



Un autre Sahel est possible !

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AGRHYMET Operational Activities

RCC-WAS info sessions for SEWA

Dr TINNI HALIDOU Seydou

Head of Regional hydro-Met & Climate Watch Division

Climate-Water-Meteorological Division

AGRHYMET CCR-AOS/CILSS

seydou.tinni@cilss.int

RCC info sessions for SEWA
20 October 2025
Online





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Plan

- **Institutional setup and Membership**
- **Vision, Mission, Mandate**
- **Products and services**
- **Training/Outreach**
- **Challenges**
- **Opportunities**



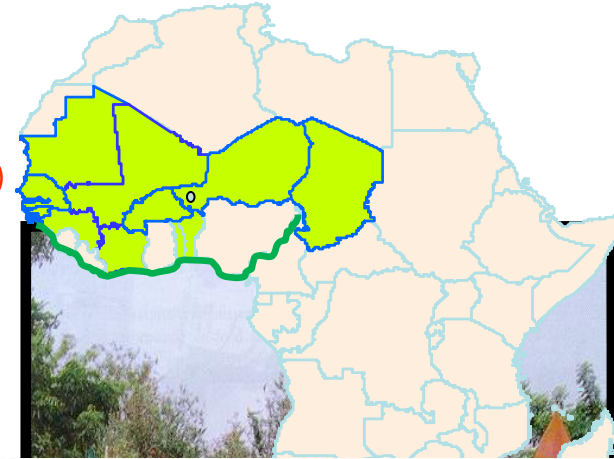


CILSS/AGRHYMET

CILSS : Permanent Interstate Committee on Drought Control in the Sahel (CILSS)

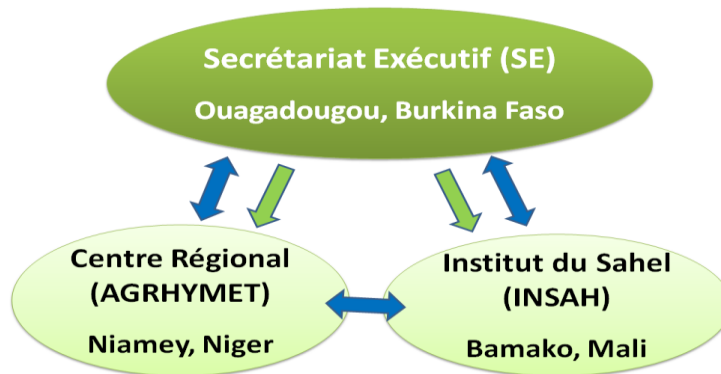
CILSS: Created in 1973 by six states following the catastrophic droughts of the 1970s,

- 13 member states: Benin, Burkina Faso, Cabo-Verde, Côte d'Ivoire, Chad, The Gambia, Guinée-Bissau, Guinée, Mali, Mauritania, Niger, Senegal, Togo.



- Mandate:** Food security, natural resource management, combating desertification, water management, and climate change adaptation

CILSS = 3 sites



The CILSS system is composed of three sites, namely:

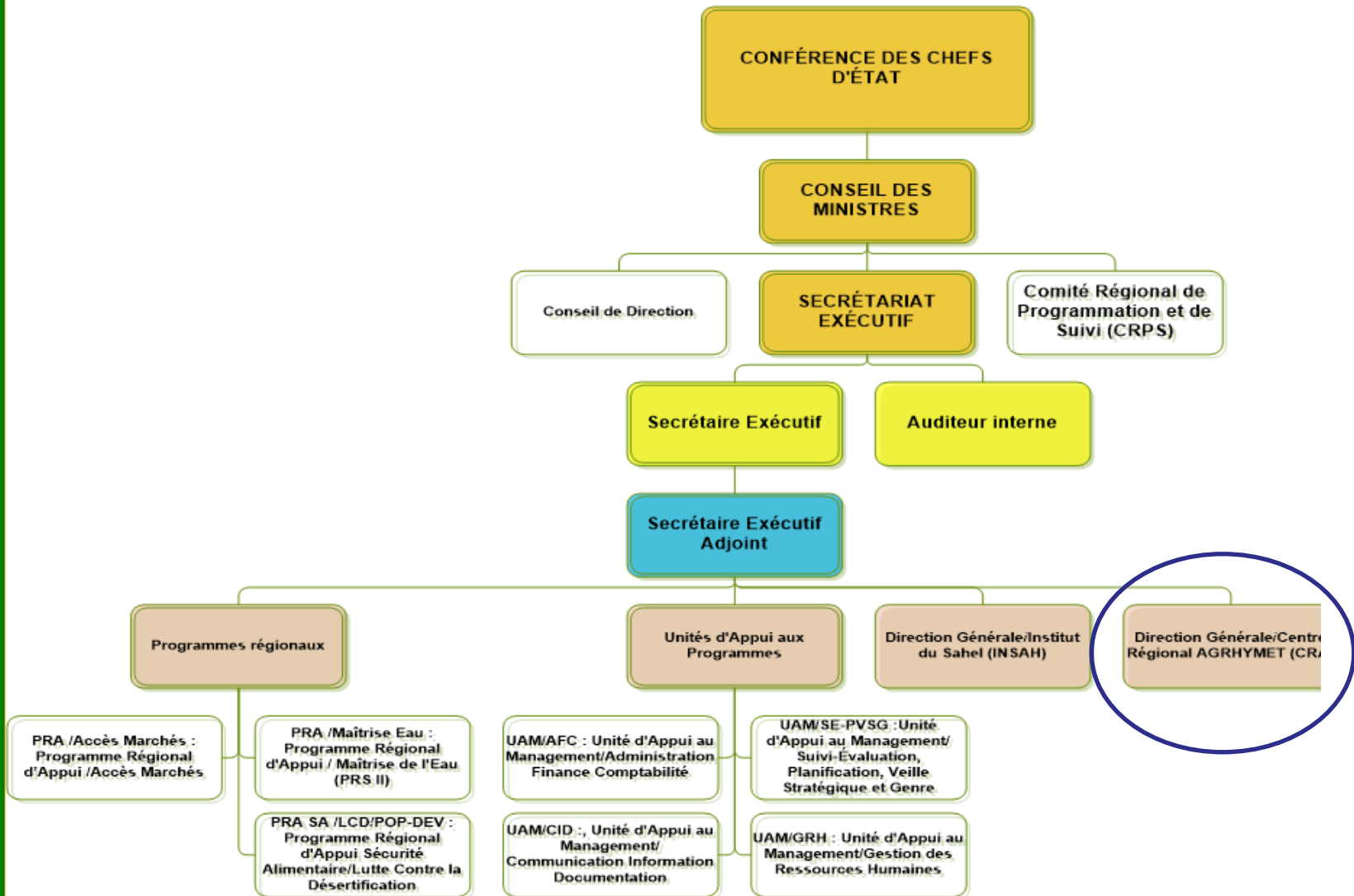
Executive Secretariat
headquarter of the institution, based in Ouagadougou, Burkina Faso



