















# The Nile Basin Development Forum (NBDF) 2023: Early Warning for All In the Nile Basin.

Water Users Interface Platform and Continental Climate Outlooks: Expected Products and Contributions from the

RCCs and Hydrological Community.

Presented by

Thousands have lived without love, not one ACMAD/NORCAP

Credit: ACMAD Team

without water." -H. Auden

17/10/2023



## **OUTLINE OF CONTENT**



01 Introduction

O2 Global Framework for Climate Services

• 03 Water User Interface Platform

O4 Expected products and contributions from the RCCs and hydrological community

05 Operationalization of WUIP

 06 Concluding Remarks and Expectations





















## **ACMAD**



Created through resolution 540 of the United Nations Economic Commission for Africa (UNECA) Conference of Ministers in April 1985 following the droughts of the 70s and 80s, ACMAD is established in Niamey-Niger since October 1992

- Enhance African countries / NMHs' capability to understand, anticipate and manage the impacts of weather and climate fluctuations to support the achievement of sustainable development and poverty reduction;
- Consolidate weather/climate monitoring efforts in Africa, better understand the African weather systems (monsoon) and improve forecasts;
- Facilitate the exchange of information, experience and expertise; and strengthen sustainable institutional mechanisms;
- ▶ Provide advanced notice on potential weather and climate-related hazards and information for the implementation of policies for vulnerability reduction and adaptation to climate variability and change.















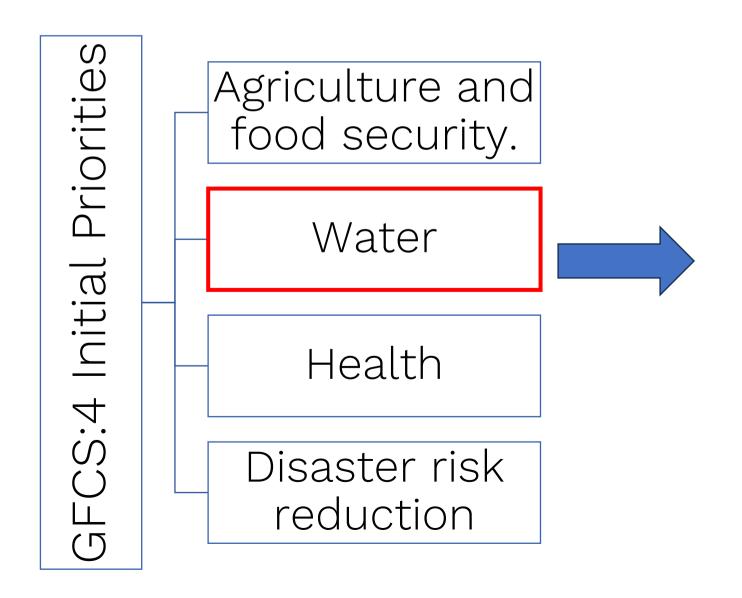


## Global Framework for Climate Services(GFCS)



- GFCS has been initiated to enable science-based climate information and services to support decision-making.
- A framework pillar, namely User Interface Platform (UIP) is required to provide a structured means for users and climate services providers to interact. This is to ensure that the GFCS meets user needs for climate services.

## User Interface Platform



- Following assessments pointing to the weak interactions between providers and users of climate services leading to limited use of climate information and an increase in losses and damages due to climate change in critical socioeconomic sectors across the continent;
- ➤ ACMAD and Partners organised a workshop in Cameroon Yaoundé from 26-29/07/2022 during which continental User Interface Platforms for Agriculture, Water, DRR and Health were created.





















## Water User Interface Platform

### Products and Services:

- Monitoring heavy rains, dry/wet spells, floods and droughts, hightemperature watches, and issues warnings/alerts;
- ✓ Conduct Impact based daily to seasonal forecasts of precipitation, temperature, high/low flow or water levels;
- ✓ Climate risk assessments over water basins and develop risk profiles over these water basins;
- ✓ Develop web application/AI that manages, monitors, and detect extremes in real-time and issues warnings and alert, therefore, enhancing the Common Alerting Protocol CAP;
  - Hydrological Status and Outlook System monitoring and predicting global freshwater and hydrological conditions;



















### Water User Interface Platform





## Activities

- Assessment of water availability (surface and groundwater)
- Climate risk assessment for the water sector
- Floods, drought watches, warnings and alerts
- Prepare advices on water levels for water management in dams, lakes, rivers etc.
- Training and exchanges between climate services providers and water experts
- Development and update of climate and water information systems with climate, stream flow, water levels data, and available infrastructure for water management.
- Update, tailor and share climate/water data and information among stakeholders
- Monitoring and evaluation of activities above

