



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

*Agrometeorological Bulletin No.13, Dekad 1, May (1 –10) 2011*

**SUMMARY**

During the period under review, most parts of the south as well as areas in and around Jos and Kaduna witnessed surplus rainfall anomalies while the north generally had deficit. Light to moderate rains were received across the south and parts of the North Central with thunderstorms in parts of north central. Most parts of the south had episodes of floods which flooded roads and farmland disrupting both vehicular and human traffic. Greater parts of the south and areas in and around Jos had surplus soil moisture condition while the northern states had deficit. Stations at the extreme north (Yelwa, Sokoto, Gusau, Katsina, Kano, Nguru, Potiskum, Yola and Maiduguri) recorded warmer than normal temperatures while Jos, Eket and Calabar stations (in the north central and south) experienced colder than normal temperatures. Temperatures below 32 deg C were recorded in Jos and parts of the Niger Delta while other parts of the country had above 32 Deg C. However, temperatures of above 40 Deg C were reported at, Maiduguri, Potiskum, Nguru, Kano, Katsina and Sokoto. Following the increase in rainfall activities in most parts of the north central in the past months, some farmers have continued to clear their farmlands for seed bed preparations while others began planting. Harvest of early maize and leafy vegetables planted earlier on irrigated farms across the country is in progress. Farmers in the extreme northern parts of the country are still advised to wait for the appropriate planting dates for rainfed farming.

**1.0 RAINFALL TREND**

**1.1 Rainfall Anomaly**

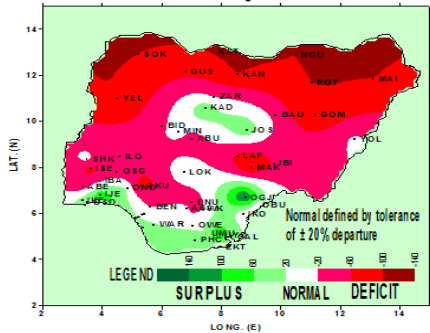


FIG. 1: 1st DEKAD OF MAY 2011 RAINFALL ANOMALIES (%) OVER THE COUNTRY. ANOMALIES ARE COMPUTED WITH RESPECT TO THE 1971 - 2000 BASE PERIOD DECADEAL MEANS.

Fig 1 above shows the rainfall anomaly during the dekad and indicates that most parts of the southeast, south-south, some parts of the southwest and areas in and around Jos and Kaduna (green areas) had surplus rainfall anomalies while the north especially the extreme north had deficit. The white areas were normal.

**1.2 Rainfall Amounts**

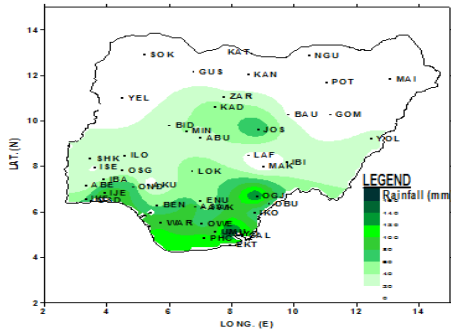


FIG. 2: ACTUAL RAINFALL AMOUNT FOR DEKAD 1, MAY 2011

The rainfall amount received as shown in Fig 2 shows that most parts of the south and parts of the

north central (in green) recorded light to moderate rains with heavy thunderstorm in some parts of the south. The extreme northern parts of the country (in white) had below 20mm of rainfall while most parts of the Niger Delta region had above 100mm. The rains in these areas favoured field crops, especially crops with high rainfall demand. Farmers, particularly those in the extreme north are advised to continue to irrigate their crops as rains are still inadequate for rainfed farming.

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

Figs 3A & B below show the comparison of the actual rainfall amount recorded with normal rainfall for the dekad in some selected stations across the south and north. Fig 3A shows that most stations in the north which had rains were below normal while Fig 3B shows that most stations in the south recorded also below normal. It revealed that the dekad received below normal rainfall which might affect optimum crop growth and development in some areas.