AGRHYMET Regional Centre, based in Niamey, Niger

Sahel Institute
based in Bamako, Mali







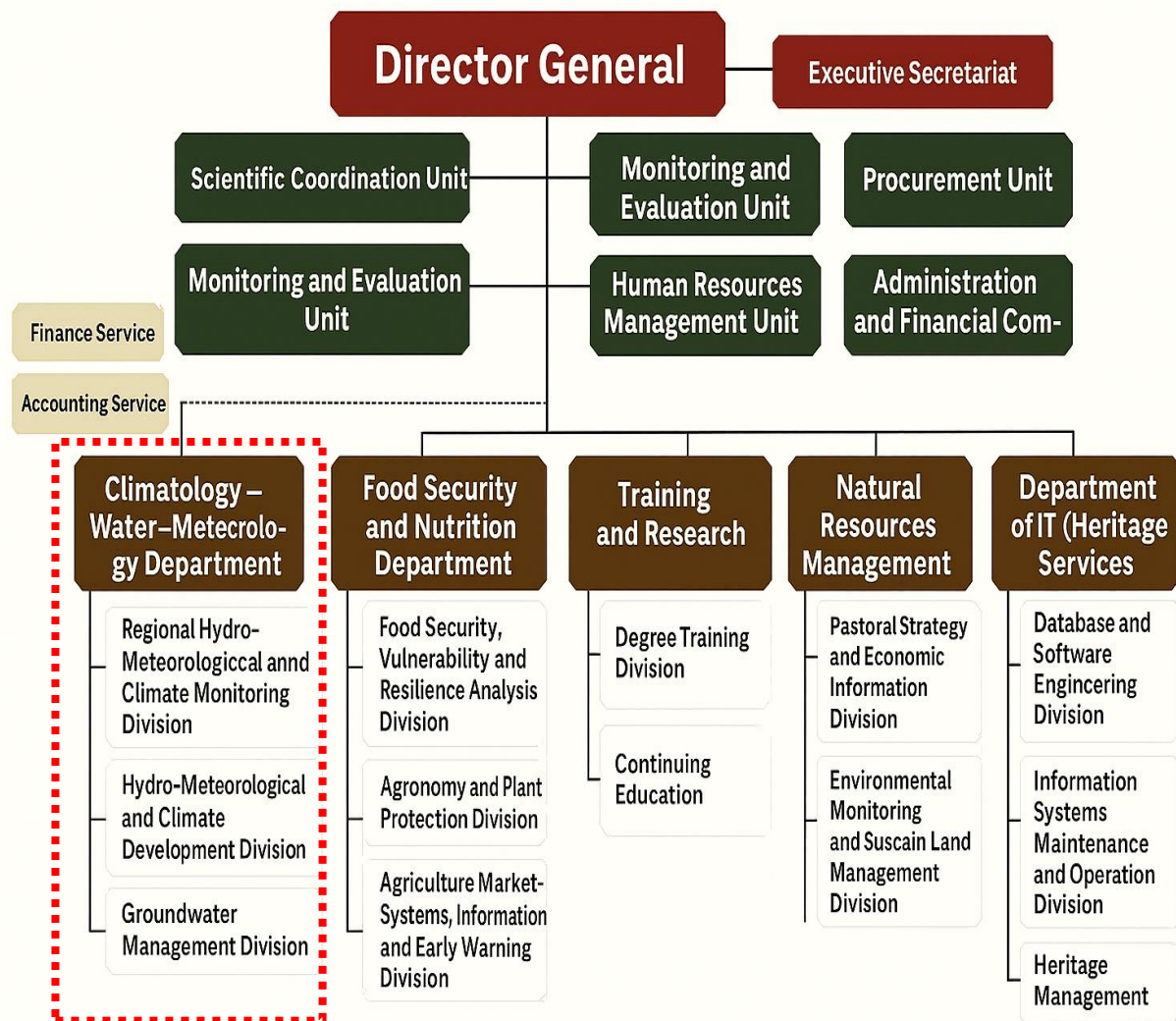
Mission of AGRHYMET

AGRHYMET = AGRonomy + HYdrology + METeorology

Created in **1974**

Mission :

- **Collect, manage, and disseminate climate, hydrological, and agrometeorological information** across CILSS member states,
- **Strengthen the technical and institutional capacities** of NMHSs and other partners,
- **support resilience to food insecurity, drought, and climate risks** in the Sahel and West Africa,

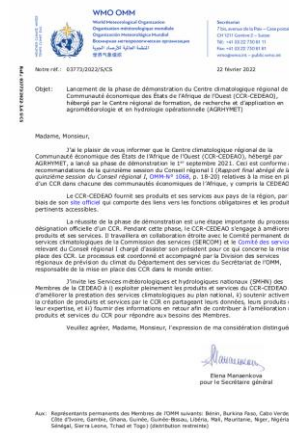




Mission of AGRHYMET

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- Endorsement of AGRHYMET by ECOWAS as the RCC-WAS : MoU between CILSS and ECOWAS in July 2020
- Implementation of the RCC-WA web portal (<http://ccr-agrhyment.cilss.int/>)
- Declaration of intention to WMO July 2021
- Letter of WMO to countries member, February 2022



Cc : - Mr Amos Makarau, Director AFDC





Climate, Water, Meteorology Department

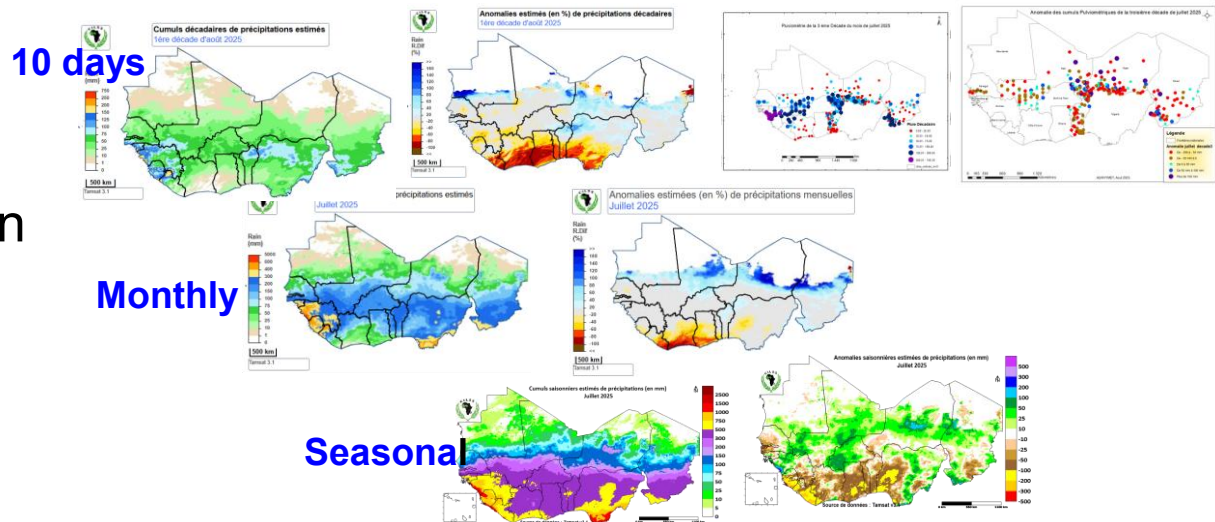
- **Vision:**

"To be at the **forefront** of scientific and technological advances, **providing regional leadership** in the development and delivery of innovative climate, hydrological, and meteorological services **tailored to user needs.**"

Climate Diagnostic

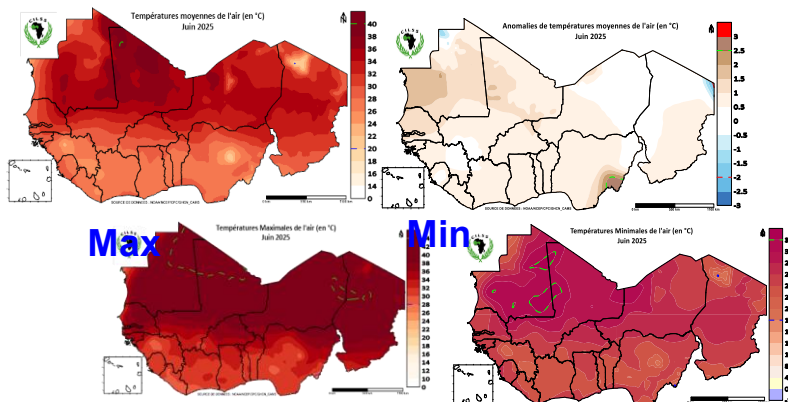
Monitoring/Monthly and 10 days

➤ Precipitation



➤ Temperature

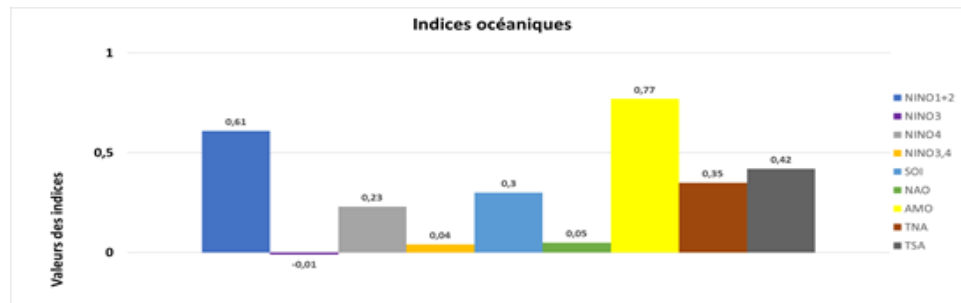
Mean



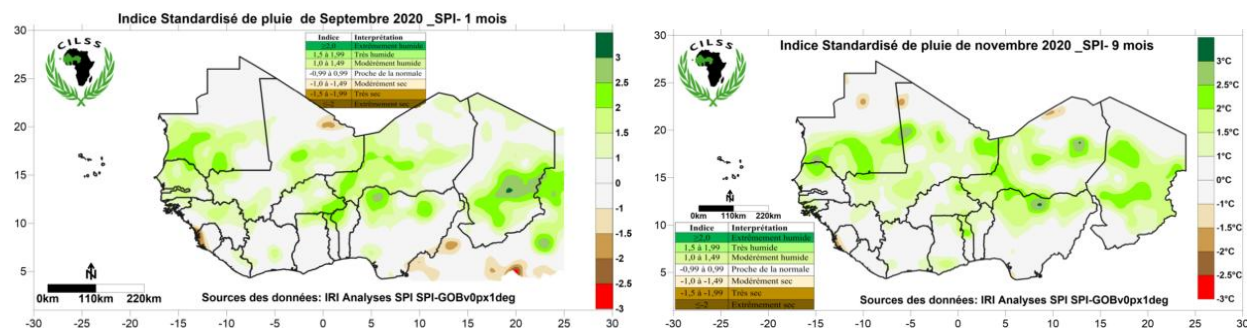
Climate Diagnostic

Climate Indices

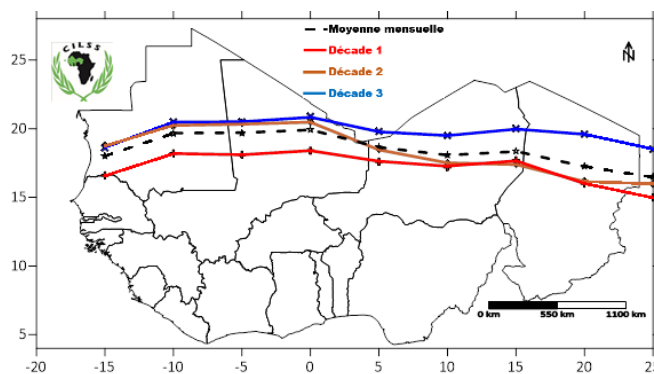
- ENSO, SOI, NAO, AMO, TNA, TSA



- SPI 1_9



- ITF





Climate Diagnostic

10 days briefings

Monthly Bulletins

Special notes

Monthly bulletin/ Dekadals briefings/Technical notes



Briefing décadaire de veille stratégique sur la dynamique de la campagne agropastorale 2025–2026