### **Rules of procedures**

Chair AU/AMCOW: Secretariat: ACMAD/ANBO frequency of

meetings: quarterly and ad hoc

















## Water User Interface Platform Institutions making up the WUIP:



Group 1: Decision Makers; Group 2: Knowledge Producers; Group 3:

Users

List of organisations making up the WUIP							
Group1: Decision Makers	Level of Operations						
-	Local	National	Regional	Continental			
Government	Χ	Χ					
River Basins (Transboundary River							
Basin)	X						
RECS (ECOWAS, SADAC, CEMAC, IGAD,							
CEEAC)			X				
AUC				X			
AMCOW				X			
Financial and Technical partners	X	X	X	×			

Group3: Users	Level of operations				
	Local	National	Regional	Continental	
Ministries	X	×			
River Basin Organisation			X		
Dam Authority		×			
Civil Societies	X	×			
Decision Makers	X	X			
Humanitarian Agency	X	X			
Civil Protection	X	×			
Disaster Risk Reduction					
Committee	×	X			
Electricity, Water Companies	X	X			
Irrigation Scheme	X	X			
NGOs	X	X			
Communities	X	X			

List of organisations making up the WUIP						
Group2: Knowledge Producers	Level of operations					
	Local	National	Regional	Continental		
WMO			X	X		
ACMAD				X		
UNESCO			X	X		
FAO			X	X		
UNECE			X	X		
CIWA			X	X		
TWMO /African Network of Basin						
Organisation			X	X		
RCCs		X	X	X		
GWP		X	X			
NMHs	X	X	X	X		
Universities	X	X	X	x		















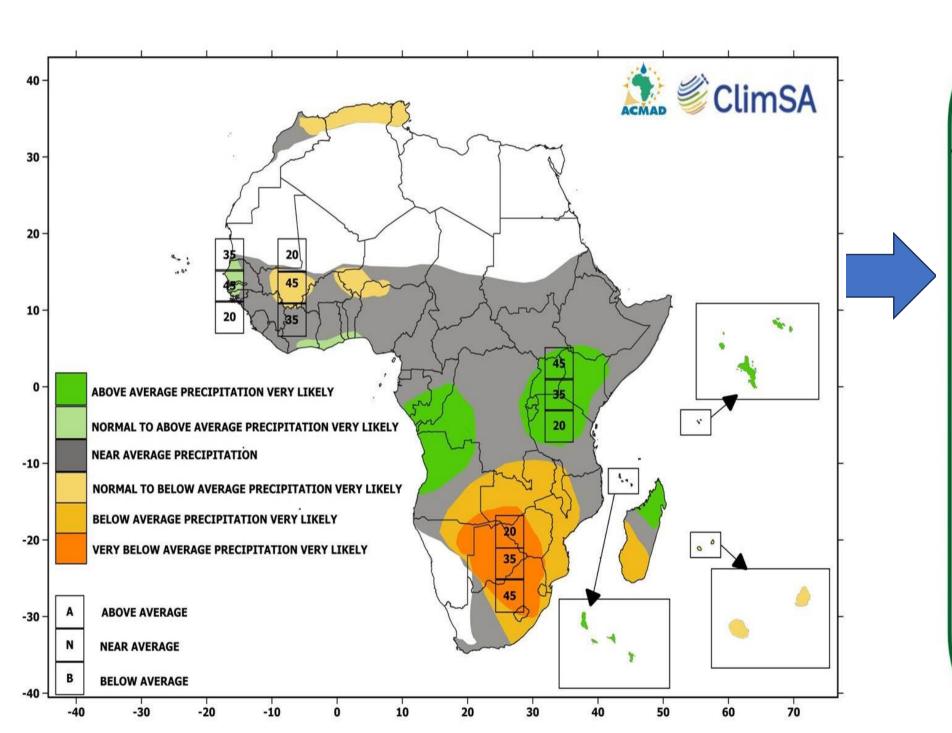




## Expected products and contributions from the RCCs and hydrological community.



## Seasonal precipitation forecast to Brief for Policy and Decision Makers



Seasonal precipitation forecast for October-November-December 2023 Available monthly



#### CONTINENTAL

**BRIEF FOR POLICY AND DECISION MAKERS BASED ON** SIGNIFICANT WEATHER AND CLIMATE EVENTS UPDATE.

**VALID FOR: SEPTEMBER TO DECEMBER 2023** 



**PRODUCTS FOR** 

**DECISION MAKERS** 

#### **CLIMATE ANOMALIES**

Wetter than average season very likely Heavy rainfall with reported flooding event

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

#### POTENTIAL IMPACTS

Waterlogging, pest and diseases Infestation, Outbreak of water borne diseases damage to infrastructures (dams, reser voirs, 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

#### Drier than average season very likely

Prolonged drought with reported persistent

CLIMATE ANOMALIES

#### HAZARDS

Weak to Moderate drought, dry spells, near average to late onset very likely.

