

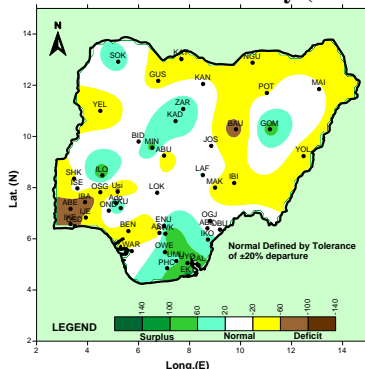
## Agrometeorological Bulletin No.25, Dekad 1, September (1 –10) 2014 ISSN: 2315-9790

### SUMMARY

The effect of little dry season (a.k.a. August Break) manifested in most of the stations in the south-west of the country with its attendants of very low rainfall amounts such that stations like Ibadan, Abeokuta, Ikeja and Oshodi had 2.1mm/3rain-days, 6.0mm/6 rain-days, 12.9mm/4 rain-days and 15.1mm/3 rain-days respectively as witnessed during the 1st dekad of September 2014. This observed weather pattern was quite delayed as it usual occurred in August hence August break (a case study?). The Inter Tropical Discontinuity (ITD)'s position remained above the country as it fluctuated between Latitudes 16 and 18°N. Generally, there was a reduction in rainfall activity across the country as below-normal rainfall was recorded over most stations in the country. Calabar station recorded the highest rainfall amount of 247.2mm in 10 rain-days, followed by Eket with 238.1mm in 9 rain-days and Owerri with 200.4mm in 9 rain-days while Ibadan recorded the least rainfall amount of 2.1mm in 3 rain-days. The country continued to experience low maximum temperatures with the highest value of 33°C as recorded over Nguru and Jos having the lowest value of 24.7°C. The major agricultural activities included: Harvest of new yams, cassava, sweet potatoes, groundnut, fresh vegetables and corn/maize in the South and Central and harvest of millet and earthen of sorghum in the extreme North.

### 1.0 RAINFALL PATTERN

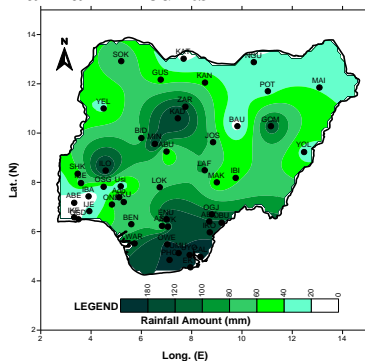
#### 1.1 Rainfall Anomaly (Deficit / Surplus)



**Fig.1: 1<sup>st</sup> DEKAD SEPT, RAINFALL ANOMALIES**

Fig.1 above shows the rainfall anomaly over the country and reveals that the country generally experienced normal to deficit rainfall anomalies. However, stations like Sokoto, Zaria, Kaduna, Minna and Gombe in the North; Ilorin in the Central and Ado-Ekiti, Owerri, Umuahia, Port-Harcourt, Uyo, Calabar and Eket in the South recorded surplus rainfall anomalies when compared with the normal (1981-2010).

#### Rainfall Amounts

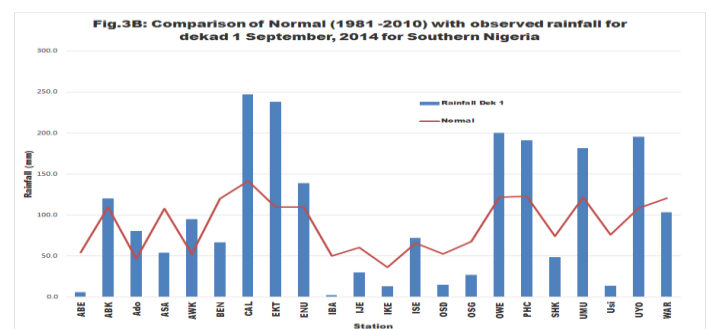
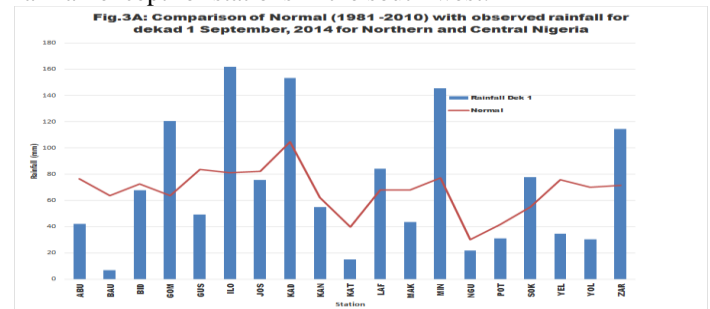


The actual observed rainfall amounts measured over the country for the 1<sup>st</sup> dekad of September are shown in Fig.2 above and reveal generally a reduction in rainfall amounts across the country when compared with the preceding dekad. However, stations like Calabar, Eket and Owerri recorded higher values than what they reported during the last dekad and their values were 247.2mm in 10 rain-

days, 238.1mm in 9 rain-days and 200.4mm in 9 rain-day respectively. All the stations in the south-west recorded poor rainfall values due to the effect of little-dry-season(LDS) (a.k.a. August-Break) such that Ibadan recorded as low as 2.1mm in 3 rain-days. Farmers in these areas usually use this period (LDS) to harvest and prepare for second cropping season.

