

## Agrometeorological Bulletin No.21, Dekad 3, July (21 –31) 2014

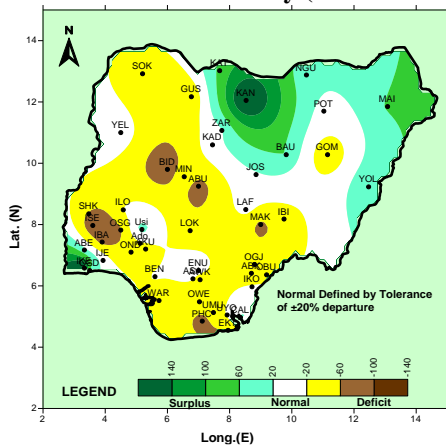
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### SUMMARY

The dekad under review witnessed persistent position of the Inter Tropical Discontinuity (ITD) remaining above the country and widespread rainfall activities across the country. However, below-normal rainfall was recorded across the country except Kano, Maiduguri, Nguru, Bauchi, Calabar and Lagos that recorded above normal rainfall. The stations at north-east had started recovering from prolong dry-spells. The highest rainfall amount was recorded at Kano with 213.9mm in 3 rain-days, followed by Calabar with 201.3mm in 10 rain-days and Bauchi with 164.8mm in 7 rain-day. Maximum temperature values continued to remain high especially in Maiduguri and environs. Harvest of new yam, sweet potatoes, fresh vegetables and corn/maize continued across the country; In the extreme North planting of early maturing Sorghum, earthen and fertilizer application were major activities during the dekad and would continue in the next dekad.

### 1.0 RAINFALL PARTERN

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



**Fig.1: 3<sup>RD</sup> DEKAD JULY RAINFALL ANOMALIES**

Rainfall anomaly over the country as shown in Fig.1 above shows that most parts of the country experienced deficit rainfall anomalies as compared to the normal (1981-2010). However, Kano, Katsina, Nguru, Yola and Maiduguri in the North and Abeokuta, Ikeja and Oshodi in the South recorded surplus rainfall anomalies.

#### 1.2 Rainfall Amounts

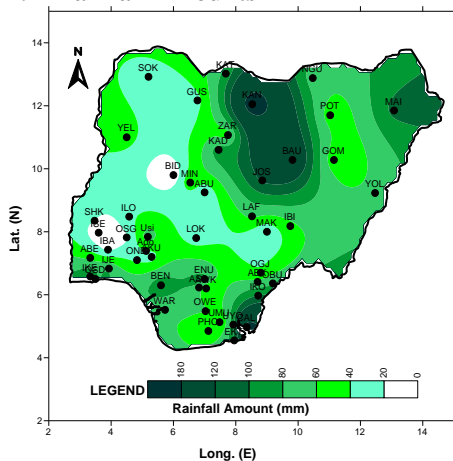


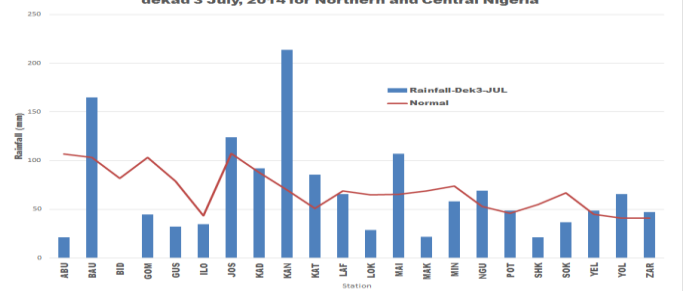
Fig.2 above shows the actual observed rainfall amount measured over the country for the 3<sup>rd</sup> dekad of July. Stations across the country recorded moderate to good rainfall except Bida, Ibadan, Ijebu-Ode, Iseyin and

Oshogbo that had reported less than 20mm. The highest rainfall amount was recorded at Kano with 213.9mm in 3 rain-days, followed by Calabar with 201.3mm in 10 rain-days and Bauchi with 164.8mm in 7 rain-day. These stations especially Kano and Bauchi with high values should monitor their farmlands to avoid possible flooding.