#### POTENTIAL IMPACTS

Moisture stress, decreased river dis charge, reduced rain-fed crop yield pro spect, degradation of pastures and high food prices.

#### **MEASURES**

evelop and implement policy to support oil and water conservation practice, tershed based in-situ water harvesting structures Developand Implement policy n support of weather based in surance and dam management

















LEGEND



Observed drought hazard

Observed flood hazard

Drought hazard outlook

Flood hazard outlook





# Coproduction: OUTLOOK AND IMPACTS IN THE HUMANITARIAN SECTOR, MORE VALUABLE WITH BETTER OPERATIONAL COORDINATION WITH NATIONAL DRR PLATFORMS





#### CONTINENTAL

BRIEF FOR POLICY AND DECISION MAKERS BASED ON SIGNIFICANT WEATHER AND CLIMATE EVENTS UPDATE.

**VALID FOR: JULY TO OCTOBER 2022** 





#### CLIMATE ANOMALIES

Wetter than average season very likely Heavy rainfall with reported flooding events

#### HAZARDS

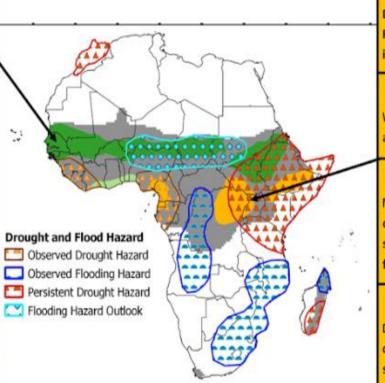
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#### POTENTIAL IMPACTS

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 management in 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 likely.

#### POTENTIAL IMPACTS

Moisture stress, decreased river 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 Developand Implement policy Insupport of weather based in surance and dam management

## OCHA

### **WEST AND CENTRAL AFRICA**

CABO VERDE

Legend
Population exposed

Flooding Situation: Hotspot Countries

As of 9 September 2022

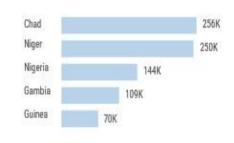
#### OUTLOOK

Countries with the highest risks of floodings based on the rainfall forecast for July to October 2022 include Chad, Côte d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Mali, Niger, Nigeria, Senegal, and Sierra Leone <sup>1</sup>. Hotspot countries have a significant number of people residing in areas with high floods exposure and are thus expected to receive "normal to above average rainfall" during the 2022 rains season <sup>24</sup>

In 2021, hotspot countries included Chad, Niger, Nigeria, The Gambia, and Guinea, with floods killing 172 persons, affecting 828,000, and displacing 311,000.

- Analysis was carried out by OCHA
- <sup>1</sup> Flood risk exposure map was created by World Bank (https://www.nature.com/articles/s41467-022-30727-4)
- <sup>3</sup> Forecast was done by according to African Centre of Meteorological Application for Development (ACMAD)

#### Countries most affected by floods between July and October 2021



9-13%

13-16% Forecast (July - Oct 2022)<sup>2</sup>

16-23% Above average rainfall

Above 23% Normal to above average rainfall

S must increase funding, and larly flexible one, for disaster ergency preparedness and ergency preparedness and

Percentage of populations exposed to high flood risks overlaid with regions

forecasted to have normal or above average rainfall between July and October 2022.

Humanitarian and development organizations must develop and implement emergency preparedness and contingency plans as these are critical to mitigate the risk of humanitarian impact of floods in "at-risk" countries. Donors must increase funding, and Governments of hotspot particularly flexible one, for disaster countries must strengthen their and emergency preparedness and emergency preparedness plans, including plans to contingency planning to maximize the respond to floods, develop flood risks potential of response funds to meet maps, identify flood zones, and build humanitarian needs in a more timely, and effective manner. floodwalls to prevent

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Sources: Media, UN reports, Red Cross and Red Crescent Movement and NGO reports, Government data. Data on displacement was provided by IOM. Source of data available upon request

N. B: This document contains evolving data which will be continuously updated.

Page 4









SACTOME AND PRINCIPE











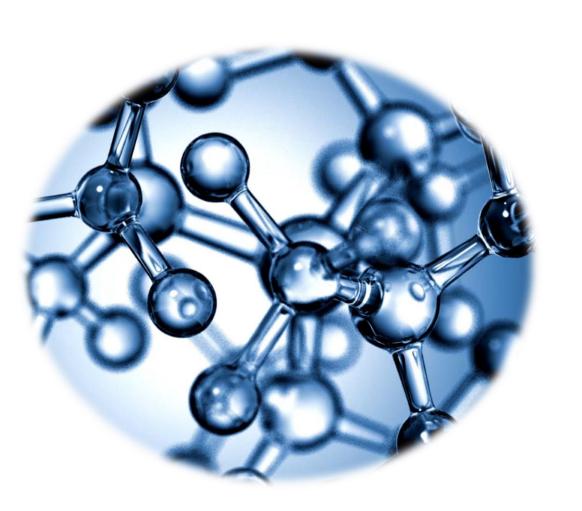
## Operationalization of the WUIP: Synergizing tools and systems to work towards delivering precise and concise information to inform early warning for all under CAP