Briefing N°9 du 18 Août 2025

Présentation : Dr Seydou TINNI (Expert prévisionniste) ; Dr Issaka LONA (Expert suivi climatique) ; Dr Alassane AGALI (Expert Agronome) ; Dr Idrissa MIAGA (Expert protection des végétaux) ; M. Mohamed HAMATAN (Expert suivi hydrologique) ; Dr Issa GARBA (Expert Agropastoraliste) ; Sy Martial TRAORE (Expert Marché) ; Papa Alassane (Expert en Communication).

Préparation : Dr Issa GARBA, Chef DGRN

Supervision : Dr Issoufou Baoua, DG pi

Plan du Briefing décadaire

- I. Perspectives météorologiques
- II. Suivi climatique
- III. Suivi hydrologique
- IV. Suivi des cultures
- V. Suivi Phytosanitaire
- VI. Suivi Pastoral



COMITE PERMANENT INTER-ETATS DE LUTTE CONTRE LA SECHERESSE DANS LE SAHEL
PERMANENT INTERSTATE COMMITTEE FOR DROUGHT CONTROL IN THE SAHEL
COMITÉ PERMANENTE INTER-ESTADOS DE LUTA CONTRA A SECA NO SAHEL
اللجنة الدائمة المشتركة لمحاربة التصحر في الساحل



Centre Régional-AGRYMET

Suivi climatique pour l'Afrique de l'Ouest et le Sahel

Bulletin mensuel

N° de Juillet 2025

I. → Suivi des indices océaniques et de l'état des températures de surfaces de la mer



COMITE PERMANENT INTER-ETATS DE LUTTE CONTRE LA SECHERESSE DANS LE SAHEL
PERMANENT INTERSTATE COMMITTEE FOR DROUGHT CONTROL IN THE SAHEL
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AGRYMET, Centre Climatique Régional pour l'Afrique de l'Ouest et le Sahel

Note spéciale sur la situation des inondations au Sahel

Note spéciale : N°01, du 11 août 2025

Le Sahel et l'Afrique de l'Ouest encore sous les eaux :
Inondations meurtrières et perspectives alarmantes!

1) Situation actuelle des inondations au Sahel





Climate References

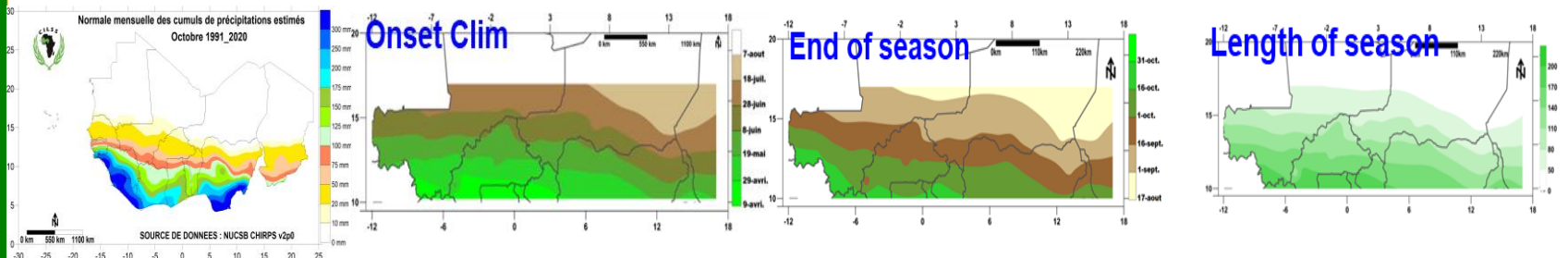
References climatology: 1981-2010 & 1991-2020

➤ Precipitations/Rainfall

- Stations data
- CHIRPS & TAMSAT
- Merging data (Satellite + station data)

➤ 2mTemperature

- Onset, Secession and length of maximum dry spells



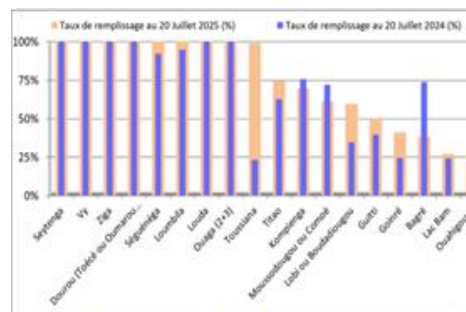
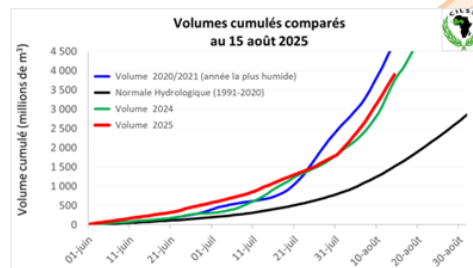
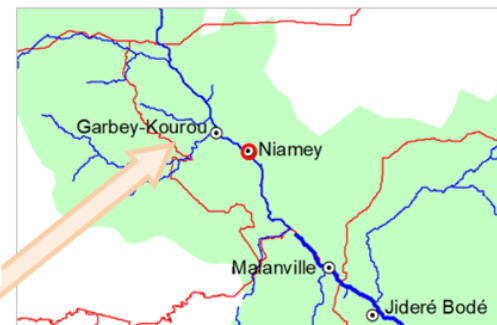
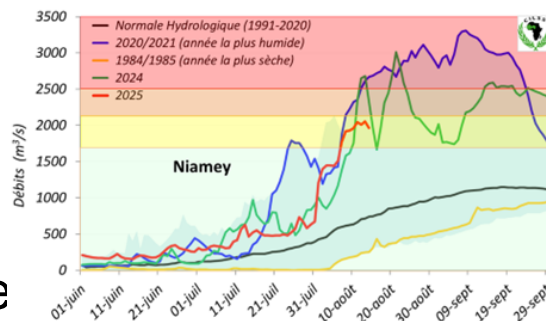
<https://ccr1-agrhymet.cilss.int/reference/>



Hydrological Watch

Rivers flows monitoring

- Niger, Senegal, Lake Chad,



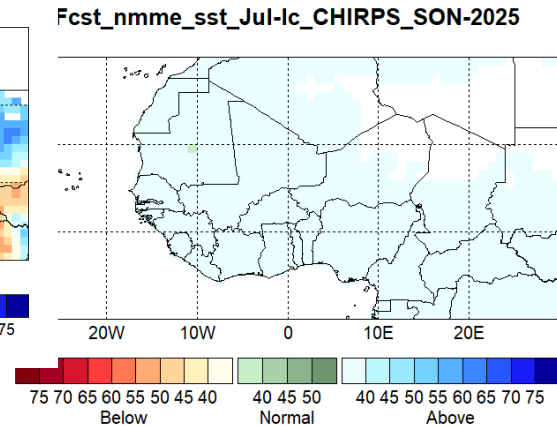
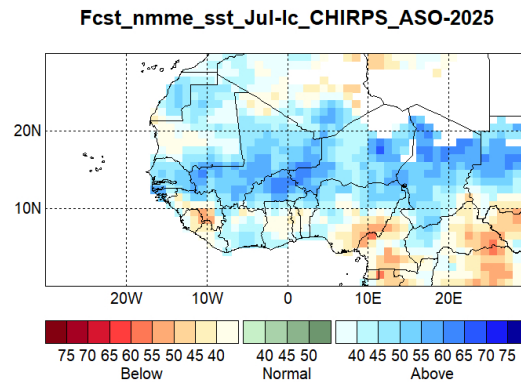
Reservoir Levels

- Burkina Faso, Manantali,

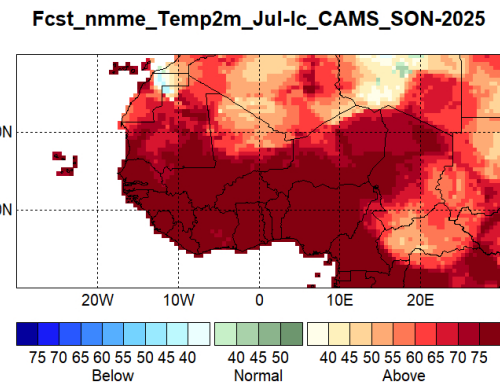
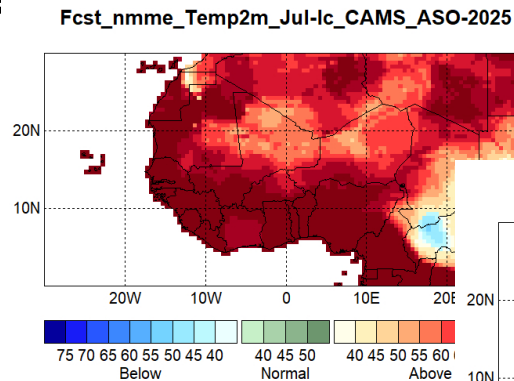
Seasonal Forecasting

