Regional meeting of Intergovernmental Organizations in West Africa:

Promoting Regional Value chains and food security for strengthening regional integration and sustainable development in West Africa

Climate Services for Food Security Trends in West Africa: Available Initiatives and Challenges

Prepared by :

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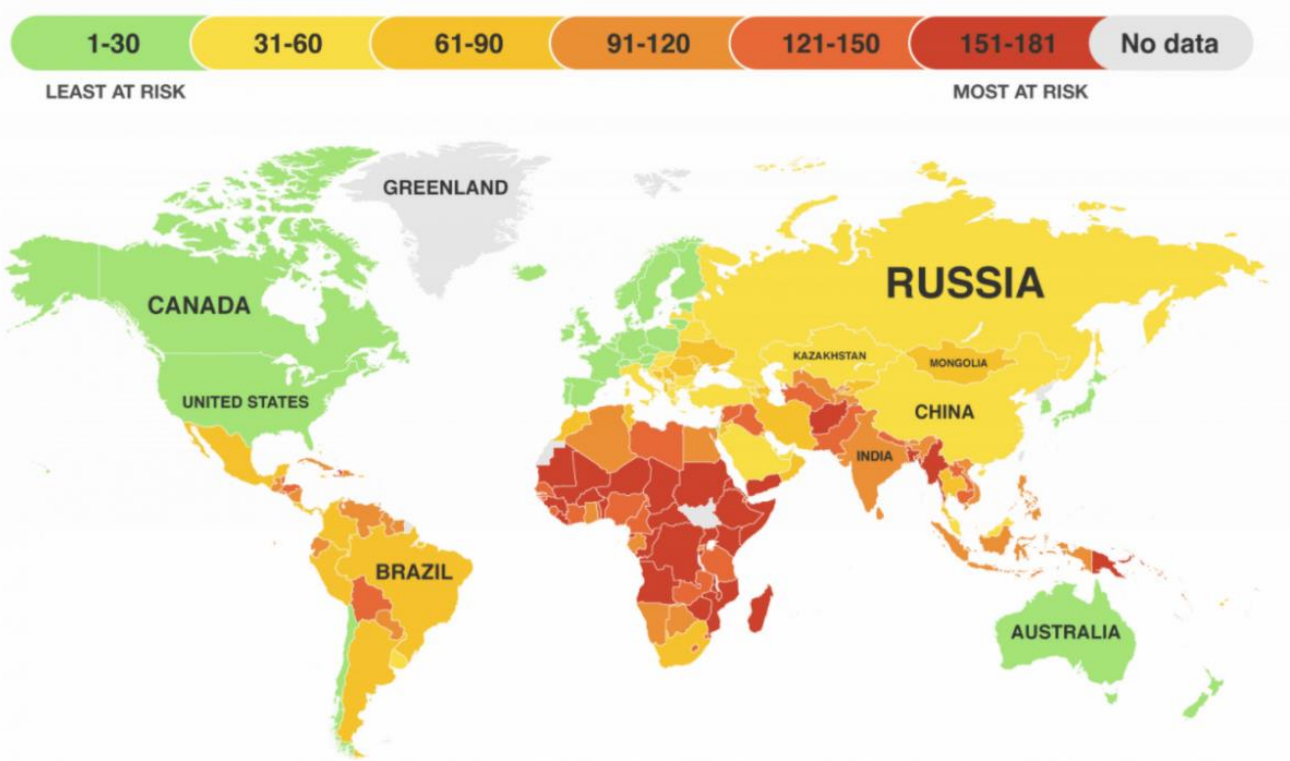
Dakar-Senegal, 22 -23 June 2023

African countries are the most at risk of climate change and Variability



- **70%** of the people in Africa make a **living through agriculture** (World Economic Forum)
- Africa may **lose up 47%** of agricultural revenue by **2100 due to climate change** (UN, 2016)
- One could bring it down to **only 6%,** but for that, **required adaptation** practices and infrastructure should already be in place.

- Continental, detailed, clear and easily accessible **climate information for** the **agricultural** sector could **ramp up adaptation**.

ND-GAIN INDEX (https://gain.nd.edu/our-work/country-index/)

