NATIONAL WEATHER FORECASTING AND CLIMATE RESEARCH CENTRE, BILL CLINTON DRIVE, NNAMDI AZIKIWE INTERNATIONAL AIRPORT, P.M.B. 615, GARKI, ABUJA, NIGERIA

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#### **SUMMARY**

The 3<sup>rd</sup> dekad of September, 2015 shows that the northwest and central states recorded deficit rainfall anomalies except Yelwa, Kano and Zaria that recorded surplus. The northeast recorded normal to deficit except Bauchi, Maiduguri and Yola that recorded surplus rainfall. The south recorded normal to surplus rainfall. A good spread of rainfall was recorded over the country except the north that are beginning to record less raindays an indication of rainfall cessation. The Inter Tropical Discontinuity (ITD) continues its equatorward movement and fluctuates between latitudes 14degN and 15degN. The highest rainfall amount for the dekad was recorded over Eket with 253.4mm in 10 rain-days, followed by Asaba with 205.8mm in 6 rain-days and Calabar with 182.2mm in 9 rain-days. The maximum temperature anomaly analysis shows warmer than normal temperature conditions over most part of the country except Bauchi, Ilorin and Eket that had colder than warmer conditions. The Soil moisture condition over the extreme North shows deficit except Bauchi that show surplus condition while the southern states shows surplus moisture condition. Preparation for dry season farming has commenced in the northern and central states.

#### 1.0 RAINFALL PATTERN

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

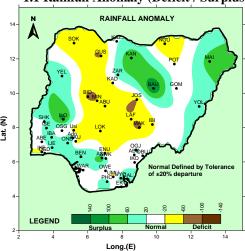


Fig.1: 3<sup>RD</sup> DEKAD SEPT, RAINFALL ANOMALIES The 3<sup>rd</sup> dekad of September, 2015 shows that the northwest and central states recorded deficit rainfall anomalies except Yelwa, Kano and Zaria that recorded surplus. The northeast recorded normal to deficit except Bauchi, Maiduguri and Yola that recorded surplus rainfall as shown in Fig.1 above. The south recorded normal to surplus rainfall.

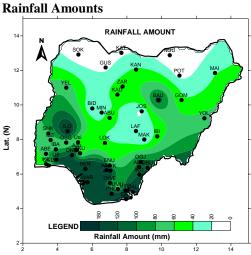


Fig.2: 3<sup>RD</sup> DEKAD SEPT, RAINFALL AMOUNT

The actual rainfall amount recorded for the 3<sup>rd</sup> dekad of September, 2015 as shown in Fig.2 above indicates a good spread of rainfall over the country except the extreme northern states. The highest rainfall amount for the dekad was recorded over Eket with 253.4mm in 10 rain-days, followed by Asaba with 205.8mm in 6 raindays and Calabar with 182.2mm in 9 rain-days.

#### 1.2 COMPARISON OF NORMAL WITH ACTUAL RAINFALL FOR THE 3<sup>RD</sup> DEKAD OF SEPTEMBER, 2015

The charts below shows the comparison of the actual rainfall amounts recorded against the Climatic normal during the dekad is shown in Fig.3A and Fig.3B below. The stations in the north recorded normal to below normal rainfall except Kano, Bauchi, Ilorin and Yelwa that recorded above normal rainfall. Stations in the south recorded normal rainfall to above normal rainfall except Akure and Ekiti that recorded below normal.

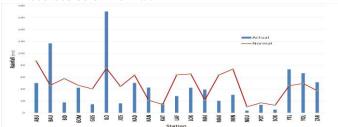


Fig.3A Comparison of Normal with Rainfall in the Northern part of Nigeria

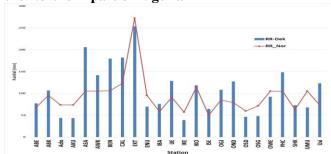


Fig.3A Comparison of Normal with Rainfall in the Southern part of Nigeria

#### 1.3 Number of Rain Days.

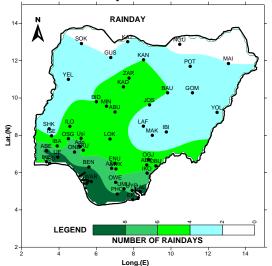


Fig.4: NUMBER OF RAIN DAYS

The rain-days distribution over the country for the 3<sup>rd</sup> dekad of September, 2015 is shown in *Fig.4* above and it indicates a good rainfall distribution in the south with every station recording at least 2 rain day. However, the stations in the north are beginning to record less raindays. This is an indication of probable end of season

