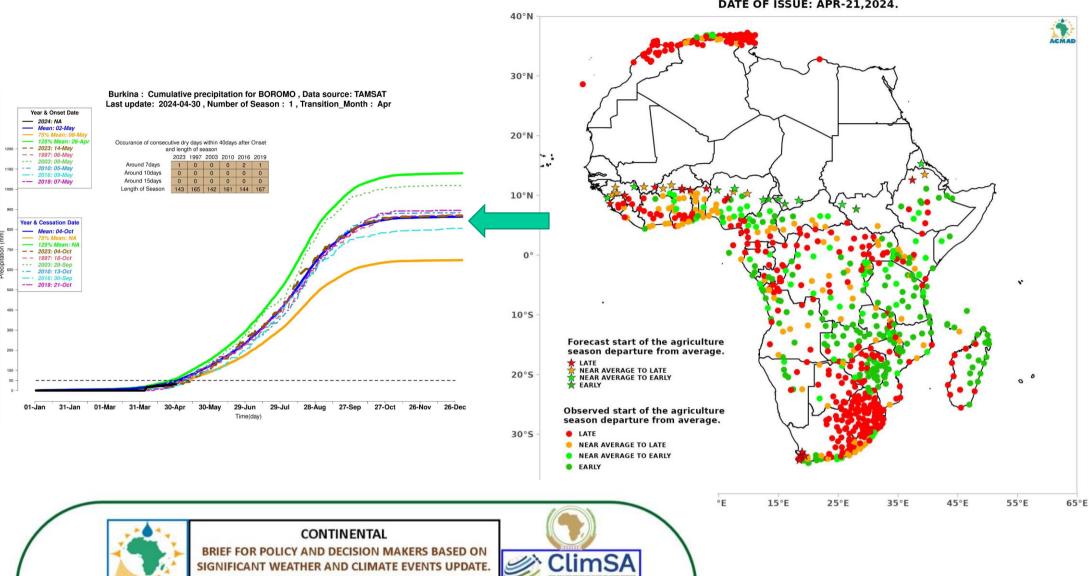
d dam management

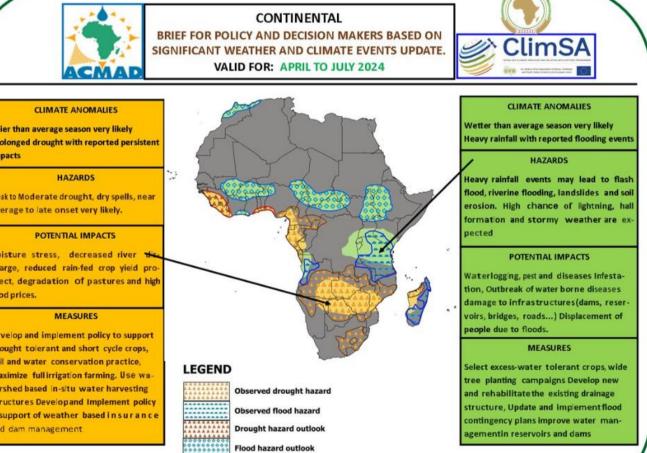
erage to late onset very likely.



ada.acmad.org

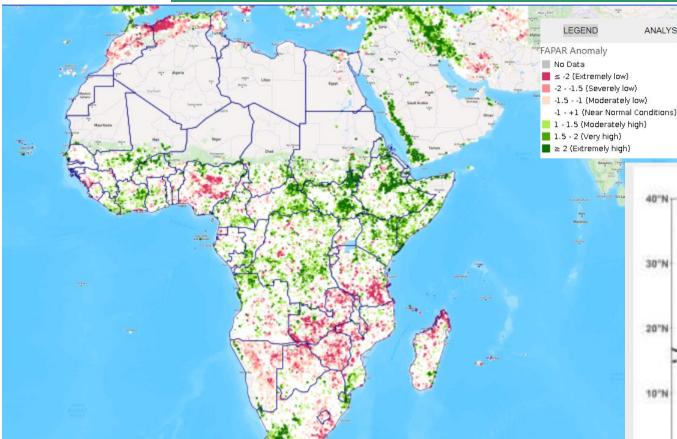
MONITORING OF OBSERVED ANOMALIES ON THE START OF THE AGRICULTURE SEASON AND OUTLOOK OBSERVATION AND MONITORING UNTIL: Apr-20,2024 OUTLOOK VALIDITY PERIOD: From Apr-21-2024 to May-05-2024 DATE OF ISSUE: APR-21,2024.