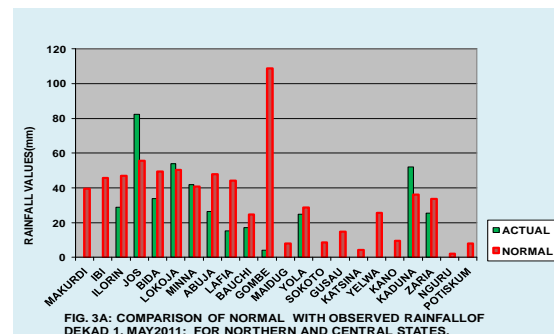


FIG. 3A: COMPARISON OF NORMAL WITH OBSERVED RAINFALL OF DEKAD 1, MAY 2011: FOR NORTHERN AND CENTRAL STATES.

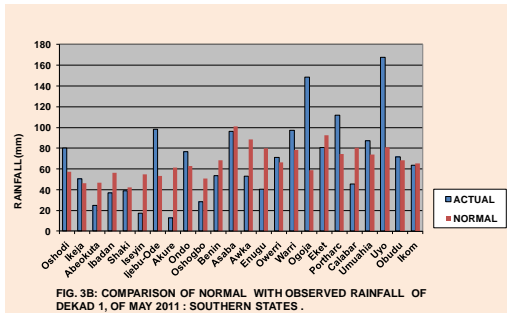


FIG. 3B: COMPARISON OF NORMAL WITH OBSERVED RAINFALL OF DEKAD 1, OF MAY 2011: SOUTHERN STATES.

### 1.4 Number of Rain Days

The number of rain days across the country is shown in *Fig 4* below and reveals that most stations in the south had 1- 4 raindays. Stations at Lokoja, Makurdi, Awka, Calabar, Eket had over 4days of rainfall that favoured crop development and growth. The greater part of the country in white had zero to 1 rain-day which impacted field crops.

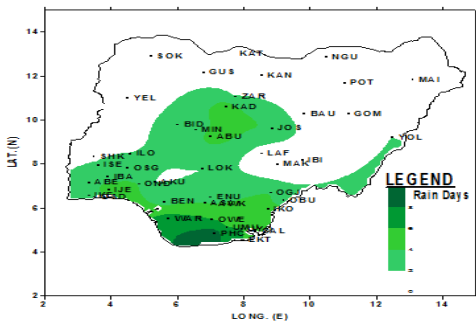


FIG. 4: ACTUAL NUMBER OF RAIN DAYS FOR DEKAD 1, MAY 2011

## 2.0 SOIL MOISTURE CONDITION

The decadal distribution of soil moisture across the country is shown in *Fig 5* and indicates that most parts of the south and areas in and around Jos had surplus soil moisture condition while the north central and the north recorded deficit whose degree of severity increased towards the extreme north. This moisture condition in the southern parts of the country favoured crop growth and development and supported pasture.

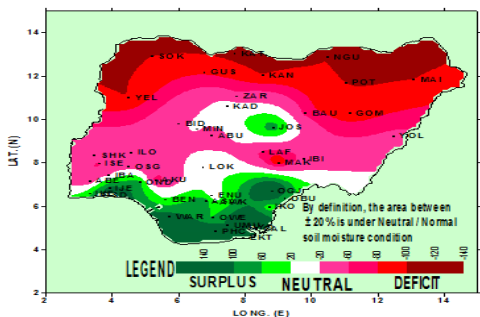


FIG. 5: 1st DEKAD OF MAY 2011 SOIL MOISTURE INDICES (%) OVER THE COUNTRY.

## 3.0 MAXIMUM TEMPERATURE TREND

### 3.1 Maximum Temperature Anomaly

*Fig 6* is the trend of maximum temperature anomaly and indicates that stations (graduated red) at Yelwa, Sokoto, Gusau, Katsina, Kano, Nguru, Potiskum, Maiduguri and Yola along the extreme north were warmer than normal temperatures while Jos, Eket and Calabar (blue) experienced colder than normal temperatures. The white areas were normal with no significant changes when compared with the normal temperatures.

