

## Agrometeorological Bulletin No.27, Dekad 3, September (21 –30) 2014 ISSN: 2315-9790

### SUMMARY

The Inter Tropical Discontinuity (ITD)'s position fluctuates between Latitudes 14 and 15°N. Generally, there was a reduction in rainfall activity particularly in the northern parts of the country. The highest rainfall amount was recorded over Abeokuta with 209.5mm in 7 rain-days, followed by Ikeja and Ijebu-Ode with 189.3mm in 7 rain-days and 185.3mm in 9 rain-day respectively. The country continued to experience normal maximum temperatures with the highest value of 34.6°C recorded over Nguru and Jos having the lowest value of 25.8°C. The major agricultural activities in the country included: Harvest of, cereals, yams, cassava, sweet potatoes, groundnut, and fresh vegetables. As we approach the end of the raining season in the North, preparation of nurseries, transplanting and other dry season activities are the major activities in these areas.

### 1.0 RAINFALL PATTERN

#### 1.1 Rainfall Anomaly (Deficit / Surplus)

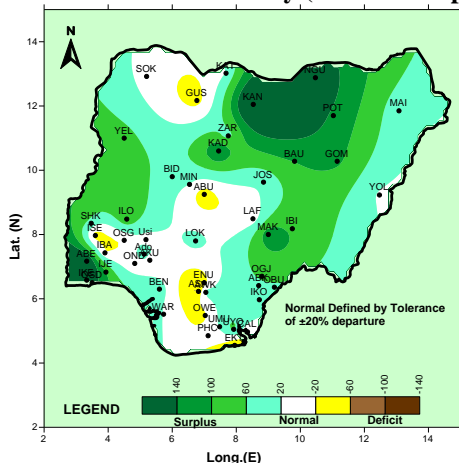
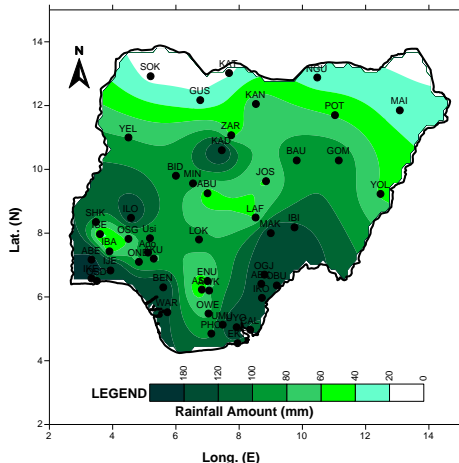


Fig.1: 3<sup>rd</sup> DEKAD SEPT, RAINFALL ANOMALIES

Fig.1 above shows the rainfall anomaly over the country and reveals that the country generally experienced normal to surplus rainfall anomalies. However, stations like Gusau, Abuja, Ibadan, Enugu, Owerri and Eket recorded deficit rainfall anomalies when compared with the normal (1981-2010).

#### Rainfall Amounts



The actual observed rainfall amounts measured over the country for the 3<sup>rd</sup> dekad of September are shown in Fig.2

above and generally reveals a good rainfall distribution. However, stations in the extreme North recorded less rainfall signalling an approach to cessation of the rains. The highest rainfall amount was recorded over Abeokuta with 209.5mm in 7 rain-days, followed by Ikeja and Ijebu-Ode with 189.3mm in 7 rain-days and 185.3mm in 9 rain-day respectively. Farmers in these areas are advised to take advantage of this second cropping season.

#### 1.2 COMPARISON OF NORMAL WITH ACTUAL RAINFALL FOR THE 3<sup>RD</sup> DEKAD OF SEPTEMBER

Fig.3A and Fig.3B below show the comparison of the actual rainfall amounts measured and normal/long term averages during the dekad over the northern and southern parts of the country respectively. Over the North (Fig.3A), most stations had their values above normal except Gusau and Abuja that recorded below-normal rainfall. In the South i.e. Fig.3B, reveals that most stations received normal to above normal rainfall except Ibadan, Iseyin, Enugu, Calabar and Owerri.



### 1.3 Number of Rain Days.

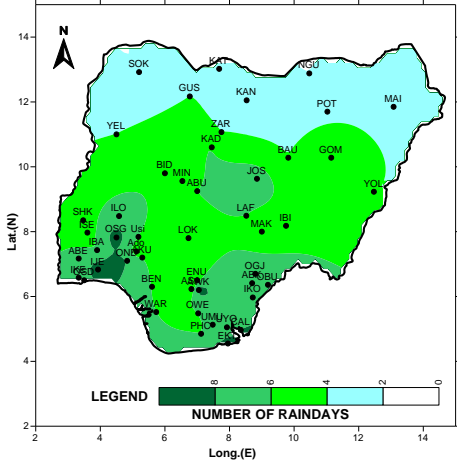


Fig.4: NUMBER OF RAIN DAYS

Fig. 4 above shows the rainfall distribution across the country and it can be inferred that the country had moderate to good rainfall distribution as 36 stations recorded 4 - 8 rain-days, 4 stations had 2 -3 rain-days and 4 stations reported 9 rain-days. The import of rain-day to farming activity is in the provision of information on rainfall distribution within the dekad which provides moisture to the field crops for better growth and development.

