



AGRHYMET role in the PRESA SS and PRESA GG processes in West Africa

By

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**WMO WORKSHOP ON GLOBAL REVIEW OF
REGIONAL CLIMATE OUTLOOK FORUMS**

5-7 September, 2017

Guayaquil, Ecuador

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Another Sahel is possible !

Outline

- **Background information on CILSS and AGRHYMET**
- **AGRHYMET Involvement in the RCOF process in West Africa**
- **Projects and Partnerships**





Background information on CILSS and AGRHYMET

- ❑ **CILSS: Permanent Inter-State Committee for Drought Control in the Sahel**
Created in 1973 at the aftermath of the great Sahel drought

- ❑ **13 member states :**

Benin, Burkina Faso, Cape Verde, Chad,

Côte d'Ivoire, The Gambia, Guinea,

Guinea Bissau, Mali, Mauritania, Niger,

Senegal, Togo

3 sites

- The Executive Secretariat in Ouagadougou (Policy issues)
- The AGRHYMET Regional Centre in Niamey (Information and Training)
- The Sahel Institute (INSAH) in Bamako (Research coordination)



Mandate: invest itself in research on food security and combat the effects of drought and desertification for a new ecological balance in the Sahel



The AGRHYMET Regional Center

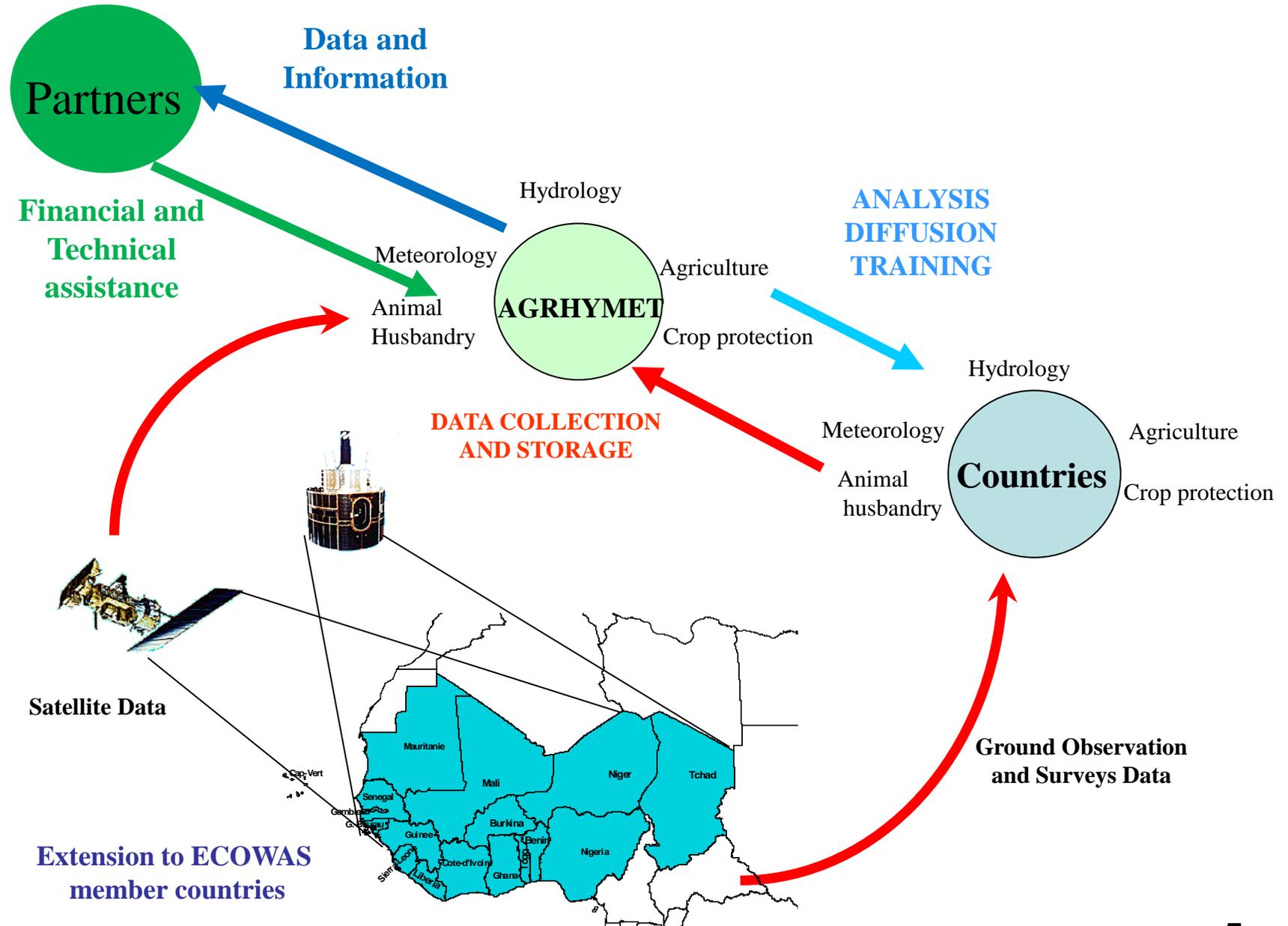
- AGRHYMET: Created in 1974,
- Mission : to contribute to achieving sustainable food security and rational natural resource management through:
 - **Capacity building** of member States
Meteorological, Hydrological, crop protection and agricultural statistics agencies (training, equipment and financial support)
 - **Production and dissemination of information** to various decision makers (national authorities, cooperation partners, NGOs and farmers)





