



## 5<sup>th</sup> Forum on The Seasonal Forecast of The Agro-hydro-climatic Characteristics for The Sudano-Sahelian Region

*A season with total rainfall amounts exceeding the 1981-2010 averages, normal to late start, average to long dry spells, late to normal end, and above to near average flows in the major rivers is expected for most of the sudano-sahelian belt of West Africa and Chad*

The 5<sup>th</sup> seasonal forecast forum of the agro-hydro-climatic characteristics for the sudano-sahelian zone (PRESASS 5) was held from April 30<sup>th</sup> to May 4<sup>th</sup>, 2018, in Abidjan, Côte d'Ivoire.

This forum was organized by the AGRHYMET Regional Center (CILSS), the African Center for Meteorological Applications for Development (ACMAD), the National Meteorological and Hydrological Services of Côte d'Ivoire, in collaboration with national experts in charge of generating agro-hydro-climatic information from sahelian and West African countries, as well as representatives of major river basin organizations in the sub-region and international organizations. The forum also registered the participation of the community of civil protection and disaster risks reduction.

At the end of the forum, the following probable trends are expected for the key parameters of the rainy season:

- Above to near average rainfall totals in June-July-August 2018 in southern Mauritania, eastern Senegal, the southern half of Mali, Burkina Faso (except the extreme south), western and Eastern Niger, the extreme north of Nigeria, central Chad, northern Benin and northern Togo. It is very likely that this situation persist in the same areas in July-August-September.
- Average to below average total rainfall in June-July-August in the coastal zone of Senegal, in The Gambia and Guinea Bissau, in South-Eastern Nigeria and South-Western Cameroon and, from July to September in Southern Guinea, the extreme western Côte d'Ivoire, Liberia and Sierra-Leone.
- Average to late starting dates of the season throughout the sudano-sahelian belt of West Africa and Chad, except for southern Mauritania, northern Senegal, and northwestern Mali where starting dates are expected to be average or early.
- Late to normal ending dates of the season throughout the sudano-sahelian belt of West Africa and Chad.
- Long or average dry spell durations during the first half of the season in Niger, Burkina Faso, Mali, southern Mauritania, eastern and southern Senegal, Guinea Bissau and northern parts of

Guinea, Côte d'Ivoire, Ghana and Togo. Elsewhere, in northern Nigeria, southwestern Chad and western Senegal, average or longer dry spells are expected.

- Average to longer dry spells during the second half of the season across most of the sudano-Sahelian belt of West Africa and Chad, except the northern parts of Benin, Togo and Ghana where they could be average or shorter.
- Above average river flows (relatively to the 1981-2010 reference period) in the sudano-sahelian rivers basins, except for the Mono Basin, where an average situation is expected. Indeed, the Niger, Lake Chad, Bandama, Ouémé and the Upper Volta basins are most likely to have above-average flows. As for the Senegal, Gambia, Sassandra, Comoé, Lower Volta and eastern Volta river basins, average to slightly above average flows are expected. In the Bénoué and Mono basins, average flows should be observed.

## I. Recommendations for the risk reduction

### With regard to drought risks

Water deficits related to the expected late start of the season in most of the sudano-sahelian belt and long dry spells at the beginning and at the end of the season could affect the establishment of crops (risk of mortality of young shoots and reseeded), the establishment of pastures in the pastoral areas and delay the return of transhumant herds. They could also cause the persistence of high temperatures and dust storms that are favorable to the proliferation of the germs of epidemic diseases.

The expected long dry spells toward the end of the season may also be favorable to the development of some crop pests, such as the millet head caterpillar.

