



**NIGERIAN METEOROLOGICAL AGENCY**  
**33 POPE JOHN PAUL II STREET, MAITAMA DISTRICT,**  
**P.M.B. 615, GARKI, ABUJA, NIGERIA**

**Agrometeorological Bulletin No.21, Dekad 3, July (21 – 31) 2011**

**SUMMARY**

*A little dry season weather/August break (reduced rainfall activity) was observed at South-Western Nigeria and sparse rains reported at Ilorin, Lokoja, Lafia, Makurdi and Yola. Elsewhere, moderate rainfall was recorded. However, stations at Niger delta area recorded significant rains such that Warri received heaviest rain of 383.3mm in 10 days. Surplus and adequate/normal soil moisture conditions were observed across the country except for few areas in North-East, North-West, South-West and stations at Ilorin, Lokoja, Lafia and Makurdi that recorded deficits. Most parts of the country had normal temperatures while warmer- than- normal temperatures still confined along the extreme north (Sokoto, Katsina, Nguru, Potiskum and Maiduguri). Cooler-than-normal weather was mostly confined to the areas in and around Jos, Shaki, Iseyin and coastal states. Temperatures below 32 Deg C were recorded in most parts of the country while the extreme north had above 32 Deg C. Harvest of maize, cassava, fruity vegetables and new yams remained the dominant field activity during the dekad.*

**1.0 RAINFALL TREND**

**1.1 Rainfall Anomaly**

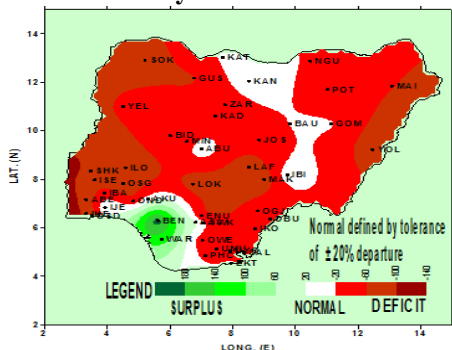


FIG. 1: 3rd DEKAD OF JULY 2011 RAINFALL ANOMALIES (%) OVER THE COUNTRY. ANOMALIES ARE COMPUTED WITH RESPECT TO THE 1971 - 2000 BASE PERIOD DECADEAL MEANS.

*Fig 1* above depicts the rainfall anomaly over the country and indicates that deficit rainfall anomalies (red areas) were recorded in most parts of the country. It implies that the dekad received rainfall below normal. However, few states in the Niger Delta had surpluses (green areas) while elsewhere recorded normal.

**1.2 Rainfall Amounts**

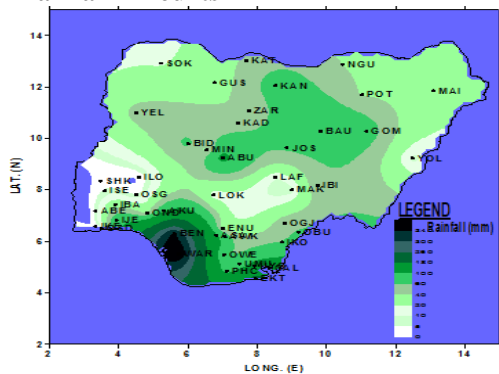


FIG. 2: ACTUAL RAINFALL AMOUNT FOR DEKAD 3, JULY 2011

The ten-day rainfall total recorded across the country is shown in *Fig 2* and reveals that south-western states (due to the effect of the little dry season) and stations at Sokoto, Ilorin, Lokoja, Lafia, Makurdi and Yola recorded below 30mm; all other stations received above such that Warri and Eket reported heaviest of 383.3mm and 199.6mm of rainfall respectively.

**1.3 COMPARISON OF NORMAL WITH ACTUAL RAINFALL FOR THE DEKAD**

The comparison of the actual rainfall amount with normal rainfall values in some selected stations across the south and the north of the country is shown in *Figs 3A & B*. *Fig 3A* (northern stations) shows that apart from Abuja and Kano that were above normal others were below normal while stations in the south like Ijebu-Ode, Benin, Asaba and Warri had above normal and others were below normal as shown in *Fig B*.