ACMAD Presentation

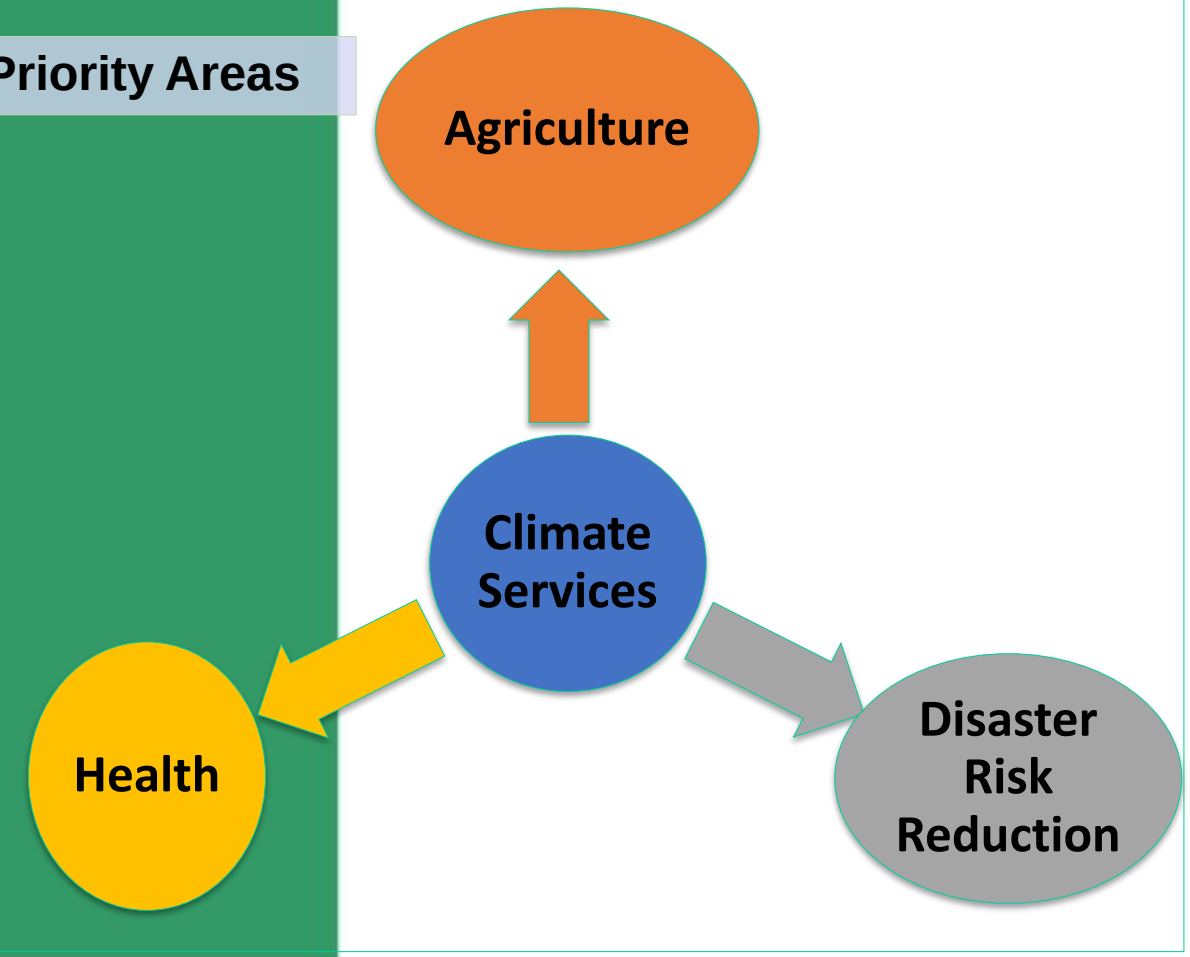
Created trough resolution 540 of the UNECA Conference of Ministers in April 1985 following the droughts of the 70s and 80s , ACMAD is established in Niamey-Niger since October 1992 with mandate

- 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, database , research and innovation as functions

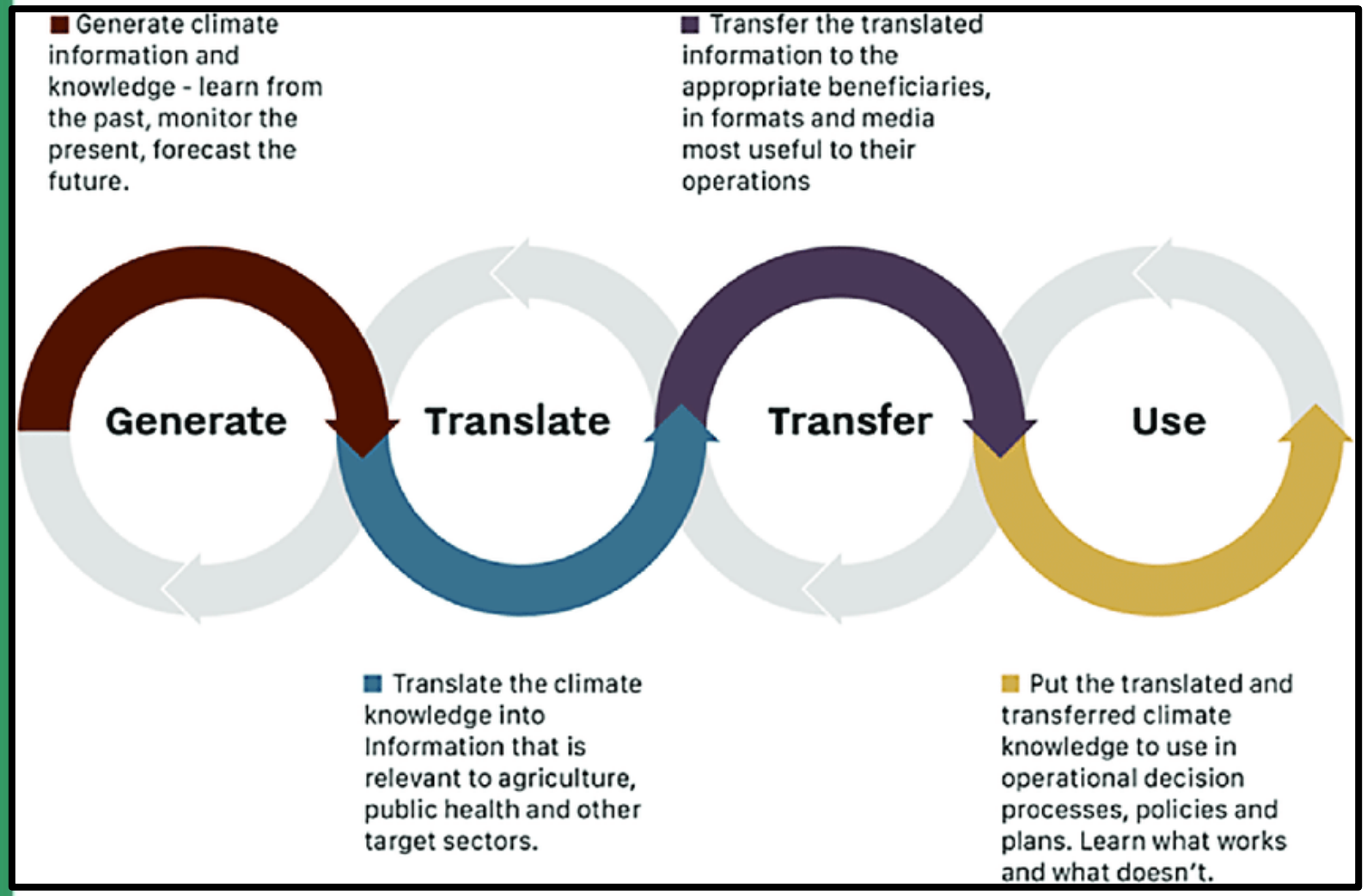
ACMAD : Who are we and what do we do?