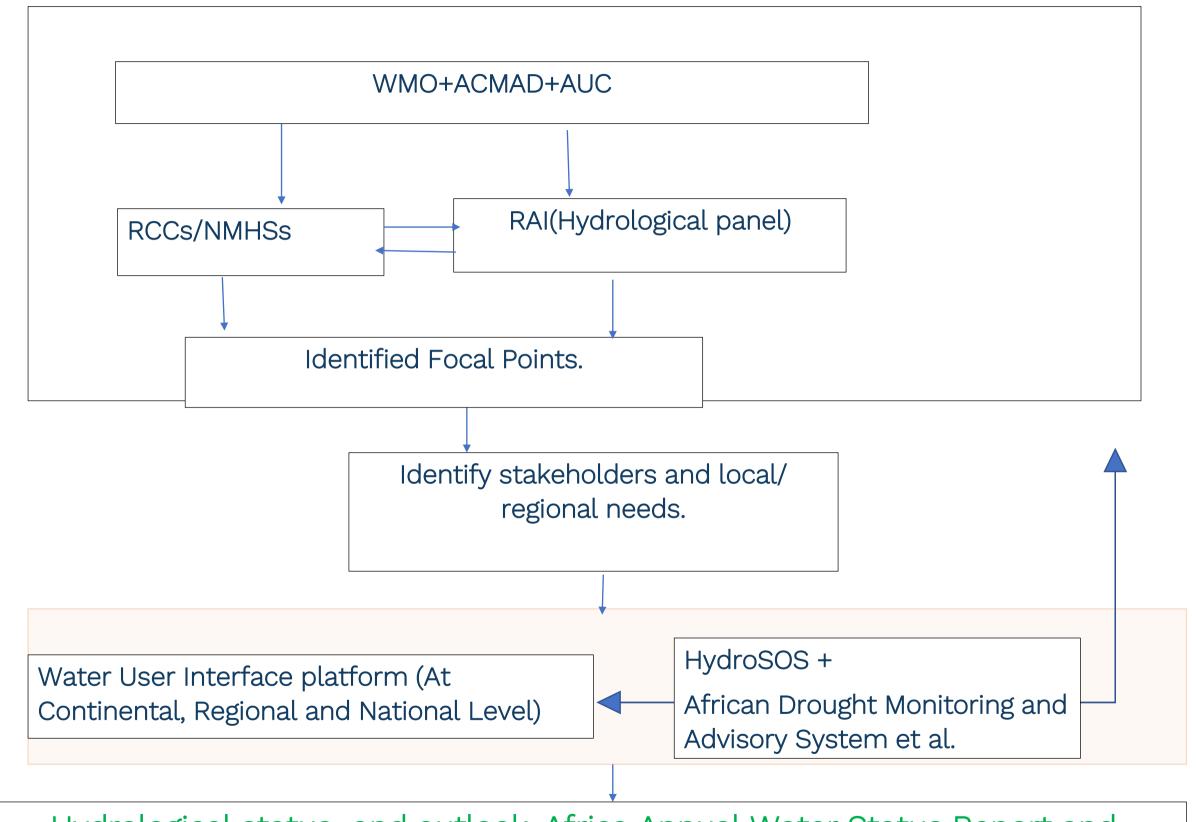


## Way forward & collaboration for the future

Proposed WUIP Operationalisation Blueprint:

ACMAD,WMO and AUC to coordinate the implementation of the following blueprint.





Hydrological status and outlook, Africa Annual Water Status Report and Monthly drought monitoring, forecasting and advisory bulletins (tailored to the stakeholders' needs)





















## **Concluding Remarks and Expectations**

- A major barrier to the provision of effective climate services is the lack of effective user and climate service provider interaction.
- The User Interface Platform is a mechanism to break this barrier.
- ❖Perception of users of current and future climate-related risk events is to be documented.
- The climate parameters and actionable indicators which are the cause of the risk to be identified.
- The impacts/consequences of risk to be documented from exchanges and interviews with users.
- \* Develop operational collaboration between HYDROSOS, Africa Drought Monitoring and Advisory services, Climate Stations et al. and WUIP in Africa to develop, deliver and use identified products and services.
- Strengthen TORs and rules of procedure for the WUIP establishment and operations.















## Thank you for your attention