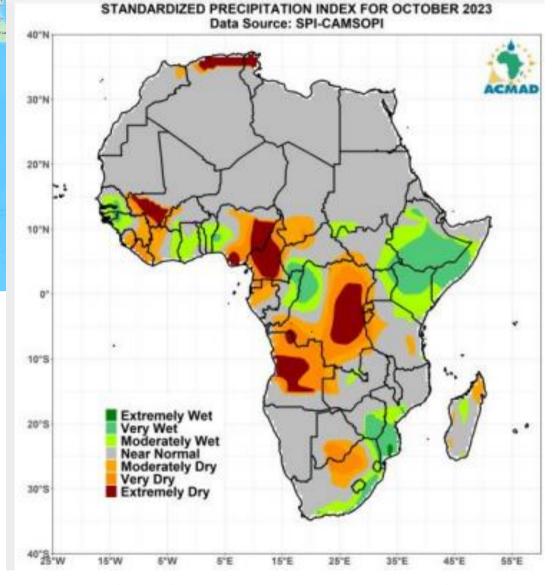




Drought Indicators

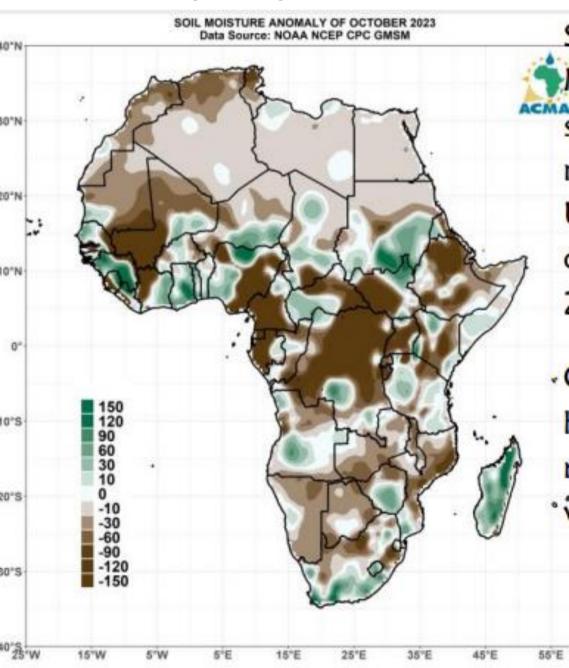


Fraction of Absorbed Photosynthetically Active Radiation (fAPAR)



Standard precipitation Index (SPI)

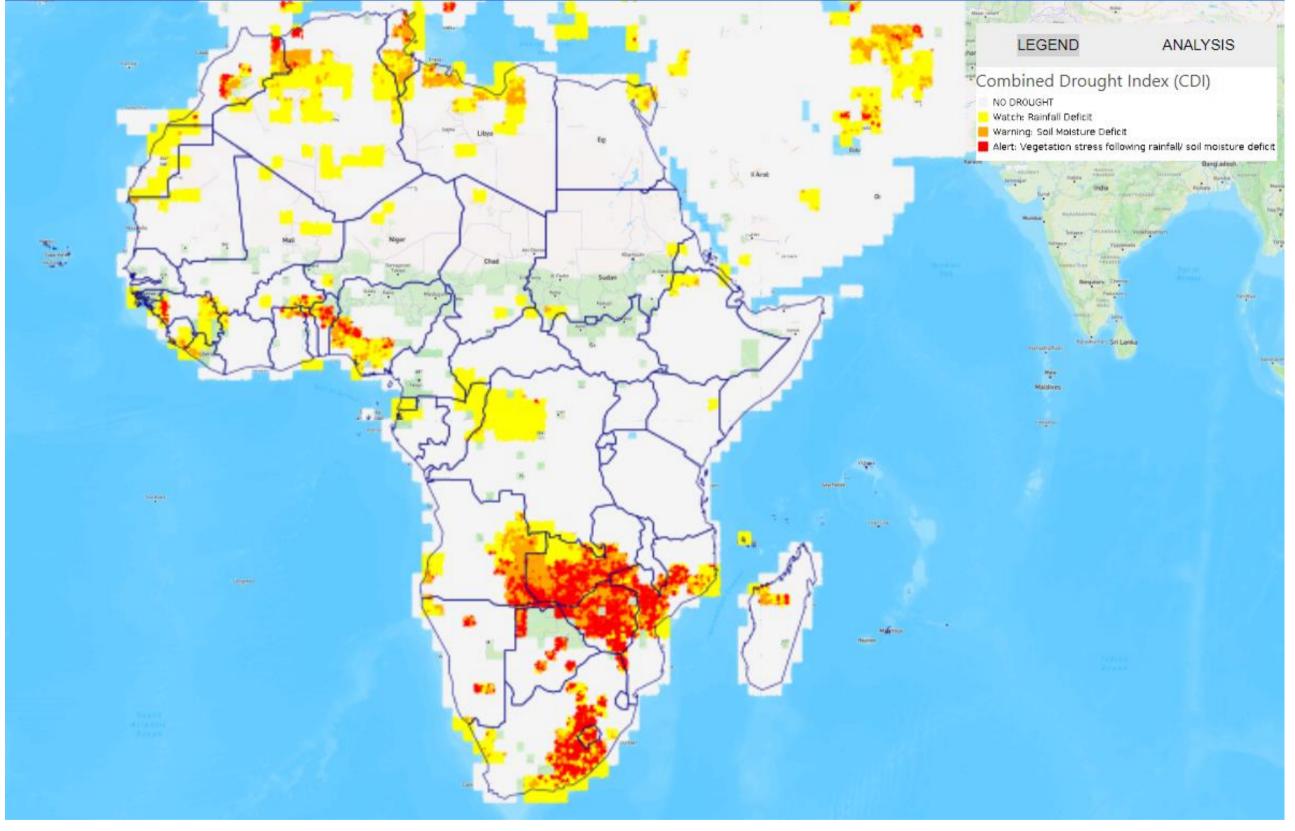
Soil Moisture Anomaly (SMA)



https://ada.acmad.org/



Drought Indicators



Drought Indicator (CDI) is derived from the combination of SPI, SMA and fAPAR, to identify areas with the potential to suffer agricultural drought, areas where the vegetation is already affected by drought conditions, and areas in the recovery process to normal conditions after a drought episode.