#### 1.2 COMPARISON OF NORMAL WITH ACTUAL RAINFALL FOR THE 1ST DEKAD OF SEPTEMBER

Fig.3A and Fig.3B below depict 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 below normal except Sokoto, Kaduna, Zaria, Ilorin Minna and Gombe that recorded above-normal rainfall. In the South i.e. Fig.3B, revealed that most stations received above normal rainfall except for stations in the south-west.



### 1.3 Number of Rain Days.

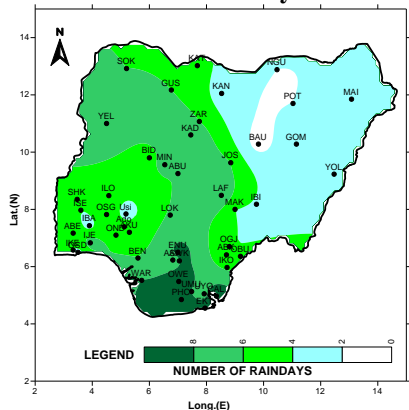


Fig.4: NUMBER OF RAIN DAYS

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 27 stations recorded 4 - 8 rain-days, 7 stations had 2 -3 rain-days and 5 stations reported 9 - 10 rain-days. The importance of spread of rains in agricultural activity cannot be overemphasized as it determines the wetness and dryness of soil that provides moisture to the field crops for better growth and development.

### 2.0 SOIL MOISTURE CONDITION

The stations soil moisture indices across the country for the dekad are shown in Fig. 5 below and indicate that the country had adequate moisture as most stations were under normal to surplus soil moisture conditions. However, few stations in north-east (Katsina, Nguru, Potiskum and Bauchi) and most stations in south-west had deficit soil moisture. This favoured farmers in the south-west as it paved way for second cropping season and harvest of crops and drying of proceeds.

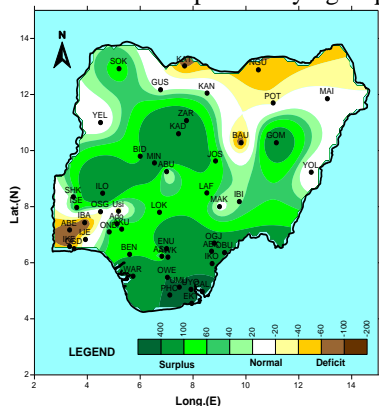


Fig.5: 1<sup>st</sup> DEKAD OF SEPTEMBER SOIL MOISTURE INDEX (SMI)

### 3.0 MAXIMUM TEMPERATURE TREND

#### 3.1 Maximum Temperature Anomaly

Colder-to-normal temperature conditions continued to prevail over the country as shown in Fig.6 below that depicts maximum temperature anomaly. However,

stations like Abakaliki, Usi-Ekiti and Shaki recorded warmer than normal temperature anomaly.

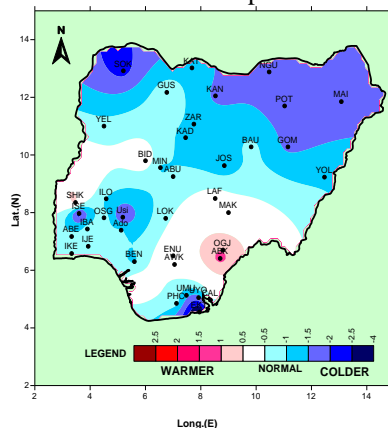


Fig.6: Maximum Temperature Anomaly.

#### 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 still maintained mean maximum temperatures range of 30°C to 33°C. Stations in the Central and southern states recorded mean maximum temperatures of 30°C and below except for Asaba, Enugu and Abakaliki that recorded temperatures above 30°C. Nguru and Jos stations continued to record the highest and lowest temperature values of 33°C and 24.7°C respectively.

