ACMAD

African Center of Meteorological Applications for Development

Centre Africain pour les Applications de la Météorologie au Développement



www.acmad.ne

ELEMENTS OF SCIENCE POLICY INTERFACE INITIATIVES IN AFRICA: CASE STUDY



19/11/2024

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



INTRA-ACP CLIMATE SERVICES AND RELATED APPLICATIONS PROGRAMME



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





ACMAD'S PRESENTATION ACMAD CORES MISSIONS

Established through resolution 540 of the UNECA Conference of Ministers in April 1985 following the droughts of the 70s and 80s, ACMAD was established in Niamey-Niger in October 1992. Continental <u>Weather and Climate Watch Centre</u> for Africa with Monitoring, *forecasting* and *early* warning for droughts, floods, tropical cyclones and other extreme events as functions

- 2015;
- **African Union Commission Headquarter in Addis Ababa**

Centre of Excellence for the Applications of meteorology for sustainable development with capacity building, methods, tools and product 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)

 \checkmark 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

 \checkmark 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

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INSTITUTIONAL FRAMEWORK

WMO RCC Status Worldwide





Continental Multi-Hazards Advisory Centre



Stakeholder Involvement

- > Adopted a cascading communication chain to facilitate the movement of information from source to the final users;
- > Information moves from the global forecast centers on the international scale and national meteorological services on the as well as AUC Situation Room.

Information finally reaches other national and last-mile stakeholders.



country scale to regional organizations such as IFRC, OCHA, national civil protection agencies, DRM, UNHCR, WHO, and UNDRR

ACMAD Supports 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 center also contributes to the organization of ad-hoc briefings for anticipatory action.



CONTINENTAL PARTNERSHIP & COORDNATION





User Interface Platform: Translate Science to Policy Decision Support Tool

What?

A framework that provides a structured means for users, climate researchers, and climate service providers to interact at appropriate levels (Regional/National/Sub-**National**) to ensure that the climate service providers meet user needs for climate services.

Why?

Promote effective decision-making where it involves climate considerations

How?

Maximizing the **usefulness** of climate information in the decision-making











Continental Climate Services User Interface Platforms (UIPs): National UIPs (2)

CONTINENTAL USER INTERFACE PLATFORMS ESTABLISHED AND OPERATIONALIZE

African Continental User Interface Platform



African Continental User Interface

- Term of reference
- Rules of procedure
- Composition of the platform
- Meetings and Workshops
- Programmes, Products and Services





Figure 2. ISO 31000.



CONTINENTAL USER AND POLICY INTERACTION (ACCOF-18)







Products for Policy Making : AFRICA CONTINENTAL CLIMATE OUTLOOK FORUM





CONTINENTAL CLIMATE OUTLOOK

BRIEF FOR POLICY AND DECISION MAKERS BASED ON SIGNIFICANT WEATHER AND CLIMATE EVENTS UPDATE. VALID FOR: NOVEMBER TO FEBRUARY 2024-25



CLIMATE ANOMALIES

Wetter than average season very likely Heavy rainfall with reported flooding

HAZARDS

Heavy rainfall events may lead to flash flood, riverine flooding, landslides and soil erosion. High chance of lightning, hall formation and stormy weather are expected

POTENTIAL IMPACTS

Waterlogging, pest and diseases Infestation, Outbreak of water borne diseases damage to infrastructures(dams, reservoirs, bridges, roads...) Displacement of people due to floods.

MEASURES

Select excess moisture tolerant crops, wide tree planting campaigns Develop new and rehabilitatethe existing drainage structure, Update and implement flood contingency plans improve water managementin reservoirs and dams



CLIMATE ANOMALIES

Drier than average season very likely Prolonged drought with reported persistent impacts

HAZARDS

Weak to Moderate drought, dry spells, near average to late onset very like-

POTENTIAL IMPACTS

Moisturestress, decreasedriver discharge, reduced rain-fed crop yield prospect, degradation of pastures and high food prices.

MEASURES

Develop and implement policy to support drought tolerant and short cycle crops, soil and water conservation practice, maximize full irrigation farming. Use watershed based in-situ water harvesting structures Develop and Implement policy in support of weather based in surance and

This product is the outcome of the ACCOF mechanism which involve all RCCs over Africa





ENGAGEMENT WITH USERS & POLICYMAKERS (NCOF-1): Cameroon







OND 2024 RAINFALL FORECAST MAP





NDJ 2024/2025 RAINFALL FORECAST MAP





Implications of Seasonal Forecast

Region	FORECAST	Impact / Implications (conside Forecast) NEGATIVE/POSITIVE

er the **Proposed Mitigation/Adaptation Measures**





VIGILANCE MAP FOR MENINGITIS OUTBREAK

Valid From 25 Apr to 02 May 2024

Issued on Apr 25, 2024

HIGHLIGHT: Meningitis cases are very likely in Algeria, Libya and Chad

HIGHLIGHT: Meningitis cases likely in Morocco, Algeria, Libya, Egypt, Mauritania, Senegal, Mali, Burkina-Faso, Niger, Nigeria, Cameroon, Chad, Sudan and Eritrea