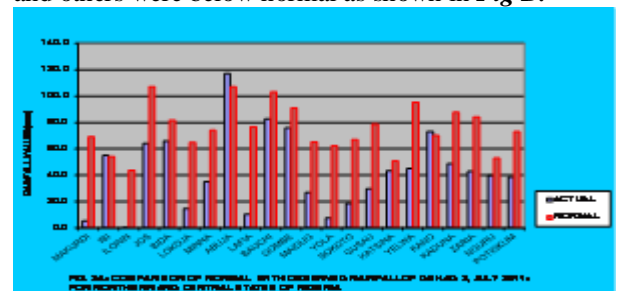


FIG. 3A: COMPARISON OF ACTUAL WITH NORMAL RAINFALL OF NORTHERN STATIONS OF DEKAD 3, JULY 2011.

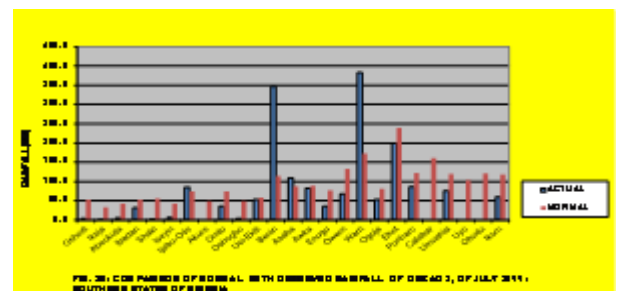


FIG. 3B: COMPARISON OF ACTUAL WITH NORMAL RAINFALL OF SOUTHERN STATES OF DEKAD 3, JULY 2011.

### 1.4 Number of Rain Days

Fig 4 shows the number of rain days across the country and it can be inferred that the **Niger Delta** area had over 6 days of rainfall while other areas had between 3 and 6 raindays except for **Gusau, Yola, Ilorin, Maiduguri and most stations at south-western Nigeria** that had 2 or less raindays. The rainfall distribution was quite adequate and favoured rainfed crops, pastures and rangeland.

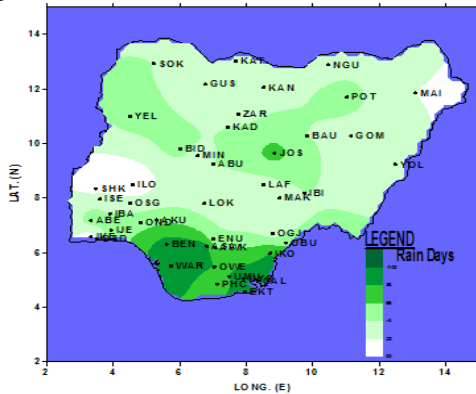


FIG. 4: ACTUAL NUMBER OF RAIN DAYS FOR DEKAD 3, JULY 2011

## 2.0 SOIL MOISTURE CONDITION

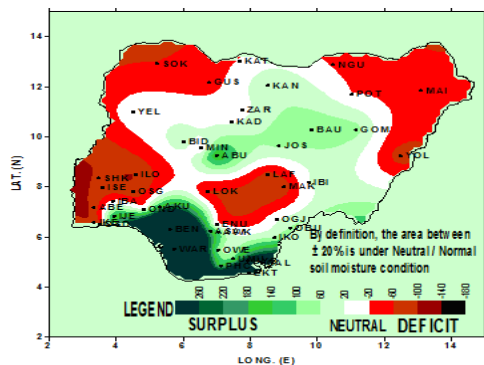


FIG. 5: 3rd DEKAD OF JULY 2011 SOIL MOISTURE INDICES (%) OVER THE COUNTRY.

Fig 5 depicts the decadal distribution of soil moisture across the country and indicates that most parts of the country (green areas) had surplus soil moisture conditions that were adequate for rainfed crops, rangeland and pastures. Areas in red such as **Sokoto, Katsina, Nguru, Yola, Maiduguri, Potiskum and stations at Southwest of Nigeria** recorded deficits. The percentage of deficit was low such that soil moisture across the country supported crop growth and development and livestock performance. It softened the soil for easy harvesting of root crops.