The AGRHYMET Operating scheme

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Agricultural Campaign Monitoring

- Seasonal forecast of rainfall, onset and cessation dates of the rainy season, dry spell durations and maximum river discharges
 - Mid-March and Early May + monthly updates
- Dekadly briefings
- Publication of Monthly and Special alert bulletins
 - Rainfall monitoring
 - Monitoring water levels in rivers, dams and pounds
 - Identification of zones where rainfall at the start of the season allowed sowing
 - Focus on zones with late onset relatively to the average
 - Crops water requirement satisfaction indices
 - Vegetation indices derived from EO satellites
 - Status of crop pests and diseases
 - Prediction of crop yield anomalies using crop models





AGRHYMET Involvement in the RCOF process in West Africa

- **Since the inception of PRESAO in 1998 currently PRESASS (ACMAD/AGRHYMET/NBA consortium)**
 - **Cumulative rainfall (Climate group, ACMAD)**
 - **Maximum river discharges (Hydrology Group, AGRHYMET)**

- **Since 2012, at the request of users**
 - **Onset, cessation, dry spell lengths (Agromet group, AGRHYMET)**
 - **Initiation of PRESAGG 1 (March) in 2013**
 - **Initiation of PRESAGG 2 (August) in 2017**



Onset of the rainy season

❖ Sahelian countries with monomodal regime

The date after **MARCH 15**, when a cumulative rainfall of at least **20 mm** is recorded in **01 to 03 consecutive days** and without **dry spell exceeding 20 days** in the next **30 days**.

For stations **north of the 400 mm isohyet**, use **15 mm** recorded from **1 May** for **01 to 03 consecutive days**, without **dry episode exceeding 20 days** in the next **30 days**.