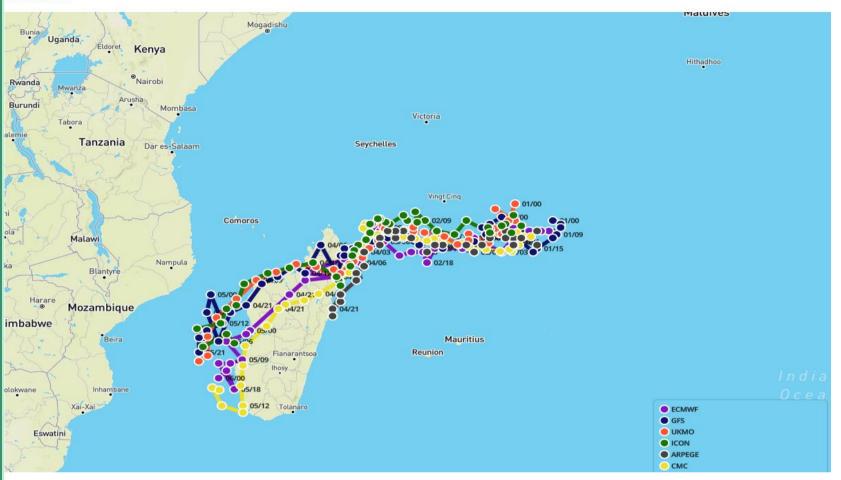


PRODUCTS TO SUPPORT AUC SitRoom In **AMHEWAS**

Tropical cyclone track forecasts from: 01-March-2024, 00UTC to 06-March-2024, 00UTC



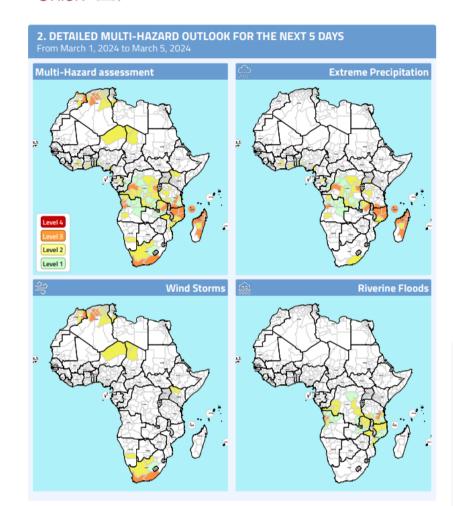
Models: ARPEGE, CMC, ECMWF, ICON, GFS and UKMO



Contribution in Continental Watch



Africa Multi-Hazard Early Warning and Action System for DRR



Contribution in Situation



SITUATIONAL OVERVIEW

- Heavy rains brought by Storm Daniel at the weekend caused two dams to burst on the usually dry Wadi Derna riverbed traversing through the city and left a trail of devastation.
- Heavy rainfall accompanied with strong winds hit north-eastern Libya on September 10th, 2023, causing severe riverine and flash floods that resulted in a big number of casualties and damage.

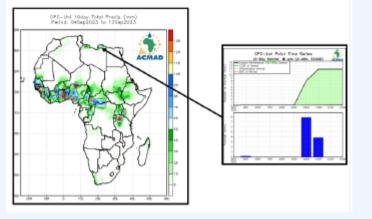


Fig 1: Total Precipitation Observed over Africa in the last 10 days

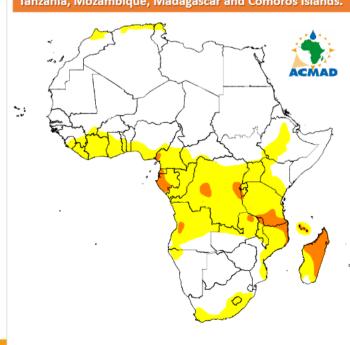
- The International Organization for Migration (IOM) reports that in Derna more than 30,000 people were displaced, 3,000 in Albayda and 1,000 in Al Mkheley. Additionally, IOM said 6,085 other people have been displaced in other storm-hit areas like Benghazi, with the number of deaths still unverified. The number of victims is expected to keep rising as recovery operations continue.
- . In the nearby neighborhood of Al-Eilwa, around 96% of properties were reported to have been flooded and many properties along the river have disappeared, leaving only their foundations
- . Health facilities in the severely affected neighborhoods of Al-Bilad and Al-Maghar on either side of the river, home to healthcare facilities used by people from across the city were hit by floods.
- . The communes in the affected areas have limited or no access to water, electricity and petrol among others because of damages to life saving services.
- There's a wave of displacement as people are trying to fiee Derna but many are stuck because a
 lot of the roads are blocked. Unfortunately, most of the people have no shelter forcing some of them to return to their inhabitable homes and some families have been taking shelter in schools, underlining the urgent need for shelter.
- . The images and map below are showing the scale of destruction before and after the floods with



VIGILANCE MAP AND POLICY BRIEF FOR HEAVY RAINFALL AND STRONG WINDS

Valid From March 1 to 5, 2024 Issued on February 29, 2024

HIGHLIGHT: Heavy rainfall is expected in Cameroon, Equatorial Guinea, Gabon, Angola, D.R.C, Rwanda, Burundi, Zambia, Malawi, anzania, Mozambique, Madagascar and Comoros Islands



Phenomen on	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.

<u>Disclaimer.</u> 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.



