

AFRICAN CENTRE OF METEOROLOGICAL APPLICATIONS FOR DEVELOPMENT (ACMAD)

<https://acmad.org/>

4TH ACMAD/CLIMSA PROJECT STEERING COMMITTEE MEETING

MAY 28, 2024

ELILLY HOTEL, ADDIS ABABA ETHIOPIA

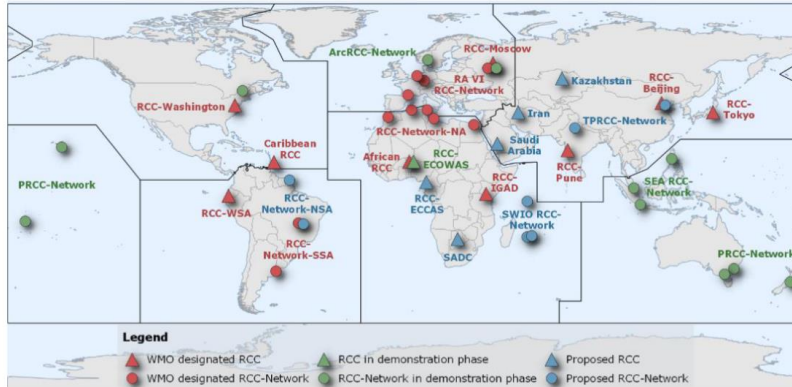


Figure 5: Established Regional Climate Centres (WMO, 2022)



2023 PROGRESS ON IMPLEMENTATION OF CLIMSA AND 2024 WORK PLAN AT ACMAD

Prepared by: ACMAD Team

Presented by : Andre KAMGA FOAMOUHOUE



OUTLINE



I

CONTEXT

II

2023/2024 PROGRESS

III

WOR PLAN 2024/2025

IV

*CHALLENGES,
OPPORTUNITIES&LESSONS*



CONTEXT



BRIEF ON ACMAD MISSION

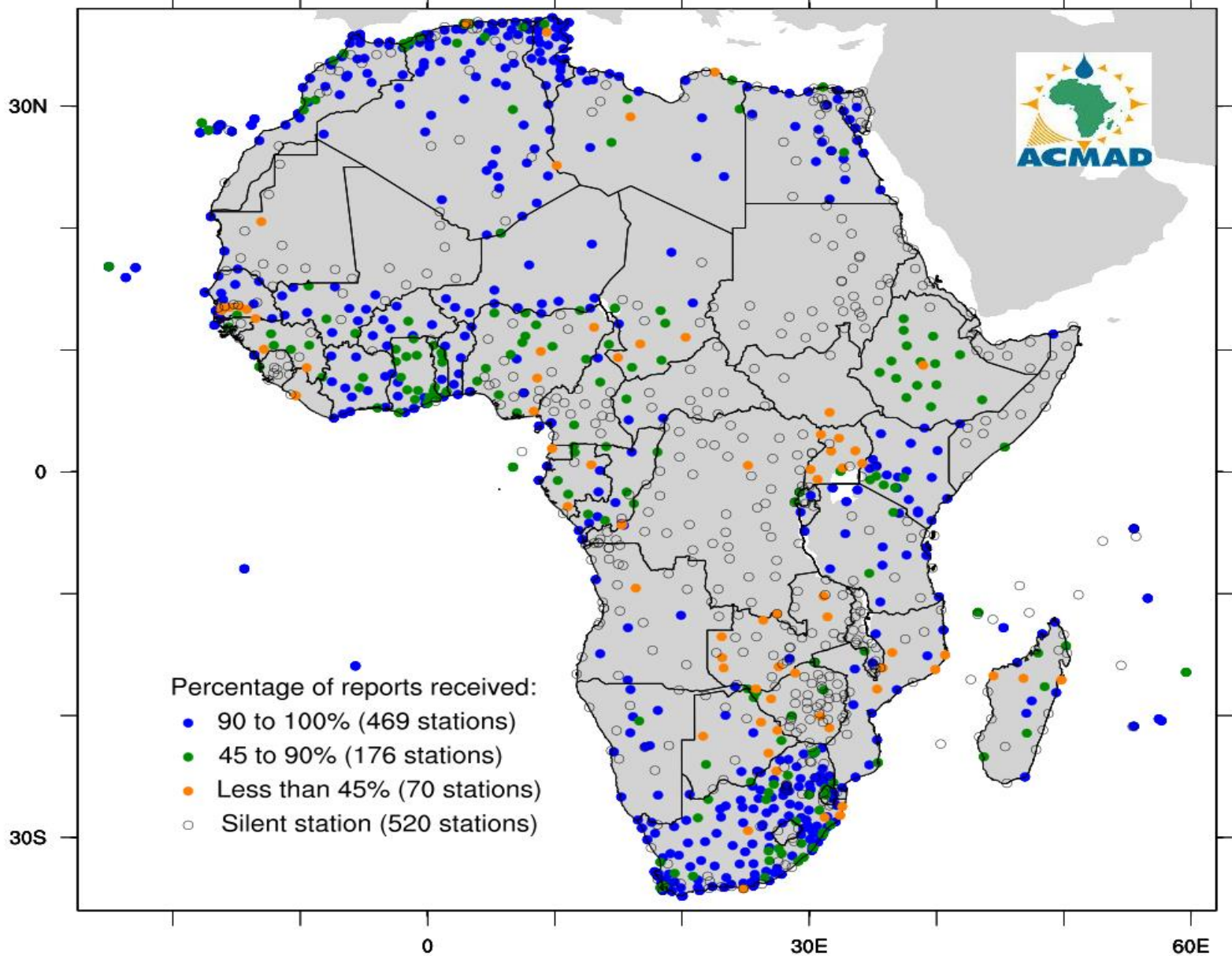
Created through resolution 540 of the UNECA Conference of Ministers in April 1985 **following the droughts of the 70s and 80s , ACMAD is established in Niamey-Niger since October 1992**

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 .**
ACMAD is a WMO designated RCC since Congress in May 2015 and a Continental MultiHazards Advisory Centre since October 2022

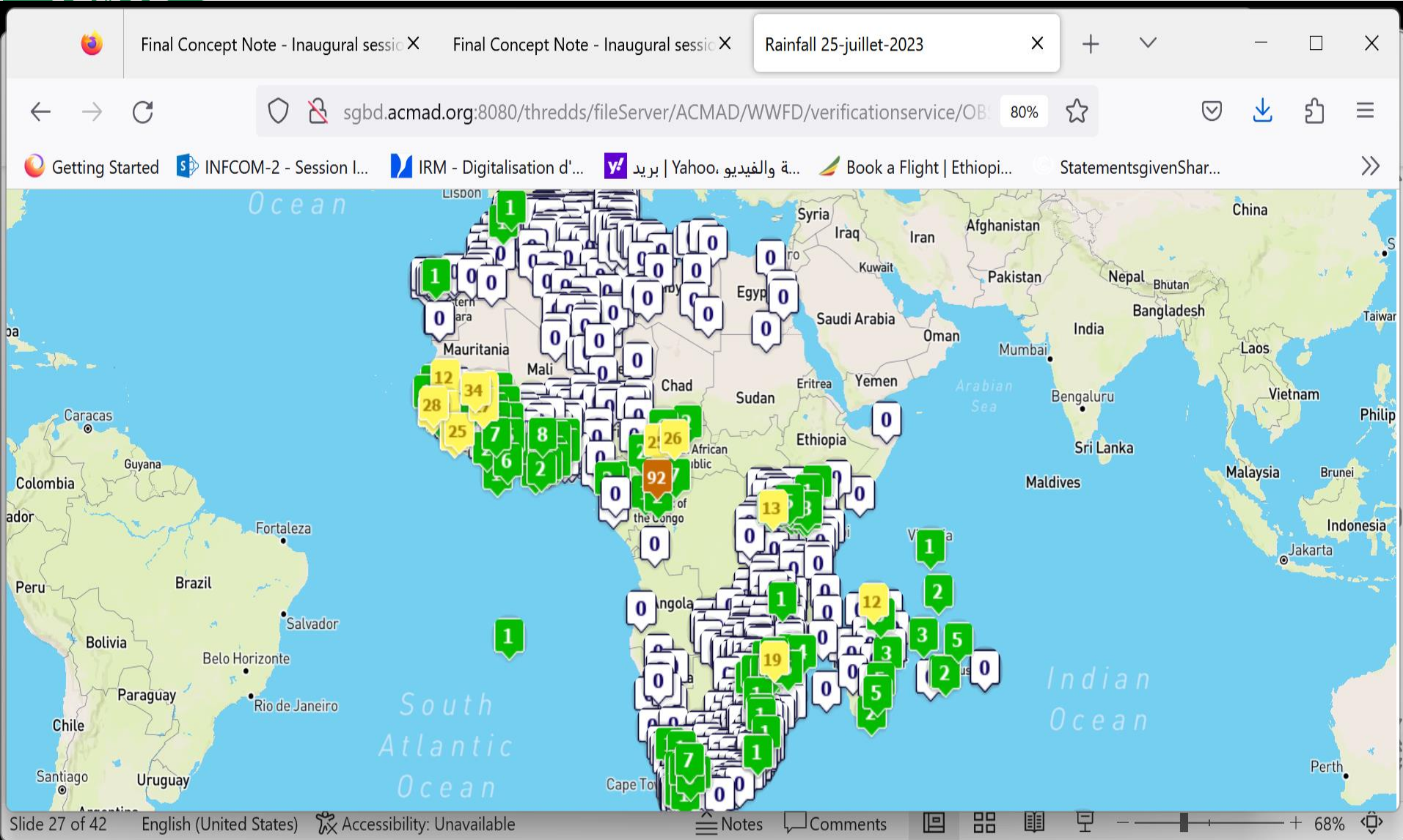
Institution of excellence for the Applications of meteorology for sustainable development **with capacity building, methods, tools and products development, contribution to global weather and climate programs, promotion of database , research and innovation as functions**



Monthly monitoring of SYNOP reports for June-2023



Stations used for continental HEAVY RAINFALL MONITORING



OVERALL OBJECTIVE



**SUPPORT SUSTAINABLE DEVELOPEMENT
THROUGH STRENGTHENING THE CLIMATE
SERVICE VALUE CHAIN AT CONTINENTAL
LEVEL IN AFRICA**

Climate Services: The Value Chain



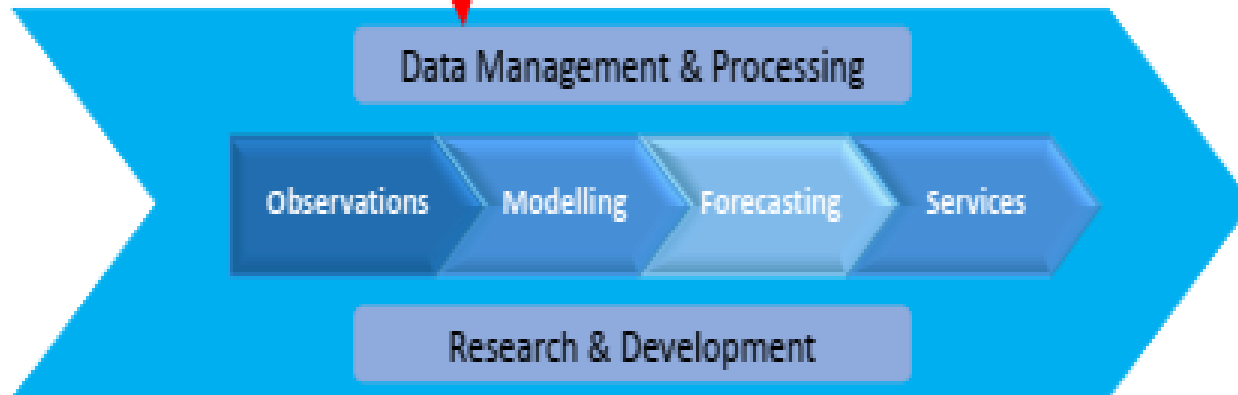
Value-adding Processes (Tailoring)



Communication Process (2-way dialog, co-design)