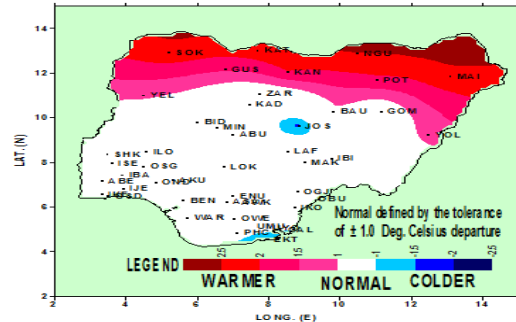


FIG. 6: 1st DEKAD OF MAY 2011 MEAN MAXIMUM TEMPERATURE ANOMALIES (Deg. C) OVER THE COUNTRY. ANOMALIES ARE COMPUTED WITH RESPECT TO THE 1971 - 2000 BASE PERIOD DECADEAL MEANS.

### 3.2 Maximum Temperature Values

The actual mean maximum temperature distribution as shown in *Fig 7* below reveals that Jos and parts of the Niger Delta (blue) recorded below *32 Deg C* while the greater parts of the country (red) had above *32 Deg C*. However, temperatures of above *40 Deg C* were recorded at Sokoto, Katsina, Kano, Nguru, Potiskum, and Maiduguri which impacted in both livestock and crop growth and development, except for heat loving crops.

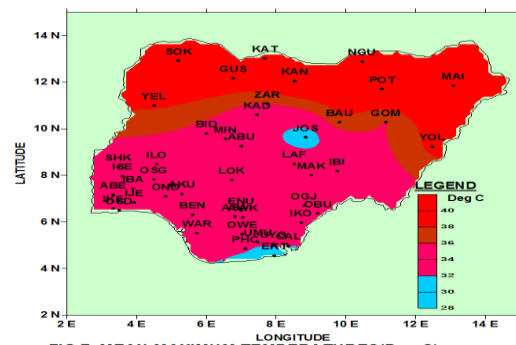


FIG. 7: MEAN MAXIMUM TEMPERATURES (Deg C) FOR DEKAD 1, OF MAY 2011

## 4.0 WEATHER/AGRICULTURAL OUTLOOK FOR DEKAD 2 (11 TO 20), OF MAY 2011

### 4.1 Weather Outlook

The Inter Tropical Discontinuity (ITD) is expected to continue its northward movement with , mean position oscillating between Latitude *14.0 deg. north and 15deg. north* during the dekad. More influx of moist south-westerly winds with active convective activities into the country are expected

Partly cloudy weather conditions will be expected across the northern parts of the country while central states will be cloudy with thunderstorm activities.

The inland areas of the south will expect cloudy weather conditions with localized rainfall /thunderstorms activities while coastal areas are expected to witness cloudy weather conditions with rains.

Expected maximum temperatures for the north and central states will be of the range of  $32^{\circ}\text{C}$  to  $40^{\circ}\text{C}$ , while minimum temperatures are expected to be between  $23^{\circ}\text{C}$  and  $28^{\circ}\text{C}$  during the period.

Maximum temperatures for Inland and coastal areas will range from  $31^{\circ}\text{C}$  to  $34^{\circ}\text{C}$ , while minimum temperatures will be from  $23^{\circ}\text{C}$ - $25^{\circ}\text{C}$ .

Predicted rainfall amounts are 0.0mm from the extreme north to 150mm in the south.

#### 4.2 Agricultural Summary

In some parts of the south and north central, planting of the staple food crops continued. Harvest of early maize and leafy vegetables planted earlier on irrigated farms across the country is in progress.

In the extreme north, farmers are advised to continue to irrigate their farm crops while the central areas are requested to engage in clearing of farm lands and planting.

Farmers in the extreme northern parts of the country are advised to wait for the rains before commencing planting as onset dates for rainfed farming are yet to be established.