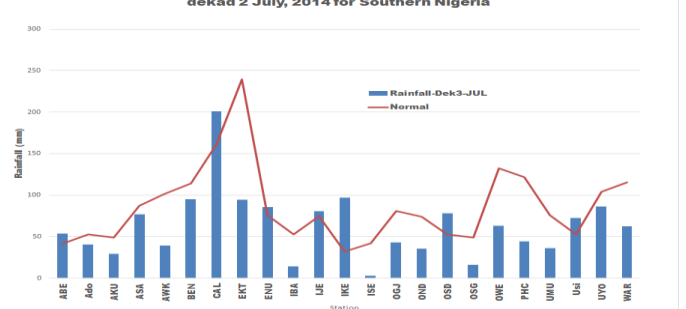
#### 1.3 COMPARISON OF NORMAL WITH ACTUAL RAINFALL FOR THE 3<sup>RD</sup> DEKAD OF JULY

The comparison of the actual rainfall amounts measured and normal during the dekad over the northern and southern parts of the country is shown below in Fig.3A and Fig.3B respectively. Above-normal condition was experienced over Kano, Maiduguri and Bauchi in the North, while Sokoto, Bida, Abuja, Lokoja and Makurdi recorded below normal rainfall (Fig.3A). Most stations in the South in Fig.3B recorded normal to below-normal rainfall except Abeokuta, Ikeja, Oshodi and Calabar that had above normal.

**Fig.3A: Comparison of Normal (1981-2010) with observed rainfall for dekad 3 July, 2014 for Northern and Central Nigeria**



**Fig.3B: Comparison of Normal (1981-2010) with observed rainfall for dekad 2 July, 2014 for Southern Nigeria**



### 1.4 Number of Rain Days.

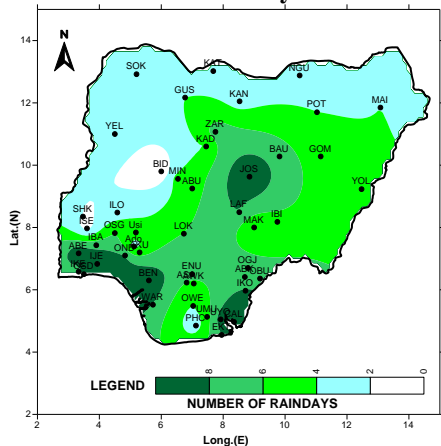


Fig.4: NUMBER OF RAIN DAYS

The Fig. 4 above is the distribution of rainfall across the country and it shows that most stations in the country recorded at least 2 rain-days except Bida that had 0 rain-day and Iseyin that had only 1 rain-day within the dekad; Stations in the South recorded as high as 6 to 10 rain-days. The distribution was adequate and good for rain-fed agriculture and it favoured crops growth and development in the country.

### 2.0 SOIL MOISTURE CONDITION

Fig. 5 below shows the soil moisture indices across the country in the 3<sup>rd</sup> dekad of July and it indicates that the country was under normal to surplus soil moisture conditions except the Bida, Iseyin, Gusau and Makurdi that experienced deficit soil moisture.

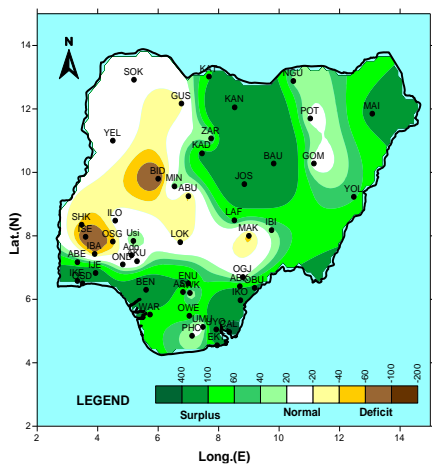


Fig.5: 3<sup>RD</sup> DEKAD OF JULY SOIL MOISTURE INDEX (SMI)

### 3.0 MAXIMUM TEMPERATURE TREND

#### 3.1 Maximum Temperature Anomaly

Fig.6 below shows the maximum temperature anomaly across the country. It indicates that the country, generally experienced normal to colder than normal maximum

temperatures with the exception of Gusau, Bida, Minna, Ondo and environs that had warmer than normal maximum temperatures.

