# INAUGURATION OF ECOWAS DISASTER OPERATIONS CENTRE



### ABUJA – NIGERIA JUNE 15, 2023

### What is a Continental Watch and Why it is needed?

The Continental Watch is needed to warn (alert) on extreme event which may occur in **country or locality, day** and the level of **severity** of such an event for a decision maker for the next 5days from issued date.

The Continental Watch is an early warning for early action bulletin compiled and issued by the AUC Situation Room with technical support from ACMAD and ICPAC



### What is a Continental Watch and Why it is needed?



### **Highlights part**



Africa Multi-Hazard Early Warning and Action System for DRR **Continental Situation Room** 

#### Issue no. 66

Union

#### African 🍋 Africa Multi-Hazard Early Warning and Action System for DRR Continental Situation Room

**Visualisation Maps** 

2. DETAILED MULTI-HAZARD OUTLOOK FOR THE NEXT 5 DAYS



#### These mans summarize the forerast occurrence of extreme precipitation, wind storms and river floods presibly affecting the population in

### **Reference or Sources** information

emergency meeting with the African Union Commission at 10:00 hours on Wednesday, 10 August, 2022 to delibearte on the forecast. The AUC will share the meeting link to the affected

African

**3. ADVISORIES** 

Union

countries (Mauritania, Senegal and Chad) through a separate email in due course. National Disaster Authorities in Ethiopia, Guinea, Guinea-Bissau, Mauritania, Mali, Nigeria, Niger, Sudan, Senegal, South Sudan and Chad, are advised to monitor the rainfall situation and water flows in the rivers over the next five days due to medium possibilities of heavy rainfall and riverine flooding.

**Advisories part** 

Continental Situation Room

Senegal and Chad , the countries at risk are advised to:

potentially vulnerable communities.

actions and preparedness to the affected areas.

Management institutions to monitor the forecast hazards, and

AMHEWAS to inform African Union organs on the evolving situation.

Africa Multi-Hazard Early Warning and Action System for DRF

Level 4 Advisory: 1. Due to high chances of heavy rainfall that is forecast to affect Mauritania

(ii) undertake preparedness measures to prevent and minimize potential losses and damages to

2. The National Disaster Management Authorities are also advised to alert communities of high

chances of heavy flash floods and provide tailored products for various clusters for anticipatory

3. The Regional Economic Communities are advised to monitor the potential flood situation in the countries likely to experience heavy rainfall and provide technical assistance if needed.

4. The potentially affected member states are requested to share information on the state of the

hazards with the AMHEWAS Situation Room at mhewsituationroom@africa-union.org to enable

5. The countries in alert level 4 warning (Mauritania, Senegal and Chad) are regusted to attend an

(i) engage with their national hydrometeorological services and National Disaster Risk

Level 2 Advisory: National Disaster Authorities of Benin, Burkina Faso, Côte d'Ivoire, Cameroon Djibouti, Ethiopia, Guinea, Guinea-Bissau, Mauritania, Mali, Niger, Nigeria, Sudan, Senegal, South Sudan, Chad, Algeria, Lesotho and Somalia, are advised to continue monitoring the rainfall evolutions that are expected to cause sporadic flash floods as well as wind storms and heavy rainfall



#### Africa Multi-Hazard Early Warning and Action Sys

https://www.globalfloods.eu/technical-information/glofas-30day http://www.acmad.net/new/NEWSITEACMAD/ https://www.ecmwf.int/en/forecasts/eccharts

http://www.meteo.fr https://www.cpc.ncep.noaa.go

https://www.metoffice.gov.uk/premium/vcpafrica/#/map https://floodlist.com/africa/senegal-deadly-flash-floods-in-daka

d in this product are solely those of the media so e African Union. This document is originally produced in English and then automa Arabic via a machine translation service. Due to the timeliness of the product, trar For any doubt please refer to the English w

Africa Multi-hazard Early Warning and Action Sys

**Continental Watch** 

From Tuesday, August 9, 2022 to Saturday, August 13, 2022

#### 1.HIGHLIGHTS

#### Observed events over the last five days:

(From Thursday, August 4, 2022 to Monday, August 8, 2022) At least one person died and another was severely injured after heavy rains caused flooding in Dakar, the capital city of Senegal.

#### Multi - Hazard Outlook for the next 5 days :

Level 4 warning for possibility of extreme rainfall over Mauritania, Senegal and Chad. Level 3 warning for possibility of high rainfall in Ethiopia, Guinea, Guinea-Bissau, Mauritania, Mali, Nigeria, Niger, Sudan, Senegal, South Sudan and Chad.

Level 3 warning for possible riverine floods in Sudan, Niger and Nigeria.

Impact-based bulletin proportional to the amount of people affected by each hazard

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### **AMHEWAS**

Africa Multi-Hazard Early Warning and Action System for Disaster Risk Reduction

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### **Resources and Tools to compile the CW**





- Continental Watch is currently compiled twice a week at the continental level. On: Tuesday and Friday;
- > To compile the CW, the requirements are
  - ✓ myDewetra Platform;
  - ✓ Skilled and trained staff (Forecaster, Hydrologist, EAW experts and communicator);
  - ✓ Adequate Infrastructure;
  - ✓ Sources of early warning information
  - ✓ Partneship or collaboration

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## What is myDEWETRA PLATFORM

- myDEWETRA platform is a real-time event scenario builder, which allows decision makers to take prevention actions and reduce impacts of the forecasted event;
- myDEWETRA provide usefull link between forecasters, decision makers, communities and population;
- myDEWETRA works as an integrated real-time system providing a single access point to key early warning information;
- Through the platform, data (local or global) can be compared and analysed by experts in a timely manner.