### 2.0 SOIL MOISTURE CONDITION

The soil moisture indices across the country for the dekad are shown in Fig. 5 below and indicates that the country had adequate moisture as most stations were under normal to surplus soil moisture conditions. However, stations in North (Sokoto, Gusau, Katsina, Nguru, and Maiduguri) had deficit soil moisture. The deficit soil moisture in the North is an indication of end of the season.

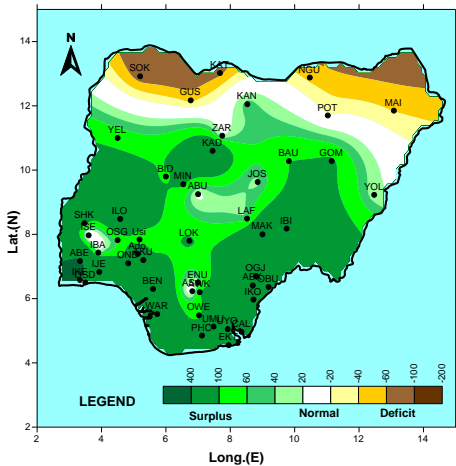


Fig.5: 3<sup>rd</sup> DEKAD OF SEPTEMBER SOIL MOISTURE INDEX (SMI)

### 3.0 MAXIMUM TEMPERATURE TREND

#### 3.1 Maximum Temperature Anomaly

Normal temperature conditions continued to prevail over the country as shown in Fig.6 below that depicts maximum temperature anomaly. However, stations like Gusau, Sokoto and Shaki recorded warmer than normal temperature anomaly. Eket, Lafia, Makurdi, Bida and Iseyin experienced colder than normal maximum temperature condition.

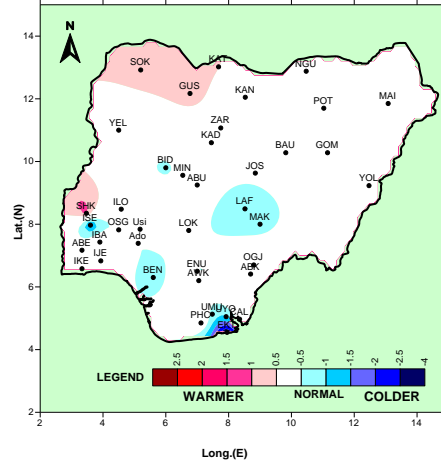


Fig.6: Maximum Temperature Anomaly.

#### 3.2 Maximum Temperature Values.

The actual mean maximum temperature distribution across the country is shown in Fig.7 below. The analysis reveals that the extreme northern part recorded mean maximum temperatures above of 32°C. Stations in the Central and southern states recorded mean maximum temperatures of 30°C and below except for Asaba, Ogoja and Lokoja that recorded temperatures above 30°C. Nguru and Jos stations continued to record the highest and lowest temperature values of 34.6°C and 25.8°C respectively.

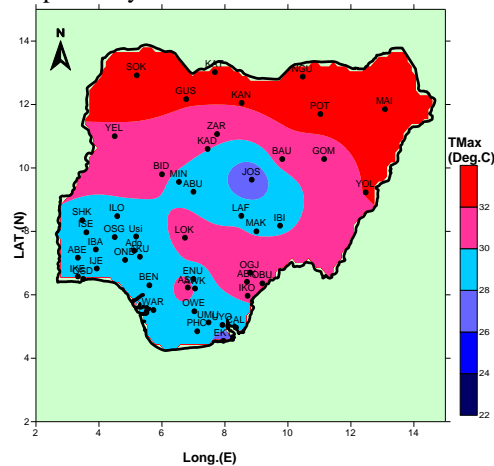


Fig. 7: Mean maximum Temperature

## WEATHER/AGRICULTURAL OUTLOOK FOR DEKAD 1 (1 TO 10), OF OCTOBER, 2014

### 4.1 Weather Outlook

The position of Inter Tropical Discontinuity (ITD) is likely to oscillate between latitudes 12deg. N and 14degN; this feature may likely reduce rainfall activity as it favours only partly cloudy weather conditions, however occasional thunderstorms may occur. The central states are expected to be cloudy with local thunderstorms/rains. The inland and coastal areas of the South are to experience cloudy weather conditions with rains/showers and localized thunderstorms.