❖ Guinea Gulf countries: monomodal regime

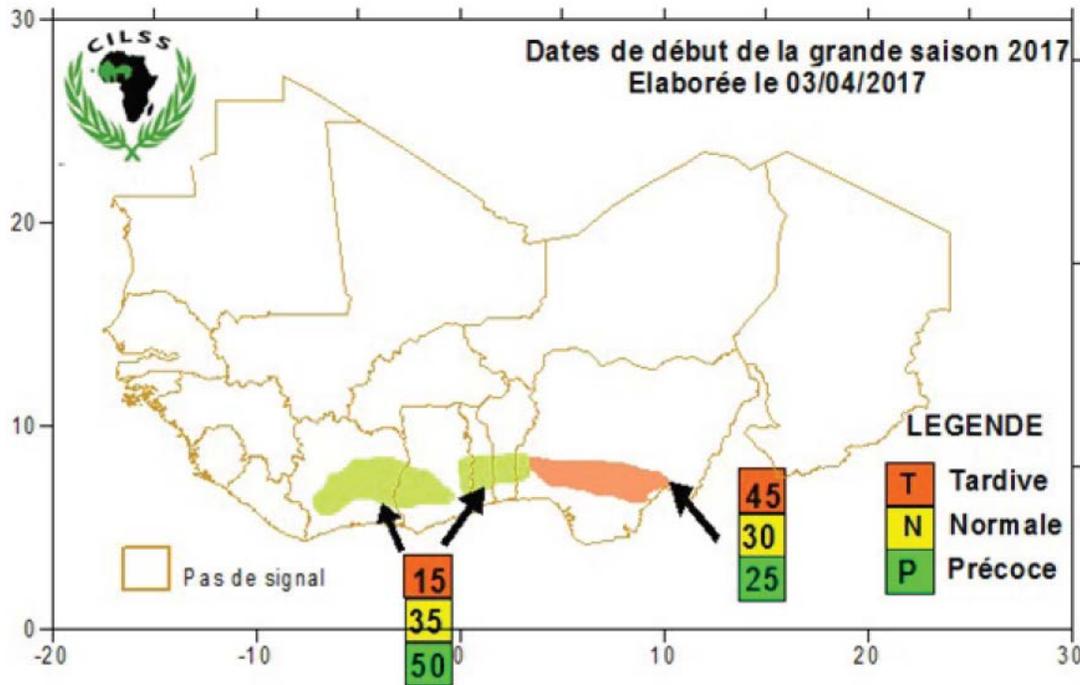
Starts from **MARCH 15**, a cumulative rainfall of at least **20 mm** recorded in **01 to 03 consecutive days** and without **dry spell of more than 10 days** in the next **30 days**.



Seasonal forecast of the rainy season onset dates

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End of the rainy season

❖ Sahelian countries with a monomodal regime

Date after **September 1** when a soil with a water holding capacity of **70 mm** is **completely depleted** by a **daily evapotranspiration loss of 5 mm**.

❖ Northern part of Guinea Gulf countries

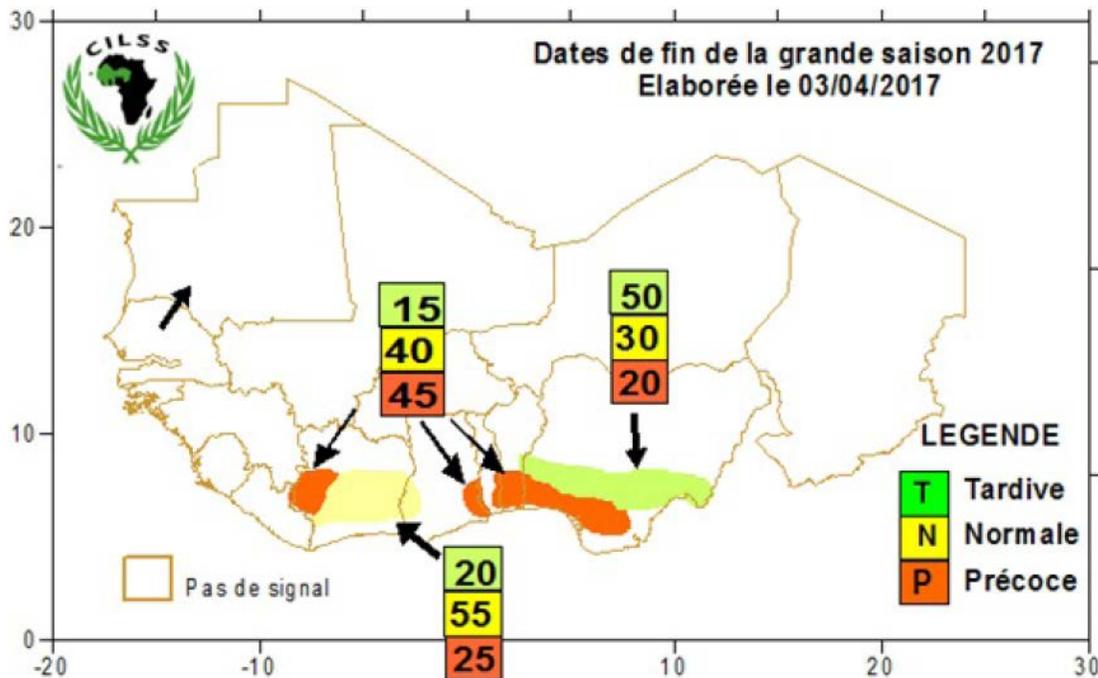
From **1 October** when a soil with a water holding capacity of **70 mm** is **completely depleted** by a **daily evapotranspiration loss of 4 mm**.



