

SEASONAL CLIMATE OUTLOOK VALID FOR JULY-AUGUST- SEPTEMBER 2013 IN WEST AFRICA, CHAD AND CAMEROON

May 29, 2013

ABUJA-Federal Republic of Nigeria

EXECUTIVE SUMMARY

Given the current Sea Surface and sub-surface Temperature patterns and trends, models outputs and expert judgment, the precipitation outlook for July-August-September 2013 is as follows:

- **Near Average or above average precipitation very likely** over western Sahel (zone I) from Mauritania and Senegal to western and central Niger. About 80% to 130% of normal precipitation is expected over much of this zone.
- **Near average or below average precipitation very likely** over the Eastern Sahel (zone II) from the Lake Chad area to the middle part of Chad. About 70% to 110% of normal precipitation is expected over much of this area.
- **Near average or below average precipitation very likely** along the Guinea coast (zone II) from Cameroon to Liberia. About 80% to 110% of normal precipitation is expected over much of the area.
- **Climatology very likely** over the remaining parts of the domain.

The region is not expected to experience severe precipitation deficits.

Available experimental products and expert knowledge suggest an **increased likelihood for normal to slightly early onset of the monsoon over much of the Sahel and disruptions in the distribution of precipitating events during 2013 summer over the region.**

Because of weakness of climate drivers particularly SSTs this year, large uncertainties were noted in models outputs. A continuous monitoring and updates of the regional climate situation will be made on regular basis with **more attention over zone 1** expected to be the area with the highest risk of above average number of extreme precipitating events that may lead to flash floods.

A- STATE OF THE OCEANS AND TRENDS

This part describes the most recent state of the global oceans and related trends. A key climate driver for the region, the El Niño Southern Oscillation (ENSO) will, most likely, remain neutral throughout the period. SST anomalies in other ocean basins influential on the region are in a state of change. These factors contribute to uncertainty in assigning a most likely category in some regions.

A1- ATLANTIC OCEAN

- In the tropical north Atlantic, SSTs have been above average over the past few months. Most models outputs and expert assessments are favorable for an evolution towards neutral conditions during the coming months.
- The equatorial Atlantic has been mostly near average with above average pattern off coasts from Gabon to Ghana. Since the third week of May 2013, a cold tongue developed along the equator from the coast of Gabon. Expert judgment and some models outputs suggest a persistence of near average SST over much of the equatorial Atlantic with a cold tongue along the equator during the coming few months.
- In the tropical South Atlantic, near average SSTs have been recorded over much of the area. Expert assessments and model outputs favor

persistence of near average SSTs in this area during the coming months.

A2 - PACIFIC OCEAN

- From February to May 2013, neutral conditions were observed in the central and eastern equatorial Pacific. These conditions gradually changed to below average SST over the eastern side during the last few weeks. Most models and expert assessments are favorable for near average SSTs in the ENSO region during the coming months.

A3 - INDIAN OCEAN

- During the last several months, SSTs over much of the tropical Western Indian Ocean have been near average. On the eastern Indian Ocean, slightly above average SSTs were observed. In May 2013, below average SSTs developed off the coast of the Greater Horn of Africa. A persistence of the current patterns is more likely during the coming months.

A4 - MEDITERANEAN OCEAN

- In the Mediterranean Sea, SSTs have been above average over the past few months. Most models outputs and expert assessments are favorable

for a persistence of above average SSTs over much of the Mediterranean Sea during the coming few months.

B- FORECAST

Given the current state and trends over the global tropical oceans as indicated above, knowledge of relationships between SSTs and West African precipitation, products of statistical and dynamical long range forecasting systems and tools, the precipitation outlook for July-August-September 2013 is as follows (figure):

- **Near Average or above average precipitation is very likely** over western Sahel (zone I) from Mauritania and Senegal to western and central Niger. About 80% to 130% of normal precipitation is expected over much of this zone.
- **Near average or below average precipitation is very likely** over the Eastern Sahel (zone II) from the Lake Chad area to the middle part of Chad. About 70% to 110% of normal precipitation is expected over much of this area.
- **Near average or below average precipitation is very likely** along the Guinea coast from Cameroon to Liberia. About 80% to 110% of normal precipitation is expected over much of the area.
- **Climatology is very likely** over the remaining parts of the domain.

The region is not expected to experience severe precipitation deficits.

C- ONSET, DISTRIBUTION OF PRECIPITATION AND RELATED EXTREMES WITHIN THE 2013 SUMMER SEASON

Over the past few years, knowledge and understanding of the West African monsoon onset (i.e the period during which monsoon precipitation belt moves from the Gulf of Guinea to the Sahel) and modulation of sub-seasonal monsoon precipitation variability have evolved. Available experimental products and expert knowledge suggest a **normal to slightly early onset of the monsoon over much of the Sahel and disruptions in the normal distribution of precipitating events during 2013 summer over the region.**

A continuous monitoring and updates on the regional climate situation will be made on a regular basis with **more attention over zone 1 where above average number of extreme precipitating events that may lead to floods is more likely.** NMHSs are advised to continue monitoring and forecasting activities at daily, weekly and monthly timescales to better identify days or weeks with high likelihood of extreme precipitation.