- Seasonal forecast/Monthly basis

- Precipitation



- Temperature





Seasonal Forecasting

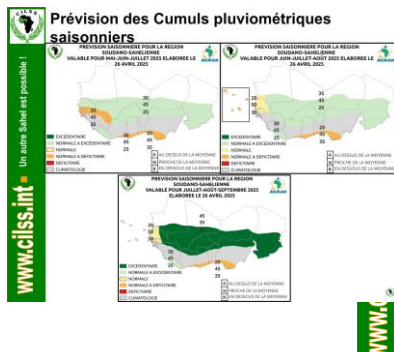
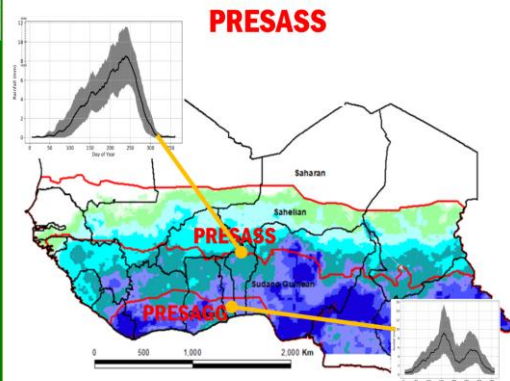
RCOF (PRESASS & PRESAGG)

Co-produced with 17 NMHSs,
6 river-basin organizations, ACMAD,

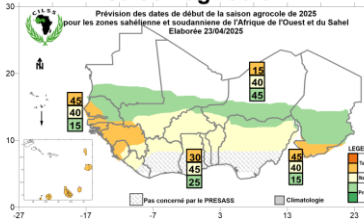
....

- Rainfall totals,
- Onset dates
- cessation dates
- Dry-spell risk,
- Runoff outlooks

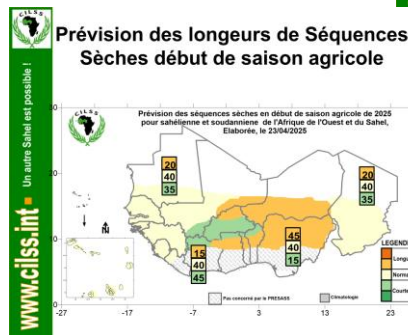
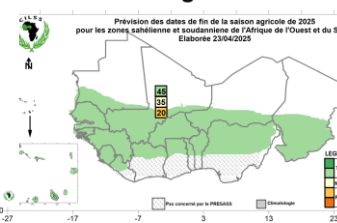
www.cilss.int • Un autre Sahel est possible !



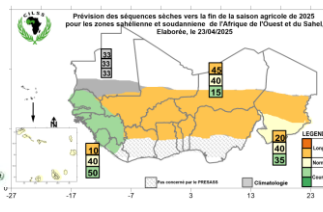
Prévision des dates de début de saison agricole



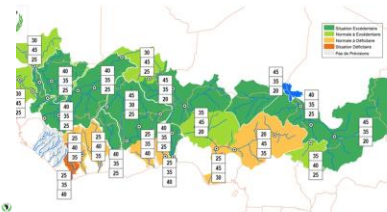
Prévision des dates de fin de saison agricole



Prévision des longueurs de Séquences Sèches début de saison agricole



Prévision des écoulements des bassins fluviaux



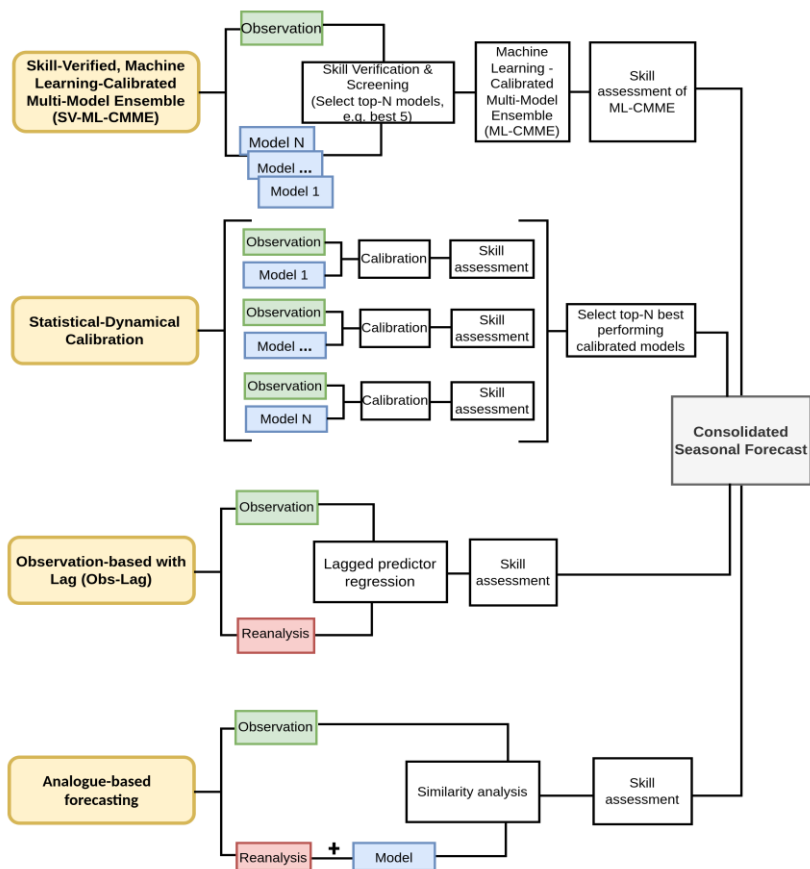
Press release/Special bulletins/ Policy briefs



Seasonal Forecasting

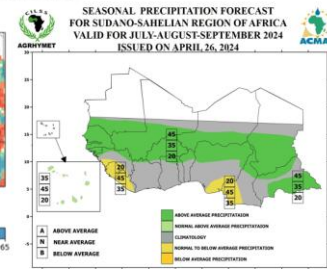
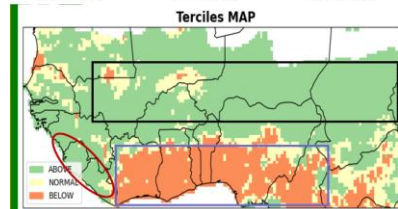
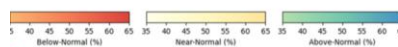
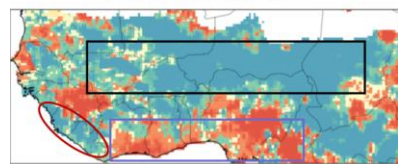
Perspectives

- Objective Seasonal forecast/Precip & Temp
- Extended Seasonal forecast /AgroMet Xteristics