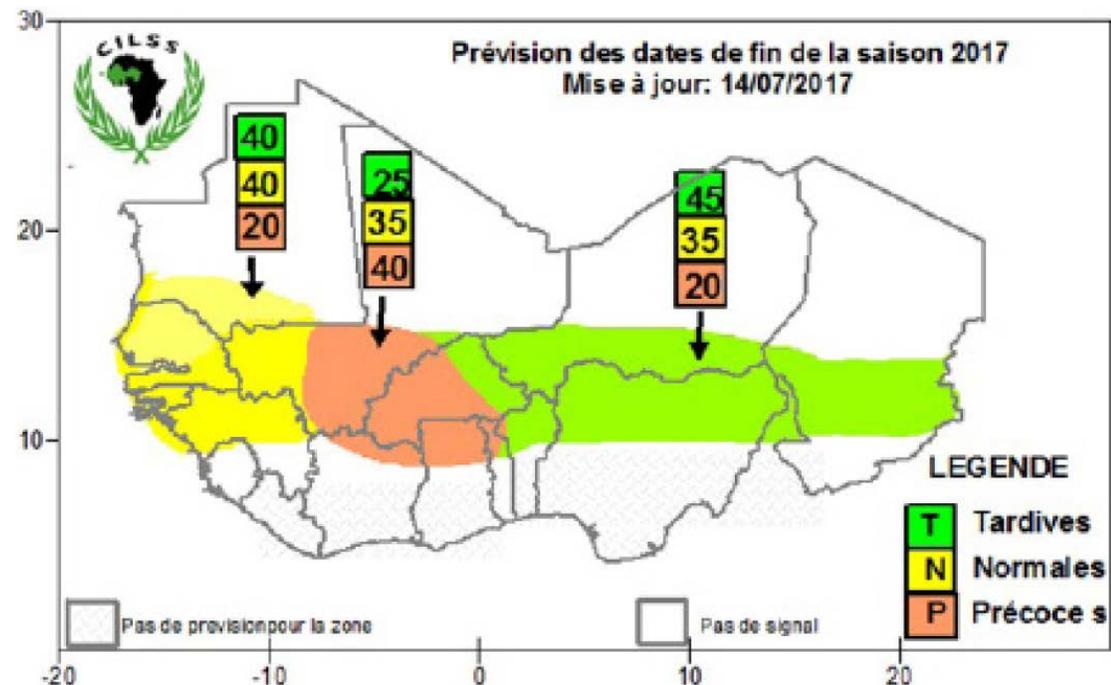
Operational activities for long-range forecasting

Seasonal forecast of the rainy season cessation dates

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Length of dry spells

❖ Dry spell length following the onset of the rainy season

It is the **longest number of consecutive dry days during the first 50 days** after the start date of the season.