## 3.0 MAXIMUM TEMPERATURE TREND

### 3.1 Maximum Temperature Anomaly

The trend of maximum temperature anomaly is shown in Fig 6 and indicates that most parts of the country were normal. However, warmer-than-normal

temperatures were still confined at the extreme north (**Sokoto, Katsina, Nguru, Potiskum and Maiduguri**) while areas in and around **Jos, Shaki, Iseyin, Eket and coastal areas** were cooler-than-normal.

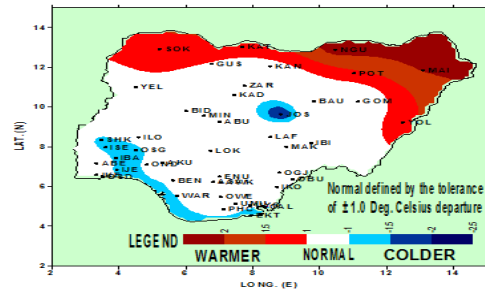


FIG. 6: 3rd DEKAD OF JULY 2011 MEAN MAXIMUM TEMPERATURE ANOMALIES (Deg. C) OVER THE COUNTRY. ANOMALIES ARE COMPUTED WITH RESPECT TO THE 1971 - 2000 BASE PERIOD DECADEAL MEANS.

### 3.2 Maximum Temperature Values

Fig 7 below depicts the actual mean maximum temperature distribution and reveals that most stations across the country had temperatures below **32 Deg C** while the extreme north including **Sokoto, Katsina, Nguru, Potiskum, Maiduguri and Yola** recorded temperatures above **32 Deg C**. The temperature conditions continued to favour crop development and growth and as well as livestock performance.

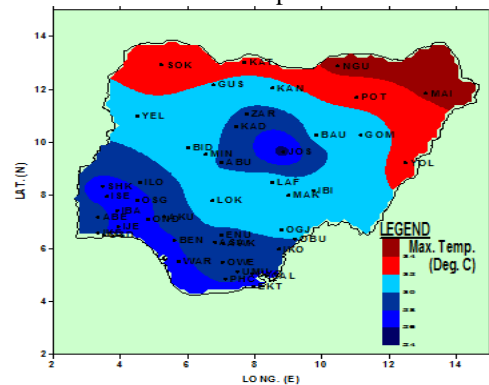


FIG. 7: MEAN MAXIMUM TEMPERATURE FOR DEKAD 3, JULY 2011

## 4.0 WEATHER/AGRICULTURAL OUTLOOK FOR DEKAD 1 (1 TO 10), OF AUGUST, 2011

### 4.1 Weather Outlook

The Inter Tropical Discontinuity (ITD) will fluctuate between Latitude **19.0 deg. and 21.0 deg. north**. The moist south westerly winds are expected to continue to dominate most parts of the country. Active convective activities across the country are expected with the exception of the south western areas due to subsidence.

The north and central states are predicted to experience cloudy weather conditions with rain showers and thunderstorm activities.

The inland and the coastal areas of the south are expected to be cloudy with widespread rainfall activities.

Maximum temperatures for the north and central states are expected to range from  $29^{\circ}\text{C}$  to  $33^{\circ}\text{C}$  while the minimum temperatures will be between  $23^{\circ}\text{C}$  and  $25^{\circ}\text{C}$ . Maximum temperatures for inland and coastal areas are expected to range from  $27^{\circ}\text{C}$  to  $32^{\circ}\text{C}$  while the minimum temperatures will be between  $22^{\circ}\text{C}$  and  $24^{\circ}\text{C}$  with the exception of Jos and environs that will have lower values.

Significant rains are expected to spread across the country with the exception of the south western states where rainfall amount will be reduced due to cooler-than-normal weather (little dry season). Rainfall amounts are predicted to range from **10mm to 300mm**.

## 4.2 Agricultural Activity/Outlook

Harvesting of **staple food crops and fruity vegetables** continued to dominate farming activities in most parts of the south and the middle belts while weeding and other farming operations were confined at the northern states.

It is expected that in parts of the south and the middle belts, harvest of **maize, cassava, vegetables and new yam** will continue. Farmers in the north are advised to continue to weed their farmlands before they get to the peak of the rains. **Farmers in the south western states** are requested to use this period of little dry season (less rains (August break) to harvest matured crops, weed cassava farmlands and plan for second cropping season.