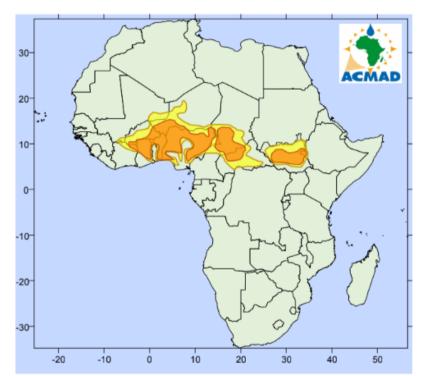
Early warning for Health

VIGILANCE MAP AND POLICY BRIEF FOR HEAT WAVE

Valid From April 30 to May 4, 2024 Issued on April 29, 2024



HIGHLIGHT: Moderate heat wave is expected in Burkina Faso, Ghana, Togo, Benin, Niger, Nigeria, Cameroon, Chad, C.A.R., and South Sudan.



	Phenomenon	Hazard	Potentials Impacts	DRM Measures / Advices
	In next 5 days apparent temperature >40°C to 44°C are expected for two days	Heat wave Conditions persists on 2days	Moderate temperature heat is tolerable for general public but moderate health concern for vulnerable people(people chronic diseases, infants and elderly)	Civil Protection Services to monitor closely the heat wave situation with NHMSs.
	apparent temperature 40°C to 44°C are expected for more than 2 days	Moderate heat wave conditions are likely to persist for 3days ore more with varied severity	High temperature Increased likelihood of heat illness symptoms in people who are either exposed to sun for a prolonged period or doing heavy work High health concern for vulnerable people	Civil Protection services to take adaptive and preventive measures to the heat wave situation with NHMSs.
	Apparent temperatures >45°C are expected for more than 2 days	Severe heat wave is very likely to persist for more than 2 days,	Very high likelihood of developing heat illness and heat stroke in all ages	Civil Protection services to take adaptive and preventive measures to the strong heat wave situation with NHMSs.

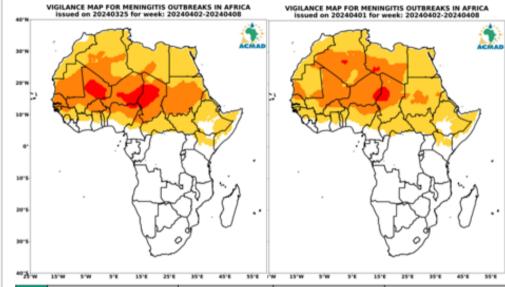
concerning the legal status of any country, territory or area, or concerning the delimitation of frontiers or boundaries.



Meningitis Outbreak Outlook/Advisory For WHO-AFRO Meningitis Surveillance And Control Generated

Climate Service for Health/Meningitis - Verification

Meningitis Outbreaks Outlook/Advisory for 02-08 Apr 2024



Phenomenon	Hazard	Potentials Impacts	Advisory / Measures
-Dust concentration below 150µg/m ³ -Relative humidity above 40% -Temperature below 27°C	Meningitis cases not	Potential pressure on the health system	Routine surveillance systems at regional and national levels
-Dust concentration between 150 to 400µg/m3 -Relative humidity between 20 & 40% -Temperature above 27°C	Emergence of Meningitis cases very likely	Loss of life, pressure on the health system	Activation of surveillance systems at regional and national levels
-Dust Concentration at least 400μg/m3 and above -Relative humidity less than 20% -Temperature above 30°C	Emergence of Meningitis cases very likely and epidemic status possible	Loss of life, increased pressure on the health system	Strengthen and increase meningitis surveillance systems at both regional and national levels

ACMAD vigilance maps of the period from 02nd to 08th April 2024, call for possible meningitis epidemics status over Mali, Niger, Nigeria, and Chad. Potential cases were expected in Senegal, Mauritania, Guinea, Ghana, Benin, Togo Burkina Faso, Mali, Libya, Nigeria, Cameroon, Algeria, and Sudan.

As reported by WHO/AFRO, on week 14 of 2024 (ie 01st-07th Apr): One district (1) crossed the epidemic threshold in Niger and nine (9) districts crossed the alert threshold in six (6) countries: Benin (2), Central African Republic (1), Chad (1), Mali (2), Niger (2) and Senegal (1).

Meningitis case distribution by country for 1st - 07th April 2024 (source: WHO AFRO Meningitis Surveillance And Control Programme)