This period takes into account the critical stages of crops installation and vegetative development,

❖ Dry spell length towards the end of the season

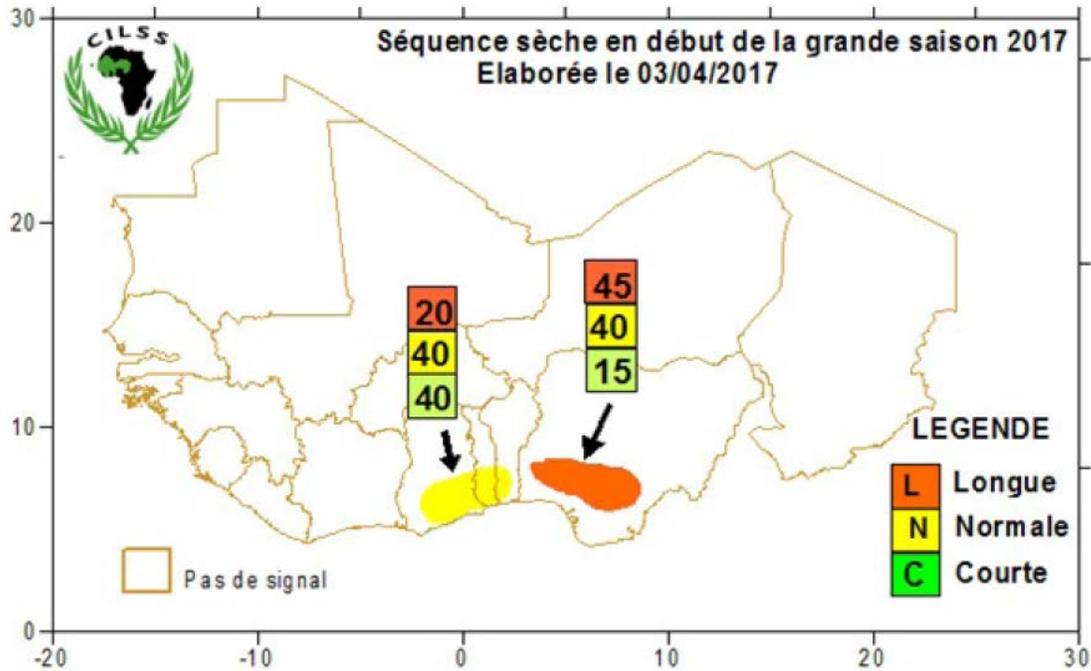
The **longest period without rainfall** from the **50th day** after onset till the end of the season,

This period takes into account the critical stages of heading-flowering and maturation of the crops,