Priority Areas



- *ACMAD have been admitted by the UNFCC as Intergovenmental organizations (IGOs) since 2000 and participate in COP, to the findings of State, with African negotiators and policymakers providing science-based information for negotiations and debates on climate action*
- *ACMAD is a member of the NoE (Africa Network of Excellence for DRR)*
- ***The centre is more than ever determined to leverage on the strengths of partnerships to serve member states supporting resilience to disasters and adaptation to climate change across Africa helping to realize the AU agenda 2063 " The Africa we want".***

Climate Services : The Value Chain



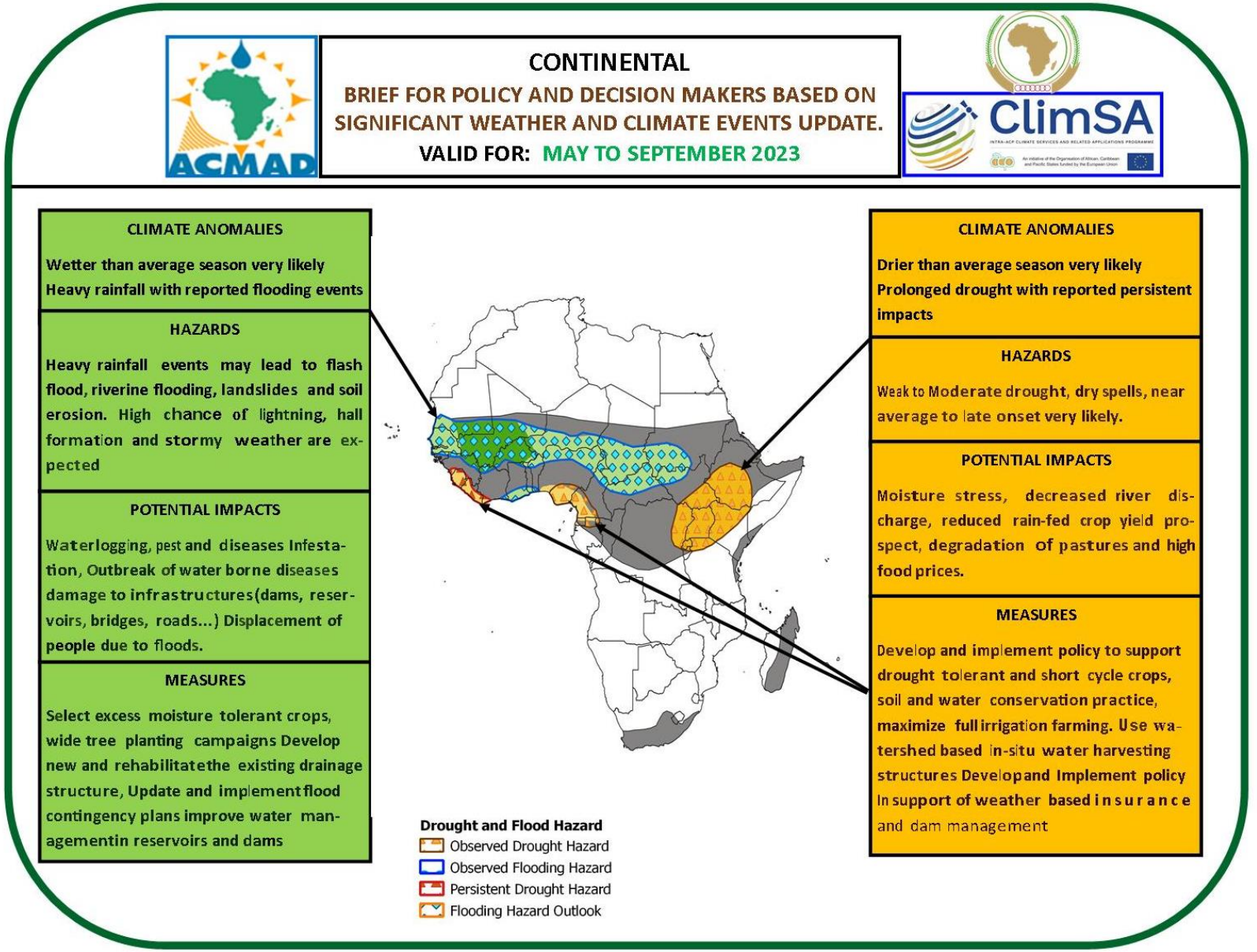
Colored loops: **interaction between users to producers (co-production)**

Grey loops: **engagement at the generation phase (co-designing)**

Contribution to the Food Security Value Chain – Prospects of expected rainfall

1. **Decision-making tool for managing water surpluses or deficits and identifying areas favorable or unfavorable to good harvests.**

- Sahel will experience flooding due to excess rainfall and possible associated rains.
- Possible excess humidity that could lead to crop loss