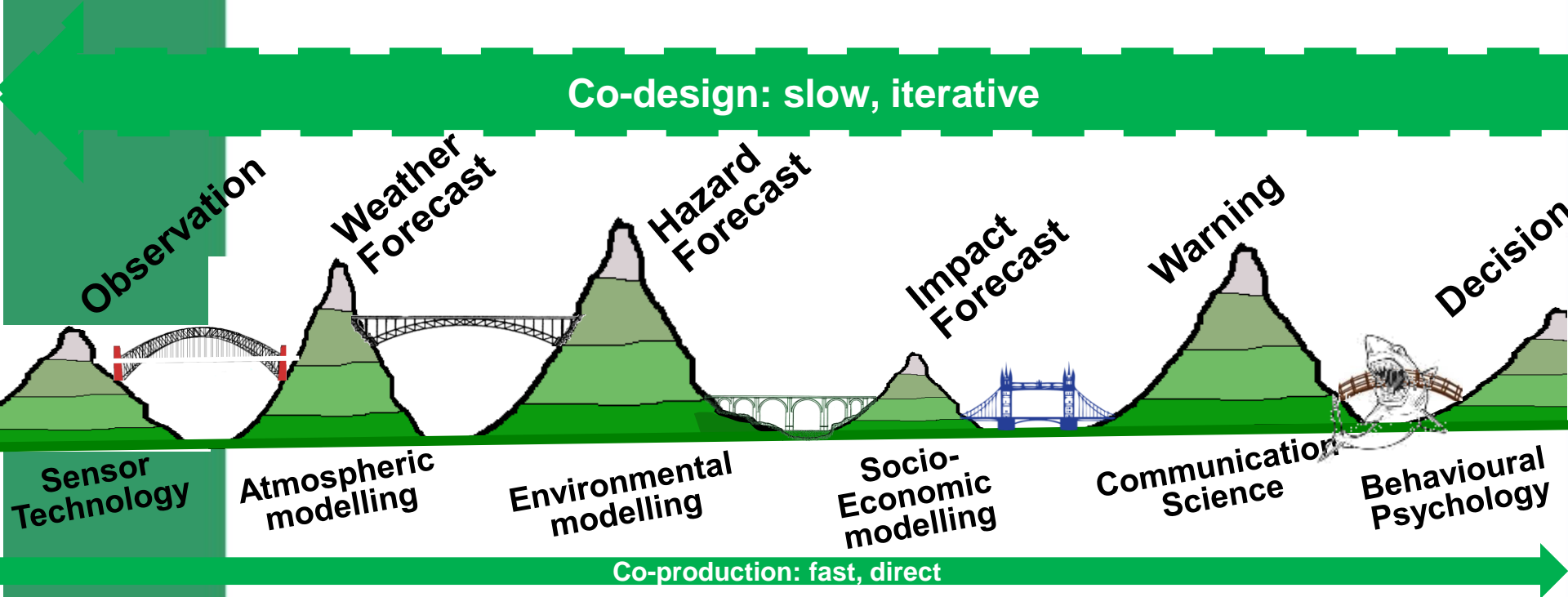


Climate Services Information System



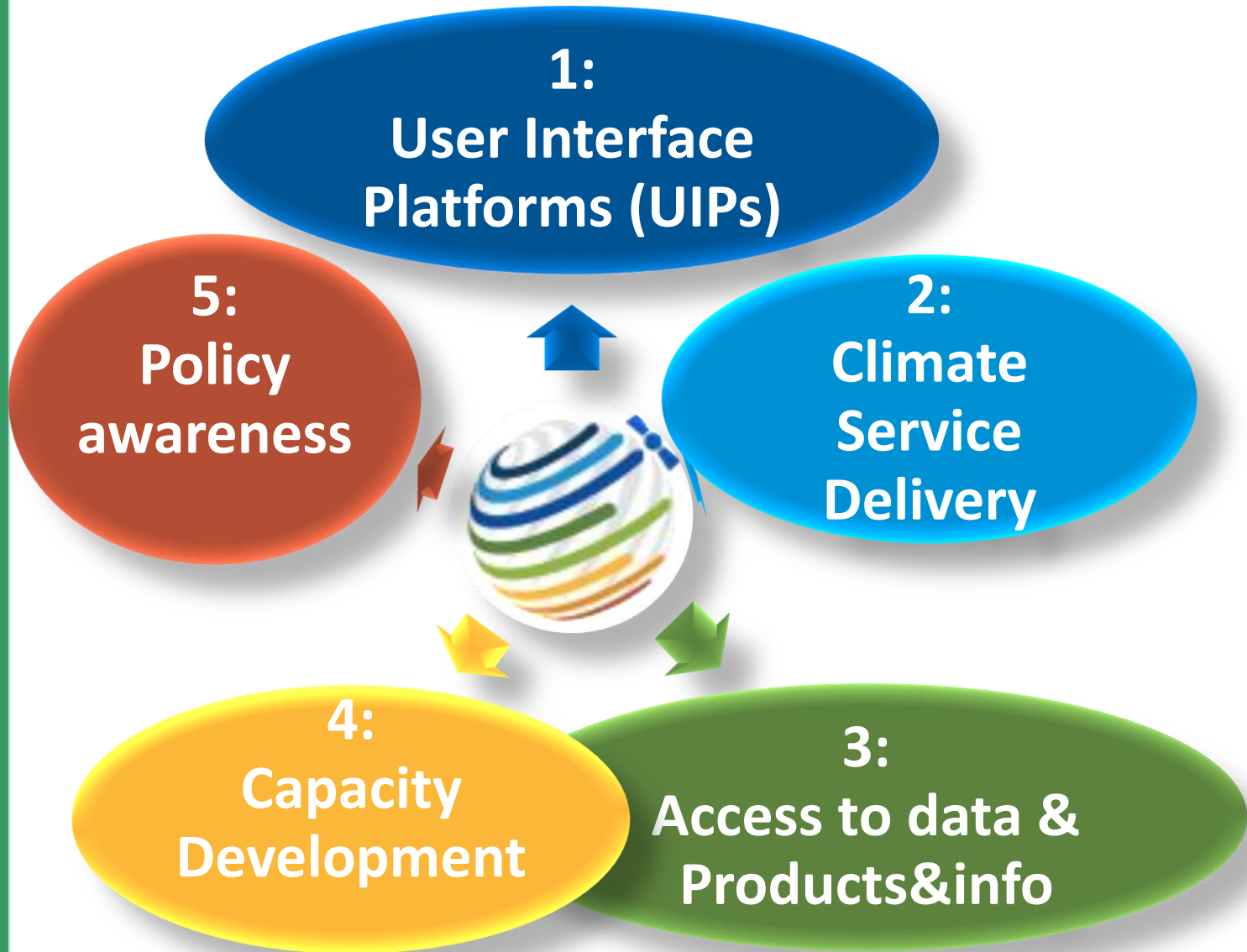


Along warning value chain for early warning for All



**Bridges represent necessary Partnership
Mountains are needed expertise to operate warnings**

OUTPUTS





STRENGTHENED USER INTERFACES

Deliverables&Indicators

- ✓ ***3 UIPs (agriculture, DRR, Health)***
- ✓ ***2 Sub UIPs (Infrastructure, water)***
- ✓ ***ToRs , Rules of Procedures and Products & Services***
- ✓ ***For a and workshops organized or attended to operationalize UIPs (ClimHealth Africa, WMO RAI Hydrological Advisors forum, ACMAD/ClimSA meetings on Early wraning for all at continental and national levels, meetings with PAFO, ...);***

Plan for 2024&2025

- ✓ ***Negotiate MoU with PAFO (Q4 2024 – Q1 2025)***
- ✓ ***Further operationalization of the UIPs with Agriculture, DRR***
- ✓ ***Attend platforms and working groups fora and meetings on Infrastructure, DRR, agriculture, water and Health***
- ✓ ***Update and test new products and services***



Deliverables&Indicators

- ✓ ***Technical assistance with concept notes, templates and tools for stakeholder engagement, product and services definition and specification , organization of UIP consultations, workshops and meetings in **ECOWAS , ECCAS regions and pilot countries*****
- ✓ ***Technical Notes, Information Notes on impact based services with UNOCHA, UNHCR, IFRC with 02 Anticipatory Action dialogue days***

Plan for 2024&2025

- ✓ ***Support establishment and Operationalization of the UIPs in the RECs and pilot countries (i.e ECCAS, ECOWAS) with trainings on User Interfaces (Q2 2024 -Q1 2025)***
- ✓ ***Develop and use tools for feedback collection on the use of climate service***



QUALITY PRODUCTS SERVICES

*We shall provide weather, climate, water **data, information, Knowledge, understanding***

*Ensure that information is used to make **decisions and act** to reduce negative impacts and exploit opportunities*

Principles and success measures

Ensure that all stakeholders are *aware* of threats and mitigation actions

Measure of success: evidence that fewer surprises occur, or fewer poor decisions are made due to inadequate information.

Make society *aware* of climate services

Measure of success: evidence that capacity building and training include various groups in society. Increase the number of public engagement events. Conduct successful citizen and focus groups awareness initiatives

- 1. Measure of success: workshops designed with and for forecasters and decision makers to raise awareness on new tools and provide training to make their work more effective.*

Ensure that stakeholders are *aware* of each other's work for coordination:

Measure of success: projects or initiatives started/continued with partners



Deliverables&Indicators

- ✓ ***02 ACMAD staffs trained on the use of ClimSA station***
- ✓ ***Reports from ACMAD/RCC staff and on infrastructure status (Short term expertise, secondments, fellowships, WIS 2.0)***
- ✓ ***Status report of IT support expert from Morocco (develop WIS/DCPC at ACMAD)***

Plan for 2024&2025

- ✓ ***Train ACMAD staff by EUMETSAT, JRC, COPERNICUS on PUMA, Climate Stations operations***
- ✓ ***Status report on IT infrastructure with focus on its relevance to support effective service delivery***



Deliverables&Indicators

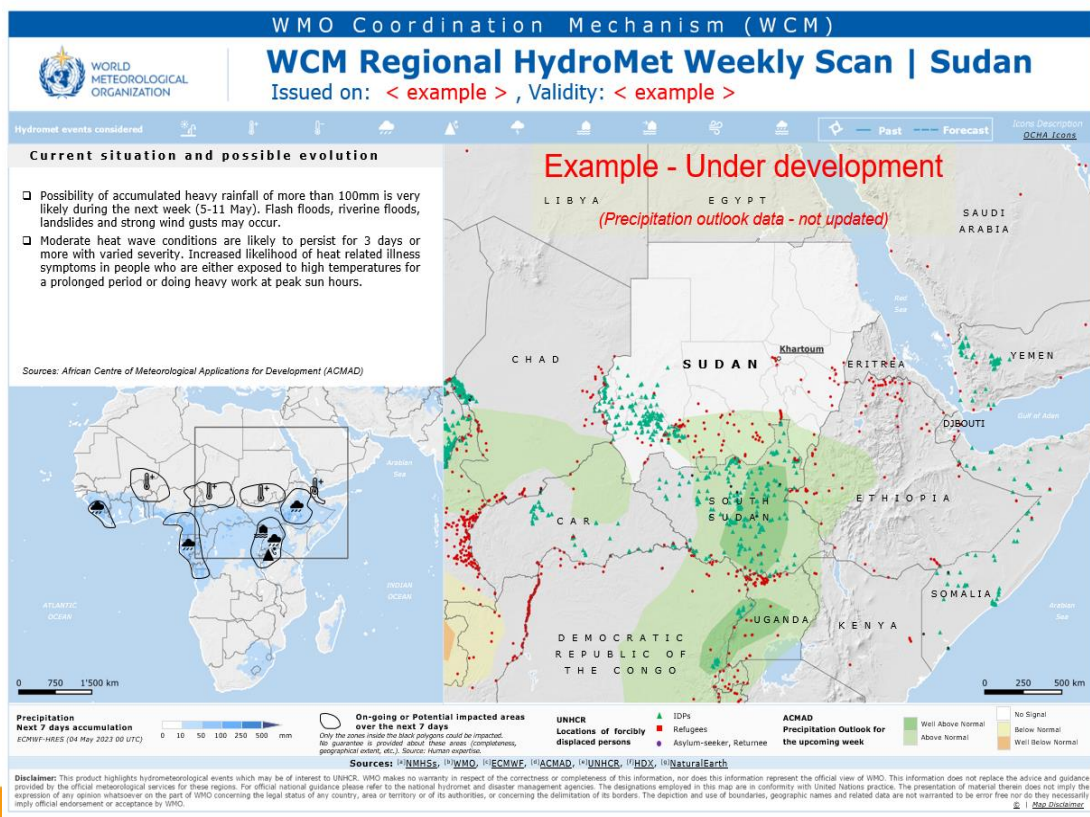
- ✓ ***Continental synoptic technical notes and watches for cyclones, high temperatures, dusts, heavy rains, strong winds (twice a week)***
- ✓ ***Monthly Continental technical notes, outlook statements, summary for decision makers and climate watches***
- ✓ ***Briefings and Ad Hoc Briefings***
- ✓ ***Regional technical notes and Climate outlook statements for ECCAS and ECOWAS (2023 PREASGG, PRESAC, PRESASS)***
- ✓ ***National climate Outlooks supported with datasets, methods, tools and products in ClimSA pilot countries***
- ✓ ***Annual technical note and report on the state of climate for Africa in 2022***



