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Enhancing Capabilities of African NMHSs Through ClimSA Interventions

Nov. 16, 2024, Baku, Azerbaijan



**Prepared by the ACMAD Team
Presented by
Dr Kamoru Abiodun LAWAL**



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



**Faire du temps, du climat et de l'environnement des ressources pour le développement
Making weather, climate and environment resources for development**



ACMAD CORES MISSIONS

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

- 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 WMO Congress after a successful demonstration phase as a Regional Climate Centre for Africa in May 2015;*
 - ✓ *The Continental Weather Watch Centre was achieved with the Continental Multi-Hazards Advisory Centre inaugurated in November 2022, at ACMAD providing contributions to continental watches and disaster situation reports to the situation room operations at the African Union Commission Headquarter 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, database, research and innovation as functions

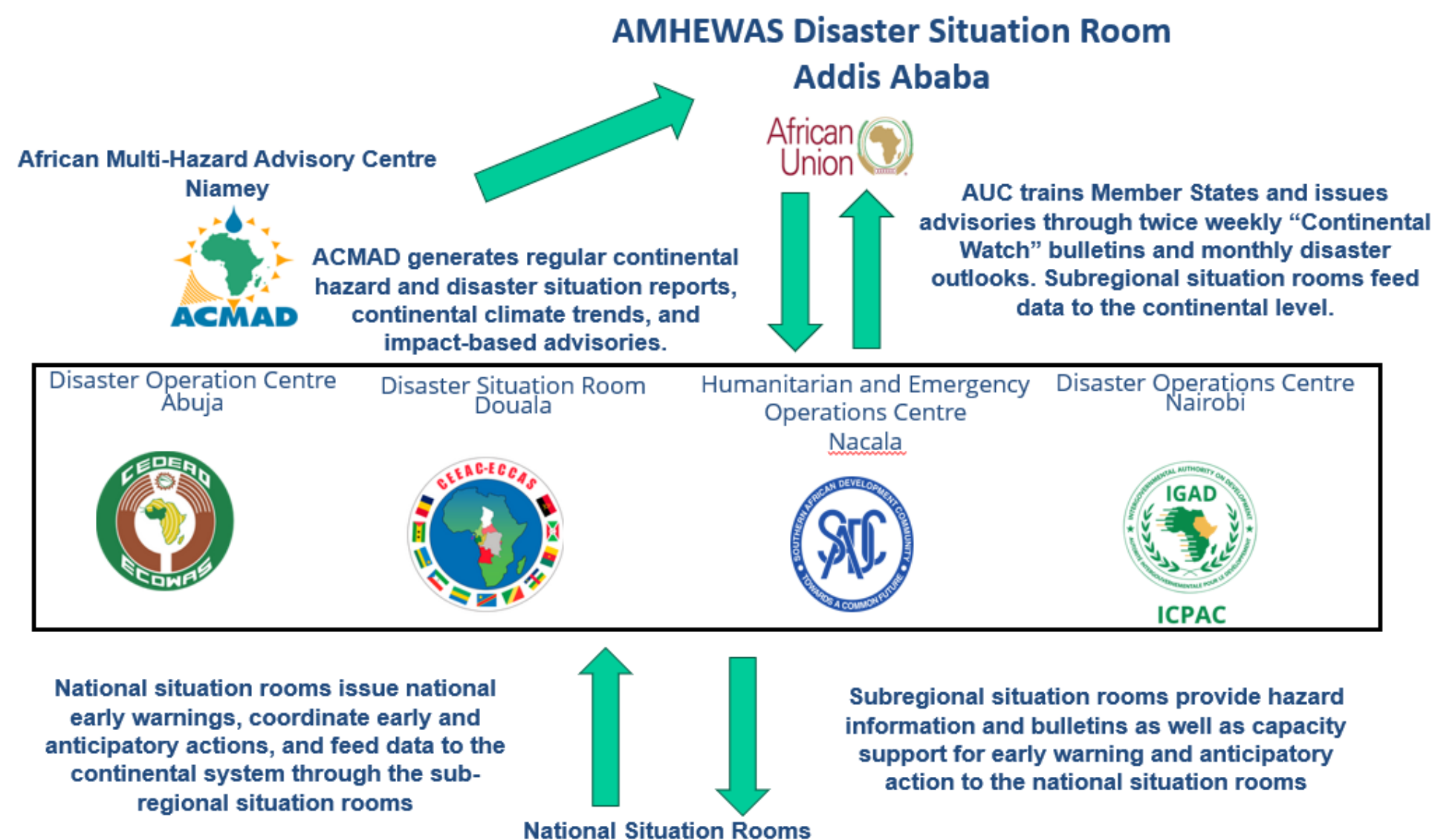
ACMAD is a member of the NoE (Africa Network of Excellence for DRR)