**TABLE OF AGROMETEOROLOGICAL DATA FOR THE DEKAD**

STATIONS	TOTAL RAINFAL (mm)	TOTAL RAIN DAYS	EVAPOTRANSPIRATION (mm)	MEAN MAXIMUM TEMP ( $^{\circ}\text{C}$ )	MEAN MINIMUM TEMP ( $^{\circ}\text{C}$ )	DEGREE DAYS (MAIZE)	MEAN RADIATION ( $\text{MJ}/\text{m}^2/\text{day}$ )
ABEOK	25	3	50.3	35.1	24.0	215.3	20.2
ABUJA	26.3	5	46.8	34.3	24.5	213.7	18.8
AKURE	12.7	2	45.5	32.7	23.0	198.5	18.8
ASABA	96.2	4	48.6	34.5	24.0	212.4	19.6
AWKA	53	4	45.3	33.2	23.9	205.3	18.5
BAUCHI	17	1	54	37.7	25.6	236.5	20.9
BENIN	53.7	3	44	33.2	24.5	208.6	17.9
BIDA	33.8	3	46.1	35.1	25.8	224.5	18.2
CALABAR	45.3	4	40.1	32.1	24.8	204.6	16.4
EKET	80.7	6	34.3	30.7	25.4	200.5	14.1
ENUGU	40.4	3	39.1	33.2	23.4	190.6	16.4
GOMBE	4	1	50.4	35.9	24.8	223.5	19.9
GUSAU	0	0	58.7	40.0	26.1	250.2	22.2
IBADAN	36.8	2	47.2	33.7	23.6	206.6	19.2
IJEBU	98.3	6	45	33.3	24.2	207.4	18.3
IKEJA	50.3	2	42.6	33.2	25.1	211.7	17.2
IKOM	63.5	5	45.8	32.5	22.5	194.8	19
ILORIN	28.8	2	48.3	34.4	24.0	212.1	19.5
ISEYIN	17.2	2	48.2	33.9	23.3	206.1	19.6
JOS	82.5	4	44.4	29.6	18.9	162.4	19.6
KADUNA	52	5	49.4	33.9	22.5	201.8	20.3
KANO	0	0	60.8	41.0	26.4	256.7	22.8
KATSINA	0	0	60.7	40.6	25.7	251.2	22.9
LAFIA	15.3	1	47.1	35.6	26.3	229.5	18.5
LOKOJA	54	2	46.1	35.0	25.8	224.5	18.2
MAIDU	0	0	61.8	42.2	27.7	269.5	22.7
MAKURDI	0	0	45.4	34.1	24.9	214.9	18.2
MINNA	42	2	49.7	34.9	23.9	213.8	20
NGURU	0	0	66.4	42.6	25.3	259.5	24.8
OGOJA	148.7	4	47.2	33.5	23.4	204.4	19.3
ONDO	76.5	4	43.4	32.6	24.0	202.9	17.8
OSHODI	80.4	2	40.7	33.4	26.1	217.4	16.3
OSOGBO	28.6	3	45.1	32.7	23.3	199.8	18.6
OWERRI	71.1	6	45.1	32.3	22.7	194.9	18.7
PHC	112.1	9	43.1	32.2	23.6	198.7	17.8
POT	0	0	58.4	40.7	27.4	260.4	21.8
SHAKI	38.9	2	50.1	34.0	22.4	202.2	20.6
SOKOTO	0	0	59.5	42.2	28.9	275.2	21.6
UMUAHIA	87.4	6	43.2	32.2	23.5	198.5	17.8
UYO	167.8	6	42.4	32.4	24.2	203.2	17.4
WARRI	97.1	7	44.1	33.1	24.3	207.2	17.9
YELWA	0	0	51.3	38.3	27.7	250.2	19.4
YOLA	24.7	2	52	38.6	27.7	251.4	19.7
ZARIA	25.5	2	53.7	36.0	23.1	215.8	21.5
OBUDU	71.5	3	43.8	32.2	23.2	196.5	18.1

**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)**