### **Real-Time Risk Scenario Assessment & Prediction with**

- myDEWETRA platform makes it possible to build risk scenarios in real time, which enables preventive measures to be taken and the impacts of predicted extreme hydrometeorological events to be reduced.
  - To Assess risk scenarios in real time Several
    sources of information must be taken into
    consideration and All information is made
    available through one single platform:
    - Hazard(in real time) Medium and short-term weather forecasts, remote sensing and in situ observations, hydrological monitoring and forecasting;
    - Adaptive capacity emergency means: shelters, storage, operational centres;
    - Exposure and vulnerability population, critical infrastructure, cultivated areas, etc...

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**Impact-Based Risk Assessment for Continental Watch** 



From the forecast to impact-based warning level classification



HAZARD BASED

**IMPACT BASED** 

- Identification of the thresholds;
- Hazard classification;
- Exposure and vulnerability;
- Risk level classification;





### The Warning Levels Classification is well establish in Legal and institutional framework

Level	Criteria for Activation	Continental Level Action
Level 1	<ul> <li>Very localized Sub-National Warning triggered by National EWS Service or community based EWS targeting specific geographical areas within a MS.</li> <li>Warnings issued for relatively low impact, routine, events which can be managed by local authorities or communities with no major risk of escalation or transboundary spread.</li> </ul>	<ul> <li>No action required.</li> <li>General monitoring by Situation Room.</li> </ul>
Level 2	<ul> <li>National warning triggered by National MHEWS facility for significant events which may escalate, impacting/ potential to impact multiple administrative areas within MS or more localized events with potential of very significant consequences which requires national hazard monitoring and forecasting and may potentially require intervention of National resources in support of the local level depending on the organization of the MS.</li> </ul>	<ul> <li>No formal action required.</li> <li>General monitoring by Situation Room and provision of advice or guidance on request.</li> </ul>
Level 3	<ul> <li>Regional Warning triggered when the REC MHEWS Situation Room identifies the potential for significant impact that can exceed the coping capacity of the MS and may require international support and related supranational coordination. These events are likely to determine transboundary impacts/ anticipated impacts even from a single hazard event affected more than 1 MS. This may be triggered by information received from regional hazard monitoring services, or from information received from a MS.</li> <li>Regional Warning may be issued to all impacted/ potentially impacted MS within same REC. Where neighbouring MS from another REC may be impacted, transboundary warnings may be issued through the Continental MHEWS Situation Room.</li> </ul>	<ul> <li>Partial activation of the Situation Room.</li> <li>Montor the situation with the involved REC(s).</li> <li>Evaluate the situation and escalate to Level 4 Warning if required.</li> <li>Issue Situation Reports to impacted REC Situation Rooms to monitor the situation.</li> <li>Inform so that they may initiate pre-emptive Early Actions as required.</li> </ul>
Level 4	<ul> <li>Continental Warning issued by the AMHEWS Situation Room for the most significant events that may potentially exceed the coping capacity of the affected MS by a large amount and require international support and related supranational coordination. These events are extremely likely to result in regional transboundary impacts.</li> <li>Warnings for significant hazards with potential for continental impacts, likely affecting multiple MSs and RECs with significant consequences.</li> </ul>	<ul> <li>Full activation of the Situation Room to coordinate information from multiple sources, haison with RECS on transboundary impacts or anticipated impacts.</li> <li>If a disaster occurs, ensure data and information on hazards being monitored continues to be provided to the Continental Disaster Coordination Centre.</li> <li>Issue regular Situation Reports on hazards and early warnings issued, and on Early Actions taken, for AUC Bodies, AUC Senior Decision Makers and International Partners.</li> </ul>

### Threshold : Rainfall, Wind, Flood used in CW Compilation



### RAINFALL



**Precipitation**: maximum 24h cumulations taken from a long term satellite dataset (CHIRPS). *Thresholds linked to annual probability of exceedance (2, 5, 20 years),* Thresholds are bounded with upper and lower limits to account for different ranges of extreme precipitation due to differences in the datasets (CHIRPS, GSMAP, GFS) and in their grid resolution.

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WIND



Alert class	Wind speed threshold	Note
Medium	14.3 m/s	Average speed for wind advisory by NOAA-NWS
High	17.9 m/s	Breaking or uprooting of trees
Extreme	22.3 m/s	Peak of the distribution of fatal and injury-causing accidents

The Wind storms thresholds are based on

https://doi.org/10.1175/WAF-D-15-0112.1

published research:

**River floods**: Based on peak discharge. Thresholds linked to annual probability of exceedance (2, 5, 20 years) from

GloFAS.





### **Impact-Based Classification**







### **Continental Watch Target**

African () Union () Acceded ()

- ✓ The Continental Watch is intended for designated DRM and Hydro-meteorological authorities engaged in Early Warning and Disaster Risk Reduction for High Level decision making;
- Embassies or Ministries responsible for Foreign Affairs receiving the Continental Watch is just for their their information.



### **From Hazard to Impacts**





For flood the JRC For Flood inundation maps (1 km) associated to each sub-basin are activated if the related return period threshold is exceeded in the following 5 days



### **DEMONSTRATION SESSION**

### From Hazard to Response level







Index threshold	Tier	CW Impact forecast
<10 people	0	No event

<500 people	1	Local / Sub-National
<0.5% of Admin1 pop	2	National
<5% of Admin1 pop >10k people	3	Regional
>5% of Admin1 pop >50k people	4	Continental

#### Based on 5062 disasters occurred in 1990-2021 (EM-DAT)



### **Collaborators**

This Continental Watch is produced by the African Union with the technical and scientific assistance of UNDRR, ICPAC, ACMAD and CIMA Foundation, with support of the Italian Government



### Africa Multi-hazard Early Warning and Action System









# Thanks for your attention !

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