Stakeholder Involvement

- ACMAD adopted a cascading communication chain to facilitate the movement of information from its source to the final users;
- Information moves from the global forecast centres on the international scale and national meteorological services on the country scale to regional organisations such as IFRC, OCHA, national civil protection agencies, DRM, UNHCR, WHO and UNDRR as well as AUC Situation Room.

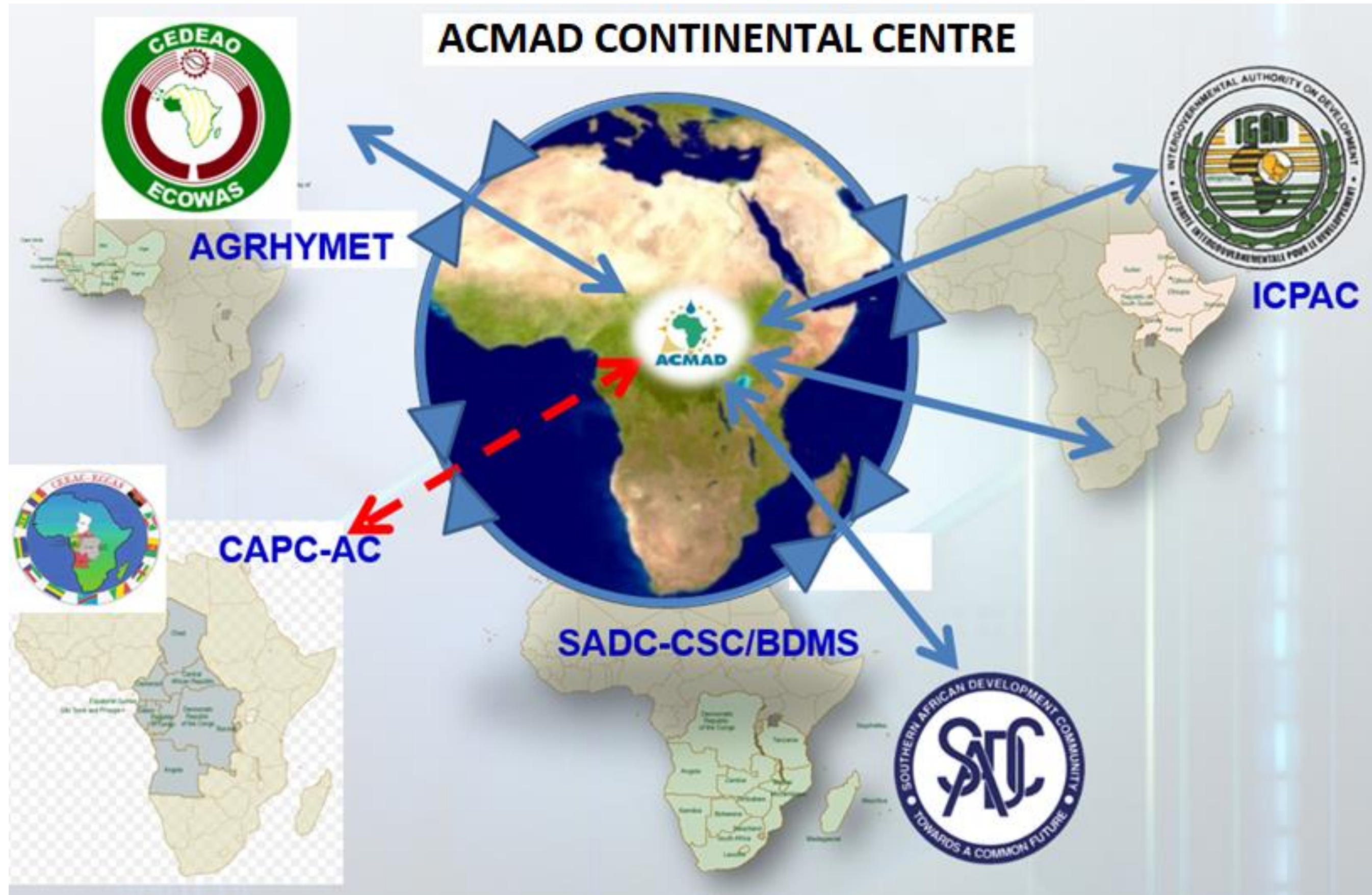
Information finally reaches other national and community level stakeholders.