#### 2.0 SOIL MOISTURE CONDITION

The Soil moisture condition over the extreme North shows deficit except Bauchi that show surplus condition. The central states shows normal to deficit soil moisture. The south shows surplus condition as shown in Fig.5 below

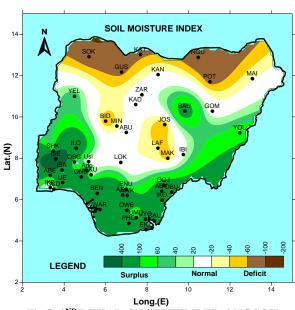


Fig.5: 2<sup>ND</sup> DEKAD OF SEPTEMBER, 2015 SOIL MOISTURE INDEX (SMI)

#### 3.0 MAXIMUM TEMPERATURE TREND

#### 3.1 Maximum Temperature Anomaly

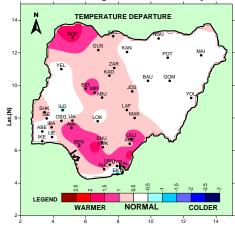


Fig.6: MAXIMUM TEMPERATURE ANOMALY.

The maximum temperature anomaly analysis for 3<sup>rd</sup> dekad of September, 2015 shows warmer than normal temperature conditions over most part of the country except Bauchi, Ilorin and Eket that shows colder than warmer conditions. The northwest recorded warmer temperature except Yelwa. The entire northwest recorded normal temperature. Warmer than normal temperature was recorded over the south except Eket.

#### 3.2 Maximum Temperature Values.

Fig 7 below shows the actual mean maximum temperature distribution across the country for the 3<sup>rd</sup> dekad of September, 2015. The extreme North recorded maximum temperature of between 32 and 35°C. Jos recorded temperature values below 30°C. The south recorded temperature value ranging from 27 to 32°C. Nguru recorded the highest maximum temperature value of 34.9°C while the lowest temperature was recorded over Jos with 26.9°C.

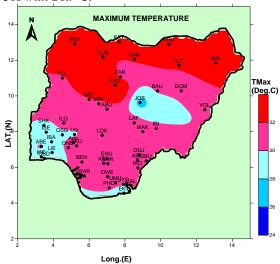


Fig. 7: MEAN MAXIMUM TEMPERATURE

# WEATHER/AGRICULTURAL OUTLOOK FOR DEKAD 1 (1 TO 10), OF OCTOBER, 2015.

#### 4.1 Weather Outlook

The Inter Tropical Discontinuity (ITD) has commence its equatorward movement and is likely to fluctuate between latitudes 13degN and 14degN. The northern part of the country is expected to have few clouds with little thundery activities; the central part is also expected to experience cloudy and thundery conditions. The inland and coastal areas of the South are likely to experience cloudy weather conditions with good rainfall.

The northern and the central states are expected to have mean maximum temperatures to range from  $26 \, ^{o}C$  to  $36^{o}C$ , while the mean minimum temperatures will range from  $17^{o}C$  to  $23^{o}C$ . The mean maximum temperatures over the inland and coastal areas of the South are

expected to be between  $27^{o}C$  and  $31^{o}C$ , while the mean minimum temperatures will range from  $18^{o}C$  to  $23^{o}C$ .

### 4.2 Agricultural Activity/Outlook

Preparation for dry season farming has commenced with broadcast of vegetable seeds in the nursery in the north. Transplanting of some vegetables continued. Harvest of maize new yam and vegetables will preoccupy most farmers in the south and central states planting of sorghum and cowpea will continue over the Northern states. Harvest in Maize, Potatoes and vegetables will preoccupy farmers in the central states. For more information please refer to the 2015 SRP and consult the nearest ADP or Ministry of Agriculture.

