



## NIGERIAN METEOROLOGICAL AGENCY

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 dekad under review indicated that northern and central states had no rains except few stations in the central states like Lokoja, Makurdi and Horin that recorded rainfall while southern part continued to record a decline in rainfall activity. The ITD continued its southward movement with its position fluctuated between latitude  $9^0$ N to  $10.5^0$ N. The highest rainfall amount was recorded over Eket with 205.4mm in 6 rain-days, followed by Oshodi with 113.5mm in 4 rain-days and Ogoja with 103mm in 2 rain-days. Soil moisture conditions in the South varied from neutral to surplus whereas in the North and Central deficits soil moisture were recorded. The dekad recorded increased maximum temperatures across the country with the highest value of  $38.2^0$ C at Sokoto while Eket had the lowest value of  $28^0$ C. Preparation for dry season farming remained a major activity over the North with minor in drying of farm produce while harvesting of yam, cocoa-yam from the first season and maize from the second season took place in the Southern part of the country and would continue in the next dekad.

#### 1.0 RAINFALL PATTERN



#### Fig.1: 1ST DEKAD NOV, RAINFALL ANOMALIES

The *Fig.1* above shows rainfall anomalies over the country and it indicates that the southern part of the country had surplus rainfall anomaly while the North and most of the central states had normal to deficit rainfall anomalies due to absence of rains.

#### **Rainfall Amounts**



Actual rainfall amount observed for the dekad is shown in *Fig.2* above and indicated that the North and most parts of the central had no rains except few stations like Lokoja, Makurdi and Ilorin in the central states that recorded rainfall. *The highest rainfall amount was recorded over Eket with 205.4mm in 6 rain-days, followed by Oshodi with 113.5mm in 4 rain-days and* 

*Ogoja with 103mm in 2 rain-days.* Farmers in the South that used the second season rains for second cropping were favoured with such rains while some had commenced harvesting of the crops.

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

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 is shown in *Fig.3A and Fig.3B* below respectively. In the North (*Fig.3A*), most stations recorded normal to below normal rainfall except Lokoja, Makurdi and Ilorin that recorded above-normal rainfall. In the South, *Fig.3B* revealed that most stations recorded normal to above normal rainfall. The South still recorded moderate to good rainfall.





FIG. 3B: COMPARISON OF NORMAL WITH OBSERVED RAINFALL OF DEKAD1 NOVEMBER 2014: FOR SOUTHERN STATES OF NIGERIA.

#### 1.3 Number of Rain Days.



Fig.4: NUMBER OF RAIN DAYS

*Fig.4* above shows the number of distribution of rainfall over the country and it indicates that the North and most of the central states recorded zero (0) number of raindays. The stations in the South recorded 3 to 5 rain-days that still favoured field crops.

#### 2.0 SOIL MOISTURE CONDITION

Soil moisture indices across the country for the dekad are shown in *Fig.5* below and it reveals that the central and northern parts of the country had deficit soil moisture conditions indicating the end of rainy season in the area. The southern part had neutral to surplus soil moisture indices that favoured development of maturing crops.



Fig.5: 1ST DEKAD OF NOVEMBER SOIL MOISTURE INDEX (SMI)

#### **3.0 MAXIMUM TEMPERATURE TREND 3.1 Maximum Temperature Anomaly**

Maximum temperatures anomalies over the country are shown in *Fig.6* below and it indicates that the northern part of the country had normal to warmer than normal maximum temperature anomaly, while the central and southern parts had normal to colder than normal temperature anomalies.



Fig.6: Maximum Temperature Anomaly.

#### **3.2 Maximum Temperature Values.**

*Fig.7* below highlights the actual mean maximum temperature distribution across the country and indicates that most parts of the country had mean maximum temperatures above  $30^{\circ}C$  except Jos and Eket. The extreme North had mean maximum temperature above  $34^{\circ}C$ . Sokoto recorded the highest temperature value of  $38.5^{\circ}C$  while Eket station had the lowest value of  $28.7^{\circ}C$ .



Fig. 7: Mean maximum Temperature

#### WEATHER/AGRICULTURAL OUTLOOK FOR DEKAD 2 (11 TO 20), OF NOVEMBER, 2014 4.1 Weather Outlook

The Inter Tropical Discontinuity (ITD)'s position is likely to fluctuate between latitudes 9deg. N and 10.5degN. The northern part of the country is expected to be sunny and hazy. The central states are expected to be partly cloudy and sunny. 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  $32 \ ^{o}C - 38 \ ^{o}C$ , while the mean minimum temperatures will lie between  $18 \ ^{o}C$  and  $20 \ ^{o}C$ . The mean maximum temperatures over the inland and coastal areas of the South are expected to

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range from  $30^{\circ}C$  to  $32^{\circ}C$ , while the mean minimum temperatures will be between  $20^{\circ}C$  and  $22^{\circ}C$ .