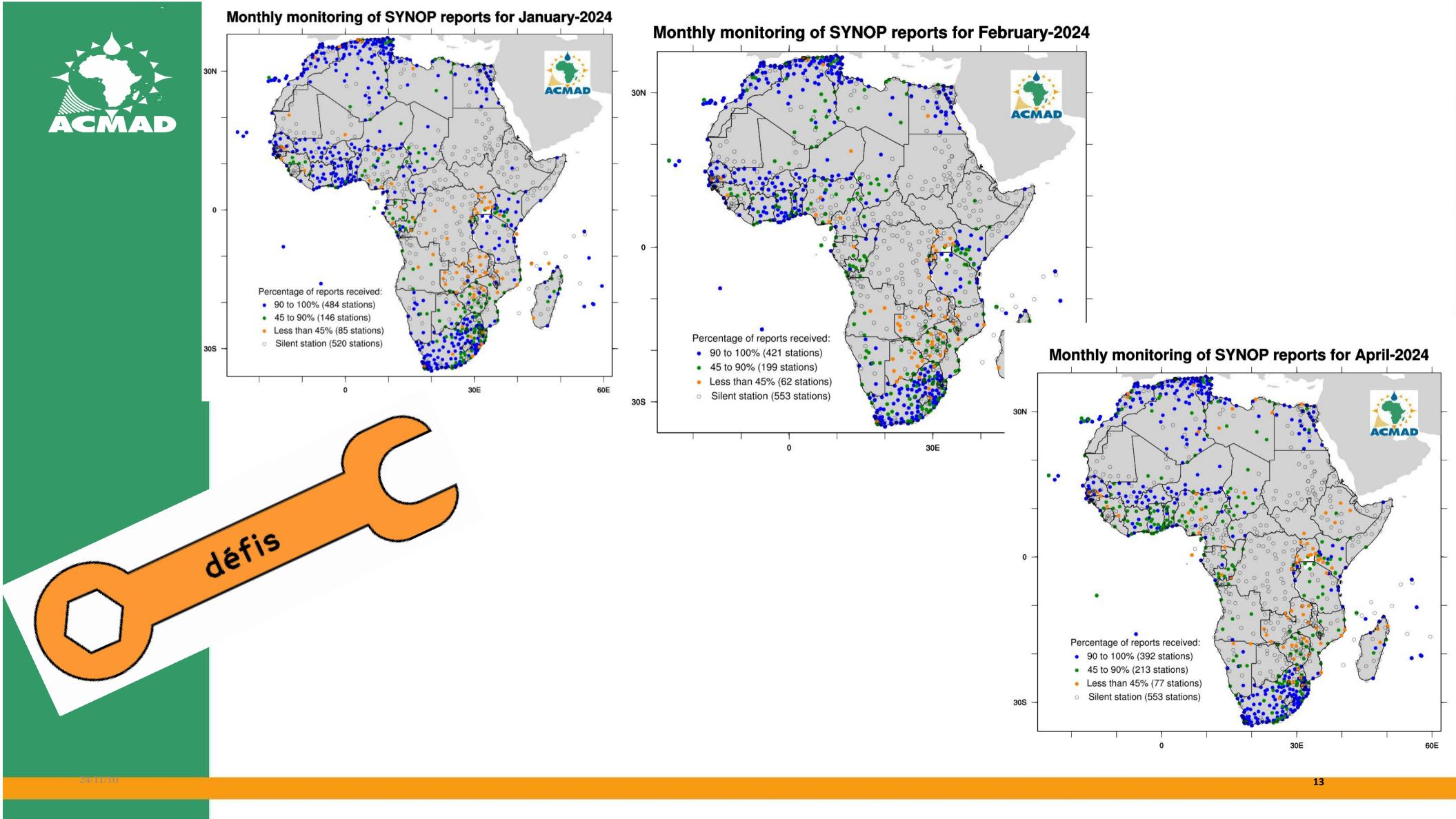








Quelles sont les améliorations futures attendues de ces services dans les années à venir et quels sont les défis à venir en termes de partenariat ?