Available every month and valide for the next following 4-months

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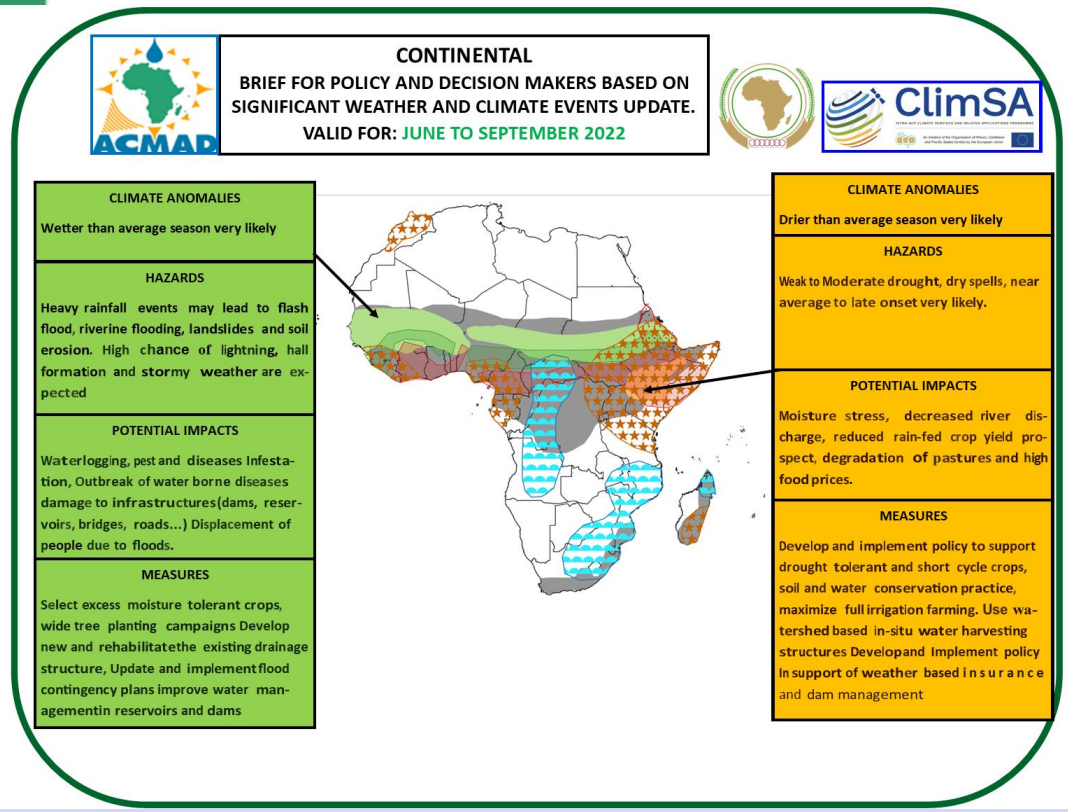
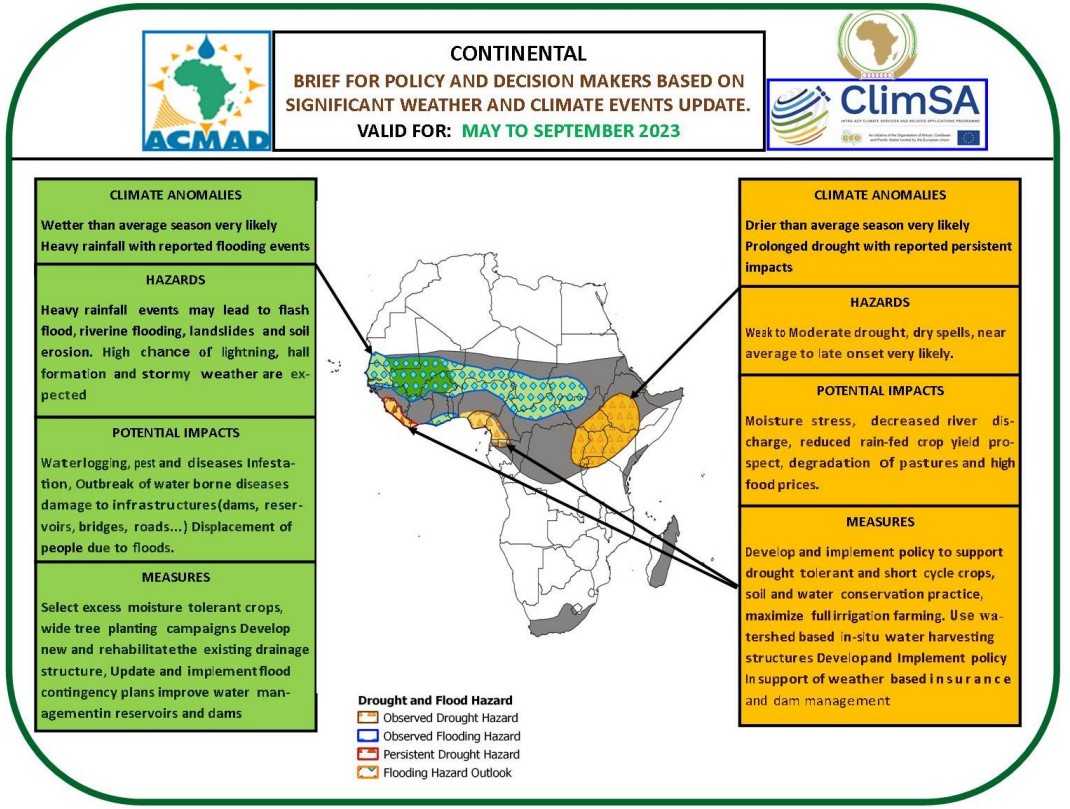




- Excess rainfall forecast and observed in the Sahel in 2022. Record flooding in northern Nigeria due to the heavy recorded in the region.
- The ongoing drought in East Africa since March-May 2022 has been detected since February using seasonal forecasts