Deliverables & Indicators

- ✓ **Recognizing ACMAD's contribution to UNHCR operations in refugee and displaced people camps in the Continent, ACMAD received a letter of Appreciation available at:**

<https://acmad.org/wp-content/uploads/2019/03/12899-2023-S-DPS.pdf>



CO-DESIGN AND CO-DEVELOPMENT OF BESPOKE CONTINENTAL HAZARDS OUTLOOK SERVICES FOR UNHCR

CO-DEVELOPMENT OF BESPOKE CONTINENTAL HAZARDS OUTLOOK SERVICES FOR UNHCR



WMO Coordination Mechanism (WCM)



WCM Regional HydroMet Weekly Scan | Sudan

Issued on: < example > , Validity: < example >

Hydromet events considered



Past Forecast

Icons Description
OCHA Icons

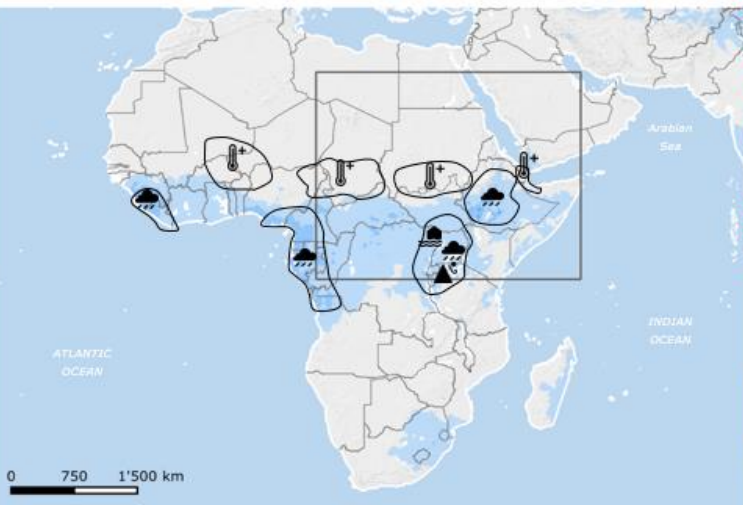
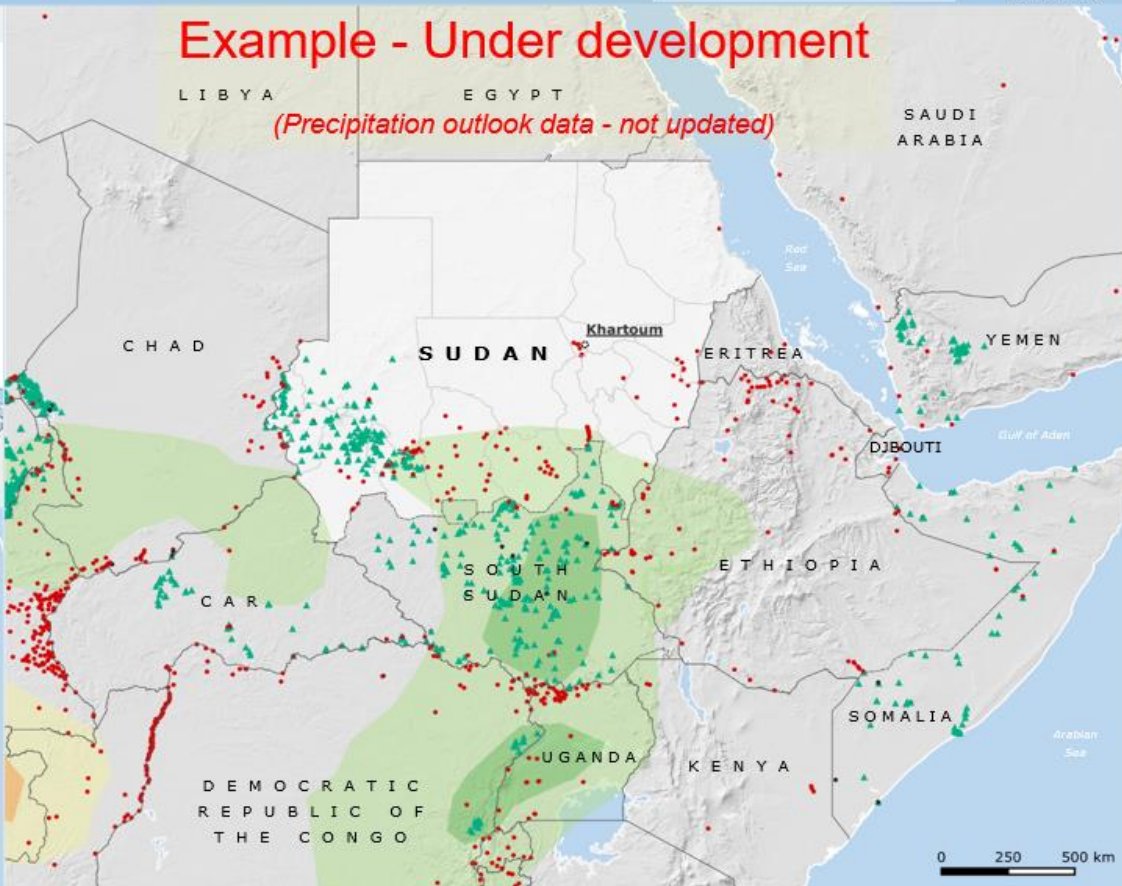
Current situation and possible evolution

- Possibility of accumulated heavy rainfall of more than 100mm is very likely during the next week (5-11 May). Flash floods, riverine floods, landslides and strong wind gusts may occur.
- Moderate heat wave conditions are likely to persist for 3 days or more with varied severity. Increased likelihood of heat related illness symptoms in people who are either exposed to high temperatures for a prolonged period or doing heavy work at peak sun hours.

Sources: African Centre of Meteorological Applications for Development (ACMAD)

Example - Under development

(Precipitation outlook data - not updated)



Precipitation
Next 7 days accumulation
ECMWF-HRES (04 May 2023 00 UTC)



On-going or Potential impacted areas over the next 7 days
Only the zones inside the black polygons could be impacted. No guarantee is provided about these areas (completeness, geographical extent, etc.). Source: Human expertise.

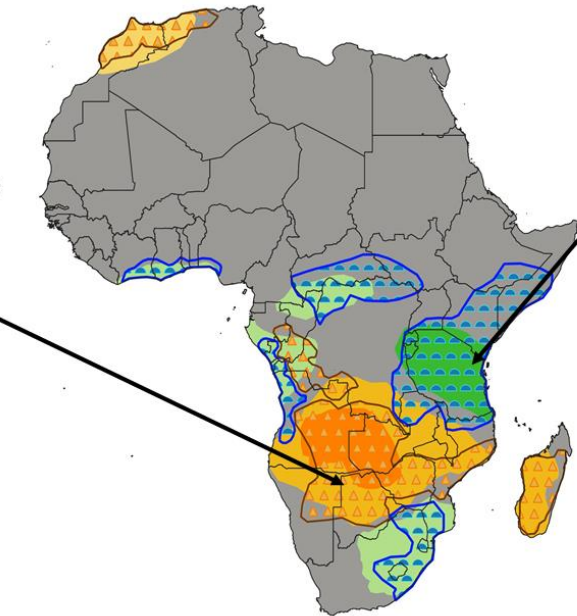
UNHCR
Locations of forcibly displaced persons
▲ IDPs
■ Refugees
● Asylum-seeker, Returnee

ACMAD
Precipitation Outlook for the upcoming week
Well Above Normal
Above Normal
Below Normal
Well Below Normal
No Signal





Sources: ^(a)NMHSs, ^(b)WMO, ^(c)ECMWF, ^(d)ACMAD, ^(e)UNHCR, ^(f)HDX, ^(g)NaturalEarth

Disclaimer: This product highlights hydrometeorological events which may be of interest to UNHCR. WMO makes no warranty in respect of the correctness or completeness of this information, nor does this information represent the official view of WMO. This information does not replace the advice and guidance provided by the official meteorological services for these regions. For official national guidance please refer to the national hydromet and disaster management agencies. The designations employed in this map are in conformity with United Nations practice. The presentation of material therein does not imply the expression of any opinion whatsoever on the part of WMO concerning the legal status of any country, area or territory or of its authorities, or concerning the delimitation of its borders. The depiction and use of boundaries, geographic names and related data are not warranted to be error free nor do they necessarily imply official endorsement or acceptance by WMO.

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 Develop and Implement policy in support of weather based insurance and dam management



LEGEND

-  Observed drought hazard
-  Observed flood hazard
-  Drought hazard outlook
-  Flood hazard outlook

CLIMATE ANOMALIES
Wetter than average season very likely Heavy rainfall with reported flooding events
HAZARDS
Heavy rainfall events may lead to flash flood, riverine flooding, landslides and soil erosion. High chance of lightning, hail 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-water tolerant crops, wide tree planting campaigns Develop new and rehabilitate the existing drainage structure, Update and implement flood contingency plans improve water management in reservoirs and dams



Plan for 2024&2025

- ✓ *Build interregional climate outlooks (equatorial Africa, Sahel from Cape verde to Djibouti in ACCOF) (Q1 2024 and Q1 2025)*
- ✓ *Continue to contribute to IGAD, SADC, IOC , MEDCOF/PRESANORD Climate outlooks*
- ✓ *Prepare a report on ACMAD/RCC operations*
- ✓ *Prepare the technical notes, statements and organize briefings including Ad Hoc briefings*
- ✓ *Prepare continental and ECOWAS, ECCAS Regional climate outlooks*
- ✓ *Technical Support ECOWAS, ECCAS, IOC RCC demonstration*



Deliverables & Indicators

- ✓ *Products catalogue updates for Climate station*
- ✓ *Scripts shared with JRC for generation of RCC products*

Plan for 2024&2025

- ✓ *Development and testing scripts on climate Station*
- ✓ *Continue development and testing of products with JRC*



Climate Change Services for Design and operation of resilient Infrastructure

https://rcc.acmad.org/CC_Services/climate_change_indexes.html

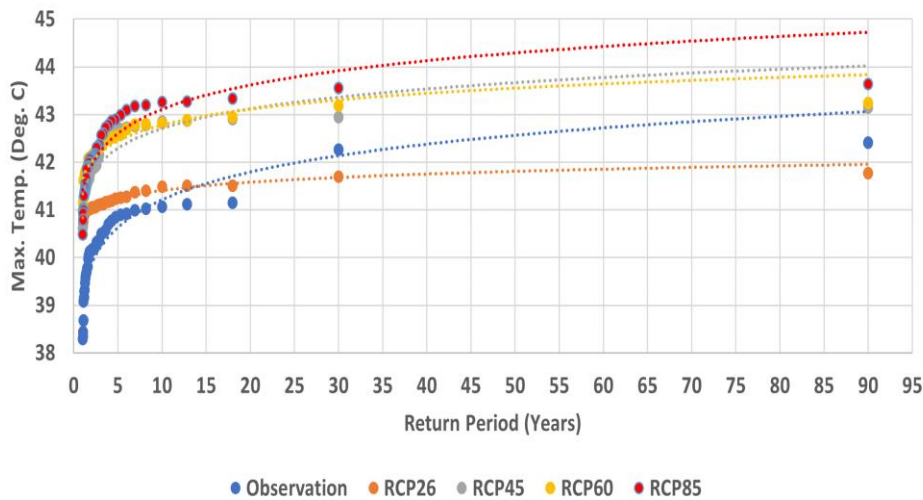
Prototype Service– Analysis of observed and Projected Extreme Event Return periods



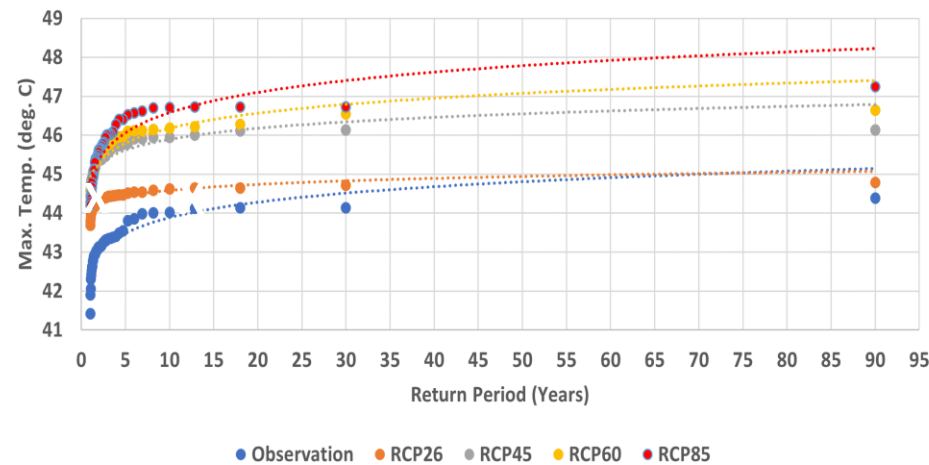
Nigeria: Abuja

Niger: Niamey

Return Periods of Extreme Temp. Events over Abuja



Return Periods of Extreme Temp. Events over Niamey



Extreme temperatures of 44° C in Niamey’s current period occurs every 5 to 10 years will very likely become yearly events. Extremes of 47° C may occur every 10 to 15 years in the future climate.