ACMAD Support the AMHEWAS program. The ACMAD Sit Room is now operational as part of the African multi-hazard early warning system for rapid action and provides twice-weekly Continental Watch, information on extreme rainfall, high winds and cyclone tracks, as well as collaborating with the AUC SitRoom and Sit Room ICPAC in the production of Situation Reports.

The centre also contributes to the organisation of ad-hoc briefings for anticipatory action.

ACMAD CONTINENTAL PARTNESHIP



INTRA-ACP CLIMATE SERVICES AND RELATED APPLICATIONS PROGRAMME





Background

Capabilities

By mentioning **CAPABILITIES**, we mean the ability of individuals, organizations, or systems to perform specific tasks, and achieve desired outcomes.

Types of Capabilities

1. **Human Capabilities**: skills, knowledge, experience, and competencies.
2. **Organizational Capabilities**: structural, procedural, and cultural abilities.
3. **Technological Capabilities**: digital infrastructure, software, and hardware.
4. **Financial Capabilities**: resource management, funding, and investment.
5. **Social Capabilities**: networking, collaboration, partnerships, and community engagement.



Capabilities of **African NMHSs** can be assessed through comprehensive overview of:

- **Infrastructures,**
- **Education, and**
- **Capacity building.**



Infrastructures

1. **Physical Infrastructure**: well equipped observation enclosures (terrestrial and maritime, plus AWOS if necessary), suitably modern forecast offices, equipment stores, and utilities (water, electricity, sanitation).
2. **Digital Infrastructure**: internet connectivity, data centers, cybersecurity, and communication networks.
3. **Social Infrastructure**: training schools, mechanical and fabrication centres, experimental laboratories, etc.
4. **Economic Infrastructure**: financial institutional support, commercial departments for marketing, economic recovery systems, etc.



Education

1. **Formal Education**: primary, secondary, tertiary (up to PhD level if possible), and ad-hoc and vocational training.
2. **Informal Education**: community-based knowledge and learning, apprenticeships, mentorship, and online courses.
3. **Non-Formal Education**: workshops, seminars, conferences, and short-term training.
4. **Specialized Education**: technical, professional, and entrepreneurial training.



Capacity Building

1. Individual Capacity Building: self development, enhancing skills, knowledge, and competencies.
2. Organizational Capacity Building: management, and governance.
3. Community Capacity Building: leadership, and participation.
4. Institutional Capacity Building: developing policies, procedures, and systems.



Interconnection between Infrastructures, Education and Capacity Building

All the three components are interconnected and essential for sustainable development of NMHSs.