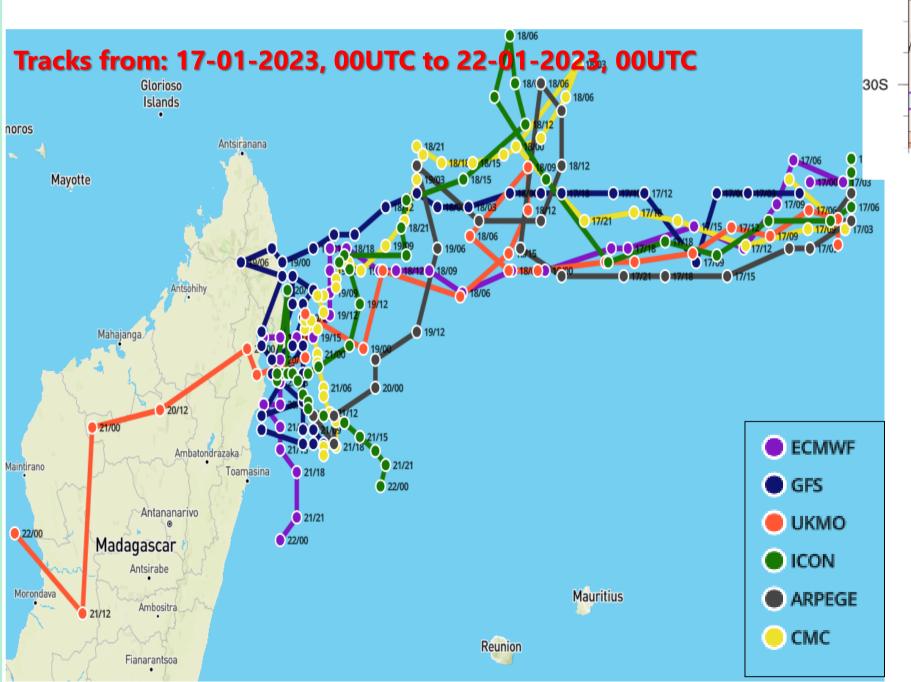


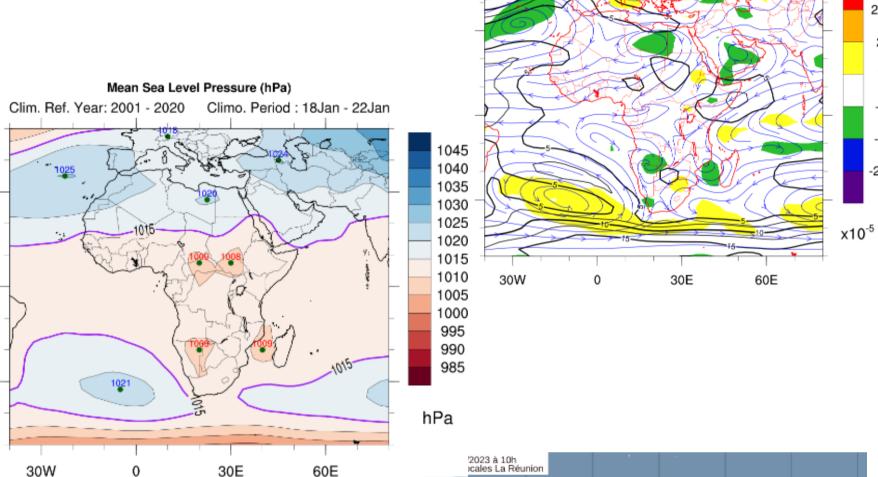
ACMAD

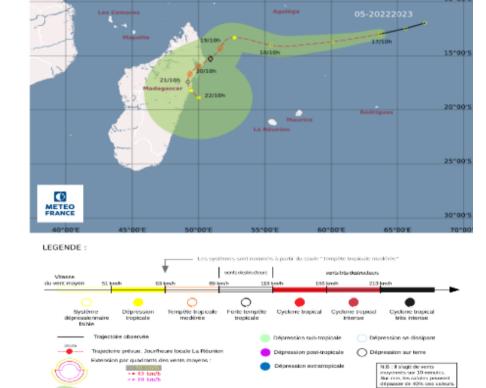
Cyclone early warning Information

(Global deterministic models : ARPEGE, CMC, ECMWF, ICON, GFS and UKMO) – **Climatology of the forecast period** favors evolution towards the Mozambican channel

Cyclone CHENOSO







Streamline, Wind Speed (black lines), vo (colors in s-1): @ 850hPa

AVERTISSEMENT:
L'enveloppe autour des trajectoires prévues (domaine de probabilité) représente l'incertitude sur la prévision pour toutes les échéances jusqu'à 5 jours. On l'appelle également "cône d'incertitude". Il indique que la trajectoire que va suivre le système au cours des 5 prochains jours a 75% de chances de se trouver à l'intérieur de ce domaine.



AMELIORATION FUTURE

Coordination des briefing ad hoc avec les SMHN, les centres régionaux sur les phénomènes météorologiques violents et le climat pour la prévision de l'impact et l'harmonisation des risques et des informations sur l'impact;

Séances d'information et déclarations spéciales pour le groupe de travail (EPR, Task Force, GECEAO) ;

Amelioration du Mécanisme de retour d'information et engagement des utilisateurs;

Tirer profit de toutes les ressources et de tous les canaux de communication pour faire en sorte que l'information atteigne l'Utilisateur;

Mettre en Place et Operationalisation des Interfaces Utilisateurs pour faciliter la Co-Production



Quelles sont les possibilités de promouvoir la coproduction de services météorologiques et climatologiques ?

Quels sont quelques exemples de réalisations réussies dans la région, quels en sont les avantages ?

Comment les capacités des SAP peuvent-elles être renforcées pour surveiller efficacement et durablement les indicateurs pertinents et fournir des alertes précises et en temps opportun ?



CO-PRODUCTION



FLOOD RISKS
IN WEST AND
CENTRAL
AFRICA

This note was produced by the West and Central Africa Flood Task Force created within the regional Emergency Preparedness and Response (EPR) group.

JULY 2023

The aim of the note is to provide information on seasonal flood forecasts for 2023 and to provide recommendations for disaster preparedness and response to natural hazards.