Future infrastructure expected to resist the impact of such high extremes



Deliverables&Indicators

- ✓ *data, products and services of ClimSA station and Climsoft updated , Web portal updated*
- ✓ *02 Weather forecasting staff reports indicating technical assistance to countries and regions on **ClimSA and PUMA stations***
- ✓ *03 Staffs from NMHSs on OJT reports with section on ClimSoft use for indices generation from station data*

Plan for 2024&2025

- ✓ *Continue updates on ClimSA station and Climsoft*
- ✓ *Continue support upon request by countries on PUMA and ClimSA*
- ✓ *Continue training and exchanges with RCCs and NMHSs on ClimSoft and Climate Station*

ACCESS TO DATA AND PRODUCTS



Plan for 2024&2025

- ✓ *Operationalize updated products on Mydewetra, MUKAU and ClimTAG platforms*
- ✓ *Accelerate ClimSA and AMHEWAS collaboration on early warning and climate information services for building resilience*
- ✓ *Support to NMHSs digital transformation*





Deliverables&Indicators

- ✓ ***Update catalogue of products for DRR to upload on MyDEWETRA***
- ✓ ***Catalogue of products (climate indices) for infrastructure resilience***
- ✓ ***Update catalogue of products for Agriculture***
- ✓ ***Report focused on methods, tools, products from Copernicus integrated in ClimSA services***

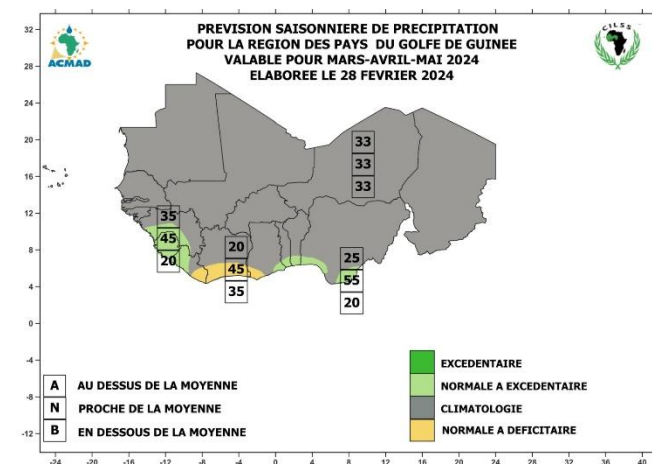
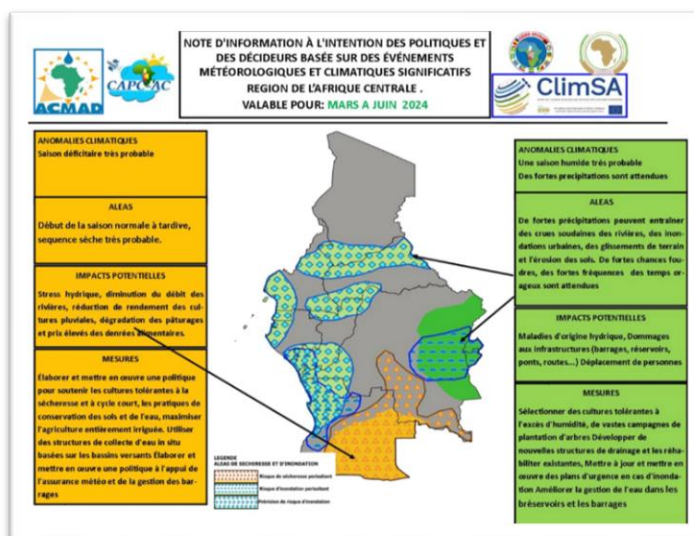
Plan for 2024&2025

- ✓ ***provide updated products on Mydewetra, MUKAU, UCLIP and ClimTAG platforms for Agriculture, DRR , Cities resilience, NMHSs and RCCs***



Deliverables & Indicators

- ✓ **PRESASS, PRESAC, PRESAGG, GHACOF and SARCOF reports in 2023 with contributions of ACMAD on methods, tools or products ;**



Plan for 2024 & 2025

- ✓ **Support continue on methods tools and products for RCOFs**
- ✓ **Support development of national products catalogue for national climate information system**



Deliverables & Indicators

- ✓ ***Installation and status of operations report for the ClimSA station***
- ✓ ***MoU on data exchange prepared with ECMWF***
- ✓ ***Interactions with JRC to define for products intercomparison and quality assurance activities***
- ✓ ***Open Data access with JASMIN and WHO/AFRO to improve meningitis Vigilance Products***

Plan for 2024&2025

- ✓ ***Additional MoUs negotiation , report on the status of Stations and web portal (Q1-Q3 2024)***
- ✓ ***Trainings and exchanges with JRC on customization (Q3-Q4 2024)***
- ✓ ***Maintain and repair PUMA and Climate stations (Ad Hoc)***
- ✓ ***Monitoring and update of web portals, liaise with web experts from other ClimSA projects (Ad Hoc)***



Deliverables & Indicators

- ✓ *13 On the Job training (01 woman), 03 Secondments and 04 internships (including 03 women)*
- ✓ *24 training workshops and Fora on services for agriculture, DRR, Health and courses on early warning with WMO and EAMAC*

Work Plan 2024&2025

- ✓ *On the Job training, secondments and internships*
- ✓ *Maintain and repair PUMA and Climate station (Ad hoc)*
- ✓ *Trainings through Fora, workshops, conference, twinning exercises....*



Deliverables & Indicators

- ✓ ***Technical note on the 2022 state of climate report statement***
- ✓ ***Web portal updated***
- ✓ ***01 workshop for development planners for West Africa Region with UNECA/SROWA to support financing of transition to inclusive green economy***
- ✓ ***02 high level visits of ambassadors: Algeria and Italy***
- ✓ ***Communication materials (among which videos on [start of Agriculture season Monitoring and outlook Tool](#), ACMAD achievements and perspectives to [accelerate climate action](#) and [delivering climate service](#))***
- ✓ ***Side event with OACPCs Ambassadors on ClimSA services for Development***
- ✓ ***UNECA COM 2024 on financing transition to inclusive green economies recognized Climate action as a priority and filling technology gaps as an imperatives through institutions like ACMAD***



Work Plan 2024&2025

- ✓ *Raise awareness with High Level Statement at COP 29 on climate information for resilient cities in Africa...*
- ✓ *Provide climate information and guide resilient infrastructure policies*
- ✓ *Promote ACCOF as an integrated mechanism for bridging the technology gap imperative for greening Africa's economy (with UNECA)*
- ✓ *Finalize the AUC, UNECA and ACMAD relationship agreement to accelerate institutional set up we need to bridge technology gap for climate action*
- ✓ *Update web portal, exchanges on new climate information of relevance to planning and policy making*



Deliverables & Indicators

- ✓ *Monthly Briefs for policy/decision makers with recently observed and expected climate anomalies, hazards, potential impacts, anticipatory/response measures*
- ✓ *COP 28 High level statement on Early warning for all achievements and perspectives by ACMAD ([link](#))*
- ✓ *Updates of contingency plans by OCHA and preparation plans by UNHCR*
- ✓ *Training and exchange presentations for ClimHealth Africa, Consultative Group for Disaster Management in West Africa, AWG DRR platforms, Africa Regional forum for sustainable development, other policy level events*
- ✓ *Communication materials and reports*

Work Plan 2024&2025

- ✓ *Monthly briefs, statement for COP 29 and 30, contingency and anticipatory action plans, material for policy awareness and debates, communication material and reports*

Policy awareness



Work Plan 2024&2025 (add value to state of climate Report)

- ✓ *Impacts and socio-economic benefit assessment methodology selection and tool*
- ✓ *Losses and damages assessment methods and tools (FoCus Africa, UIP)*
- ✓ *Use tools above to provide more added value inputs to impact section of the annual state of climate reports for Africa*



STATEMENT OF BUDGET EXECUTION Until December 2023

ACMAD-CLIMSA BUDGET EXECUTION March 01, 2021 to December 31, 2023 (Expenditure execution)

Lines	Global Budget	Execution	Rate
Human Resources	2,689,231.23	1,452,481.49	54%
Travel	365,400.00	161,986.11	44%
Equipment and supplies	182,596.03	92,141.15	50%
Local office	349,060.00	86,224.48	25%
Other costs, services	609,477.57	247,730.50	41%
Other	15,000.00	792.73	5%
Subtotal	4,210,764.83	2,041,356.46	48%
Provision for contingency reserve	82,617.31	0.00	0%
Indirect costs	214,669.10	51,150.61	24%
TOTAL (Euros)	4,508,051.24	2,092,507.07	46%

STATEMENT OF CASH INFLOW

Until December 2023



ACMAD-CLIMSA STATEMENT OF CASH INFLOW

March 01, 2021 to December 31, 2023

Description	Amount (Euros)	Rate
Global Budget	4,508,051.24	100%
First pre-financing	1,352,415.37	30%
Second pre-financing	1,352,415.37	30%
Third pre-financing	561,660.00	12%
Total received funds from AUC	3,266,490.74	72.46%
BALANCE	1,241,560.50	27.54%

BUDGET For 2024/25



ACMAD-CLIMSA BUDGET Jan 01, 2024 to Dec 31, 2025

Lines	Global Budget	Budget Jan 24-Mar 25
Human Resources	2,689,231.23	640,162.90
Travel	365,400.00	202,300.00
Equipment and supplies	182,596.03	162,916.59
Local office	349,060.00	262,246.95
Other costs, services	609,477.57	564,730.04
Other	15,000.00	14,000.00
Subtotal	4,210,764.83	1,846,356.48
Provision for contingency reserve	82,617.31	73,854.26
Indirect costs	214,669.10	96,010.54
TOTAL (Euros)	4,508,051.24	2,016,221.28



EXAMPLES OF PRODUCTS AND SERVICES

IMPACT BASED INFORMATION (from Bulletin of the American Meteorological Society) – THIS IS WHAT WE WANT IN THE MEDIUM TO LONG TERM