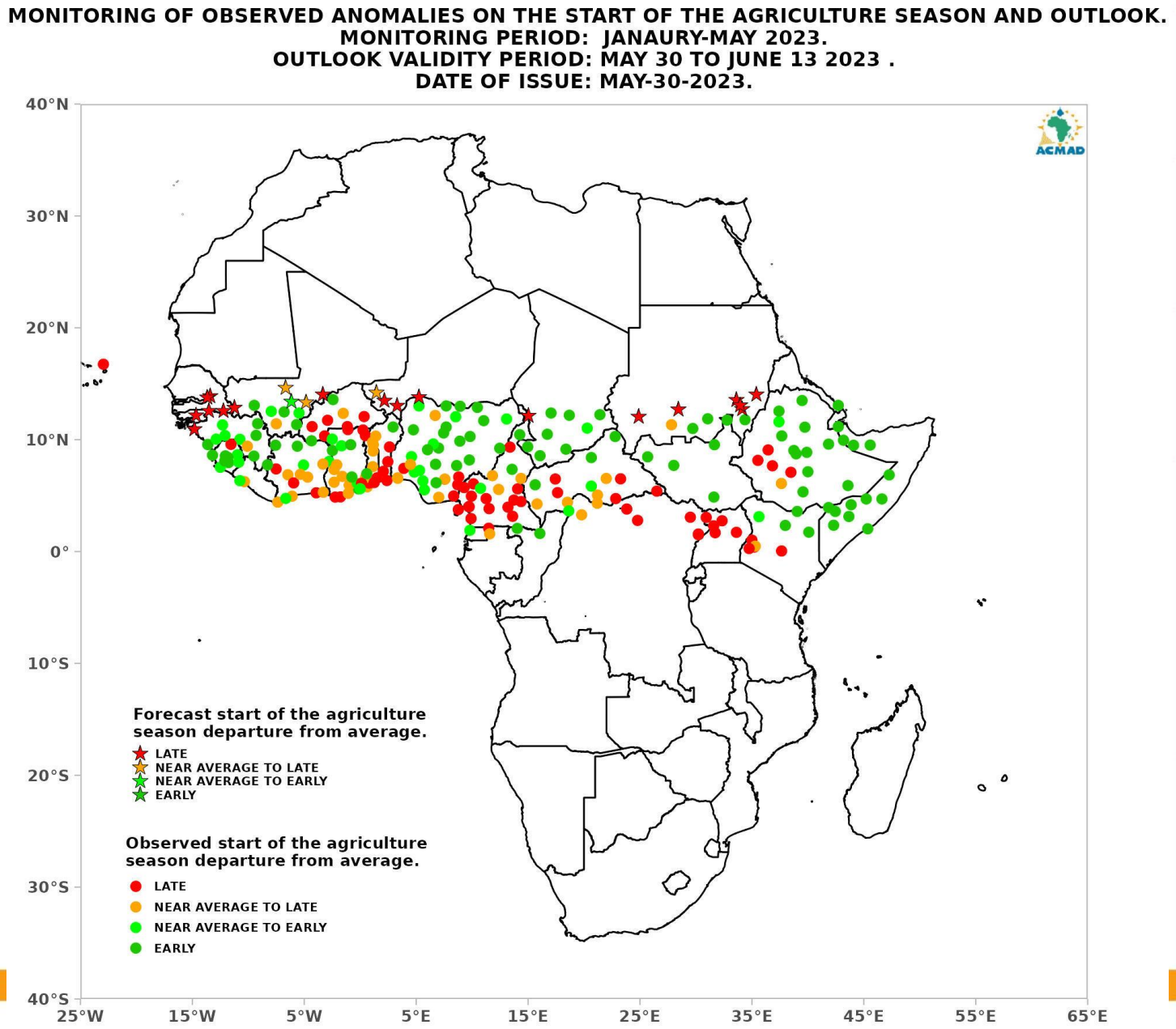
- **Sahel will experience flooding due to excess rainfall and possible associated rains.**
- **Possible excess humidity that could lead to crop loss**

Available every month and valide for the next following 4-months

Contribution to the Food Security Value Chain – Monitoring and forecasting of the start of the agricultural season

2. **Prediction of the start of the agricultural season, dry and wet periods to support farmers in planning their activities**

What will be the quality of the start of agricultural activities in the Sahel regions, which on average have an expected start during the first half of June?



Update every two week to support of agricultural sector

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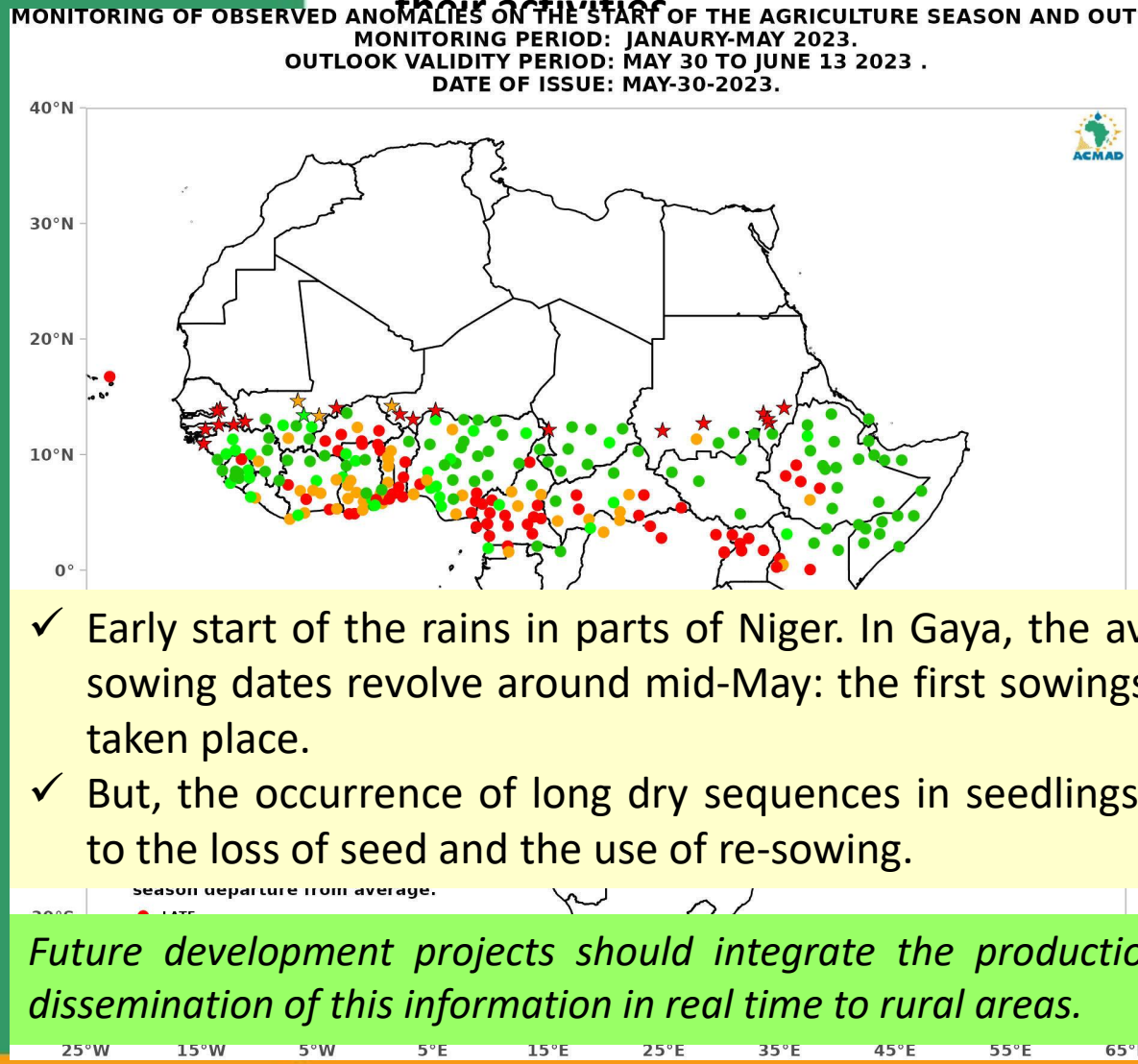