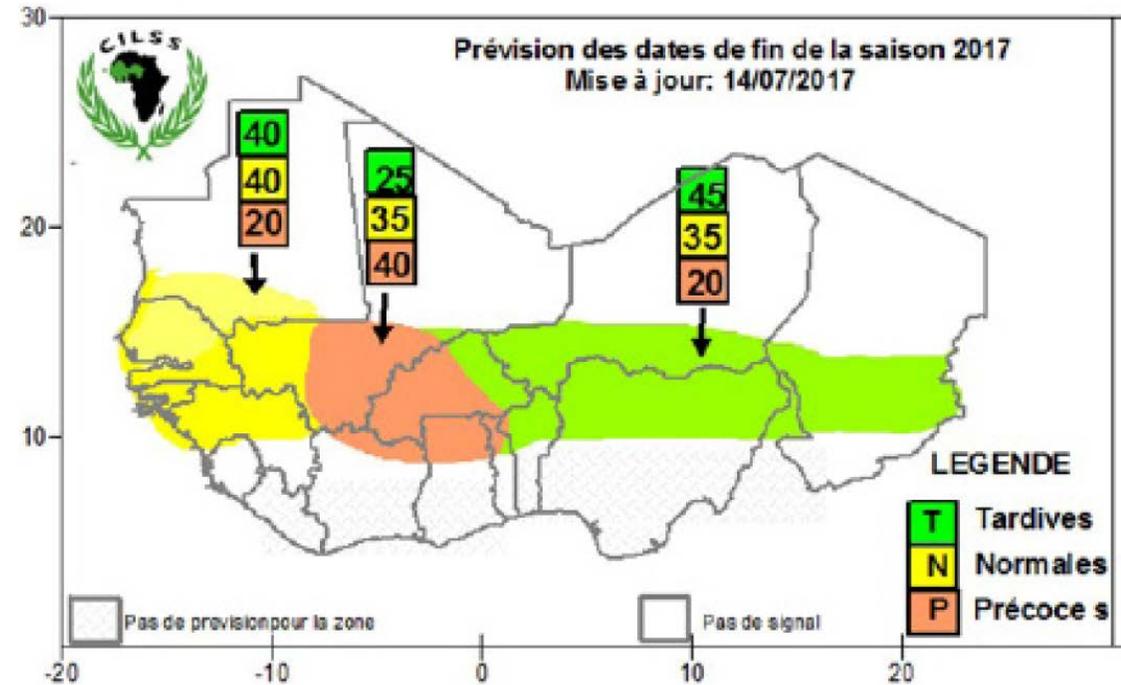


Seasonal forecast of maximum dry spell lengths following onset

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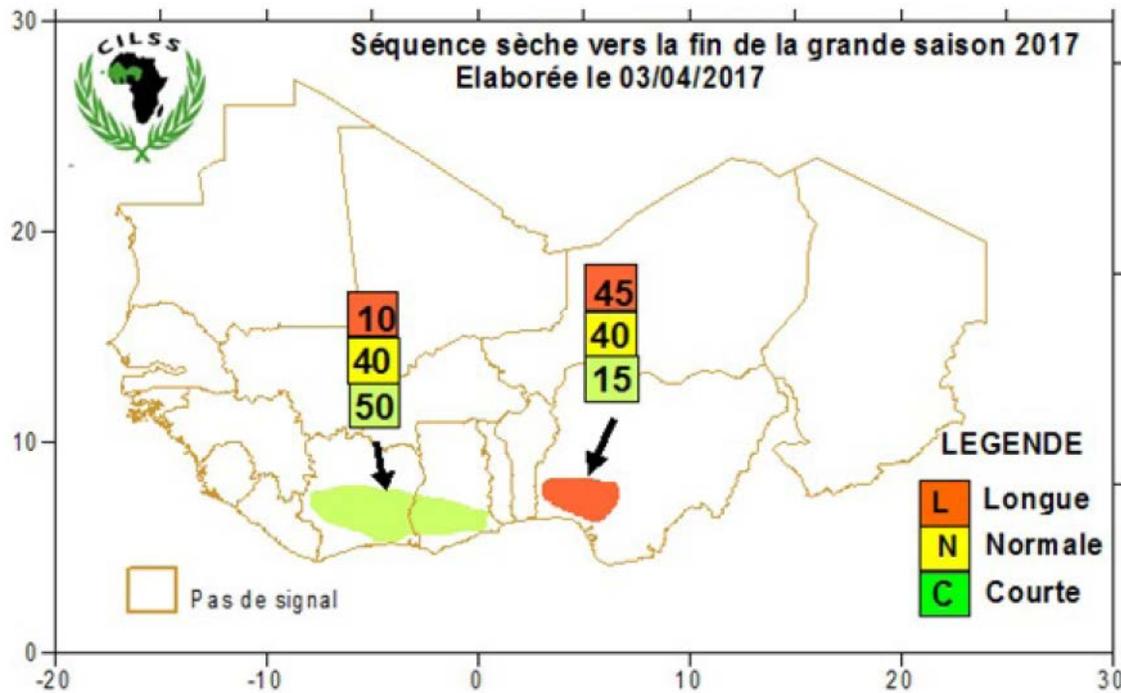
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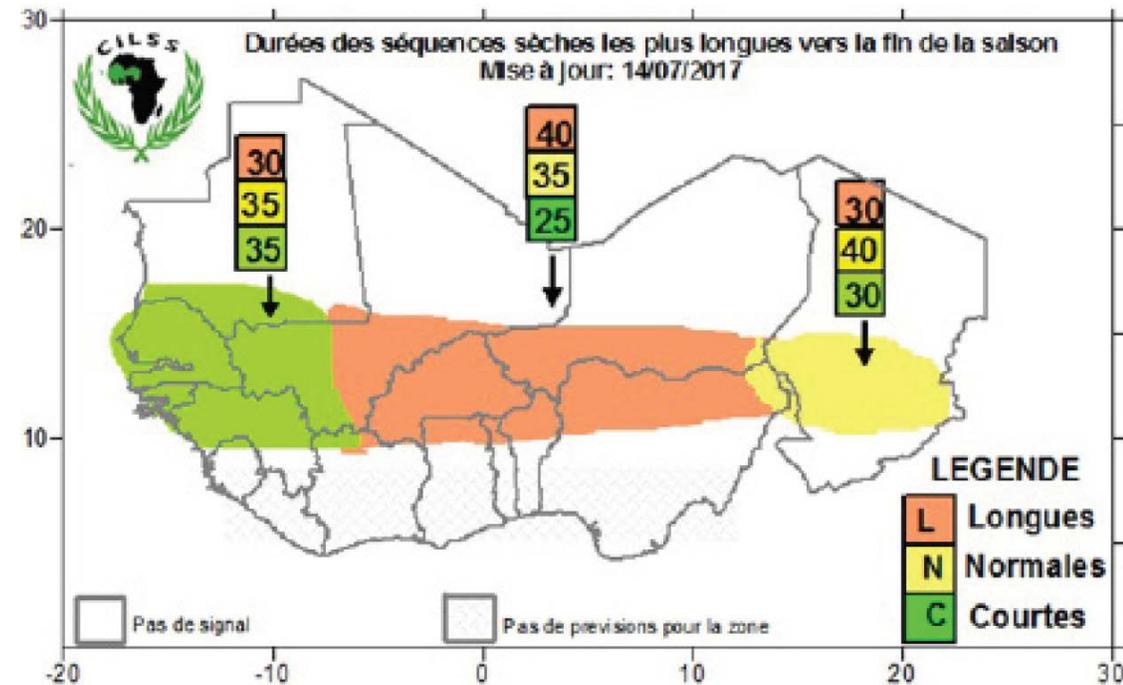
Seasonal forecast of maximum dry spell lengths towards the end of the season