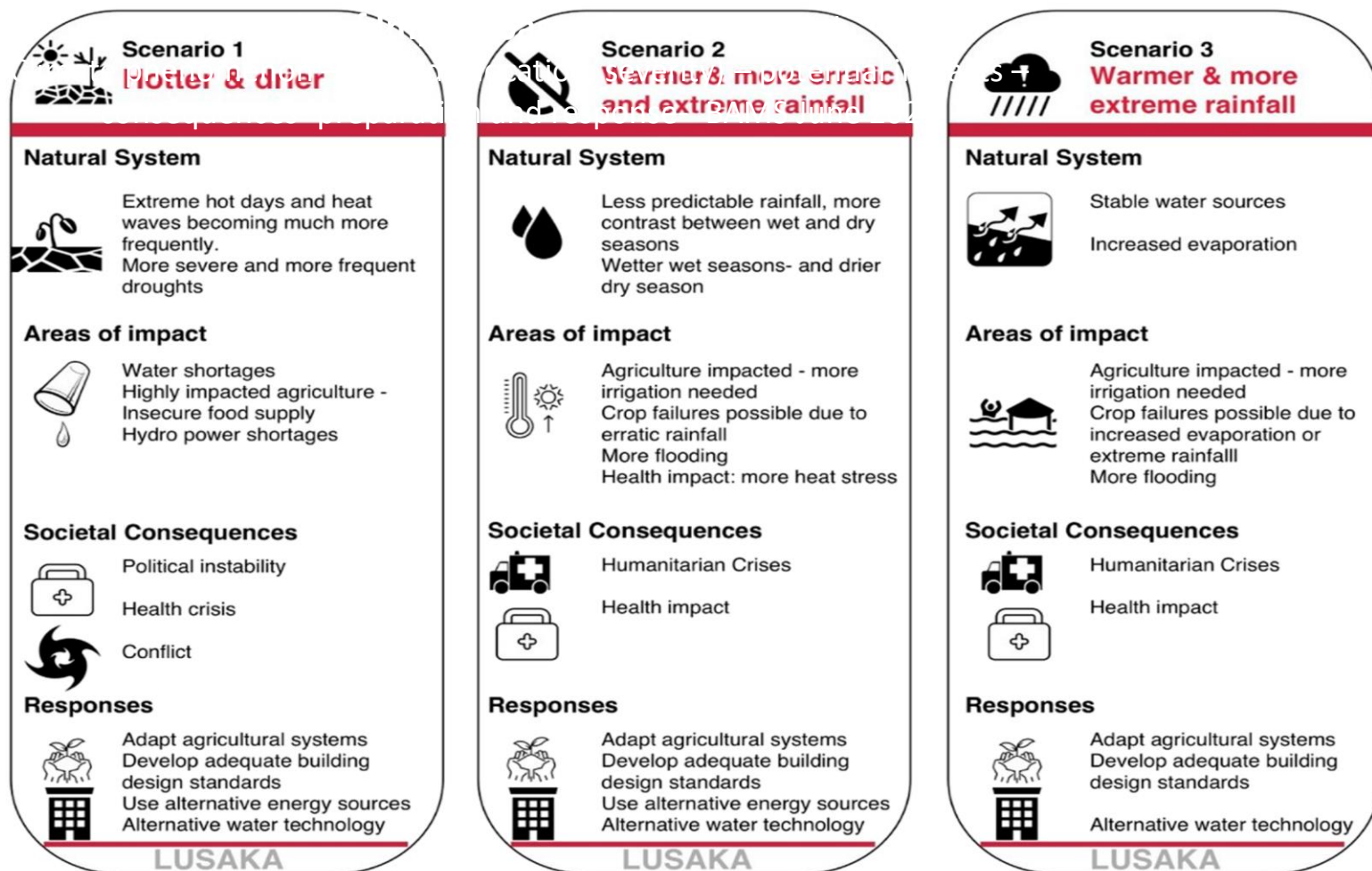
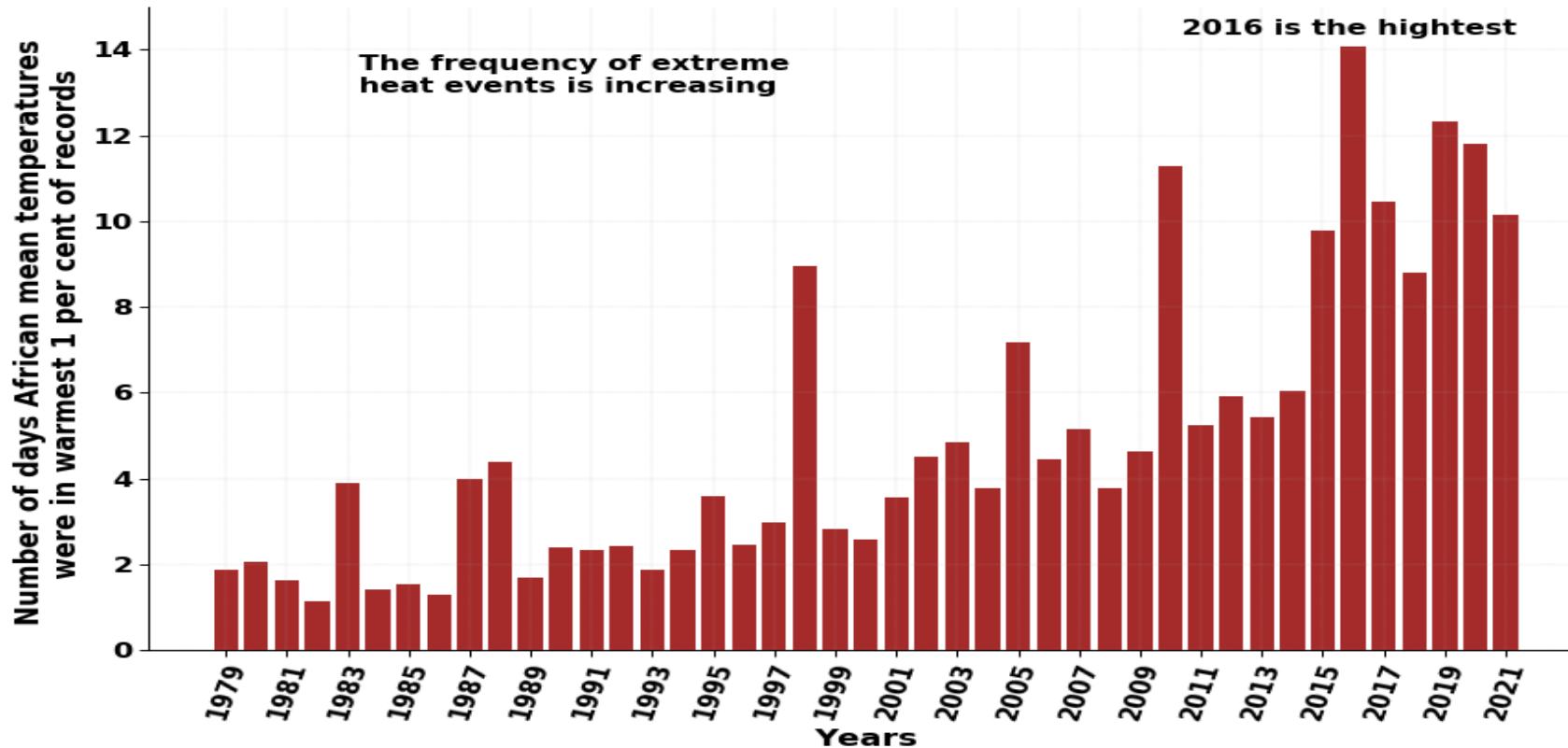


Fig. 5. Infographic summarizing three plausible future climate scenarios for Lusaka along with some key impacts, possible societal consequences, and responses.

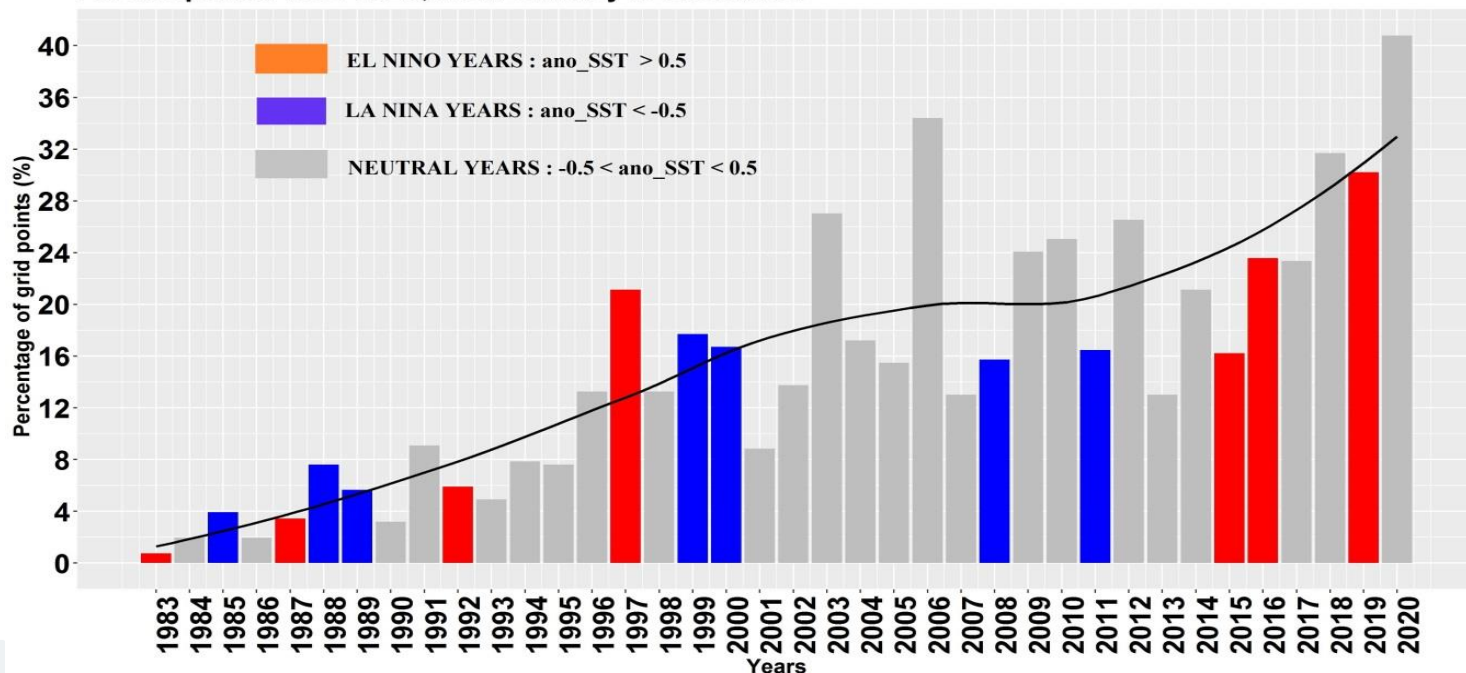
Trends on number of extreme hot days across Africa.
2016 was the warmest year on record globally.

Research on high frequency of very warm days impacts on agriculture, energy, infrastructure, health, water scarcity, disasters is a priority for sustainable development planning



Trends on the surface hit by heavy rainfall. A research on impacts of heavy rains at regional/local levels with emphasis on losses and damages to infrastructure, crops, major assets particularly in cities is essential for resilient development planning

Percentage of grid points over African land masses with daily rainfall above the 90th percentile
For the period 1981-2020, from January to December





Climate Change Services for Planning and Design Infrastructure

https://rcc.acmad.org/CC_Services/climate_change_indexes.html

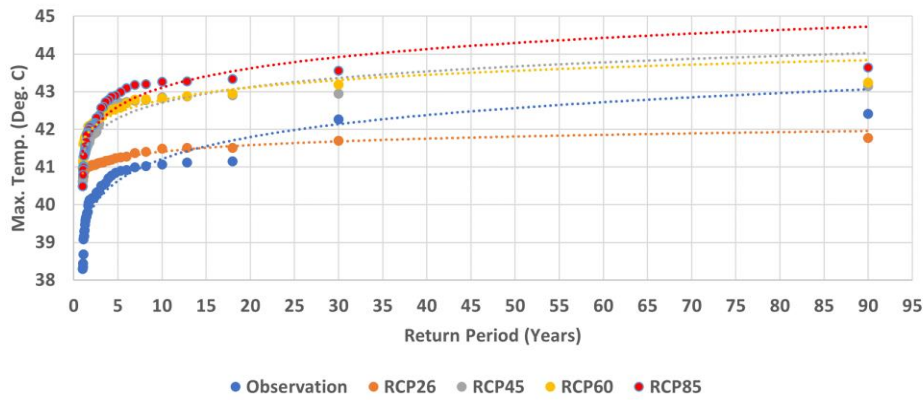


Prototype Service– Analysis of observed and Projected Extreme Event Return Period

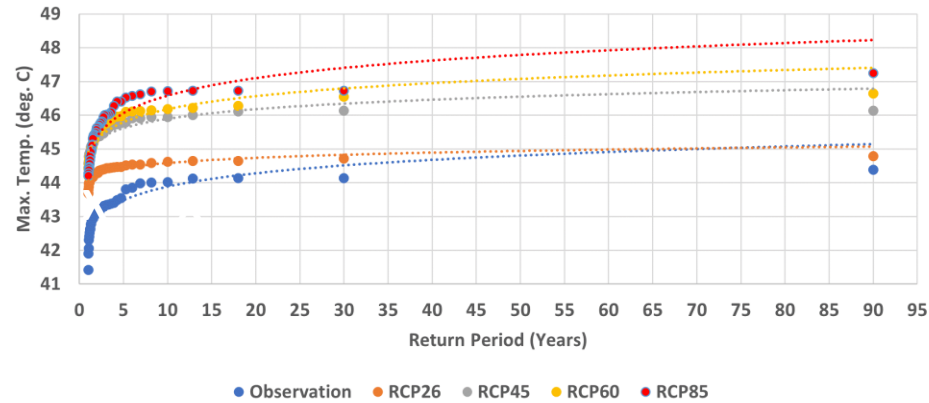
Nigeria: Abuja

Niger: Niamey

Return Periods of Extreme Temp. Events over Abuja



Return Periods of Extreme Temp. Events over Niamey

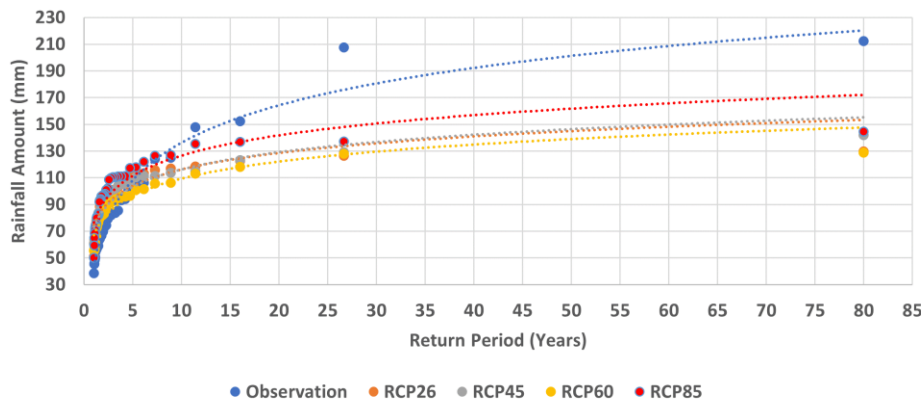


Extreme future to

Prototype Service– Analysis of observed and Projected Extreme Event Return Period