**TABLE OF AGROMETEOROLOGICAL DATA FOR THE DEKAD**

STATION	RAINF ALL (mm)	RAIN DAY (no.)	PET (mm)	TMAX (oC)	TMIN (oC)	DD (no.)	RAD(M J/m <sup>2</sup> /d ay)
ABEOK	4.4	5	37.8	28.9	22.1	192.3	14.8
ABUJA	117.2	4	39.6	29.7	22.9	201.6	15.3
AKURE	-	-	-	-	-	-	-
ASABA	109.1	9	40.7	29.9	22.9	201.9	15.7
AWKA	82.2	6	36.6	28.8	22.8	195.7	14.2
BAUCHI	82.9	4	44.5	30.9	22.3	204.7	17.1
BENIN	347.1	9	34.1	27.8	22.6	188.2	13.4
BIDA	66	5	43.1	31.3	23.6	214	16.3
CALABAR	-	-	-	-	-	-	-
EKET	199.6	10	24.7	26.4	23.7	186.6	9.8
ENUGU	34.8	5	40.4	29.5	22.5	197.9	15.7
GOMBE	75.9	3	42.5	30.1	22.0	197.6	16.5
GUSAU	29.6	2	46.5	31.9	22.7	212.4	17.6
IBADAN	30.7	4	35.4	27.4	21.6	181.9	14.1
IJEBU	85.4	5	33.3	27.4	22.3	186	13.2
IKEJA	0.9	1	33.1	28.3	23.3	196.6	12.9
IKOM	59.5	8	38.4	29.1	22.6	196.3	14.9
ILORIN	0.1	0	38.4	28.4	22.0	189	15.1
ISEYIN	6	3	37.6	27.4	20.8	177	15.1
JOS	64.1	7	38.2	25.0	17.0	142	16.3
KADUNA	48.8	4	43.8	29.5	20.7	187.3	17.3
KANO	73.2	3	46.9	31.4	22.1	205.1	18
KATSINA	43.3	3	52	32.7	21.2	208.9	19.8

LAFIA	10.3	3	43.6	31.8	24.1	218.3	16.4
LOKOJA	14.7	3	43.1	31.4	23.8	216	16.2
MAIDU	26.8	2	48.6	34.2	24.7	235.2	17.7
MAKURDI	5.1	3	46	30.9	21.9	201.4	17.8
MINNA	34.9	3	45.7	30.7	21.8	199.3	17.7
NGURU	39.8	3	51.9	34.6	23.7	233.1	19
OGOJA	52.5	3	44.9	30.7	22.2	203.1	17.3
ONDO	34.9	5	35.7	27.8	22.0	186.1	14.1
OSHODI	3	2	31.6	28.3	23.9	199.2	12.2
OSOGBO	3.7	3	34.7	27.1	21.6	180.4	13.8
OWERRI	66.9	8	37.9	28.5	22.2	191	14.9
PHC	85.5	6	35.1	28.3	22.8	192.8	13.7
POT	38.7	5	48	32.8	23.1	220.4	18
SHAKI	2	1	37.8	27.4	20.7	176.2	15.2
SOKOTO	18.5	4	45.2	32.7	24.1	224.8	16.7
UMUAHIA	75.6	8	38.9	29.3	22.6	196.4	15.1
UYO	-	-	-	-	-	-	-
WARRI	383.3	10	31.4	27.6	23.2	191.4	12.3
YELWA	45	5	42	31.5	24.4	217.5	15.8
YOLA	7.5	2	46.1	32.9	24.5	227	17.1
ZARIA	42.9	3	42.7	29.5	20.8	187.4	16.9
OBUDU	-	-	-	-	-	-	-
IBI	55	4	45.5	31.3	22.5	207.8	17.4
USI-EKITI	53	5	-	-	-	-	-

Dear All,

Comments and suggestions on how to improve this publication are welcome. Agrometeorologists, Agriculturists, Extension Workers, Research Officers, Users and the General Public should kindly send feedback to:

The Director-General/CEO,

Nigerian Meteorological Agency (NIMET),

33 Pope John Paul II Street, Maitama District,

PMB 615 Garki, Abuja.

E-mail: [nimetagrometbulletin@yahoo.com](mailto:nimetagrometbulletin@yahoo.com); NIMET WEB SITE: [www.nimetng.org](http://www.nimetng.org)