# TABLE OF AGROMETEOROLOGICAL DATA FOR THE DEKAD

STATION	RAINFALL	RAINDAY	PET	TMAX	TMIN	DD	RADIATION
ABEOK	77.4	9	39.1	30.1	23.5	188.3	16.4
ABAKALIK I	106.9	4	40.6	30.7	23.8	192.6	16.9
ABUJA	50	5	45.7	30.1	20.4	172.6	19.7
AKURE	43.5	5	42.9	30.1	21.9	179.5	18.3
ASABA	205.8	6	44.4	31.6	23.3	194.2	18.4
AWKA	141.8	6	41.9	30.9	23.4	191.1	17.5
BAUCHI	116.8	4	45.7	30.3	20.7	174.7	19.7
BENIN	179.9	8	41.3	30.6	23.3	189.6	17.3
BIDA	17.6	4	45.1	31.9	23.2	195.4	18.7
CALABAR	182.2	9	42.1	30.3	22.7	185	17.8
EKET	253.4	10	42.9	27.3	18.3	147.9	19.4
ENUGU	69.5	6	43.2	31.2	23.3	192.6	18
GOMBE	42.3	4	43.7	30.4	21.9	181.5	18.6
GUSAU	14.3	2	47	32.1	22.4	192.3	19.6
IBADAN	76.1	4	41.8	29.9	22.1	180.2	17.8
IJEBU	128.5	10	36.5	29.1	23.2	181.4	15.5
IKEJA	38.8	5	37.5	29.7	23.5	186	15.8
IKOM	118.4	7	45.5	31.9	23.3	196.2	18.9
ILORIN	170.4	5	44.6	30.7	22.0	183.5	18.9
ISEYIN	64.6	4	40.2	29.0	21.6	172.6	17.4
JOS	16	4	44.4	26.9	16.5	136.9	20.5
KADUNA	50.2	5	47.4	30.7	20.3	174.9	20.4
KANO	42.4	4	47.3	32.4	22.6	195	19.6
KATSINA	16	2	50	33.5	22.8	201.6	20.5
LAFIA	28.2	3	44.6	31.3	22.7	189.9	18.7
LOKOJA	42.3	5	42.6	31.2	23.5	193.3	17.7
MAIDU	39.2	2	50.3	34.0	23.5	207.1	20.4

KIRE	DEKAD						
MAKURDI	20.1	2	44.1	31.3	22.9	191.1	18.4
MINNA	30.2	6	44.1	31.2	22.8	189.7	18.5
NGURU	3.7	1	58.4	34.9	20.0	194.2	24.3
OGOJA	108.5	5	44.9	32.0	23.6	197.6	18.6
ONDO	127.6	6	42.1	30.3	22.5	184.1	17.8
OSHODI	46.4	7	37	29.8	23.9	188.5	15.5
OSOGBO	48.2	6	42.6	29.6	21.5	175.6	18.3
OWERRI	92.4	6	44.7	31.2	22.6	189.1	18.8
PHC	148.3	8	40.4	30.5	23.6	190.6	16.9
POT	13.4	3	47	32.4	22.8	195.7	19.5
SHAKI	73.0	3	42.2	29.7	21.7	176.8	18.1
sokoto	5.4	2	51.2	34.6	23.9	212.8	20.6
UMUAHIA	68	8	42.1	31.1	23.7	194	17.5
UYO	127.7	7	40.7	30.4	23.2	188.1	17.1
WARRI	123	10	38.9	30.5	24.1	193.2	16.2
YELWA	73.3	4	45.7	31.8	22.6	192.1	19.1
YOLA	66.7	3	36.7	30.2	23.5	188.1	15.3
ZARIA	51.3	5	47.6	30.9	20.5	176.7	20.4
USI-EKITI	123.1	8	48.6	30.5	19.7	171.3	21.1
ADO-EKITI	43.8	5	41.9	29.8	21.9	178.2	17.9

Note:

Rainfall (mm)

PET = Potential Evapotranspiration (mm/decade)

TMAX = Maximum Temperature (°C)

TMIN = Minimum Temperature (°C)

GDD = Growing Degree Day (day)

 $RAD = Radiation (MJ/m^2/day)$ 

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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