D- ADVISES AND RECOMMENDATIONS

This section summarizes advices and recommendations for user sectors.
Vigilance is required over the whole region.

For zone I where average or above average rainfall has enhanced probability:

- ✓ Prioritize high land areas for planting;
- ✓ Use low land areas for rice production;
- ✓ Develop barriers for crop protection against runoff;
- ✓ For early planting, use long cycle crop varieties;
- ✓ Provide more fertilizer or pesticides to mitigate leaching by heavy rains;
- ✓ Increase the area planted to maximize gains;
- ✓ extend and monitor rain water reservoirs;
- ✓ Plan to increase farming areas for the coming dry season;
- ✓ Prepare for a more extensive collection and storage of fodder;
- ✓ keep animals away from river banks to avoid drowning;
- ✓ Plan for more vaccines and drugs for water related diseases;
- ✓ Plan for a late transhumance;
- ✓ monitor water reservoirs and take timely decisions to cope with the risk of failure on hydraulic structures;

- ✓ Take measures to reduce negative effects of high humidity on crop drying and conservation;
- ✓ Prepare emergency plans useful in case of flooding;
- ✓ Prepare emergency interventions in case of bad crop yields;
- ✓ Monitor water quality to prepare for pollution of aquatic ecosystems resulting in algal blooms;
- ✓ Plant more trees;
- ✓ Take preventive measures taking into account the risk of road damages that may prevent access to some important agriculture belts;
- ✓ Increase monitoring of water-borne diseases;
- ✓ Monitor epidemic malaria areas;
- ✓ Increase vigilance for cholera and diarrhea;

For zone II in the Sahel where average or below average rainfall has enhanced probability:

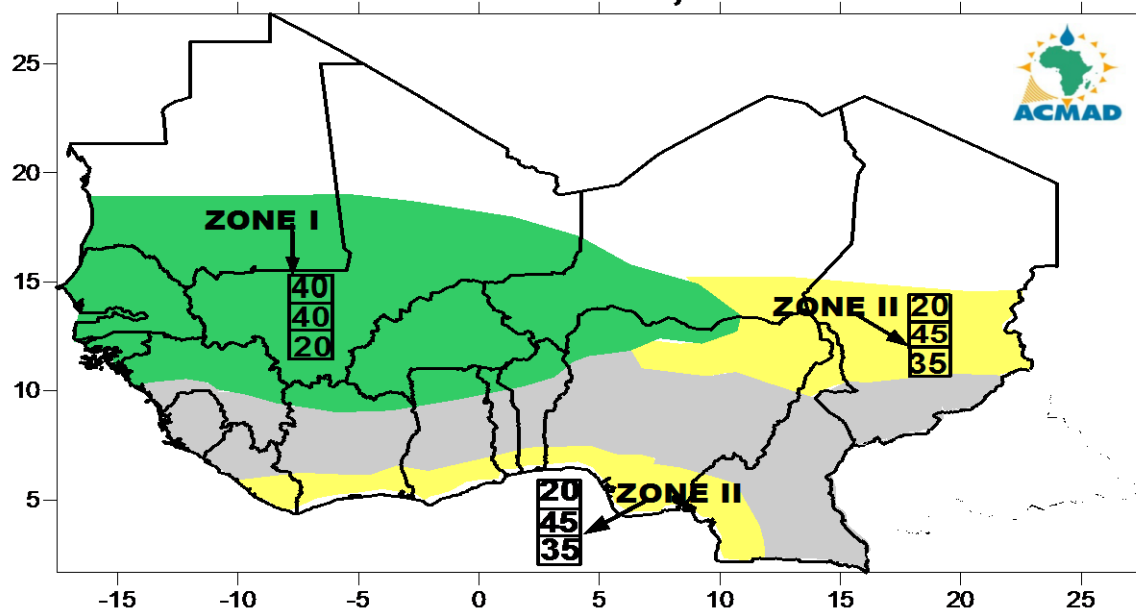
- prioritize low land areas for planting;
- use water conservation techniques;
- Choose crop varieties resistant to rainfall deficits;
- Plan to start dry season farming earlier than usual;
- Plan for irrigation to manage possible rainfall deficits;
- Plan an early start of transhumance;
- prepare or rehabilitate water points for animals;
- Increase vigilance from the end of the year 2013 to cope with possible reduction of pasture and water for animals in early 2014;
- prepare for possible deficits in the water in reservoirs;
- prepare for emergency assistance in case of crop failure;
- Increase vigilance in managing conflicts between farmers and pastoralists;

NB: Users are strongly advised to contact their National Meteorological and Hydrological Services for further expert advices and assistance.

SEASONAL PRECIPITATION FORECAST FOR JULY-AUGUST-SEPTEMBER 2013

ISSUED ON MAY 28 2013

PREVISION CLIMATIQUE SAISONNIERE DES PRECIPITATIONS
DE JUILLET-AOUT-SEPTEMBRE 2013, ELABOREE LE 28 MAI 2013



LEGENDE

S	SUPERIEURE A LA NORMALE
N	NORMALE
I	INFERIEURE A LA NORMALE
	ZONE DESERTIQUE
	CLIMATOLOGIE

LEGEND

A	ABOVE NORMAL
N	NORMAL
B	BELOW NORMAL
	DESERT AREA
	CLIMATOLOGY