- ✓ **Infrastructures enable access to education and capacity building opportunities.**
- ✓ **Education develops skills and knowledge for infrastructure development and management (i.e. provides the foundation).**
- ✓ **Capacity building enhances the effectiveness of infrastructure and education initiatives (i.e. helps to apply and reinforce what had been learned to achieve tangible results).**

Possible Challenges Hindering Capabilities of African NMHSs



- **Funding constraints**
- **Inequitable access and distribution of budgetary allocations**
- **Quality and relevance of education and training**
- **Maintenance and sustainability of infrastructures and equipment**
- **Institutional weaknesses, mis-management and vices**



Where does ClimSA comes in here?

The six-year Intra-ACP [African, Caribbean, Pacific Group of States] Climate Services and Related Applications (ClimSA: <https://www.climsa.org/>) project funded by the European Union.

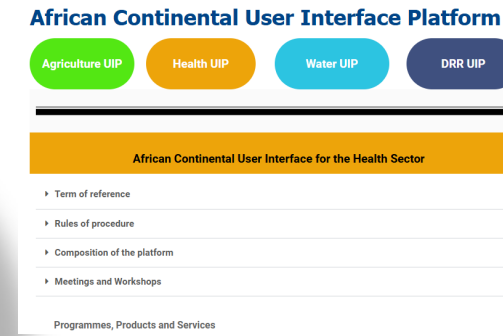
Objective: *To foster sustainable development on the continent by improving the decision-making processes and practice through informed adaptation options to climate variability and change*

Purpose: *strengthen the entire climate services value chain from access to information, generation and provision of climate services, and engagement and capacity of users to ensure effective utilization of the services*

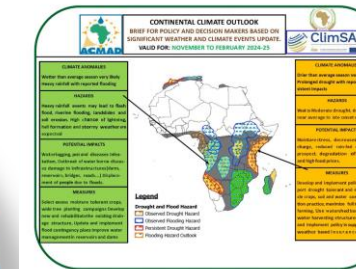


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ACMAD's ClimSA Project - Outputs



(establish, strengthen & promote Supported pilot country to operationalized a national UIPs)



(development & delivery – including strengthened CSIS)



(strengthen observation and monitoring systems, research, modelling and prediction, CDMS)



(mainstreaming climate information services)



(Institutional, infrastructural, and human)



User Interface Platform for Health Sector

- Meningitis Outbreak Outlook/Advisory For WHO-AFRO Meningitis Surveillance And Control Generated and disseminate
- Participation in Bi-monthly technical briefing with WHO-AFRO Network



African Continental User Interface Platform

Agriculture UIP

Health UIP

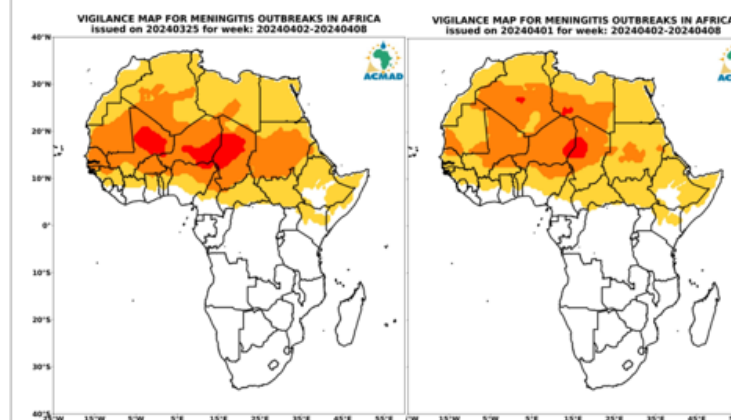
Water UIP

DRR UIP

African Continental User Interface for the Health Sector

Climate Service for Health/Meningitis - Verification

Meningitis Outbreaks Outlook/Advisory for 02-08 Apr 2024



Phenomenon	Hazard	Potentials Impacts	Advisory / Measures
<ul style="list-style-type: none"> -Dust concentration below 150µg/m³ -Relative humidity above 40% -Temperature below 27°C 	Emergence of Meningitis cases not likely	Potential pressure on the health system	Routine surveillance systems at regional and national levels
<ul style="list-style-type: none"> -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
<ul style="list-style-type: none"> -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