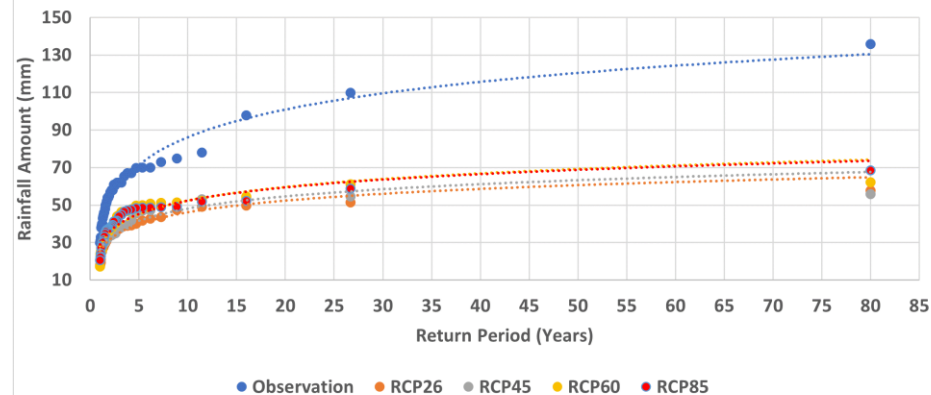
Nigeria: Abuja

Return Periods of Extreme Rainfall Events over Abuja



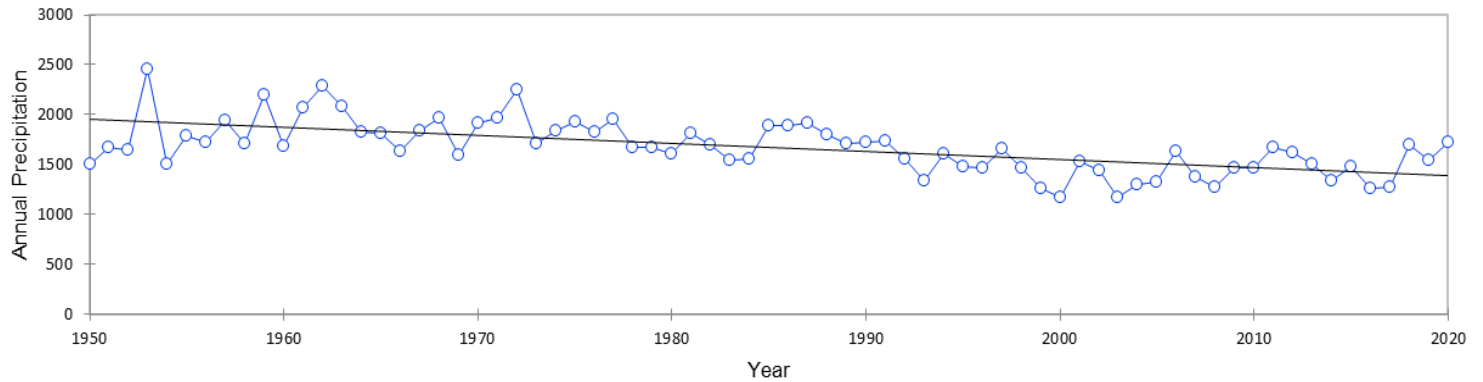
Niger: Niamey

Return Periods of Extreme Rainfall Events over Niamey

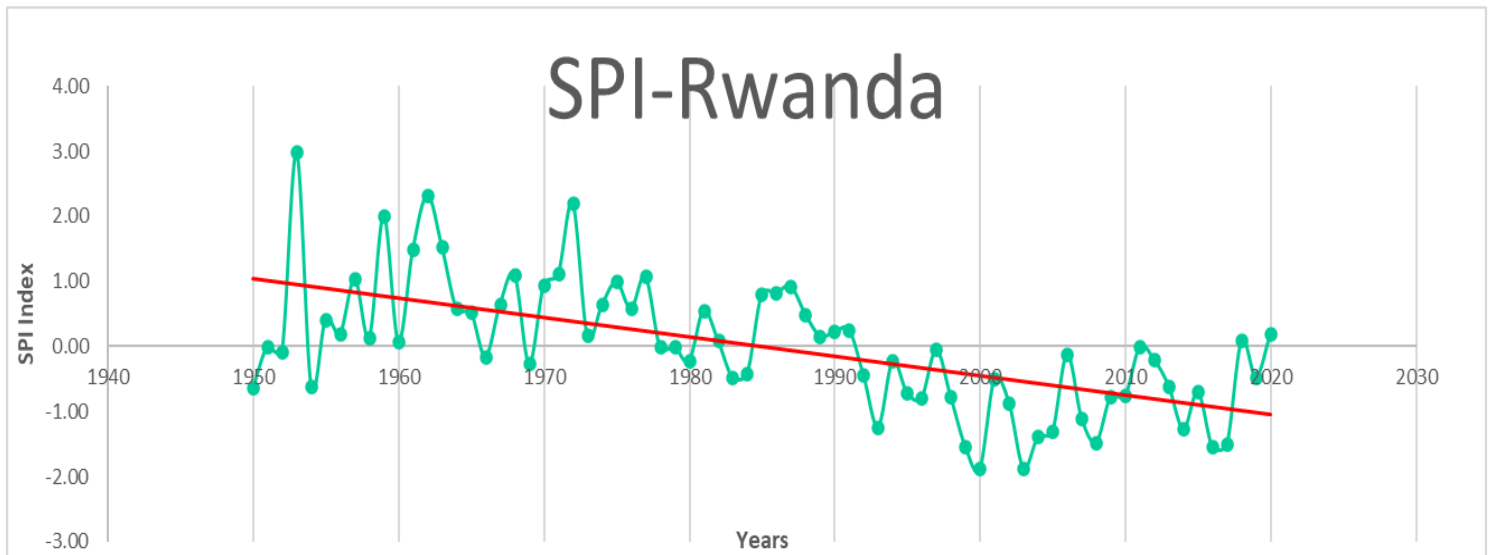




Annual Precipitation-Rwanda



Drought monitoring Service with more actionable indicator



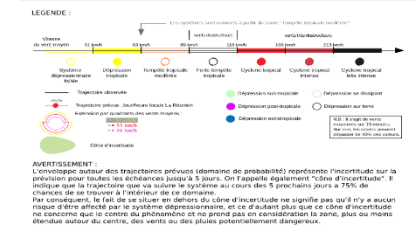
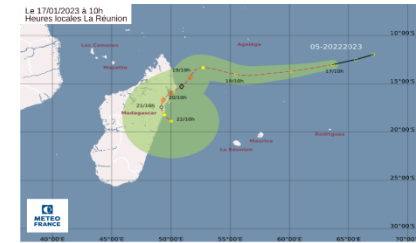
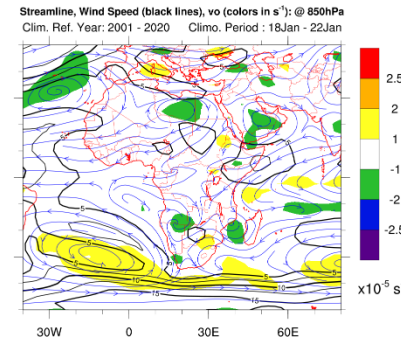
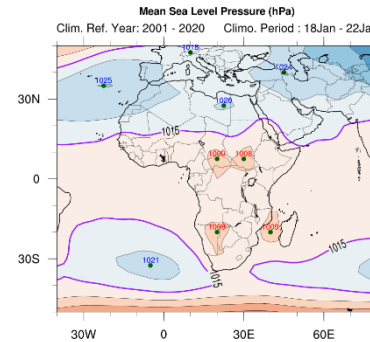
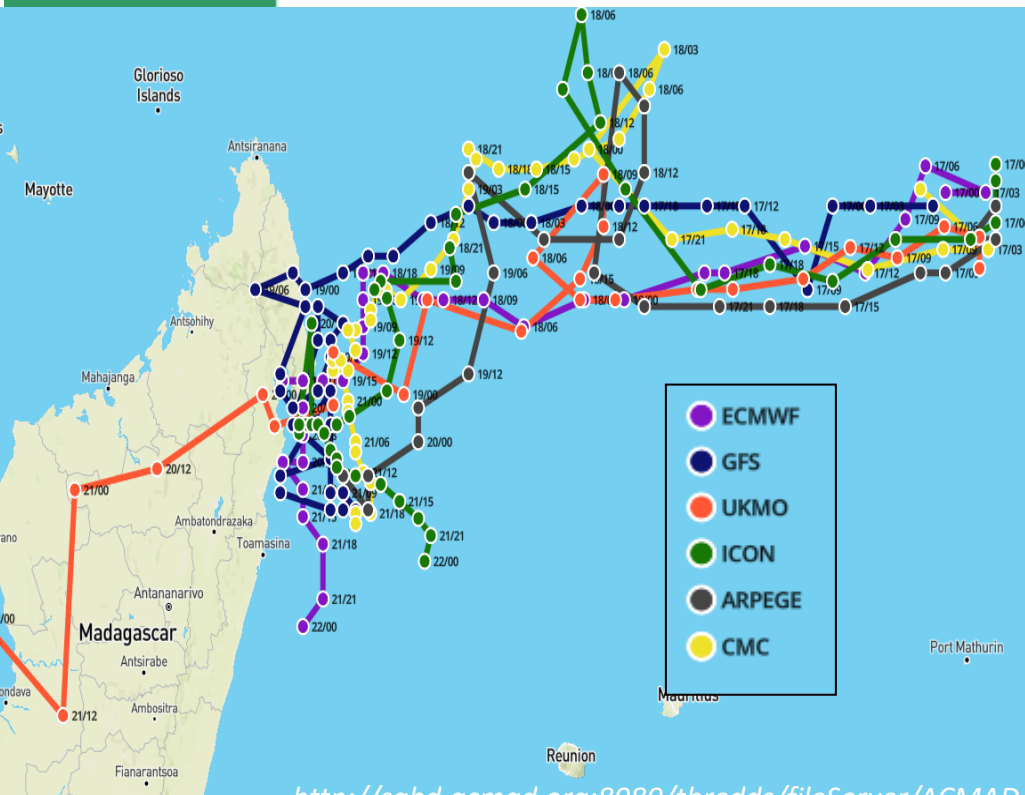
Tracks from: 17-01-2023, 00UTC to 22-01-2023, 00UTC



(Global deterministic models : ARPEGE, CMC, ECMWF, ICON, GFS and UKMO)

– **Climatology of the forecast period** favors evolution towards the Mozambican channel