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Monthly and Special Alert Bulletins

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Comité permanent Inter-Etats de Lutte contre la Sècheresse dans le Sahel
Permanent Inter-State Committee For Drought Control in the Sahel

Centre Régional AGRHYMET



BULLETIN DE SUIVI DE LA CAMPAGNE AGROPASTORALE EN AFRIQUE DE L'OUEST

Bulletin Mensuel n° 02 - Mai 2017

Prévision saisonnière des caractéristiques agro-hydro-climatiques de la saison des pluies 2017 pour les pays sahélo-soudaniens de l'espace CILSS/CEDEAO

*Une saison des pluies globalement **normale à excédentaire** tant sur le plan des cumuls pluviométriques que sur celui des écoulements moyens dans les principaux bassins fluviaux est attendue en 2017 sur une majeure partie de la zone soudano-sahélienne des pays de l'espace CILSS/CEDEAO. Son démarrage serait globalement **précoce à normal**, mais suivi de probables séquences sèches importantes. Quant à la fin de saison des pluies, elle serait **tardive à normale** au Centre et à l'Est du Sahel, mais **normale à précoce** sur l'Ouest du Sahel.*





Projects and Partnerships

- **Projects**

- MESA
- CCAFS, ACCIC, BRACED
 - Pilot projects to communicate RCOF results to agricultural extension staff and farmer associations
- SERVIR
- SAWIDRA
 - Involvement of national DRR agencies

- **Scientific partners**

- ACMAD, IRI, NASA, FEWSNET, etc...
- National Meteorological and Hydrological Services
- National Agricultural Research Institutes,
- Universities





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Thank you for your attention

www.agrhymet.ne