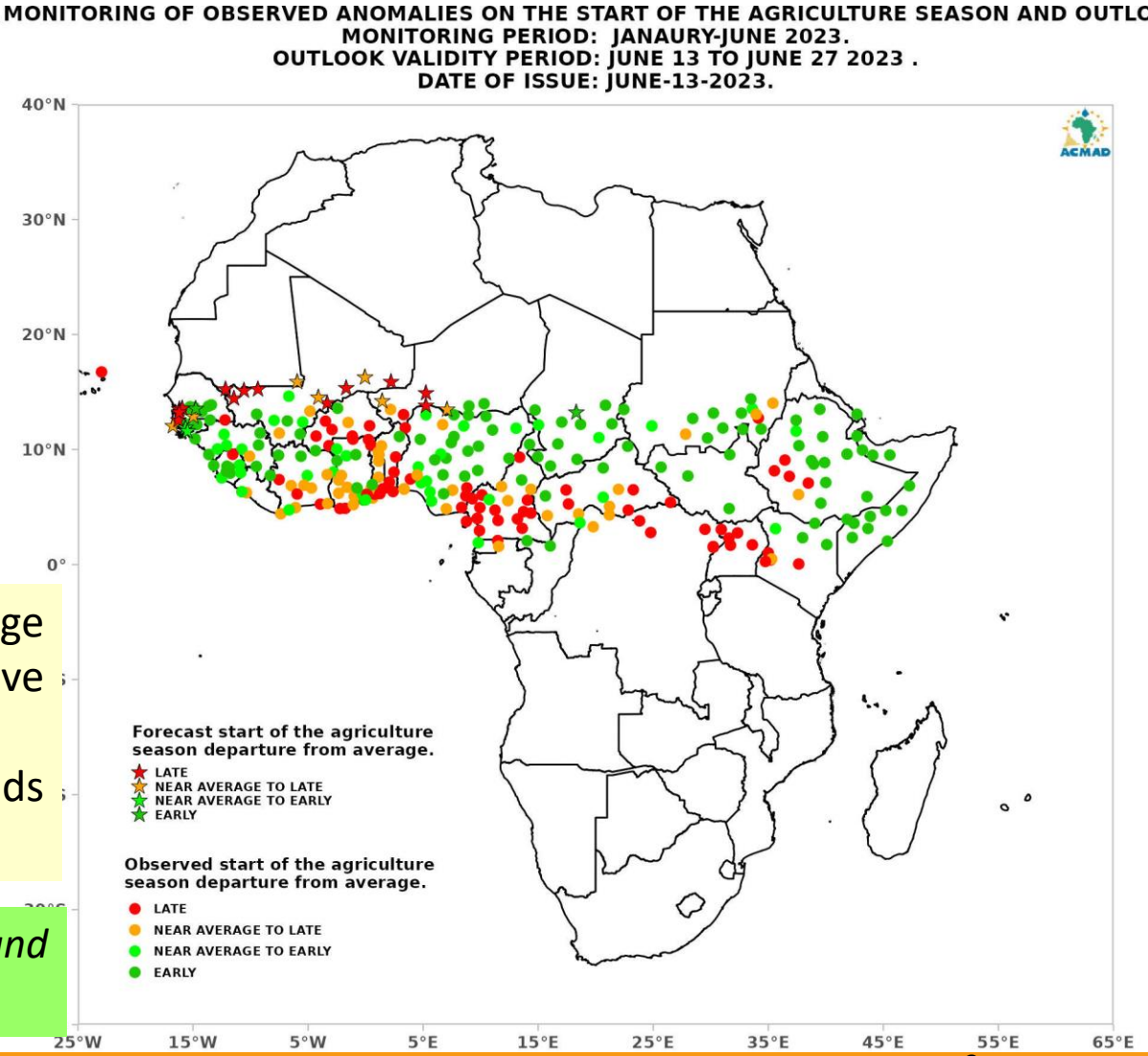

- ✓ Early start of the rains in parts of Niger. In Gaya, the average sowing dates revolve around mid-May: the first sowings have taken place.
- ✓ But, the occurrence of long dry sequences in seedlings leads to the loss of seed and the use of re-sowing.

Future development projects should integrate the production and dissemination of this information in real time to rural areas.

Update every two week to support of agricultural sector

Contribution to the Food Security Value Chain – Climate tools to support long term planning (1/2)

The CLimate InforMation porTal for AGriculture

- ❑ *web portal that gives immediate access to a wealth of tailored agro-climate information at high resolution*
- ❑ to accelerate a climate-resilient agricultural sector in Africa
- ❑ *available for national Met Services, policy makers, reseachers, extension, NGO's*

USE CASE – GROUND NUTS IN NIORO DU RIP – '*BASSIN ARACHIDIER*' (SENEGAL)

- ✓ Optimal condition: at least 500 mm of rain and temp. ~ 28°C
- ✓ What to expected in the future (RCP 8.5, 2041-2070), in the context of climate change: - Less precipitation in northern parts (250 à 300 mm) - In eastern parts of bassin possible increases to 32°C

➢ **Part of the groundnuts basin may become unsuitable for commercial groundnut production due to water stress (north) and higher temperature (east).**

- ❖ **The tools can be used on another areas, for other crops species.**
- ❖ **With ongoing and projected climate change identified area favorable for crop production**
- ❖ **However, good ground observation data are needed for the calibration and validation of the tools.**

CLIMTAG

CLIMate Information platorm for AGriculature

"Customised agro-climatic information at high resolution".