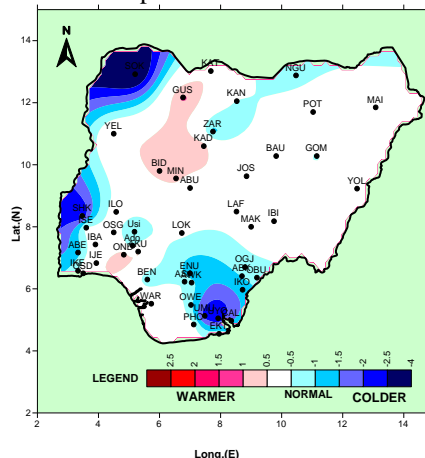


Fig.6: Maximum Temperature Anomaly.

#### 3.2 Maximum Temperature Values.

The actual mean maximum temperature distribution across the country is shown in Fig.7 below and it reveals that the extreme North of the country with exception of Sokoto and Gusau recorded maximum temperatures in the range of 32<sup>o</sup>C to 34<sup>o</sup>C. The Central states had ranges from 24<sup>o</sup>C to 31<sup>o</sup>C. Stations in the southern states recorded 31<sup>o</sup>C and below.

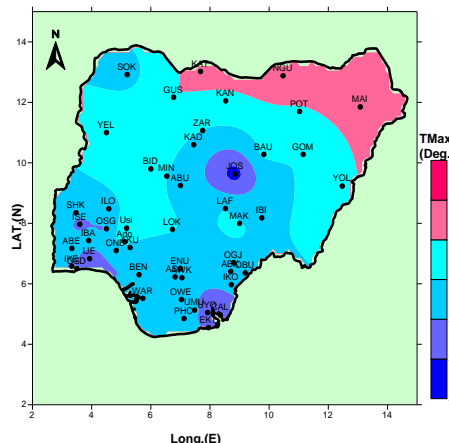


Fig. 7: Mean maximum Temperature

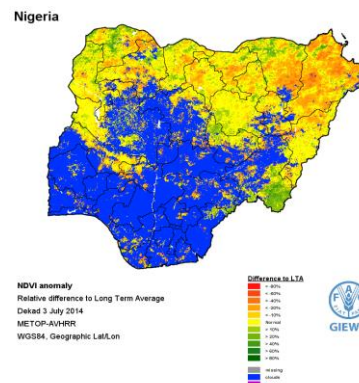


Fig.8: Normalized Difference Vegetative Index (NDVI)

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

### 4.1 Weather Outlook

The movement of Inter Tropical Discontinuity (ITD) is expected to fluctuate between latitudes 20deg. N and 22degN. This extreme position of ITD is expected to place the northern part of the country under cloudy weather conditions with thunderstorms/rains. The central part is expected to be cloudy with thunderstorm/rains while the inland and coastal areas are expected to be cloudy with rains, however, little-dry season (reduced rainfall activity) is expected to set in over the south-west.

The mean maximum temperatures in the North and the central will range from 25 °C to 31 °C, while the mean minimum temperature will be between 17 °C and 24 °C.