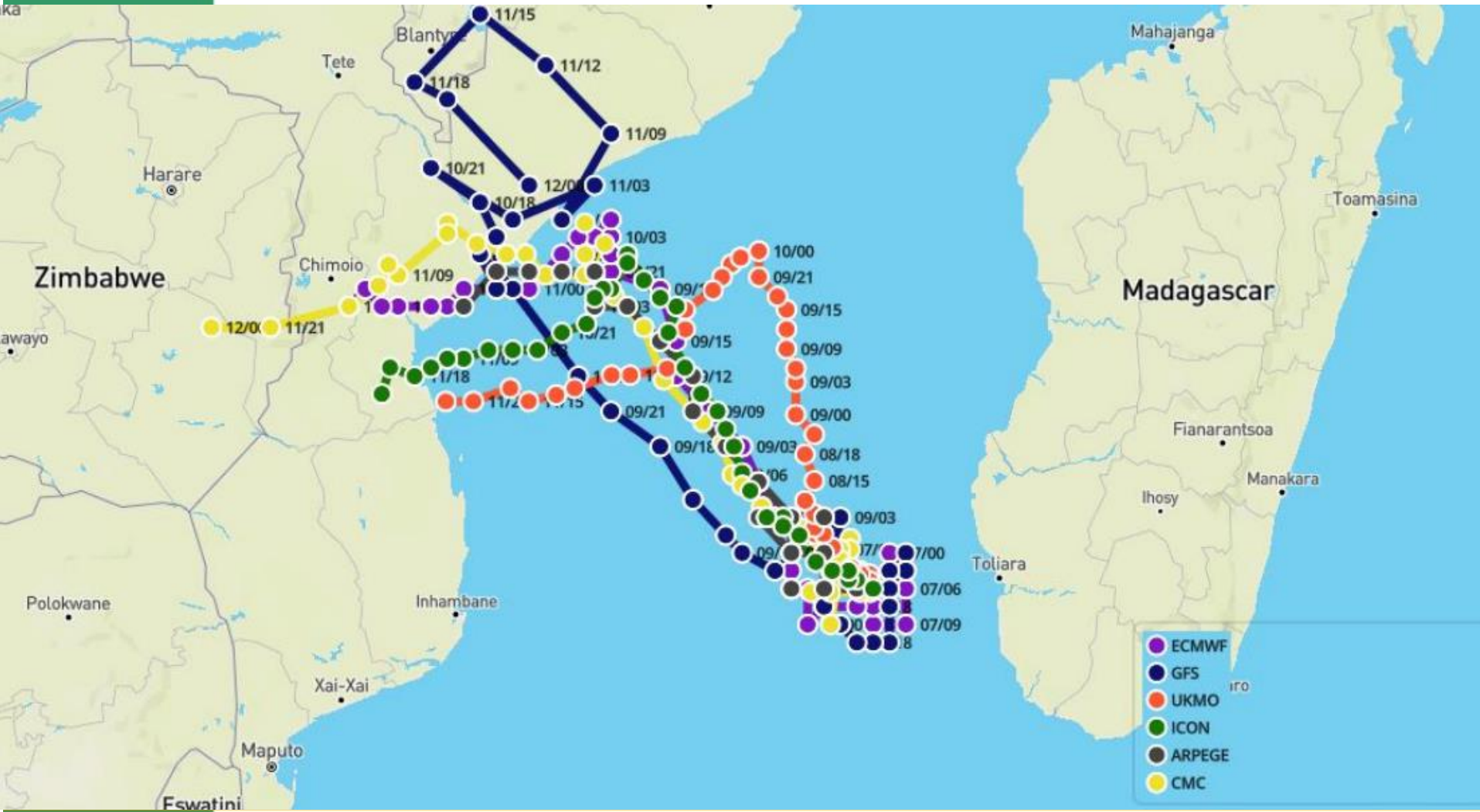
Need training on interpretation

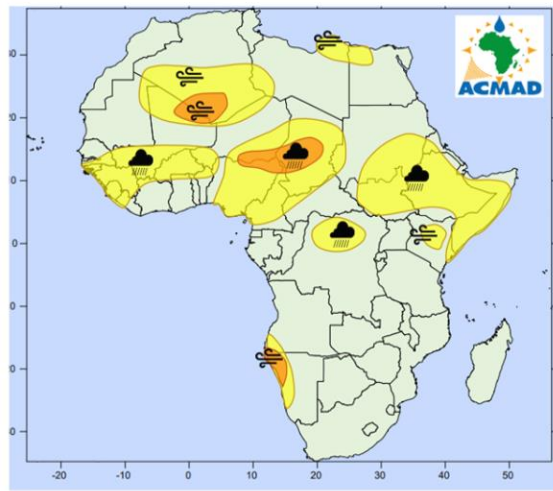


<http://cghd.acmad.org:8080/thread.php?fileServer/ACMAD/>



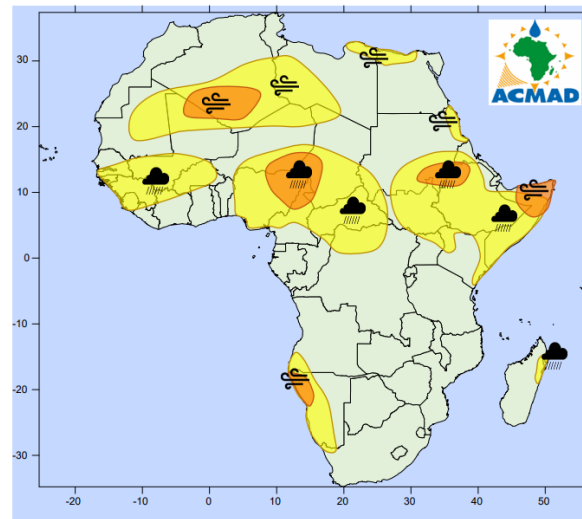
Recent Storm over Mozambican Chanel





MULTI-HAZARD OUTLOOK
Validity: 2022-07-15
 Issued on 2022-07-11

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



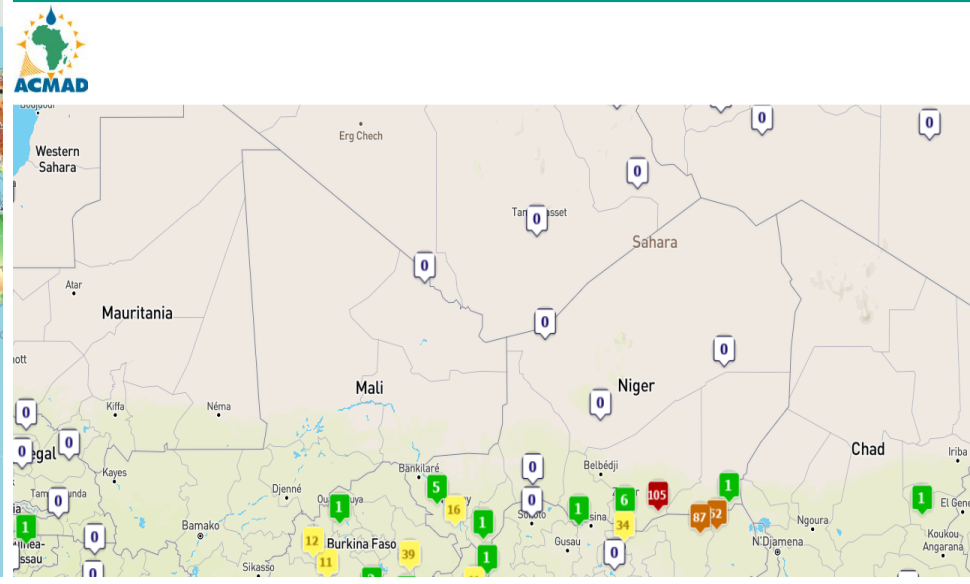
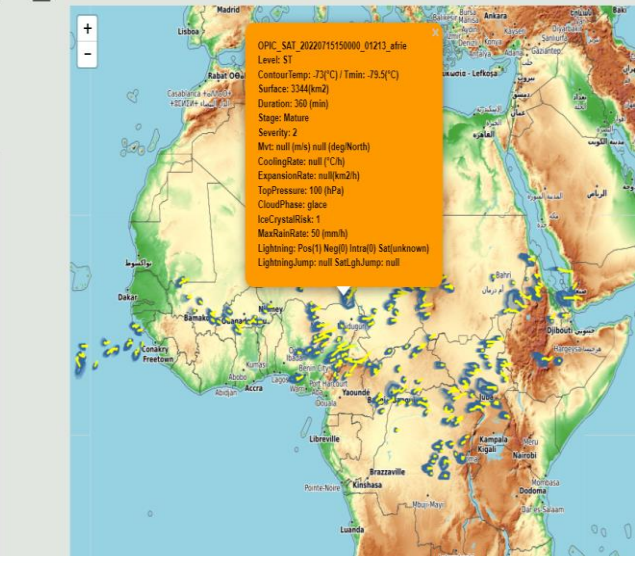
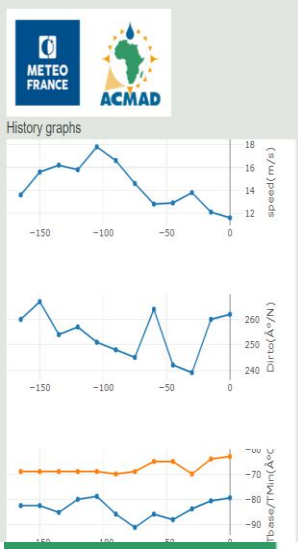
MULTI-HAZARD OUTLOOK
Validity: 2022-07-15
 Issued on 2022-07-14

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



Observed daily rainfall (mm) on: 16-juillet-2022

MSG 2022-07-15T15:00:00Z : RDT-CW_v515





VIGILANCE FOR HEAVY RAINFALL FOR THE NEXT 5 DAYS. POTENTIAL IMPACTS AND PREPARATION/RESPONSE MEASURES VERIFICATION WITH RAINFALL DATA ON THE LEFT



VIGILANCE MAP AND POLICY BRIEF FOR HEAVY RAINFALL AND STRONG WINDS

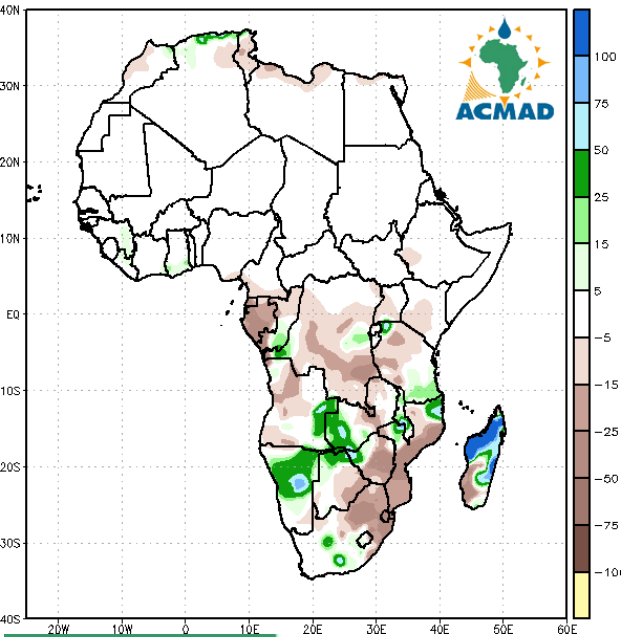
Valid From January 20 to 24, 2023

Issued on January 19, 2023

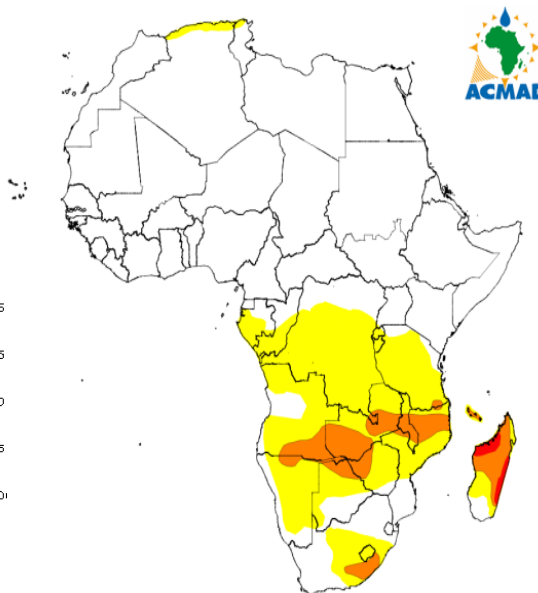


HIGHLIGHT: Extreme Heavy rainfall associated with the Tropical Storm CHENESO is expected over North-western and eastern Madagascar

CPC-Uni 7day Precip Anomaly (mm)
Period: 18Jan2023 to 24Jan2023



Heavy rainfall is expected over Tanzania, Mozambique, Malawi, Zambia, Angola, Namibia, Botswana, Zimbabwe, Comoros and Madagascar



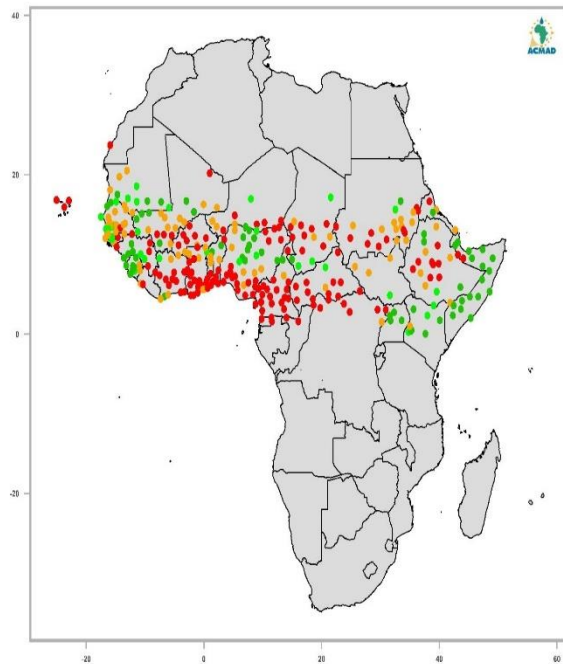
Phenomenon	Hazard	Potentials Impacts	DRM Measures / Advices
In next 5 days accumulate d rainfall (50-100mm) is likely,	Moderate rainfall, flash flood, riverine flooding, landslides, soil erosion and lightning likely	Displacements of people due to floods, outbreak of water borne diseases, damage of infrastructures (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 services and DRM authorities to activate flood contingency plans for emergency response (assistance to victims, search & rescue operations), and be in close touch with NHMS in case the situation becomes worst.