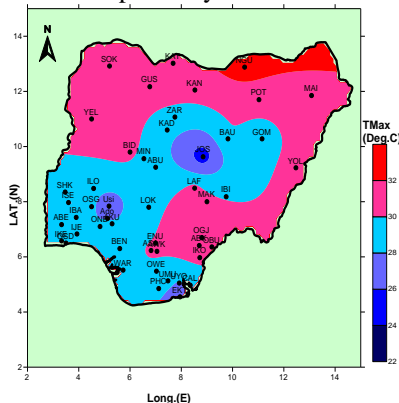
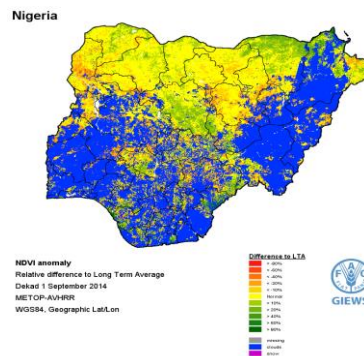


Fig. 7: Mean maximum Temperature



Normalized Difference Vegetative Index

## WEATHER/AGRICULTURAL OUTLOOK FOR DEKAD 2 (11 TO 20), OF SEPTEMBER, 2014

### 4.1 Weather Outlook

The Inter Tropical Discontinuity (ITD) still remains above the country as its position is likely to oscillate between latitudes 15deg. N and 18degN; a feature that still favours cloudy weather conditions with rains and occasional thunderstorms over the northern states of the country. The central states are expected to be cloudy with local thunderstorms/rains. The inland and coastal areas of the South are likely 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 17 °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 new yam, sweet potatoes, fresh corn and fresh vegetables while those of the North continued the preparation of nurseries for tomatoes and other vegetables and also harvesting of fresh maize, sweet potatoes, early millet, vegetables like carrots, cabbage, groundnut and fertilizer applications. 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	6	6	36	29.4	23.5	184.3	15.2
ABUJA	42	6	39.4	28.9	21.5	172.3	17
ABAK	120.4	4	43.4	31.3	23	191.2	18.1
ASAB	54.3	6	45.7	30.3	20.7	175	19.7
AWKA	94.8	8	39.7	30.2	23.2	187.4	16.7
BAUCHI	6.7	1	41.7	29.9	21.7	178.2	17.9
BENIN	66.8	6	35	28.7	23.1	179	14.9
BIDA	67.7	5	40.9	30.8	23.4	190.7	17.1
CALABAR	247.2	10	38	28.5	21.7	171.2	16.5
EKET	238.1	9	41.1	26.8	18.1	144.7	18.7
ENUGU	138.7	9	44.7	30.1	20.9	174.8	19.3
GOMBE	120.7	4	40.1	29	21.3	171.8	17.3
GUSAU	49.4	6	44.5	30.9	21.6	182.4	18.9
IBADAN	2.1	3	36.9	28.5	22.2	173.7	15.9
IJEBU	30	7	33.5	28.2	23	175.9	14.4
IKEJA	12.9	4	32.1	28.3	23.6	179.6	13.7
ILORIN	162.1	5	39.6	28.7	21.2	169.7	17.2
ISEYIN	72	4	37.5	27.8	21	164	16.5
JOS	75.8	6	39.2	24.7	15.8	122.7	18.7
KADUNA	153.5	8	41.1	28.7	19.9	162.9	18
KANO	54.9	3	44.2	30.8	21.7	182.1	18.8
KATSINA	14.9	5	45.8	31.5	21.8	186.8	19.3
LAFIA	84.2	8	41.6	30.6	22.9	187.3	17.5
MAKURDI	43.6	4	42.4	30.5	22.5	184.9	17.9
MINNA	145.4	7	37.7	29	22.2	175.9	16.2
NGURU	21.8	2	49.2	33	22.2	196	20.4
OSHODI	15.1	3	32.8	28.8	23.9	183.6	13.9
OSOGBO	26.8	6	36.9	28.3	21.9	171.3	16
OWERRI	200.4	10	39.2	29.4	22.4	179.3	16.8
PHC	191.3	9	36	28.7	22.8	177.9	15.4
POT	31	2	42.7	30.8	22.4	186.1	18
SHAKI	48.8	5	39.7	28.9	21.4	171.6	17.2
SOKOTO	77.9	6	42.6	30.9	22.4	186.6	17.9
UMUAHIA	181.9	8	36.4	28.8	22.8	178.1	15.6
UYO	195.8	7	33.3	27.8	22.5	171.6	14.4
WARRI	103.7	8	35.9	29.6	23.9	187.6	15.1
YELWA	34.7	8	41.5	31.1	23.1	190.7	17.4
YOLA	30.5	3	40.4	30.8	23.6	192.3	16.9
ZARIA	114.5	6	43.8	29.4	20	167	19.2
ADO-EKITI	80.8	5	37.2	28	21.3	166.4	16.3
USI-EKITI	14.1	3	37.9	26.9	19.4	151.3	17

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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