**TABLE OF AGROMETEOROLOGICAL DATA FOR THE DEKAD**

STATION	RAINFALL	RAINDAY	PET	TMAX	TMIN	GDD	RAD
ABEOK	54	10	32.9	28.5	23.8	199.4	12.7
ABUJA	21.1	5	40.5	29.3	21.9	193.5	15.8
AKURE	29.2	5	38.3	28.8	22.3	193.1	15
ASABA	77.1	6	42.3	30.1	22.5	201.4	16.3
AWKA	39.5	5	34.8	28.9	23.7	201.6	13.4
BAUCHI	164.8	7	43.8	30.4	22	200.5	16.9
BENIN	95.1	10	31.4	28	23.7	196.2	12.2
BIDA	0	0	41.2	31.2	24.1	216	15.5
CALABAR	201.3	10	32.4	27	22.1	182.4	12.9
EKET	94.2	8	46.7	27.9	17.3	160.6	19.3
ENUGU	85.6	8	40	28.4	21.2	184.6	15.9
GOMBE	44.7	5	43.3	30.1	21.9	197.8	16.7
GUSAU	32.2	4	46.8	32	22.5	212	17.8
IBADAN	14	7	35.8	28.5	22.9	194.8	13.9
IJEBU	80.8	10	30.4	27.4	23.3	191.1	11.9
IKEJA	96.7	7	32.2	27.9	23.3	193.3	12.6
ILORIN	34.9	3	38.4	29.1	22.6	196.8	14.9
ISEYIN	3	1	36.2	27.7	21.8	184.3	14.4
JOS	124	10	39.8	24.9	16.3	138.2	17.1
KADUNA	92.1	4	42	29.6	21.6	193.3	16.4
KANO	213.9	3	44.6	31.5	22.8	210.7	16.9
KATSINA	85.6	3	45.9	32.6	23.8	222.2	17.1
LAFIA	65.8	8	40	30	23.1	203.8	15.4
LOKOJA	28.7	6	38.6	30.1	23.8	208	14.7
MAIDU	106.8	4	47.2	32.9	23.4	221.6	17.6

In the inland and coastal areas, the mean maximum temperatures are expected to lie between 26 °C and 28 °C, while the mean minimum temperature will range from 20 °C to 23 °C.

### 4.2 Agricultural Activity/Outlook

Harvesting of new yam, sweet potatoes, fresh corn and fresh vegetables was the major activity in the central southern states and will continue. In the North, farmers were engaged in harvesting of fresh vegetables and sweet potatoes, earthen, fertilizer application and sowing of early maturing Sorghum and will continue. Farmers are advised to use the NiMet's 2014 Seasonal Rainfall Prediction (SRP) for good agricultural planning and increased yields and other relevant publications/weather information like the Drought and Flood Monitor bulletin.

MAKURDI	21.7	4	43.9	30.1	21.7	196.8	17.1
MINNA	58	5	40.5	30	22.8	202.4	15.6
NGURU	69.2	3	52.4	33.6	22	218.1	19.6
OGOJA	43.1	7	39.2	29.6	23.1	201.9	15.1
ONDO	35.6	8	36.9	28.8	22.8	195.7	14.4
OSHODI	78.3	9	31.4	28.1	23.9	198	12.2
OSOGBO	16.2	6	34.7	27.9	22.5	189.6	13.7
OWERRI	62.9	4	34.9	28.4	23.1	195.5	13.6
PHC	44.4	3	36.7	28.6	22.7	194.4	14.3
POT	48.5	4	44.4	31.7	23.3	214.8	16.8
SHAKI	21.3	2	38.1	28.4	21.9	188.5	15
SOKOTO	36.5	3	39.1	29.1	22.1	193.5	15.2
UMUAHIA	36.2	5	35.9	28.7	23.1	196.7	14
UYO	86.5	9	27.8	26.6	23	184.4	10.9
WARRI	62.7	8	35.2	29.2	23.9	204.2	13.5
YELWA	48.5	4	41.4	31.8	24.6	221.9	15.4
YOLA	65.5	4	41.9	31.8	24.7	222.6	15.6
ZARIA	47.2	7	43.1	30	21.7	196	16.8
ADO-EKITI	29	7	36.4	28.1	22.2	188.5	14.3
USI-EKITI	47.1	3	46.4	27.9	17.3	160.6	19.2

Note:

RAINFALL (mm)

PET (mm/day)

TMAX (°C)

TMIN (°C)

GDD (day)

RAD (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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