



4th Forum on the agro-hydro-climatic seasonal forecast in sudano-sahelian Africa (PRESASS, 2017)

A season with overall above average rainfall, an early to normal onset and equivalent or above average water levels in most river basins is expected in 2017

The 4th Forum on Seasonal forecast of the agro-hydro-climatic characteristics of the rainy season in sudano-sahelian Africa (PRESASS, 2017) was held from 15 to 19 May 2017 in Accra, Ghana.

This forum was organized by the AGRHYMET Regional Centre (CILSS), The African Center for Applications of Meteorology to Development (ACMAD), the Ghana National Meteorological Agency and Hydrological Department, in collaboration with experts in charge of monitoring and developing agro-hydro-climatic information West and Central African countries, and representatives of the River Basin Organizations in the sub-region. Representatives of the disaster risk reduction community and humanitarian aid agencies also attended the forum.

I. Summary of the forecast results

At the end of the forum, the following is expected for the key parameters of the rainy season:

- Above average cumulative rainfall in areas covering northern Ghana, northern Togo, northern Benin, eastern half of Burkina Faso, western Nigeria, western Niger, central Mali, southern Mauritania, The Gambia, Northern Senegal, southern Chad and eastern Cameroon.
- Early onset dates in the same areas, extended to the agricultural zone of Niger, Northern Nigeria and Central Chad. Countries in the western part of the Sahelo-Sudanian zone should expect an early-to-normal end of season, while elsewhere, late to normal end of season dates are more likely. It is also expected that longer to normal dry spells will be observed during the crop installation phase throughout the Sahelo-Sudanian zone of West Africa. Most parts of Burkina Faso, southern Mali, northern Côte d'Ivoire, Ghana, Togo and Benin are expected to have longer than average dry spells during the second half of the rainy season.
- Average or above-average flows relatively to the past 30 years in the river basins of the West African region, except for the Mono River basin (Togo and Benin) and the lower Volta River basin (Ghanaian part mainly). Hence, the upper, middle and lower parts of the Senegal basin, the middle part of the Niger basin, the Upper and middle Ouémé basin (Benin), and the upper Volta Basin will have above average flows. In the Lake Chad basin, the southern part of the Logone tributary sub-basin, the downstream part of the Chari-Logone system and the Komadougou-Yobé sub-basin are expected to have above-average flows. As for the lower basin of the Niger River and the basin of the Benue (Cameroon and

Nigeria), the lower and middle basins of the Volta, the coastal basins of Comoé, Sassandra, Bandama and the Gambia River, average flows are expected.

II. Recommendations for the reduction of major risks

With regard to drought risks

- Water deficits associated with early season cessation dates that are expected in the western Sahelo-Sudanian zone and longer dry spells at the beginning of the season (almost the entire zone) and towards the end of the season (at the Center of the zone) could affect planting, growth and crop yields, as well as the establishment of pastures in the affected areas.
- The expected dry spells towards the end of the season and the early cessation of the rains may also be favorable for the development of certain crop pests, such as the millet earworm.
- Expected average to below average flows in the Mono basin and the lower Volta Basin (Ghana, Togo and Benin) could lead to the decrease in the availability of water resources for local users (dam managers, irrigation , Etc.),

In view of this situation, it is recommended to:

- Take steps to address potential production shortfalls in areas that may experience dry spells, late onset and/or early cessation of the rainy season through the promotion of market gardening, agroforestry, income generation activities, good monitoring of market prices and the establishment of local food security stocks,
- Give priority to crop species and varieties that are resistant to water deficit,
- Give priority to cultivation techniques that promote the conservation of soil water
- Avoid additional fertilizer inputs, such as nitrogen during the crop installation period and those with drought risk,
- Plan and arrange for the use of supplementary irrigation,
- Ensure efficient management and use of water resources,
- Interact with technicians of the national meteorological, agricultural and hydrological agencies for agro-hydro-meteorological information and advice on the varieties and techniques to be used,
- Establish stocks of livestock feed in risk areas,
- Facilitate the access of animals to the nearest water points in order to protect them from the effects of water shortages and to avoid conflicts between farmers and herders,

With regard to flood risks

- Considering the above average cumulative rainfall expected in the Sudano-Sahelian belt, associated with high probabilities of occurrence of intense rainfall events and above average flows for most river basins, high levels of flood risk are to be considered for the upper, middle and lower parts of the Senegal basin, the middle part of the Niger river basin, the Upper Ouémé basin, the Logone sub-basin, the downstream part of the Chari-Logone system and the Komadougou-Yobé sub-basin.
- Close monitoring of alert thresholds is recommended to enhance anticipatory flood management in identified high risk areas. Alert thresholds exist for most of these areas, but they deserve to be updated.

Since the risk of flooding is associated with both overflowing streams and intense rains, it is strongly recommended to :

- Ensure that animals do not risk drowning,
- Take measures to protect animals against epizootic germs that prefer good wet conditions,
- Ensure strong collaboration between hydrological and meteorological services for the development of integrated flood risk early warning and monitoring systems;
- Continue and strengthen exchanges between agencies in charge of flood monitoring, disaster risk reduction and humanitarian assistance.

With regard to health risks

- In areas where a wetter season is expected, there are high levels of risk of cholera, malaria, dengue, parasites (such as bilharziasis), diarrhea and Rift Valley fever for animals ;
- It is strongly recommended to inform and strengthen the capacities of national health systems through civil protection or national platforms on disaster risk reduction, climate-sensitive disease monitoring bulletins, awareness of social protection systems, general population, decision-makers and the promotion of collaboration between meteorological and health services.
- It is also recommended, especially in areas that are potentially isolated during the rainy season, that stocks of mosquito nets, antimalarials, chlorine and other water treatment products be established to monitor water quality and sanitation, and drainage of gutters.

III. Recommendations with regard to opportunities to seize

For areas where it is more likely to observe above normal to normal rainfall, early season onset, shorter dry spells after the start of the season, and an extension of floodplains, it is recommended to farmers, breeders, authorities, projects, NGOs and POs to:

- Invest in seeds of improved varieties of both food and cash crops,
- Use fertilizers (organic fertilizer and mineral fertilizer)
- Increase vigilance against weeds and crop pests (locusts, caterpillars and other insect pests),
- Invest more in the exploitation of available water through the promotion of irrigation and flood recession crops,
- Invest more in aquaculture;
- Take the measures for adequate access to agricultural inputs (improved seeds, fertilizers and livestock feed) in the different areas,
- Take measures to provide agricultural services and producers with equipment and means for the practice of irrigation, particularly around water points useful for this purpose,
- Support and promote the communication on climate information, including seasonal and climatic forecasts, to various users, including agricultural producers,
- Set up or strengthen the frameworks for assistance to producers, and for the monitoring and response to climate risks.

The above forecasts may change during the raining season. Therefore, it is highly advised to monitor updates that will be made in June, July and August 2017 by the AGRHYMET Regional Centre, ACMAD and national Meteorological Agencies

Accra, 19th May 2017

The Forum