Forecast products compare to observation and consensual

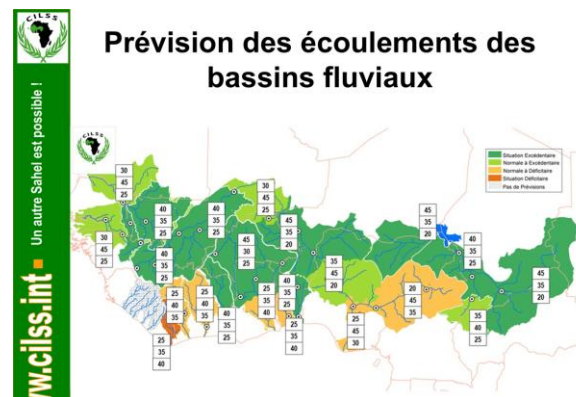
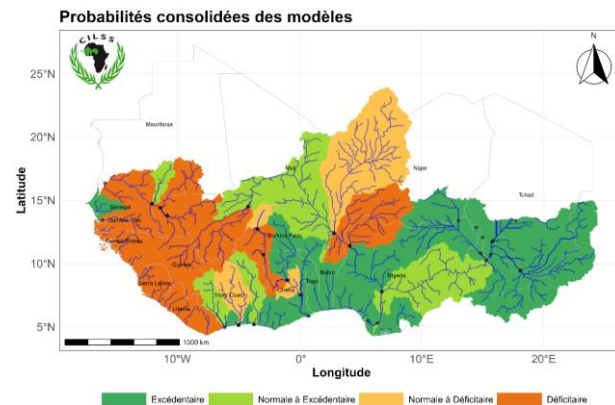
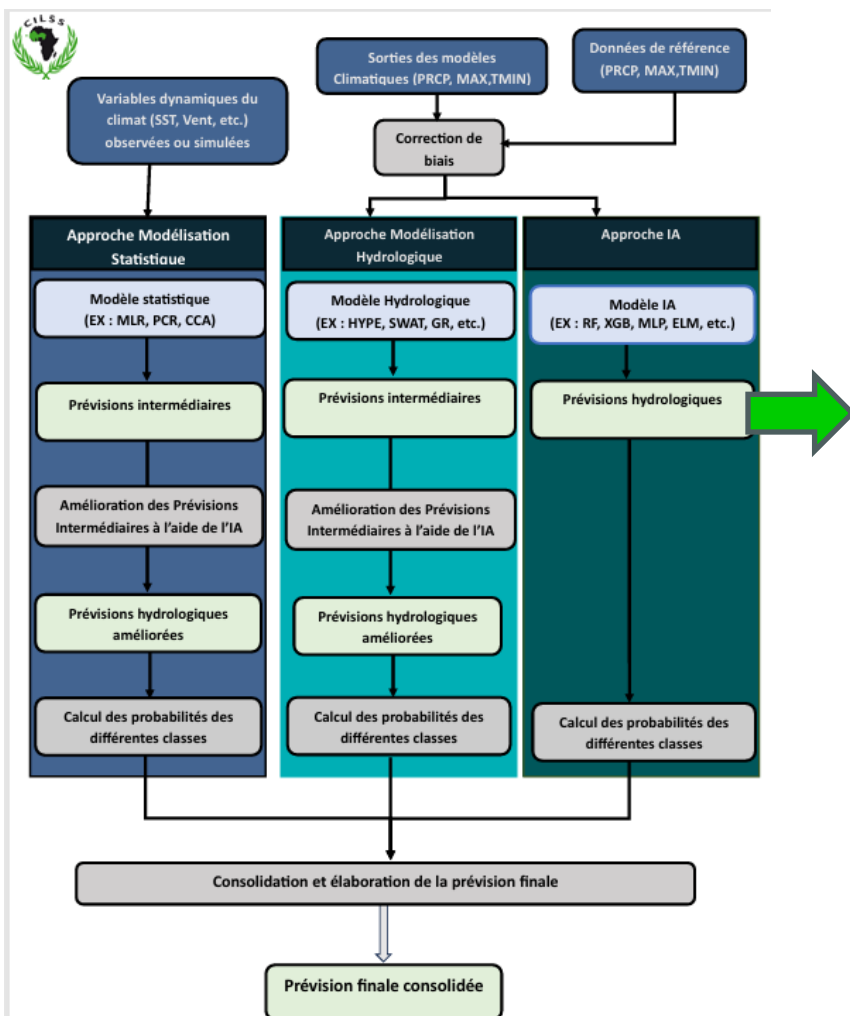
Forecast Probabilities - JulAugSep-2024



Seasonal Forecasting

Perspectives

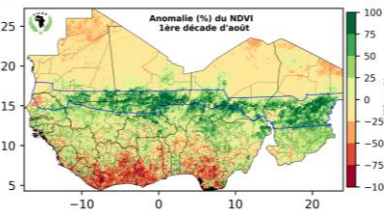
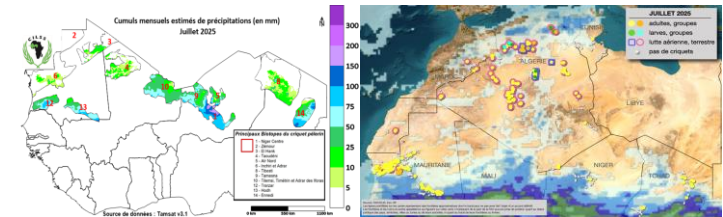
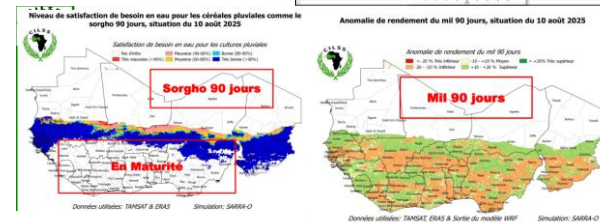
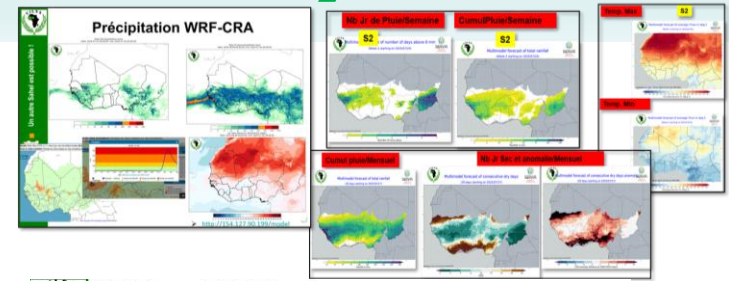
- Objective Seasonal hydrological forecast



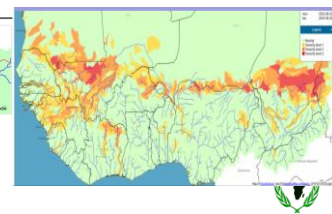
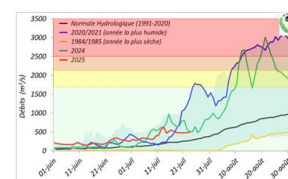


Tailored Products for Key Sectors

- Intra seasonal forecasts
- Agriculture and Food security
 - Sowing calendars, Crop monitoring
- Phytosanitary
 - (Pest, Locusts, ..) conditions
- Pastoral conditions
 - NDVI monitoring
- Water:
 - seasonal runoff; Rivers & dams situations;
 - FANFAR/EF5 flood forecasts for EW
- DRR:
 - Rapid advisories from Watch Room

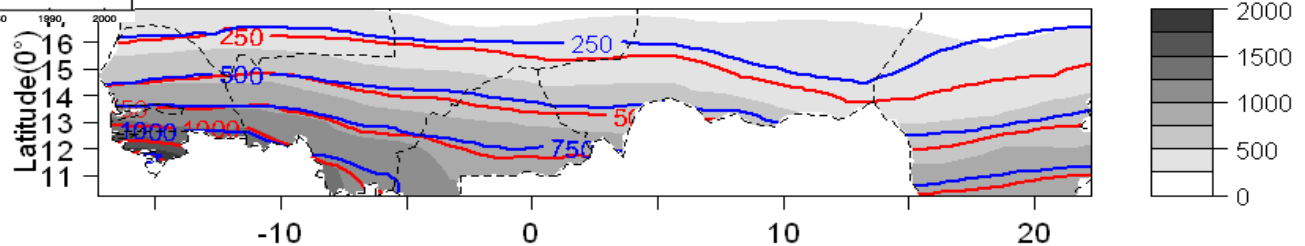
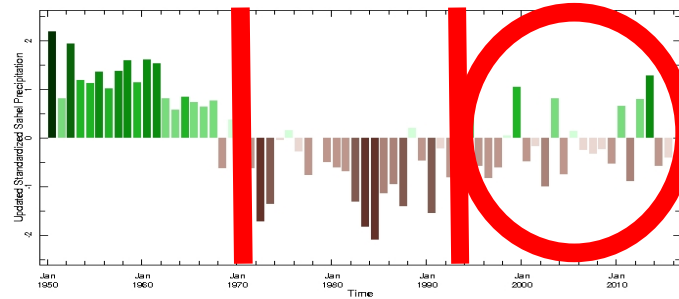
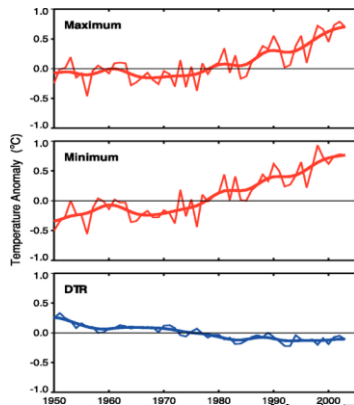


1.1. Bassin Moyen du Niger: Station de Niamey

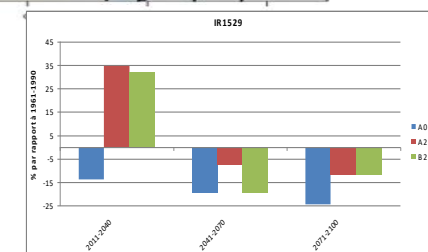
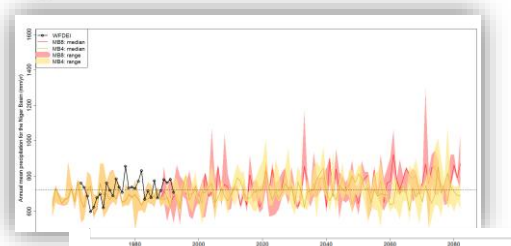
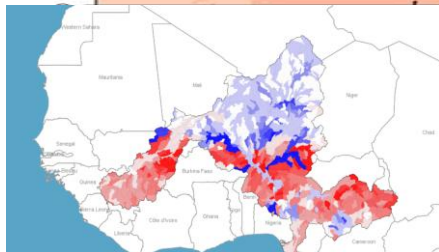
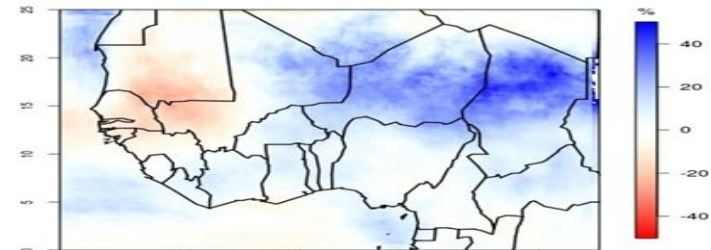
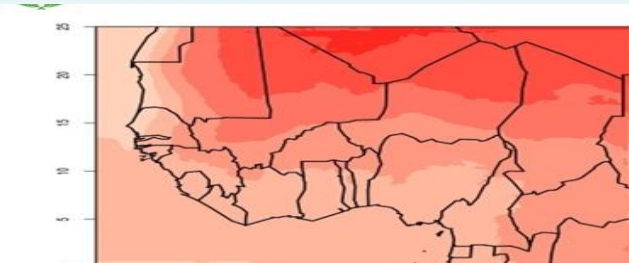