Supporting a climate resilient agricultural sector by:

- Explore climate projections and seasonal forecasts
- Identifier threats and opportunities of a changing climate
- React with crop planning, climate adaptation strategies and international funding

Co-created with stakeholders

for meteorological services, policy makers, researchers, extension workers, NGOs, ...

Provides a wealth of agro-climatic data

34 x agro-climate indicators
3 x climate scenarios
15 x climate models
4 x time horizons
@ 1 km resolution

Offers immediate access via an intuitive web portal

CLIMTAG™ for Africa

upscaling to 23 countries and counting...

klimpala

klimpala.vito.be

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ACMAD entrepreneurs for entrepreneurs KPMG

vito ECMWF KENTER Flanders State of the Art Copernicus

Contribution to the Food Security Value Chain – Climate tools to support long term planning (2/2)

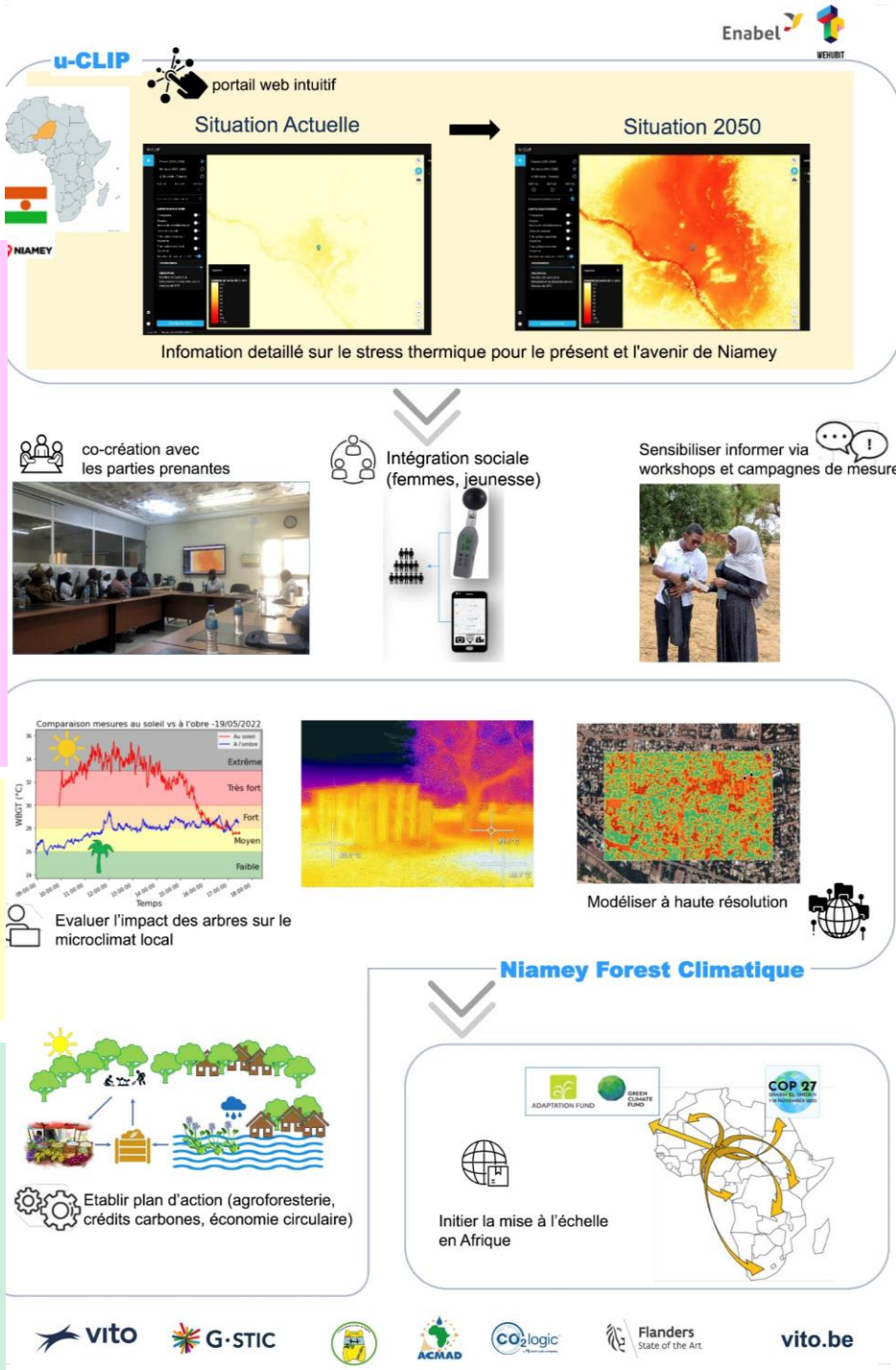
The Urban **C**limate **I**nformation **P**latform **: u-CLIP**

- ❑ An urban climate information platform, providing future projections of the spatial layout of the City of Niamey
- ❑ **objective data** on temperature and on the direct impact of greening to **support their climate actions** and the further **formulation of adequate resilience measures**
- ❑ **An inclusive and participatory approach**: **–** ***understand*** local climate ***challenges*** - ***refine*** understanding of very ***specific realities*** - ***listen to the needs and experiences*** of the inhabitants, local authorities, …

Strong advocacy that leveraged other programmes and funding, as the **Niamey Climate Forest project ----> Select species and tree planting as adaptative measure to : -** mitigate the impacts of climate change - support agroforestry - generate carbon credits

u-CLIP platform is not only the impact of greening -> it's possible to visualize, other type of climate action. It could be complemented with other climate issues such as: **water management, droughts and floods**.

However, new partnerships are require to work on these elements.