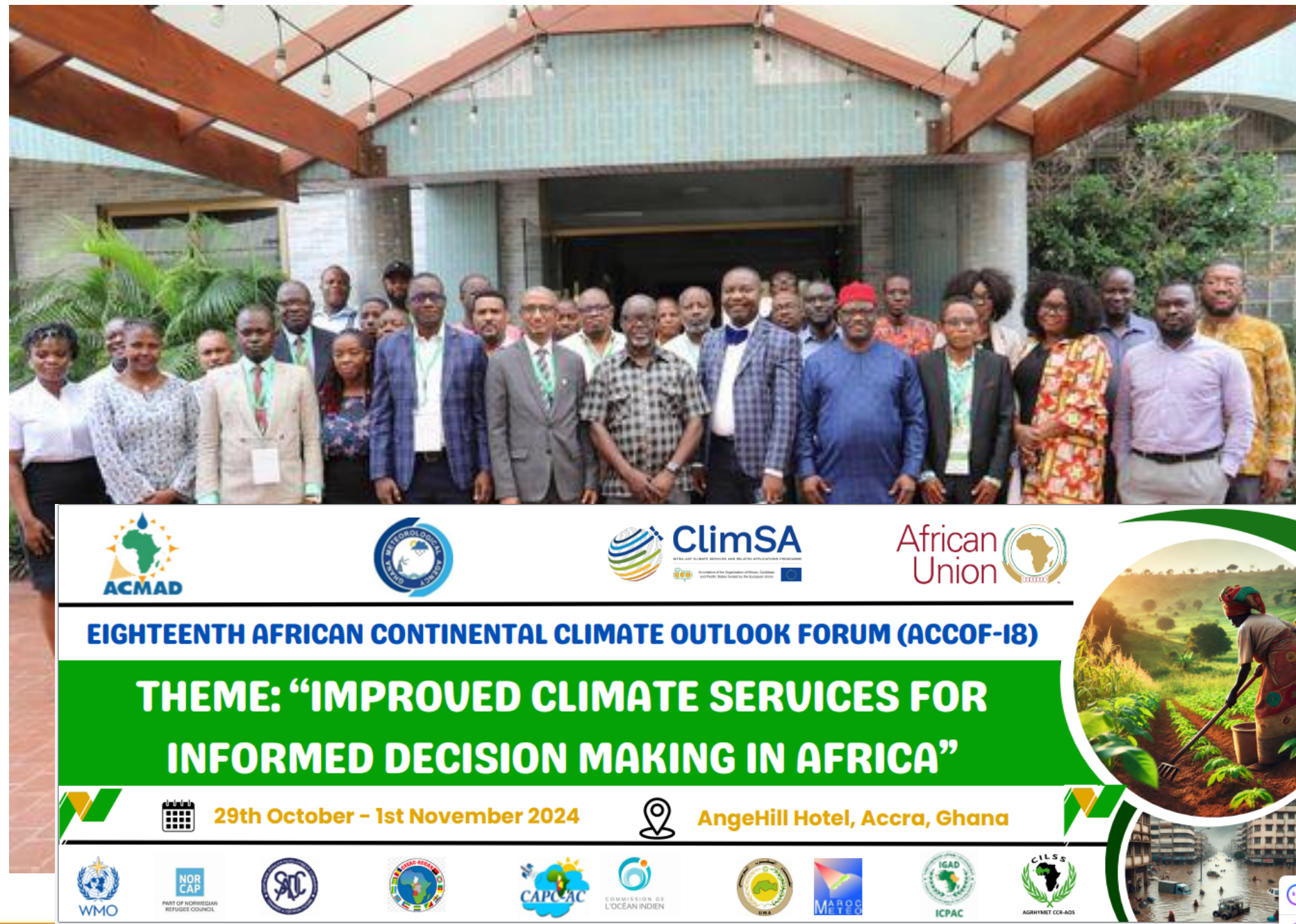
(source: WHO AFRO Meningitis Surveillance And Control Programme)