It is therefore recommended to take actions to avoid sowing failures, to reduce production deficits and to prevent diseases that the expected water deficits could cause in areas likely to have late starting dates and long dry spells, through:

- water management, the promotion of income-generating activities, the monitoring of markets and prices and the establishment of local security stocks,
- choice of crop species and varieties that are resistant to water deficit,
- use of soil water conservation farming techniques,
- limitation of additional nitrogen fertilizer inputs during the crop installation periods and those at risk of drought,
- consultation of agricultural and meteorology experts in order to choose the right planting dates, to avoid the risks of re-sowing and crop failure related to the late start of the season and the long dry spells expected in the Sahelian zone,
- interaction with meteorological, agricultural and hydrological technicians for agro-hydro-meteorological information and advice on the varieties and techniques to be used,
- Establishment of livestock feed stocks in risk areas,
- facilitating access to the nearest water points to animals,

- prevention of conflicts between farmers and pastoralists who would have difficulty moving back to the North earl, because of the likely delay in the establishment of pastures and surface water points in the pastoral zone.

**Regarding the hydrological situation**, the expected average flows in the Benue Basin would result in an acceptable water availability, but calling for the rational management of water resources for the different uses. In the Mono Basin, the uncertain outlook requires great caution for any eventual occurrence.

### **With regard to the risk of flooding**

The above average total rainfall expected in the sudano-sahelian belt, associated with the probability of occurrence of heavy rains and expected overflows in most of the river basins, suggest risks of flooding, particularly in the Niger, Lake Chad, Bandama, Oueme, and the Upper Volta rivers basins. As the risk of flooding is associated with both overflowing rivers and intense rainfall, it is therefore highly recommended to:

- ensure close monitoring of alert thresholds to strengthen the anticipatory management of floods in high-risk areas,
- put in place prevention, response and recovery support mechanisms for vulnerable or affected populations,
- avoid the occupation of the flood prone areas, for both cropping and housing,
- prevent animals from drowning,
- protect against epizootic germs that prefer wet conditions,
- strengthen collaboration between hydrological and meteorological services for the establishment and operation of integrated flood risk monitoring and early warning systems,
- strengthen exchanges between agencies responsible for flood monitoring and disasters risks reduction as well as humanitarian aid agencies.

### **Regarding the risk of diseases**

In areas where a wetter season is expected, there are high levels of risk of cholera, malaria, dengue fever, schistosomiasis, diarrheal infections and Rift Valley Fever for animals. It is therefore recommended to:

- strengthen the prevention and response capacities of national health systems, civil protection and national platforms for disasters risks reduction, through the dissemination of climate-sensitive disease monitoring bulletins, the sensitization of the population and decision makers and the encouragement of collaboration between meteorological and health services;
- put in place stocks of mosquito nets, antimalarial drugs and water treatment products in areas with difficult access during the rainy season,
- monitor water quality and ensure the drainage and the cleaning of gutters.

## II. Recommendations to take advantage of the opportunities

For areas where above average or average rainfall totals, average dry spells duration during the season and the extension of floodplains are expected, it is recommended:

To farmers, livestock breeders, authorities, projects, NGOs and farmers organisations:

- invest more in improved seeds, both for food and cash crops,
- develop techniques for collecting / conserving rainwater and reducing run-off in areas exposed to water erosion,
- put in place agricultural inputs (improved seeds, fertilizers and livestock feeds) in sufficient quantities in the different zones,
- apply fertilizers (organic manure and mineral fertilizer) at the recommended rates,
- increase vigilance against crop pests (locusts, caterpillars, armyworms and other pests),
- invest more in the exploitation of available water, by promoting irrigation, flood recession crops and agroforestry, particularly in the flood plains of Lake Chad and the Niger basin.
- support and promote the communication and use of climate information, including agro-hydro-climatic seasonal forecasts, to different users, including farmers,
- set up or strengthen the farmers supervision system, monitoring and climate risk monitoring and response mechanisms,

***Given that these forecasts are subject to change during the rainy season, it is strongly recommended to follow the updates that will be made in June, July and August by the AGRHYMET Regional Center, ACMAD and the National Meteorological and Hydrological Services.***

Abidjan, the 4<sup>th</sup> May 2018

The Forum



RESEARCH PROGRAM ON  
Climate Change,  
Agriculture and  
Food Security