Past and future CC scenarios

Observed trends



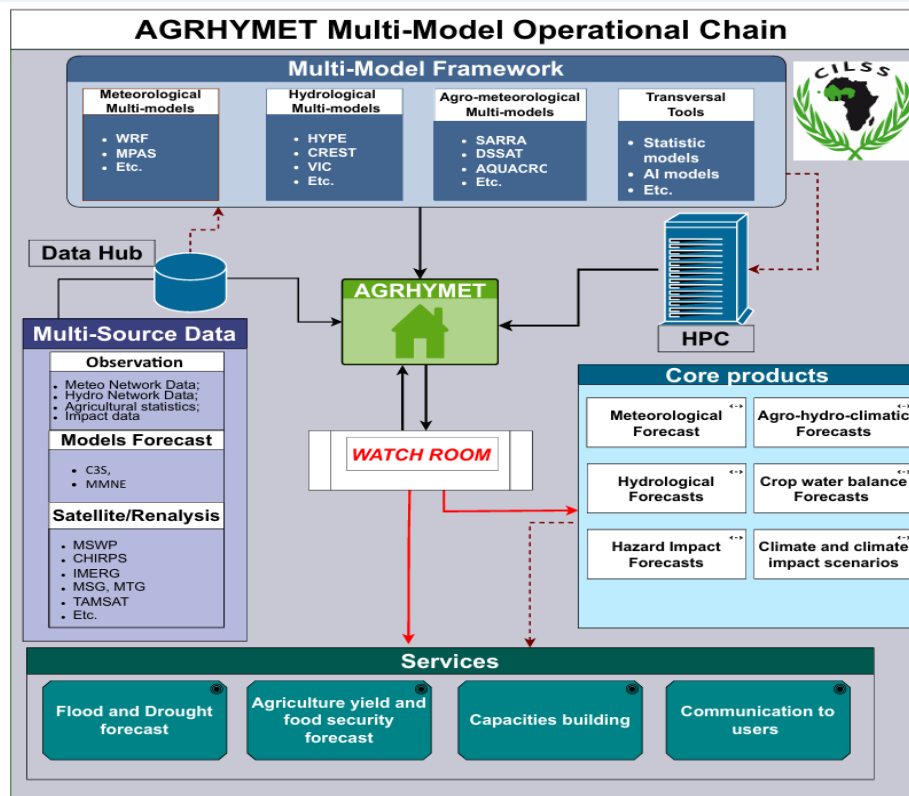
Future scenarios for West Africa





Tailored Products for Key Sectors

- S2S forecast
- Agriculture and Food security:
 - Phytosanitary
 - Pastoral conditions
- Water
- DRR
-