#### 4.2 Agricultural Activity/Outlook

The major activity in the northern states was the preparation for the dry season farming that is expected to continue in the next dekad; the preparation involved land clearing, seedlings preparation and making all the necessary arrangement for the season. In the southern part, harvesting of yam, cocoa-yam of the first cropping and maize in second season took place; Same activity is expected to continue in the next dekad.

19.4

27.3 18.9 17.4 19 18.4 18.5 27.1 18.6 25 17.7

22.6 24.1 18.8 21.9

TABLE OF	AGROM	ETEC	OROL	OGICA	L DA	ATA	FOR	THE	DEKA	١D

STATION	RAINFALL	RAINDAY	PET	тмах	TMIN	GDD	RAD	MAKURDI	26.4	3	47	32.6	23.0	197.6	
AREOKUTA	36.5	5	44.1	31.9	23.4	196.3	18.2	MINNA	-	-	-	-	-	-	
ABLORDIA	3.9	1	48.5	32.5	22.0	192.4	20.2	MINIA	0	0	66.4	38.0	18.4	201.7	
ABUJA	93	1	51.2	34.5	23.7	210.8	20.7	NGURU	103	2	46.3	32.9	23.9	203.9	
ABAK	44.5	4	45.3	31.0	21.5	182.4	19.2	OGOJA	113.5	4	41.2	30.5	22.8	186.8	
AKURE	84.1	4	46.6	32.8	23.5	201.2	19.1	OSHODI	64.2	5	44.9	30.9	21.6	182.6	
AWKA	04.1	-	54.0	24.0	20.0	20112	22.4	OSOGBO	70.7	0	44.4	00.0	21.0	102.0	
BAUCHI	0	0	54.8	34.9	21.9	204	22.4	OWERRI	12.1	4	44.1	31.4	22.1	190.6	
BENIN	95.5	5	42.1	31.3	23.4	193.3	17.5	РНС	91.6	5	44.4	31.5	22.8	191.7	
BIDA	0	0	50.3	34.3	23.6	209.7	20.4	POT	0	0	65.2	37.2	18.1	196.4	
CALABAR	53.4	5	43	30.5	22.2	183.5	18.2	SHAKI	9	2	44.3	31.2	22.1	186.6	
EVET	205.4	6	34.4	28.7	23.3	180	14.7	SOKOTO	0	0	63.2	38.5	22.0	222.3	
ENEI	50.2	3	44.4	31.9	23.3	196.2	18.4	SOKOIO	64	5	42.1	30.7	22.8	187.6	
ENUGU	0	0	55.3	36.1	23.4	217.5	22.1	UYO	-	-	-	-	-	-	
GOMBE	0	0	58.9	36.1	20.8	204.6	24.1	WARRI	-	-	-	-	-	-	
GUSAU								YELWA	0	0	57 A	37.2	24.1	226.4	
IBADAN	-	-	-	-	-	-	-	YOLA	0	0	57.4	37.2	24.1	220.4	
IJEBU	/1.3	/	41.6	30.7	22.8	187.8	17.5	ZARIA	0	0	0	34.3	19.1	187.2	
IKEJA	99.3	4	XX	30.9	XX	XX	XX	ADO-EKITI	29.5	5	44.1	30.6	21.6	180.9	
ILORIN	26.9	3	46.8	31.8	21.8	188	19.7	USI-EKITI	58.7	2	50.1	30.8	18.6	166.9	
ISEVIN	54.6	2	41.7	29.9	21.7	178	17.8								
IJETIN	0	0	49.7	28.8	15.3	140.6	22.9	Note:							
JOS	0	0	56.3	34.0	19.2	186	23.8	Rainfall (mm) PET = Potential Evapotranspiration (mm/day) TMAX = Maximum Temperature ( $^{\circ}C$ ) TMIN = Minimum Temperature ( $^{\circ}C$ )							
KADUNA	0	0	57.6	36.0	20.4	201.8	23.9								
KANO	0	0	61.1	36.8	20.4	206	24.9								
KATSINA	0		54.4	00.0	20.4	200	27.3	GDD = Growing Degree Day (day) $RAD = Radiation (MJ/m2/day)$							
LAFIA	2.2	1	51.4	34.7	23.7	212.1	20.7								
LOKOJA	46.5	3	47.5	33.1	23.4	202.3	19.4								

#### 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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