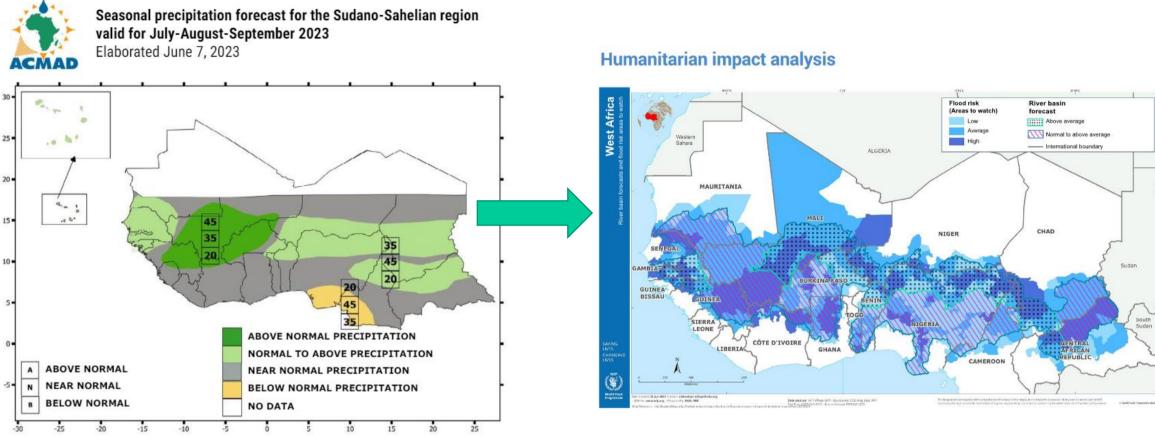


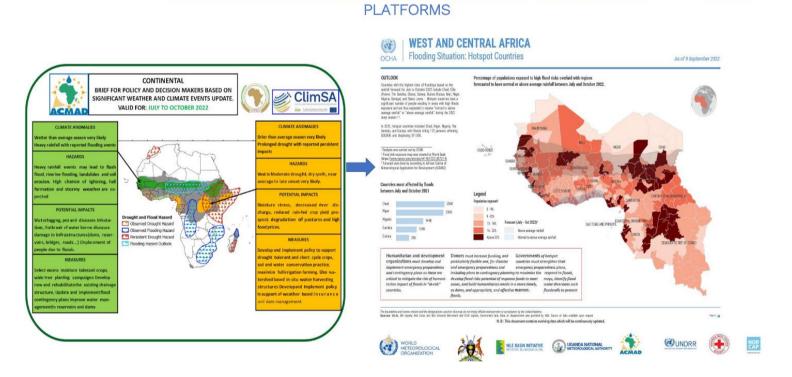
Better production
 Better nutrition
 Better environment
 Better life

Proactive action to flood risk in the Sahel

FAO's initiative to safeguard livelihoods and food security

June 2023





ACMAD co-produced knowledge materials with partners such as UNOCHA, UNHCR, and FAO to support anticipatory actions and reduce disaster risks.



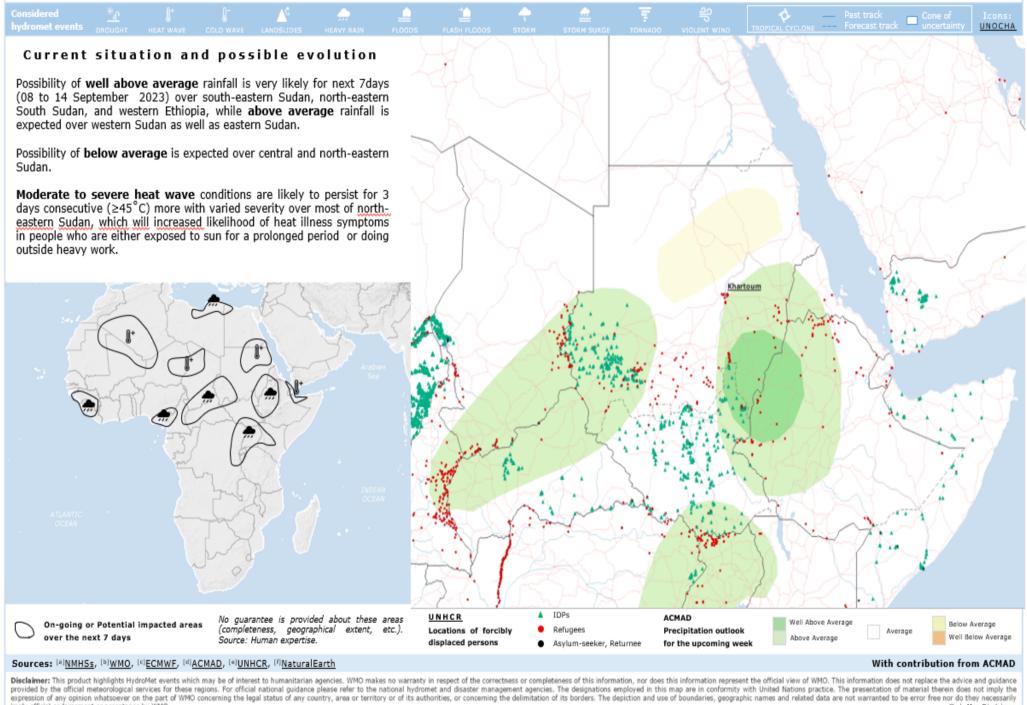
OPERATIONAL SERVICE CO-DESINGED AND CO-DEVELOPED WITH UN and HUMANITARIAN AGENCIES

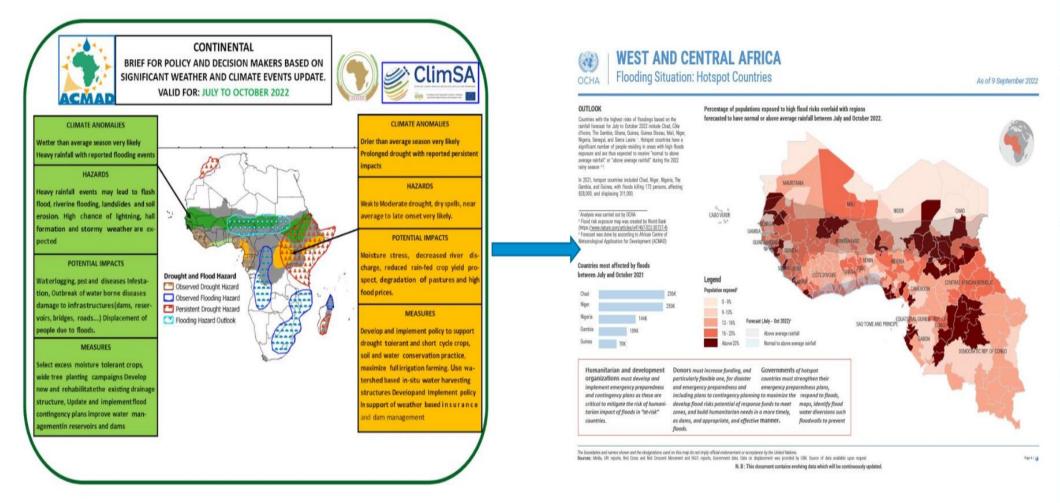




WMO Coordination Mechanism (WCM)