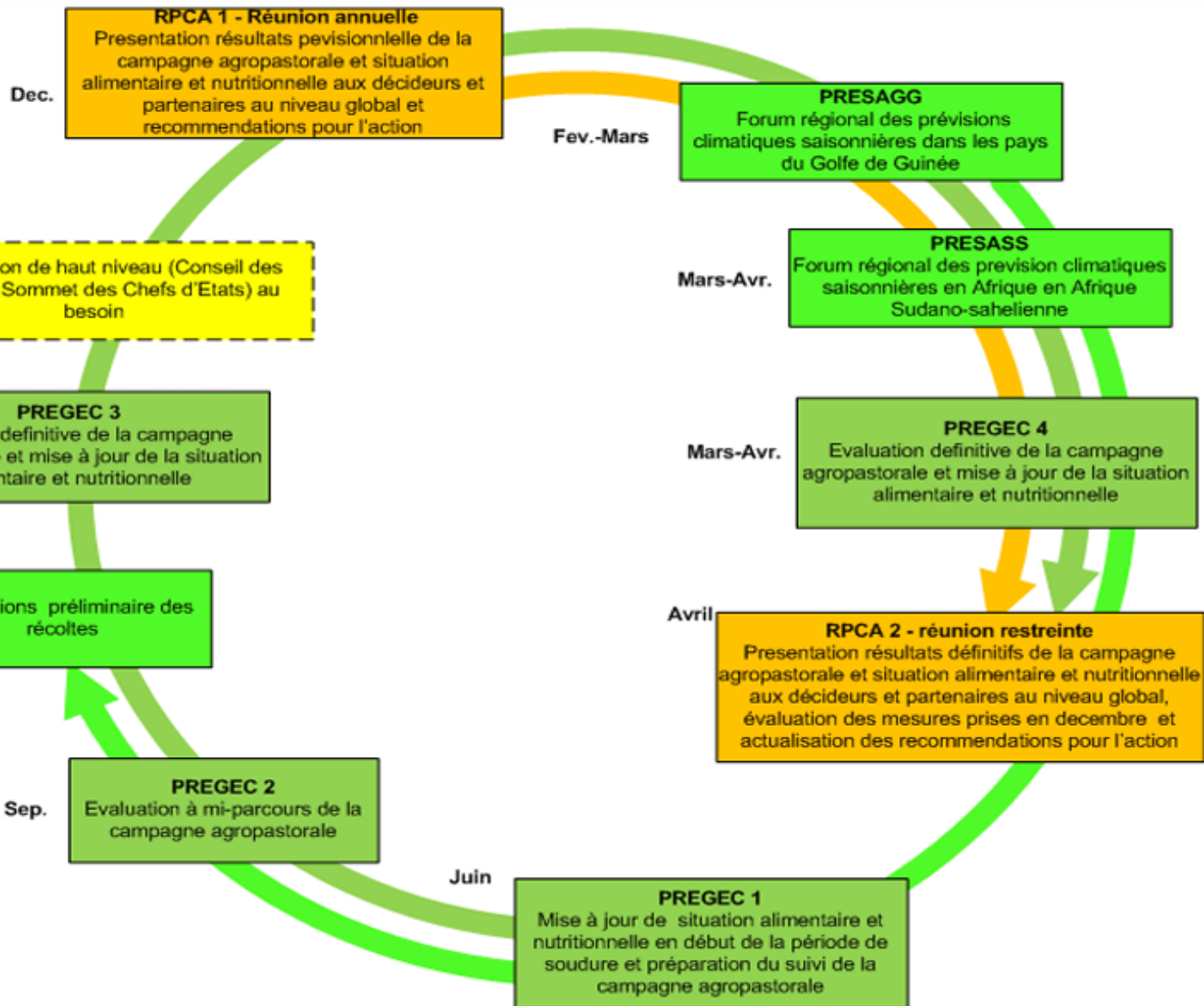


**Launch of Watch Room
(Niamey, 30th July 2025)**





Food Security Monitoring and EWS



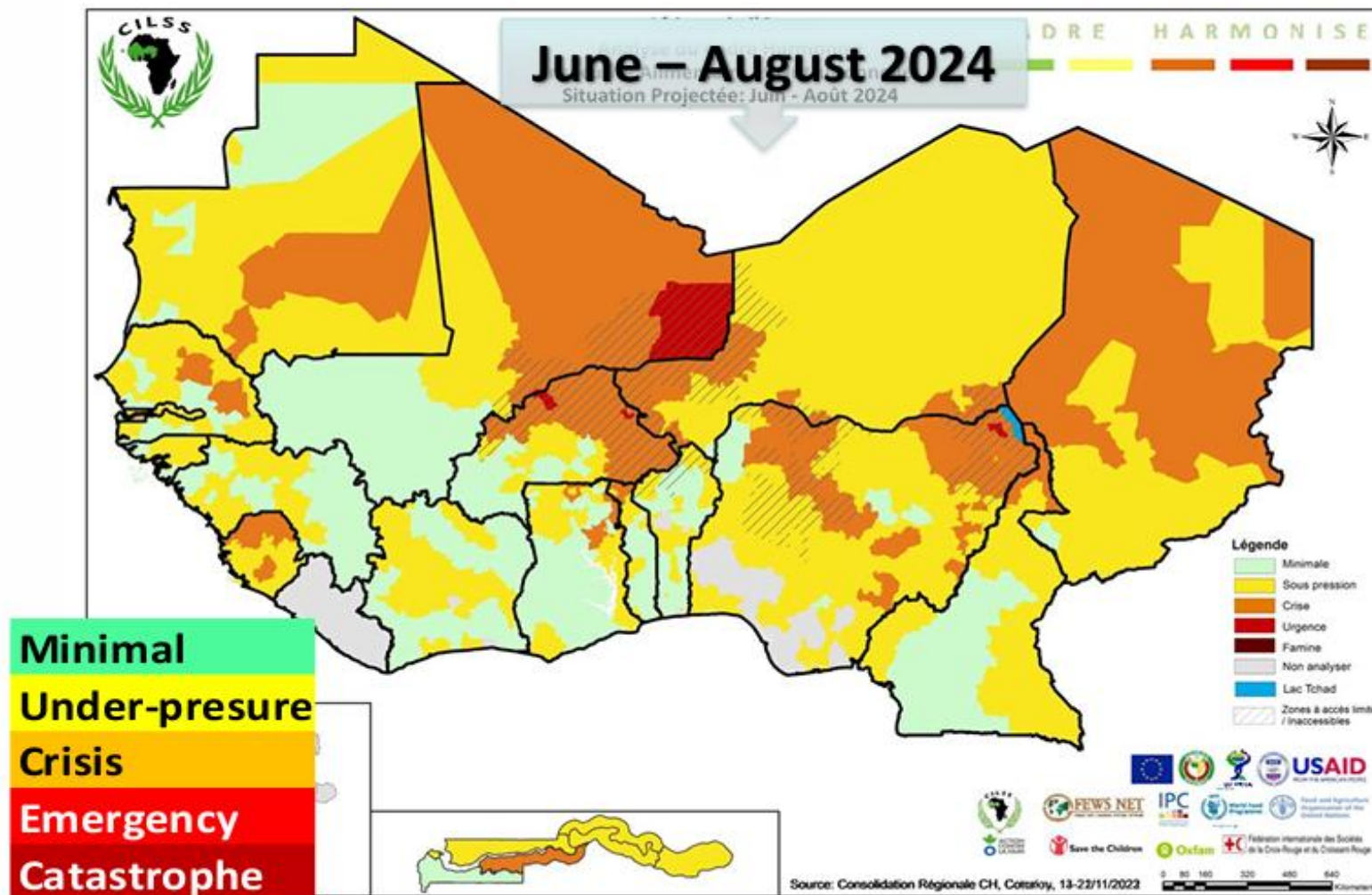
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Number of people in Food insecurity (through the Cadre Harmonise)



Regularly, CILSS/AGRHYMET conducts an assessment of number of people in food insecurity for the current situation and the upcoming period through a Cadre Harmonise. A strategic tool for drought impact assessment

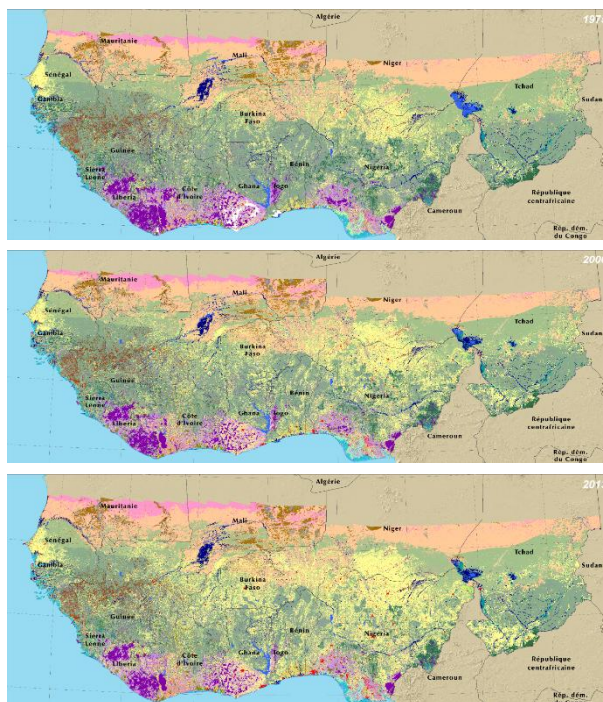




Monitoring land use dynamics, land degradation, and related issues in the region

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Land Cover / Occupation des Terres

- Forest / Forêt
- Gallery forest & riparian forest / Forêt galerie & formation ripicole
- Degraded forest / Forêt dégradée
- Woodland / Forêt claire
- Swamp forest / Forêt marécageuse
- Mangrove
- Savanna / Savane
- Herbaceous savanna / Savane herbacée
- Bowé
- Thicket / Fourré
- Agriculture / Zone de culture
- Irrigated agriculture / Cultures irriguées
- Agriculture in shallows and recession / Cultures des bas-fonds et de décrue
- Plantation
- Settlements / Habitation
- Bare soil / Sols dénudés
- Rocky land / Terrains rocheux
- Open mine / Carrière
- Water bodies / Plans d'eau
- Wetland - floodplain / Prairie marécageuse - vallée inondable

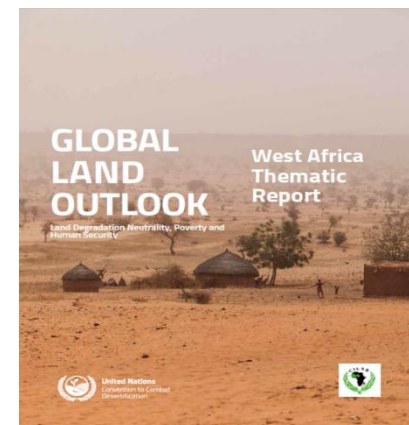
Landscapes of West Africa

A WINDOW ON A CHANGING WORLD

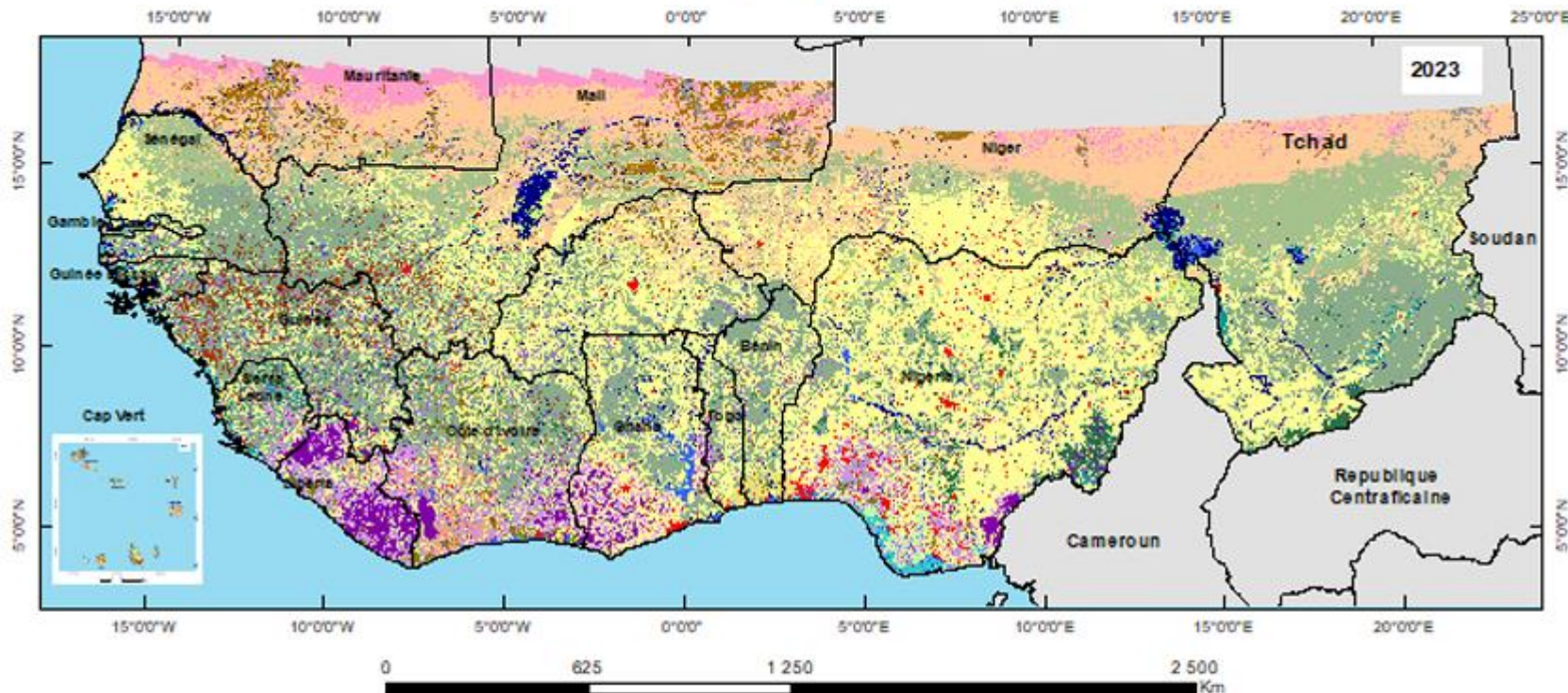


The evolution of land use in the Sahel and West Africa since the 1970s. The dramatic expansion of cultivated areas is clearly visible and has been quantified every decade

