



**Seasonal forecasts of rainfall, agro-climatic characteristics and runoff for the 2014 rainy season in West Africa, Cameroon and Chad.  
Bamako, May 2, 2014**

Climatologists, agro- meteorologists and hydrologists of the African Centre of Meteorological Applications for Development (ACMAD ) and AGRHYMET Regional Centre , representatives of the west African countries, Chad and Cameroon in charge of monitoring and elaborating information on the rainfall season , agro-climatic and hydro-meteorological characteristics and representatives of rivers Basins of the region , met from April 28 to May 2, 2014, in Bamako, Mali to develop seasonal forecasts rainfall , agro-climatic and hydro- climatic characteristics of the 2014 rainfall season. These experts received technical support from an expert from Météo France.

Thus, the results of this forecast gives the likely trends of precipitation , onset and ending dates of the season , dry spells (after sowing and after flowering of the crops) and average runoff during the 2014 agro-hydro-meteorological season.

**1) With regard to precipitation forecast.**

The precipitations forecasts for the periods of June- July-August and July -August-September 2014 in the Sudan and Sahel zone are as follows:

- There is strong probability that precipitation amounts expected in 2014 will be lower than those observed in 2013 in the region, particularly in the western Sahel;
- In most parts of Guinea, Senegal , the Gambia and some areas of Mali and Mauritania, low than average seasonal rainfall are expected, from June to September, 2014;
- On the coastal parts extending from Ghana to southwest Nigeria, less to close than the seasonal rainfall average is expected, from July to September 2014;
- Over the central and eastern Sahel including Mali, Burkina Faso, southern Niger and northern Nigeria, near to below seasonal averages precipitation are expected from June to September, 2014;
- On the coast, stretching from the Ivory Coast to the southwest of Nigeria , near to below seasonal averages precipitation are expected from June to August, 2014;
- On the remaining part of the region, precipitation close to seasonal averages are expected ;
- However, disturbances in the distribution of precipitation are very likely during the season. They could relate to the start dates of the season, the dry spells and the end of the season.

## **2) Onset dates of the season**

Late to normal starting dates are expected particularly on the western side and the Sahel band, over the entire northern part of the agricultural zone of the Sahel expanded to the southern part of Chad. However, they could be early to normal in Burkina Faso, in the communities of Mali making borders with Burkina Faso, the extreme west of Niger, in west-central part of Nigeria and in the northern parts of Côte d'Ivoire, Ghana, Togo and Benin.

## **3) Seccession dates of the season**

It is expected that the ending dates of the season will be generally late to normal over the entire area. However, some areas may experience for relatively normal to early.

## **4) Dry spells during crops installation phase (after the start of the season)**

It is expected to observed dry spells durations longer to equivalent in the Northern parts of Senegal and Nigeria, in the agricultural area of Mali, in the extreme east of Burkina Faso and in all agricultural areas of Mauritania, Niger and Chad. They could be shorter in the area covering the Gambia, Guinea Bissau, Guinea, Sierra Leone, the southern half of Senegal, Mali and Burkina Faso and northern parts of Côte d'Ivoire, Ghana, Togo, Benin and Nigeria.

## **5) Dry spells after the flowering period**

From the critical period of the heading-flowering of cereals, it is expected the dry spells to be shorter than those usually observed in the Gambia, in agricultural areas of Mauritania, Niger, Chad and Mali, Senegal, in the extreme east of Burkina Faso and northern parts of Benin and Nigeria.

They will be longer in Guinea, Guinea Bissau, Sierra Leone, the southern part of Senegal, western part of Burkina Faso, northern parts of Liberia, Côte d'Ivoire, Ghana and Togo, and Central parts of Benin and Nigeria.

## **6) On the hydrological plan**

Seasonal hydrological forecasting in West Africa, Chad and Cameroon covers the following major river basins: Niger, Senegal, Gambia, Comoé, Volta, Ouémé and the Lake Chad.

Thus, for 2014, averages flows compare to the reference 1982 to 2012 are globally expected for most of the river basins of the region.

- Average flows are expected in the basins of the Senegal River; Gambia River; Oueme River, in the upper and lower part of the Niger River Basin in the Chari- Logon system of the Lake Chad Basin.
- Equivalent to slightly above average flows are expected in the Comoé River basin, the middle part of the Niger River basin, the Benue sub-basin, the Komadougou Yobe sub-basin and the upper basin of the Volta.
- Finally average to below average flows are expected in the Bandama River Basin.

## **Advice and guidance for farmers**

Given all of the foregoing the forum makes the following recommendations :

A) For areas where it is more likely to observe cumulative rainfall deficit, late starting dates of the season, late ending dates of season and shorter dry spells:

- Use rolling forecasts of sowing dates, to identify and meet the optimum sowing periods depending on the area,
- Select crop varieties resistant to drought,
- Avoid additional inputs of fertilizer during the growing season,
- Focus on farming techniques promoting soil water conservation
- Increase vigilance against weeds and pests (locusts and other insects).

B) For areas where it is more likely to be observed normal cumulative rainfall to less than the average, normal to early starting dates of the season, late ending dates, dry spells shorter than average, the same above recommendations are valid, plus the need to take precautions to avoid / minimize flood damage that could be observed in any following heavy rains. Similarly, we should consider the practice of recession crops to compensate for any deficits grain yield;

C) For areas where it is more likely to observe normal to less than normal rainfall total, normal to late than normal starting dates of the season, late ending dates of the season and longer dry spells, the recommendations outlined above are still valid, with the need to:

- favour short cycle varieties and exploitation of lowland areas ;
- exploit the high capacity of soil water infiltration and moisture conservation;
- limit the use of species with high water requirements.

D) For all the Sahelian and Sudano -Sahelian zones , it is important to provide a wide practice of irrigated crops and decline to compensate for any drop in agricultural production that would result from the global normal to less than normal trend of the 2014 winter;

E) For the pastoralists and agro- pastoralists, due to the high probability of a late start of the rainy season, particularly in the pastoral band, it would be necessary to consider the establishment of animal feed and facilitate animal access to the nearest water points, in order to avoid conflicts between farmers and herders.

F) On Hydrological Plan  
 Due to the expected average availability, rational management of water resources must be provided to meet the needs of different users  
 Technical services must do close monitoring of the rainy season and inform the competent authorities and the population about flood risks.

**Forecasts above are likely to change during the rainy season. Therefore, it is strongly recommended to follow the updates that will be made in June, July and August by the AGRHYMET Regional Centre, ACMAD and the national meteorological services.**