African Continental Climate Outlook forum ACCOF

A Mechanism to provide Continental Climate Outlook Services and improve coordination and harmonization on methods, data, tools, products and services for all Africa








EIGHTEENTH AFRICAN CONTINENTAL CLIMATE OUTLOOK FORUM (ACCOF-18)

THEME: "IMPROVED CLIMATE SERVICES FOR INFORMED DECISION MAKING IN AFRICA"



29th October - 1st November 2024



AngeHill Hotel, Accra, Ghana

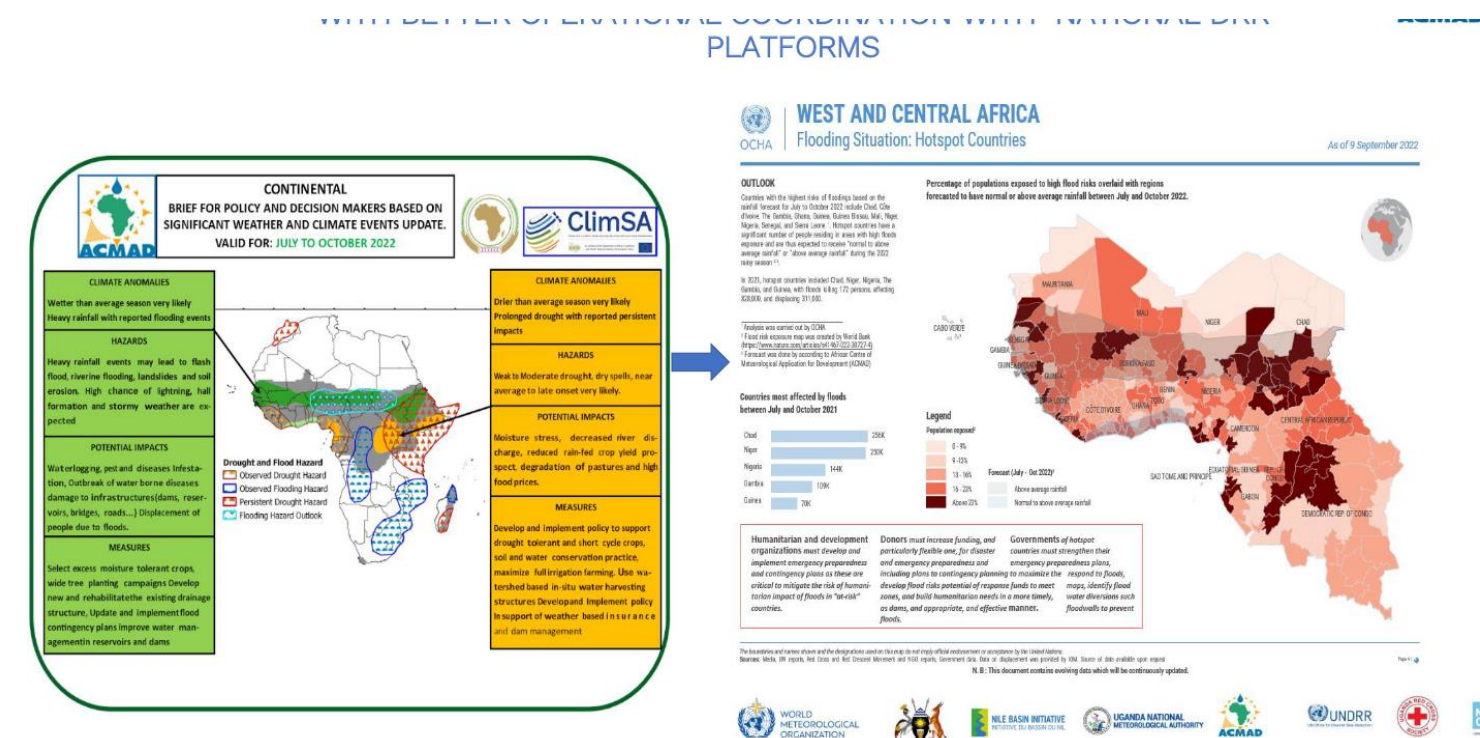











INTRA-ACP CLIMATE SERVICES AND RELATED APPLICATIONS PROGRAMME

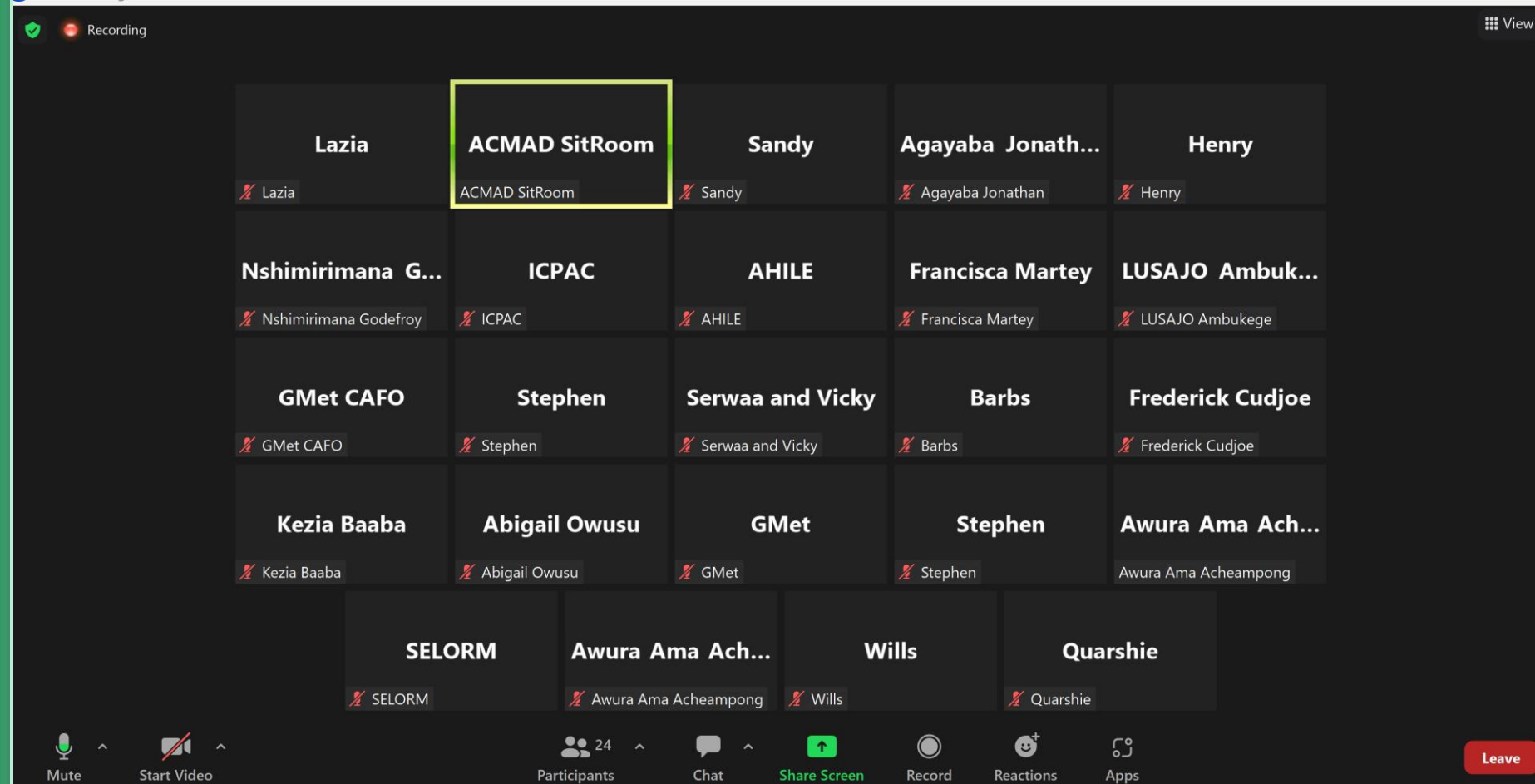
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Technical Briefings and Debriefing