AGRHYMET has been designated by the UNCCD as the entity responsible for the thematic report on West Africa within the framework of the Global Land Outlook report



The most recent map (2023)



En l'espace de 48 ans, les zones agricoles ont connu une multiplication par 2,8, passant de 525 640 km² en 1975 à 1 482 099 km² en 2023. Entre 2018 et 2023, elles ont augmenté de 9,7 % (131 347 km²), avec un taux annuel de croissance de 1,9 % (25 734 km²), inférieur à celui enregistré au cours de la période 2013-2018, qui était de 4,4 % (48 971 km²). L'expansion des terres cultivées s'est réalisée au détriment des savanes, des savanes sahéliennes, des steppes et des forêts dégradées-claires, dont respectivement 8 %, 4 %, 1,5 % et 2,6 % de leurs superficies en 2018 ont été convertis en terres agricoles

Data Services

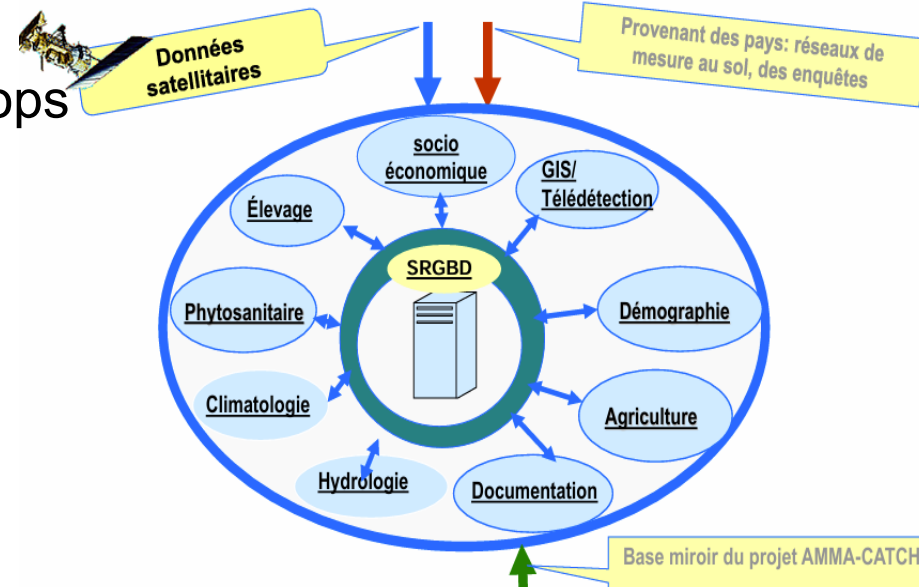
- Regional data base (**climate**, **Hydro**, TDBase, disasters, crops and food security related)

- Merged dataset** (Rainfall and temperature)

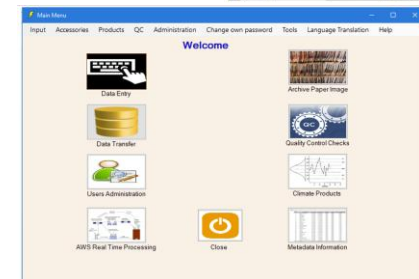
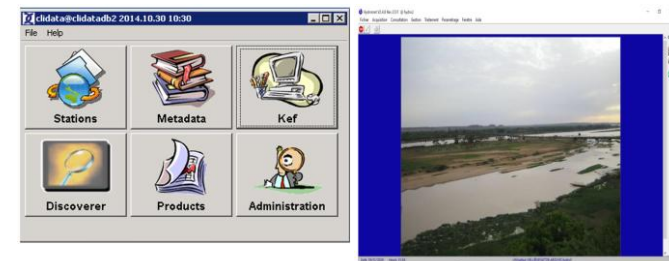
- Metadata**

- DBMS** in AGRHYMET AND 17 NMHSs:

CLIDATA, CLIMSOFT and HYDROMET adoption across 17 countries



Centre Régional AGRHYMET – Novembre 2019



Training & Capacity Building

- Training via ClimSA, AICCRA, WISER,...
 - Seasonal forecasting
 - Climate monitoring
 - DBMSs (CLIDATA, HYDROMET, CLIMSOFT, ...)
 - Crop Yield forecast (SARRA-O+H)
- On-the-job training
- Continuous monitoring & rapid advisories

AGRHYMET & AICCRA capacity building on **Objective Seasonal Forecast for West Africa and the Sahel**



- - Others training are planned under AICCRA Framework, but others funding are solicited





Trainings

Degree trainings



FORMATION,
INFORMATION
& RECHERCHE



Degree trainings



Graduates from AGRHYMET





Degree-awarding training programs

Advanced Technician and Engineering Programs:

- Agrometeorology
- Plant Protection
- Hydrology
- Instruments & Microcomputing

Master's Degree Programs:

- Integrated Water Resources and Environmental Management
- Climate Change and Sustainable Development
- Sustainable Land Management
- Food and Nutritional Security
- Sustainable Crop and Environmental Protection
- Pastoralism

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Good Practices Driving Success

- **Co-production** with 17NMHSs, 6RBOs & users (3UIPs)
- Media and communicators **Networks** (Regional and 2 nationals)
- Used of **SF & Climate information** as **inputs** in PREGEC & RPCA, famers organizations (ROPPA, RBM), UN organizations (FAO, OCHA,.....), NGOs
- **Multi-channel** dissemination (web, SMS, email, API)
- Used **mobile applications** to collect and disseminate data and climate information
- Institutional **anchoring** (CILSS: ECOWAS+AES)
- **Annual meetings** with Directors of NMHSs to validate AGRHYMET/DCWM CIS activities
- **Shift** to objective seasonal forecasting





Partenariats et reconnaissances internationales

- Au niveau du Niger: Plateformes régionales multi-acteurs (PIREM), SFR-RACINE
- Avec les organisations d'intégration régionale: CEDEAO, UEMOA, G5 Sahel, etc.
- Appartenance à plusieurs réseaux internationaux: G-WADI, AgMIP, CORDEX, GEOSS,
- Reconnaissances: Centre de formation certifié de l'OMM, Centre d'Excellence de l'UEMOA, Recherche et formation reconnues par le CAMES, activités scientifiques et pédagogiques évaluées par un CSP composé de 8 éminents scientifiques internationaux, etc.

Quelques partenaires techniques et financiers



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Current Challenges

- **Data Availability and Quality:** Gaps in hydrometeorological and socio-environmental datasets needed for robust modeling and impact analysis.
- Data sharing: Fragmented observation networks and irregular data sharing between AGRHYMET and NMHSs
- **Technical:** IT infrastructure, low bandwidth, outdated databases; electricity shortage
- **Human resources:** Limited specialized climate modellers, data scientists, communication experts, **need** for AI/data science skills
- **Financial:** Project-dependent funding, weak member State contributions



Opportunities

- **Regional Leadership and Institutional Mandate**
- **Strengthening Infrastructure and Digital Transformation**
 - Operationalization of the **HPC Cluster** to support advanced modeling (e.g., MPAS, WRF, HYPE, SWAT).
 - Ongoing modernization of data and dissemination systems (e.g., eAgrimet, Climate Data Store).
- **Capacity Development and Partnerships**
 - Access to wide training networks and initiatives (WISER, ClimSA, P2P2RS, FSRP, AfDB, EU, Met Office).
 - Opportunity to train a new generation of climate experts, especially through collaboration with universities and NMHSs.
- **Integration of Emerging Themes** : Expansion into impact-based forecasting, climate security, migration, carbon monitoring, and climate-risk financing.
- **Science–Policy Interface and Regional Cooperation**
 - Strong collaboration potential with ECOWAS, ACMAD, Basin Authorities, UN agencies, and national governments.
 - Ability to serve as a regional hub for **evidence-based decision support**, influencing adaptation and mitigation policies.



Conclusion & Call to Action

- AGRHYMET's RCC-WAS **role is central** to regional resilience
 - Departments : Climate Water Meteorology+ Natural resources Management + Food Security& Nutrition
- Tailored products **support** Agriculture, water & DRR
- **Scaling good practices** strengthens NMHS uptake
- **Next Steps:** Strengthen co-production, expand Watch Room impact, sustain training; Operationalize Objective Seasonal Forecast



Please let Professor Lippman know if you cannot attend.

des données relatives à l'impact sur le développement des activités éducatives (qualité de l'enseignement, efficacité de l'enseignement) et l'impact des programmes éducatifs sur le développement de l'économie (niveau de l'éducation, niveau de l'emploi, niveau de la production, niveau de la consommation).

Pour faire valoir ses intérêts, le syndicat des éleveurs d'équidés, le premier syndicat par sa taille, a tenté de faire valoir son poids en faisant pression sur le vote de la loi. Mais, au contraire, les éleveurs ont été déçus de ne pas voir leur voix prise en compte. Ils ont même été déçus de ne pas voir leur voix prise en compte. Ils ont même été déçus de ne pas voir leur voix prise en compte.

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Fait à Niamey le 29 juillet 2025





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THANK YOU FOR YOUR ATTENTION