Disclaimer: 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.



Research and innovation is promoted to intercompare Start of season definitions, products and compare with perceptions and findings of extension workers and subsistence farmers. Observations of disruptions on the start of season, processes and phenomena driving this event. Its predictability are essential research priorities for the African agriculture sector

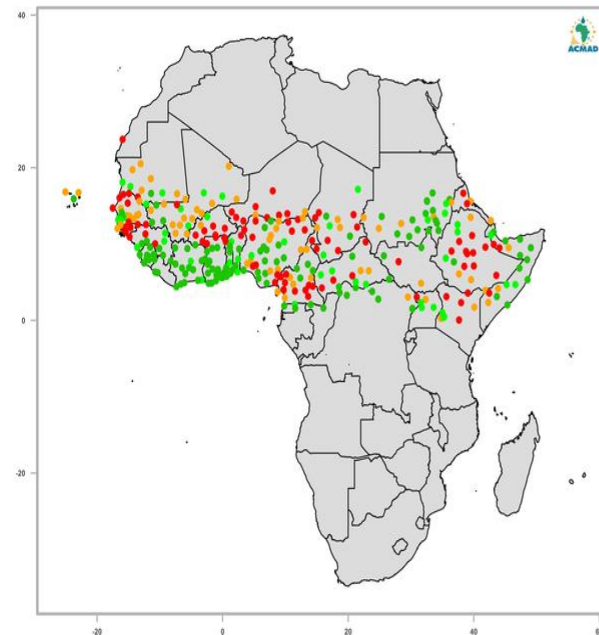
**START OF THE AGRICULTURE SEASON FROM JANUARY TO JULY IN 2020
OVER SUB-SAHARAN AFRICA.**



Observed start of the Agriculture Season departure from Average.

- LATE
- NEAR AVERAGE TO LATE
- NEAR AVERAGE TO EARLY
- EARLY

**START OF THE AGRICULTURE SEASON FROM JANUARY TO JULY IN 2021
OVER SUB-SAHARAN AFRICA.**



Observed start of the Agriculture Season departure from Average.

- LATE
- NEAR AVERAGE TO LATE
- NEAR AVERAGE TO EARLY
- EARLY

IMPACT BASED FORECAST-ACTIONABLE INDICATORS

ACMAD-UNOCHA West and Central Africa office



WEST AND CENTRAL AFRICA Flooding Situation: Hotspot Countries

As of 9 September 2022



CONTINENTAL
BRIEF FOR POLICY AND DECISION MAKERS BASED ON
SIGNIFICANT WEATHER AND CLIMATE EVENTS UPDATE.
VALID FOR: JULY TO OCTOBER 2022

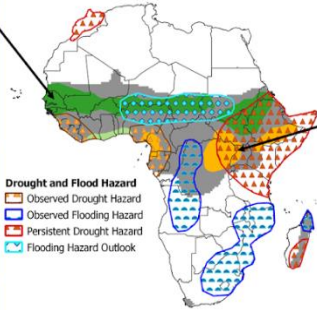


CLIMATE ANOMALIES
Wetter than average season very likely
Heavy rainfall with reported flooding events

HAZARDS
Heavy rainfall events may lead to flash flood, riverine flooding, landslides and soil erosion. High chance of lightning, hail 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 rehabilitate the 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 Develop and implement policy in support of weather based insurance and dam management

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 Leone¹. Hotspot countries have a significant number of people residing in areas with high flood exposure and are thus expected to receive "normal to above average rainfall" or "above average rainfall" during the 2022 rainy season².

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

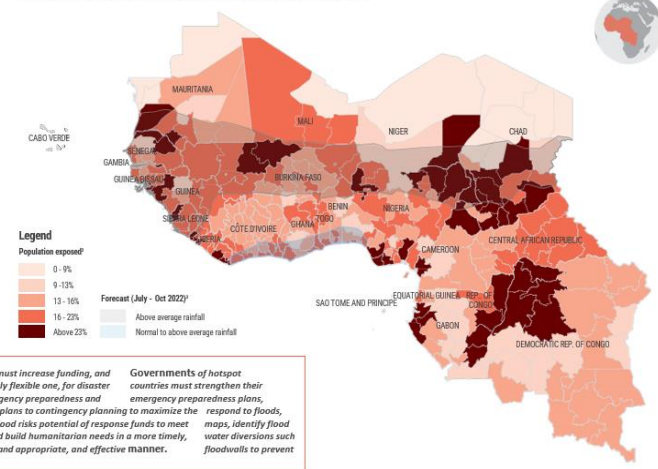
¹ Analysis was carried out by OCHA

² Flood risk exposure map was created by World Bank (https://www.researchgate.net/publication/352382372) ³ Forecast was done by according to African Centre of Meteorological Application for Development (ACMAD)

Countries most affected by floods between July and October 2021



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 plans as these are the most vulnerable to the risk of humanitarian impact of floods in "at-risk" countries.

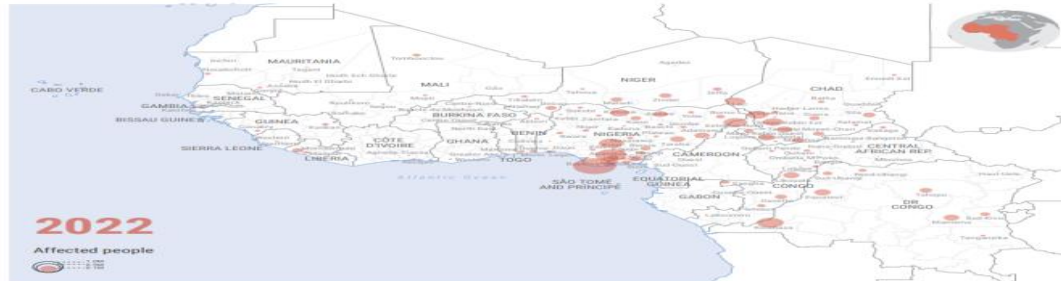
Donors must increase funding, and particularly flexible one, for disaster and emergency preparedness and including plans to contingency planning to maximize the potential of response funds to meet needs in a more timely, as donors, and appropriate, and effective manner.

Governments of hotspot countries must strengthen their emergency preparedness plans, respond to floods, maps, identify flood water diversions such floodwalls to prevent floods.

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.



1,567
People killed

4,401
People injured

517k
Houses destroyed

1.6M
Affected fields

8.5M
People affected

3.2M
People displaced

GLOBAL FIGURES IN 2022

Nigeria	4.5M	2.4M
Chad	1.5M	281k
RD/C	946k	309k
Niger	327k	-
Cameroon	327k	23k
Central African Republic	311k	64k
Liberia	120k	25k
Mali	95k	1k
Benin	75k	1k
Mauritania	48k	35k
Gambia	53k	35k
Guinea	48k	35k
Senegal	20k	8k
Côte d'Ivoire	19k	5k
Sierra Leone	17k	9k
Burkina Faso	16k	9k
Ghana	13k	13k
São Tomé and Príncipe	350	-

BRIEF FOR POLICY AND DECISION MAKERS



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

VALID FOR: **FEBRUARY TO MAY 2024**

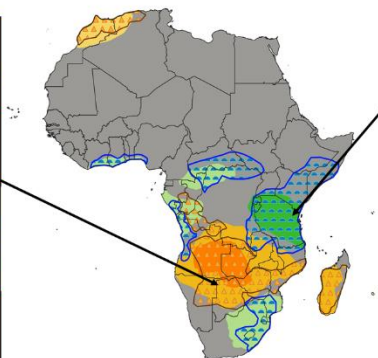


CLIMATE ANOMALIES
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MEASURES
Develop and implement policy to support drought tolerant and short cycle crops, soil and water conservation practice, maximize full irrigation farming. Use watershed based in-situ water harvesting structures. Develop and implement policy in support of weather based insurance and dam management.



LEGEND

- Observed drought hazard
- Observed flood hazard
- Drought hazard outlook
- Flood hazard outlook

CLIMATE ANOMALIES
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Heavy rainfall with reported flooding events

HAZARDS
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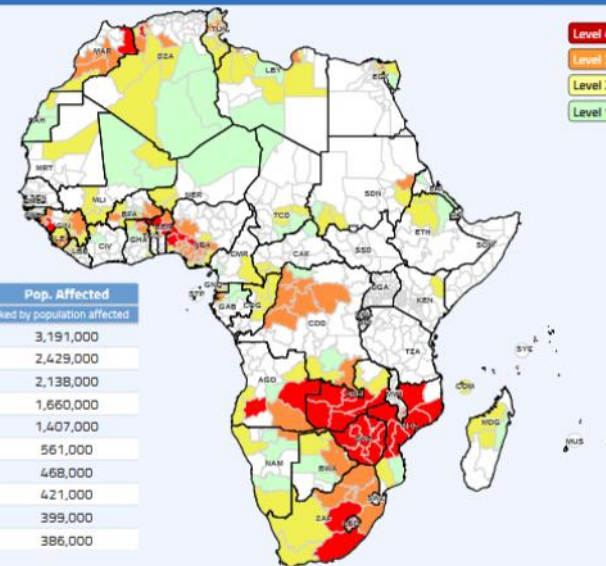
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MEASURES
Select excess-water tolerant crops, wide tree planting campaigns. Develop new and rehabilitate the existing drainage structure, Update and implement flood contingency plans. Improve water management in reservoirs and dams.

Issue no. 2024-028

African Drought Watch

April 2024



Country	Pop. Affected
Worst hit countries ranked by population affected	
Nigeria	3,191,000
Zimbabwe	2,429,000
Zambia	2,138,000
Mozambique	1,660,000
South Africa	1,407,000
Malawi	561,000
Lesotho	468,000
Guinea	421,000
Morocco	399,000
Algeria	386,000



RECOMMENDATIONS FOR 2023 SUMMER FLOODS PREPAREDNESS. IFRC, OCHA Governments and NGOs to develop proposal for FbF.

Recommendations for flood risk preparedness and response

- **Identify existing warning mechanisms and how they work:** be aware of alert levels and establish dissemination procedures to ensure that alerts reach people at risk.
- **Update risk analysis and strengthen monitoring mechanisms** in areas exposed to between "normal" and "above normal" levels of rainfall and flood risk, involving all key players (local authorities, humanitarian and development players, national hydrological and meteorological services, research institutes, etc.). These are as follows:
 - Administrative areas with "medium" or "high" flood risk, located in river basins with expected levels above average;
 - Administrative areas at "high" risk of flooding, located in river basins with average or above-average expected levels;
 - All other areas identified as being at "high" risk of flooding.
- **Launch of anticipatory actions to mitigate and prevent the impact of flooding** on households, property, livelihoods, and health, by triggering pre-positioned funds.
- **Identification of priority multi-sectoral preparedness and response actions** to be implemented both immediately and in the event of an emergency, including aspects relating to coordination, needs analysis and information management, anticipation of access-related risks, communication, etc.
- **Activation of preparedness mechanisms within the various intervention sectors** (health, food security, protection, education, etc.) and reinforcement of contingency stocks available at country level, in high-risk areas with a high risk of experiencing restricted access in the event of an emergency response.
- **Capacity building for all players**, to ensure effective assistance.
- Strengthen **communication and awareness-raising activities** with local communities in at-risk areas, in collaboration with local media and existing community-based early warning systems.
- **Pre-identify funding opportunities** available at country and regional level for emergency preparedness and response activities.



THANK YOU