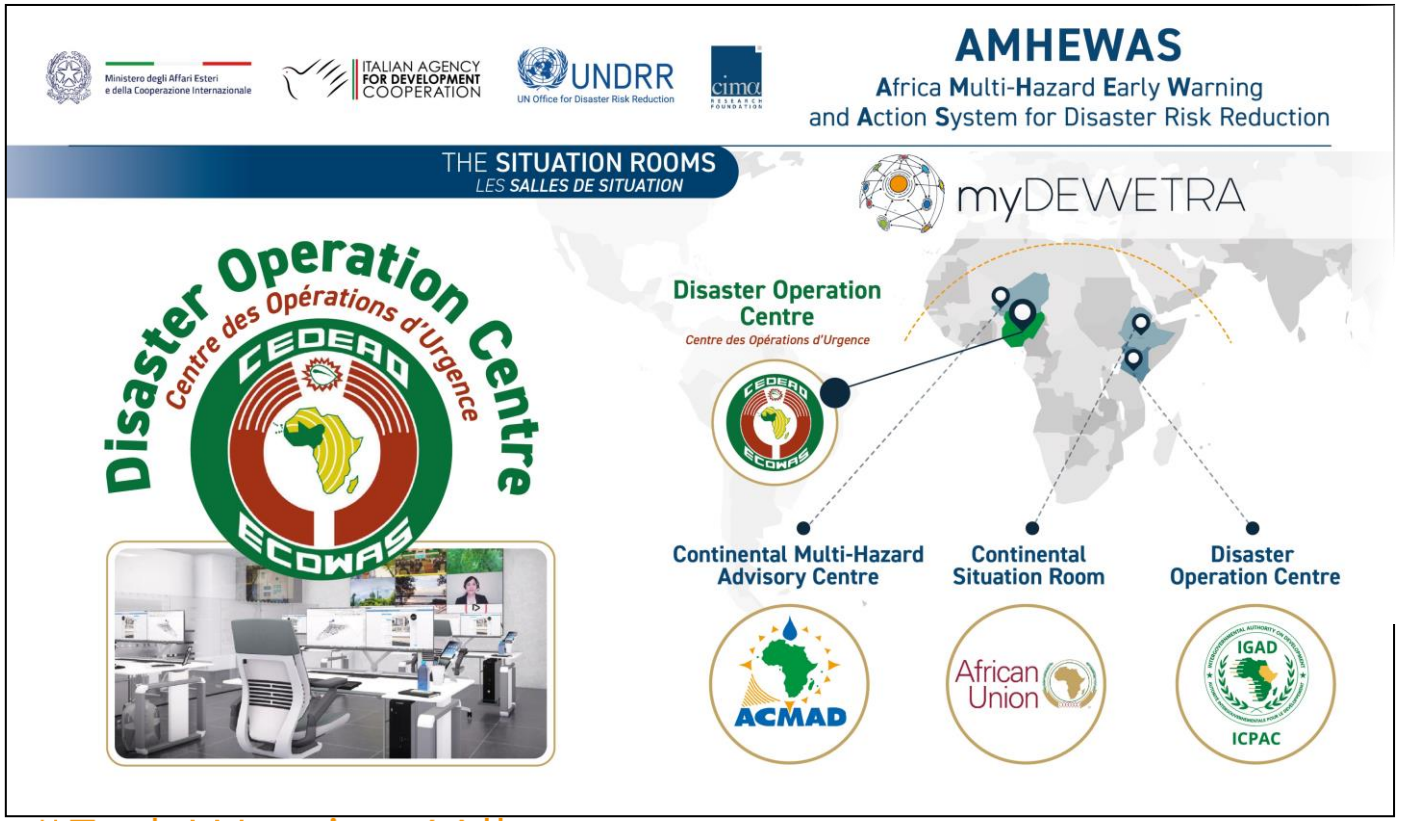


Climate Services Requirements for early warning for All

- Hazards intensity, frequency and location scenarios analyses for impact assessment, risk profiling, resilience and adaptation planning

- Hazards observations, monitoring, understanding and modeling, prediction, forecasting

- Hazards outlooks, advisories, vigilance, watches and warnings for communication and emergency preparation and response



#EarlyWarning4All

GO TO WEBSITE!

Challenges

- Little awareness of policy makers of availability of impact-based forecasting.
- Uptaking of the information in operations of user organizations are limited
- Limited data access,
  - due to restriction from some data center.
  - Low access to ground observation data – when available national policies are very restrictive.
- Limited capacity to tackle the demands (by NMHSs) for On-the-Job Training and Secondment positions
- Limited communication between NMHSs and UN country offices to share climate and impacts information in real or near real-time.

THANK YOU

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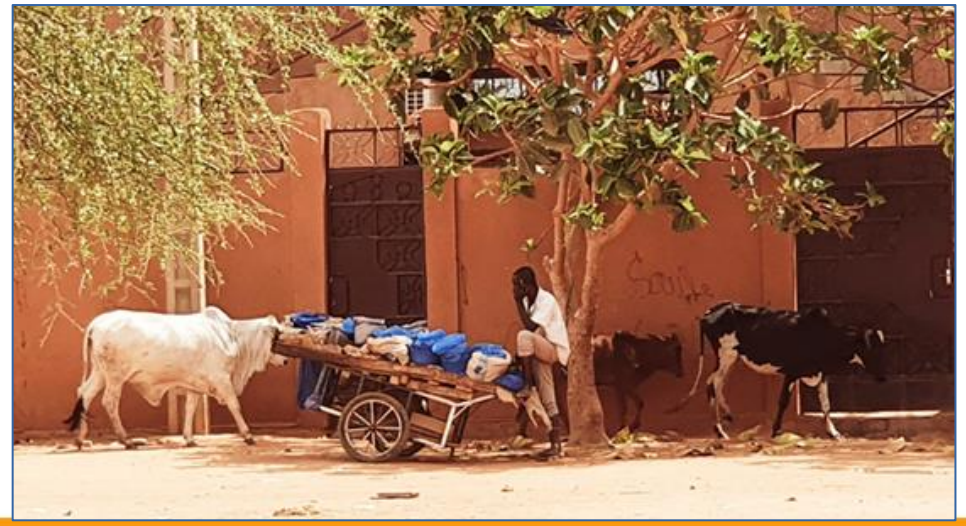

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