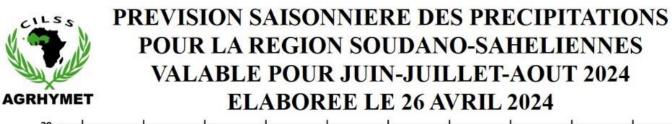
WCM Regional HydroMet Weekly Scan | Sudan Issued on 07 September 2023 12:00 UTC, Validity: 08 September – 14 September 2023





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



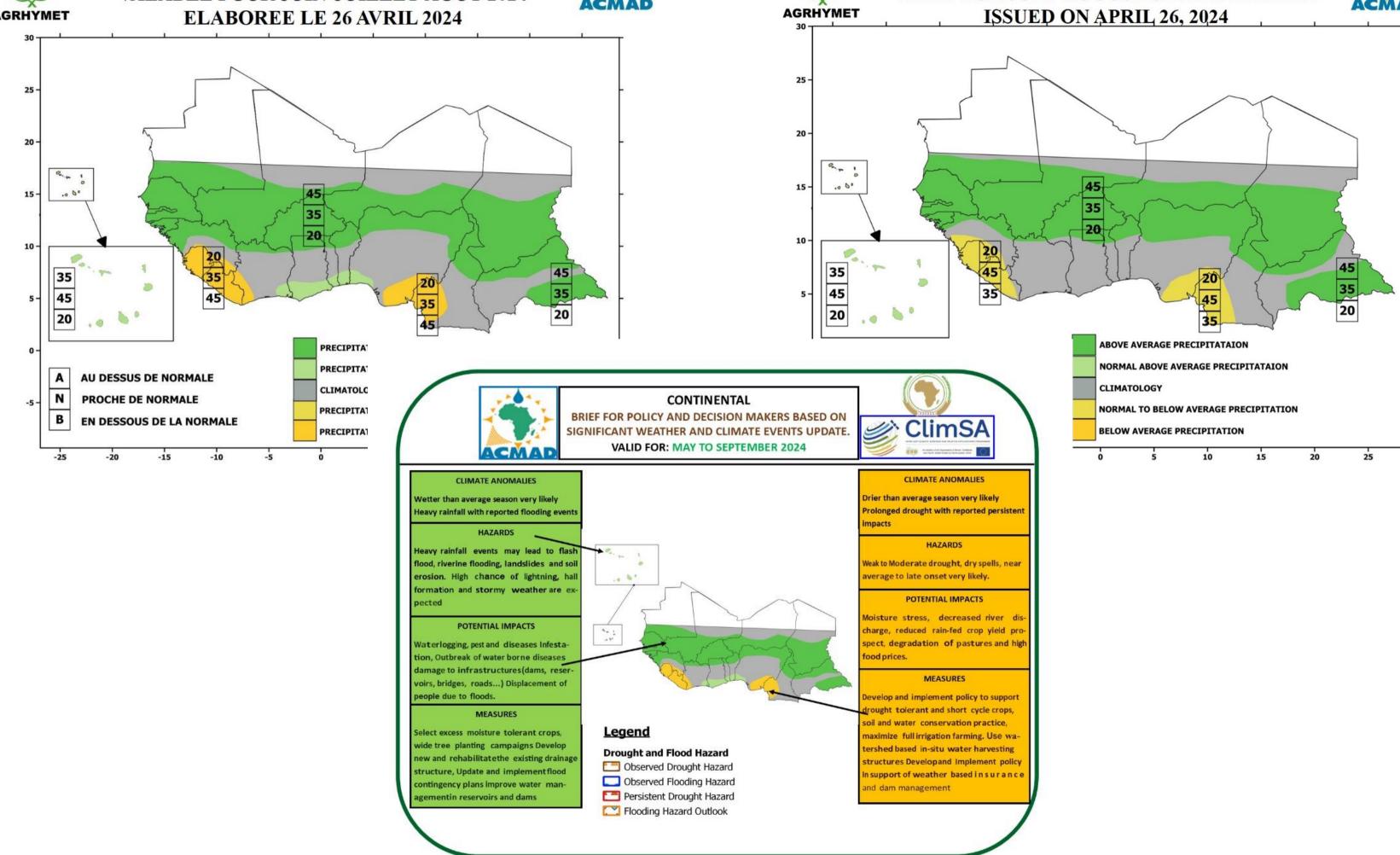






SEASONAL PRECIPITATION FORECAST FOR SUDANO-SAHELIAN REGION OF AFRICA VALID FOR JULY-AUGUST-SEPTEMBER 2024







PERSPECTIVE POUR AMELIORE LE SAP

Sensibiliser les décideurs politiques à la disponibilité de prévisions basées sur l'impact;

Renforcer les capacités des prévisionnistes en matière de connaissance des risques et communication sur les perspectives, les conseils, et alerte;

Renforcer la collaboration entre les institutions;

Amélioration l'accès aux données et la dissemination des informations ;

Tirer profit des Recherches et innovation



THANK YOU



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