A dedicated Information platform/Portal to exchange best practice and knowledge, improve our forecast and early warning and encourage cooperation between countries and region



ACMAD @ACMAD_org · 24 min

⚠️ flooding and landslide after heavy rainfall on June 11, 2023 in Abidjan, Côte d'Ivoire. It has been reported that at least 5 people died as a result of the landslide. ACMAD's 5-days alert map of 8 June highlighted this weather situation

[#EarlyWarningForAll](#) [#Climateservices](#)

AND POLICY BRIEF FOR HEAVY RAINFALL AND STRONG WINDS
Valid From June 9 to 13, 2023
Issued on June 8, 2023

In Guinea, Sierra Leone, Côte d'Ivoire, Ghana, Benin, Togo, Nigeria, Cameroon, C.A

Phenomenon	Hazard	Potentials Impacts
In next 5 days accumulated rainfall (50-100mm) is likely.	Moderate rainfall, flash flood, riverine flooding, landslides, soil erosion and lightning likely	Displacements of people due to floods, outflow of water borne diseases, damage of infrastructures (roads, bridges, ...)
In next 5 days accumulated 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, outflow of water borne diseases, damage of infrastructures (roads, bridges, ...)
In next 5 days accumulated 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, outflow of water borne diseases, damage of infrastructures (roads, bridges, ...)

Disclaimer: The presentation of country boundaries on the map does not concern the legal status of any country, territory or area, or concerns

1 1



Capacity building user engagement session

- *User engagement sessions to share knowledge and best practices and establish a **strong feedback mechanism***
- *Training on **innovative interface for climate information production** (Africa Drought Monitoring System, Onset monitoring system)*
- *Pre-RCOF training: **Downscale the continental tools at country level***



**ONLINE USER ENGAGEMENT
AGRICULTURAL SEASON ONSET
MONITORING IN AFRICA**

September 3rd, 2024 09:00 - 11:00 GMT

Register



ACMAD On-the-Job Training Program

On-the-Job training is an in-situ program at ACMAD that build the capacity of national experts with more recent technologies, tools and methods in climate service production.



MODI MBOG ESTHER C.
Forecaster at the National Meteorological Service of Cameroon



ON THE JOB TRANNEE / OCT - NOV, 2024

“ This combined training in weather prediction and communication gave me the opportunity to sharpen my forecasting skills, especially for extreme events like dust storms, heavy rainfall, and heatwaves. But more importantly, I learned how to turn science into actionable and user-friendly information that can truly make a difference ”



FORMATION-ACTION / AVRIL - AOUT 2024

Cette formation de quatre mois à ACMAD s'aligne parfaitement avec mes aspirations professionnelles. Les compétences acquises, notamment en prévision saisonnière et en prévision basée sur les impacts, représentent une expérience précieuse pour l'Union des Comores. Elles contribueront à améliorer l'anticipation et la réponse aux défis futurs, réduisant ainsi les pertes économiques tout en garantissant la sécurité alimentaire

MIROIRDINE KAMARDINE
Ing. Agronome de la Direction de la Météorologie de l'Union des Comores





Therefore, best practices has been enhanced in terms of the following:

- 1. Integrated planning and coordination**
- 2. Community engagement and participation**
- 3. Public-private partnerships**
- 4. Investment in human resources**
- 5. Monitoring and evaluation**



In Summary.....

African NMHSs benefited from ClimSA Project in terms of development and enhanced capabilities:

1. Training, education and enhanced performance
2. Investment in technology for robust efficiency
3. Strategic planning and improved decision-making
4. Collaboration and partnerships for sustainable growth
5. Continuous evaluation and improvement in aid of enhanced customer satisfaction



Thank You For Your Attention