The northern and the central states are expected to have mean maximum temperatures of the range 25 °C - 34°C, while the mean minimum temperatures lie between 16 °C and 23°C. The mean maximum temperatures over the

inland and coastal areas of the South are expected to be between 27°C and 30 °C, while the mean minimum temperatures will lie between 21°C and 24°C.

### 4.2 Agricultural Activity/Outlook

Farmers in the South and the central states were engaged in the harvest of yam, cereals, sweet potatoes and fresh vegetables while those of the North continued the preparation of nurseries for tomatoes and other vegetables and also harvesting of cereals, sweet potatoes, vegetables like carrots, tomatoes, cabbage and groundnut. In order to achieve improved agricultural yields, farmers are advised to apply the information contained in the NiMet's relevant publications and weather information like the Drought and Flood Monitoring bulletin and daily weather information in their daily farming operations.

**TABLE OF AGROMETEOROLOGICAL DATA FOR THE DEKAD**

STATION	RAINFALL	RAINDAY	PET	TMAX	TMIN	GDD	RAD
ABEOK	209.5	7	38.2	30.1	23.4	187.1	16
ABUJA	48.5	6	44.9	29.8	20.5	171.8	19.4
AKURE	71.8	6	38.3	28.4	21.4	168.9	16.7
ASAB	35.5	4	44.6	30.7	21.9	183.3	18.9
AWKA	80.7	9	39.7	29.8	22.9	183.4	16.8
BAUCHI	93.1	4	46.6	31.1	21.4	182.5	19.8
BENIN	152.1	6	36.3	28.9	22.9	178.9	15.5
BIDA	81.7	6	42.6	30.3	22.1	181.9	18.1
CALABAR	112.1	8	37.7	28.9	22.5	177	16.1
EKET	113.4	9	39.9	27	19.2	150.8	18
ENUGU	57.9	5	43.9	29.6	20.7	171.2	19
GOMBE	96.6	6	45.8	30.7	21.3	180.1	19.5
GUSAU	25.2	4	48.3	32.3	22.1	191.9	20.2
IBADAN	47.8	6	39.8	29.6	22.5	180.5	16.9
IJEBU	185.2	9	38	29.5	23	182.6	16.1
IKEJA	189.3	7	36.8	29.2	23.2	182.3	15.7
ILORIN	146.3	7	42.5	29.6	21.4	175	18.3
ISEYIN	29.8	5	39.9	28.5	21	167.7	17.4
JOS	57.4	7	43.2	25.8	15.6	127	20.4
KADUNA	158.3	6	46.2	30.1	20.1	170.7	20.1
KANO	73.3	2	48.5	32.2	21.9	190.4	20.3
KATSINA	16.5	4	50.1	33.3	22.6	199.5	20.7
LAFIA	58.8	6	41.6	29.7	21.9	178.2	17.8
LOKOJA	88	5	42	30.5	22.7	186	17.7
MAIDU	29.5	3	50.2	34.1	23.6	208.4	20.3
MAKURDI	144	5	42.1	29.8	21.8	177.8	18
MINNA	89.6	5	41.9	29.7	21.8	177.5	17.9
NGURU	28.1	2	51.9	34.6	23.5	210.9	21
OGOJA	139	7	42.5	31.2	23.5	193.4	17.7
ONDO	75	8	38.1	28.6	21.9	172.3	16.5
OSHODI	156.7	7	37.7	29.6	23.2	183.9	16
OSOGBO	61.6	9	38.5	28.5	21.6	170.9	16.7
OWERRI	73.9	6	40.4	29.6	22.4	179.8	17.3
PHC	97.3	6	39.8	29.8	22.9	183.1	16.9
POT	39.5	5	50	32.7	21.8	192.4	20.9
SHAKI	95.1	5	42.4	29.4	21.1	172.4	18.3
SOKOTO	13.7	2	50.7	34	23.3	206.8	20.6
UYO	155.2	6	35.1	28.5	23	177.4	15
YELWA	79.6	4	44.1	31.5	23.1	193.3	18.4
YOLA	57.1	4	44.9	32.1	23.6	198.3	18.6
ZARIA	52.5	4	47.2	30.7	20.4	175.4	20.3
ADO-EKITI	112.3	5	39.5	28.7	21.3	170	17.1
USI-EKITI	78.3	6	46.6	29.3	18.9	160.9	20.6

Note:

Rainfall (mm)

PET = Potential Evapotranspiration (mm/day)

TMAX = Maximum Temperature (°C)

TMIN = Minimum Temperature (°C)

GDD = Growing Degree Day (day)

RAD = Radiation (MJ/m<sup>2</sup>/day)

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:

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