	Hazard	Potentials Impacts	Advisory / Measures
ration nidity	Emergence of Meningitis cases not likely	Potential pressure on the health system	Routine surveillance systems at regional and national levels
pelow			
ration to nidity % above	Emergence of Meningitis cases very likely	Loss of life, pressure on the health system	Activation of surveillance systems at regional and national levels
on at and y less above	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



Impact forecasts prototype developed with WHO and through interactions at the climate–DRR interface



HYDROMET SIGNIFICANT EVENTS: ON-GOING (with new potential impact) & PO

A Possibility of accumulated heavy rainfall of more than 100mm during the next 7 days, leading to flash flood, may occur in Guinea, Sierra Leone, N Liberia, SE Nigeria, SW & E Cameroon, N Central African Republic, S Chad, SW & E Sudan, NW, S & E South-Sudan, E Democratic Republic of the Congo, Uganda, W Kenya, Burundi, Rwanda and W Ethiopia. Moderate to severe heat wave conditions are likely to persist for 3 consecutive days (≥45°C) or longer with varied severity in Mali, Mauritania, Algeria, Niger, Chad, Egypt, Sudan, Djibouti and Somalia. [44]

A "Medicane" (see event in 2020) could form over the Gulf of Sidra on 9-10 Sep. Violent winds may create very large waves on this area. Heavy rain, thunderstorms and gusty winds are expected on 8-11 Sep over Libya. Gusty winds are also expected on 10-11 Sep over Greece and Aegean See. Heat wave on 8-9 Sep in SE Mediterranean areas. [a,b,e] Heavy rains/showers po Sources: ^[4]NMHSs. ^[4]WMO. ^[4]UNHCR. ^[4]RSMCs/TCWCs: RSMC Miami. ^[4]ECMWF. ^[4]NaturalEarth

C Heavy rains/showers possible in S Myanmar on 8-14 Sep, S coast of Thailand on 9-13 Sep, W coast of Cambodia on 10-14 Sep and W coast of India on 8-11 Sep. Isolated moderate-heavy rains/showers may affect N Pakistan on 8-9 Sep, N, E, S & central India, Bangladesh, E Nepal, Bhutan and N Thailand on 8-10 Sep, N, E, W & central Myanmar, Lao PDR, and N Cambodia on 8-14 Sep, N, S & central Viet Nam on 9-14 Sep, and S Sri Lanka on 10-12 Sep. [a,e]

LEE is forecast to intensify into a major hurricane by 8 Sep and could pass N of the Lesser Antilles on 9-10 Sep and Greater Antilles on 11-13 Sep (still uncertainty - see <u>RSMC Miami</u> and <u>NMHSs</u>). Thunderstorms with local flash floods and strong winds are possible. Thunderstorms/heavy rains are expected on 8-14 Sep in parts of Central America, W Colombia and N Ecuador. Flooding and landsides are likely. Thunderstorms/heavy rains are expected on 8-9 Sep in S Brazil and on 11-14 Sep also in Uruguay, N Argentina, Paraguay and E Bolivia. Flooding are possible. [4,4,4]

Heavy rains/showers possible in W Indonesia on 8-10 Sep. Isolated moderate-heavy rains may affect W & NE Indonesia, Malaysia, and Singapore on 8-14 Sep. [#,#]





Product developed and tested with WMO and UNHCR under the WMO Coordination Mechanism (WMC) to support Humanitarian Policy activities.

It raises awareness of possible hydrometeorological events and developments of interest for Internal Displaced Persons (IDP) and Refugees worldwide.





Science Policy Interface at the National Level: Nigeria











Takeaway: Good Practices & Innovation



Good Practices in Science Policy-Climate Service Delivery:

- i)
- ii)
- iii)
- **v**)

Innovation:

- **i**)
- ii)
- iii) and sustain operations.

Paradigm Shift from Provider-led & User informed to co-exploration & co-generation of weather and climate services.

Effective Vertical and Horizontal Interaction between service providers & policymakers.

Integrating Universities & Research Community in the Climate Services Value Chain.

iv) NMHSs promote science & science promotes the economy. **Create MORE awareness among political decision-makers on the <u>availability</u> and <u>socio-econ benefits of</u> <u>climate services for planning & development</u>.**

Downscaling Forecast to the last mile builds confidence & trust (both users & policy makers).

PPP on modernization of weather & climate services for improved service delivery.

Commercialization of tailor-made services to improve revenue