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NiMet
Nigerian Meteorological Agency

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AGROMETEOROLOGICAL BULLETIN

A PUBLICATION OF THE NIGERIAN METEOROLOGICAL AGENCY

1st QUARTER 2024

Agrometeorological Bulletin

1st Quarter 2024

A publication of Nigerian Meteorological Agency

Our Mandate

To provide for the regulation of meteorology and for related matters

Our Vision

To be a World Class provider of Weather and Climate services for safety and sustainable national socio-economic development.

Our Mission

To observe Nigerian Weather and Climate and provide Meteorological, Hydrological, and Oceanographic Services in support of National needs and International Obligations

Who We Serve

Aviation, Agriculture, Building and Construction, Commerce, Health, Hydrology, Marine, Oil and Gas, Sports, Social Events, Power and Energy, Telecommunication and more...

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EDITORIAL

FORWARD

Climate change has increased the frequency of severe weather events in recent years, resulting in extreme events such as storms, extended dry spells, heat waves, and floods in parts of Nigeria. It has been established that climate and weather information are critical for both short- and long-term agricultural decision-making. Understanding the need to assist farming communities and other Agro-allied ventures in developing resilience to climate and weather variability, the Nigerian Meteorological Agency (NiMet) was established in 2003 by an Act of the National Assembly and charged with providing timely and accurate weather forecasts for all sectors of the economy, including agriculture, to cope with changes in the climate.

To successfully fulfil this mandate, the Agency produces the Agrometeorological Bulletin, which is issued every dekad (10-day period) to provide farmers with weather forecasts and advisories, as well as a unique set of information that can significantly improve agricultural productivity for optimum yield and economic benefit. The information contained in the Bulletin has the potential to improve Nigeria's food security
The Bulletin contains summaries of current weather patterns, climatological data, and calculated weather parameters with agricultural importance. It also includes a weather outlook/forecast for the upcoming dekad. Furthermore, the bulletin serves as an early warning tool, assisting farmers in developing appropriate adaptation and mitigation plans.

Among the additional meteorological elements that are estimated are rainfall and temperature anomalies, soil moisture index, temperature humidity index, potential evapotranspiration, growing degree days, and solar radiation. For the convenience of reference and comprehension of the interactions between various agricultural activities and climate patterns and diverse agricultural activities over time, the Agromet bulletins are often produced quarterly.

For that reason, the Dekadal bulletin collection for January to March 2024 is presented in this edition of the publication. Without a doubt, it will be helpful to researchers nationwide as well as farmers and other stakeholders in the agricultural value chain.

NiMet encourages stakeholders' feedback on this publication. This will help the Agency strengthen its ability to fulfil the specific demands of end customers.

Professor Charles Anosike
Director General/CEO NiMet & Permanent Representative of Nigeria with WMO

1st dekad (1-10) of January 2024

Summary of the Agrometeorological Bulletin for the dekad

The Agro-meteorological information for the first dekad of January 2024 is presented in this publication. The summary of the rainfall and temperature outlook is presented hereunder.

- During the dekad, the highest observed rainfall amount of 76.2mm was recorded in Abeokuta (Ogun State). The number of rain days ranged from one (1) to three (3).
- Negative rainfall anomalies (i.e., below normal rainfall) were experienced in Taraba, Benue, Cross Rivers, Ekiti, Osun, and Oyo states, and the inland cities of the Southeast. In contrast, positive anomalies (i.e., above normal rainfall) were recorded in Ogun, Lagos, Ondo, parts of Edo, Delta, and Bayelsa states.
- Below-normal soil moisture conditions were experienced in the southern states, as well as parts of Benue, Kogi, and Kwara states.
- The lowest and highest maximum (daytime) temperatures of 30.3^{0}C and 37.8^{0}C were recorded over the Plateau and Taraba states, respectively.
- The nighttime temperatures during the first dekad of January 2024 ranged from 9.4^{0}C (in Nasarawa State) to 25.6°C (in Oyo State).
- The Inter-Tropical Discontinuity (ITD) is expected to traverse between Lat 7.1^{0}N and 7.2^{0}N during the second dekad of January 2024.

- Further weather information can be found on the NiMet website at www.nimet.gov.ng, the NiMet App (available on Google Play and Apple Store), or the nearest NiMet offices in all the states in the country and the FCT.

1.0 Rainfall Pattern

1.1 Rainfall Amount

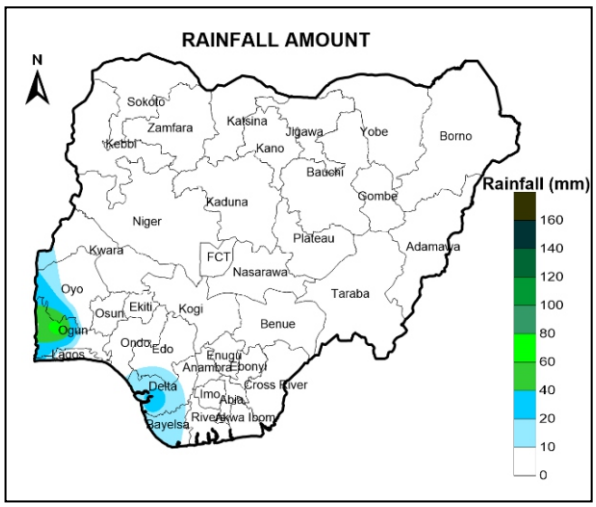

Figure 1: Rainfall Amounts across Nigeria in the First Dekad of January 2024

The rainfall amounts across the country for the first dekad of January 2024 are shown in Figure 1. The rainfall amounts recorded across the country during the dekad ranged from 3.8 mm in Ondo (Ondo State) to 76.2 mm in Abeokuta (Ogun State). South-westerly winds which carry moisture into Nigeria dominated the coastal and inland cities of the south during the dekad.

1.2 Rainfall Departure from Normal

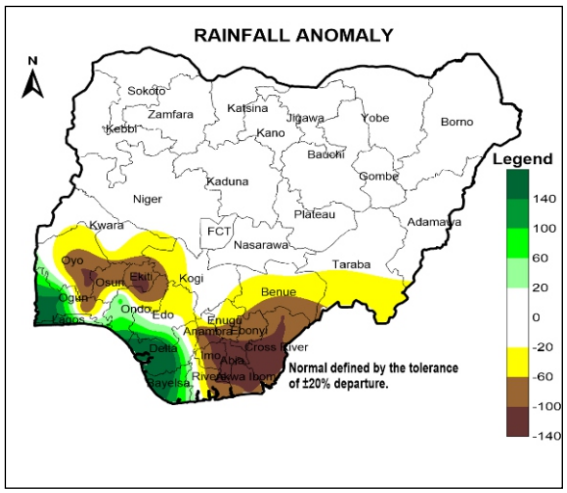

Figure 2: Rainfall Departure from the 30-year Average for the First Dekad of January 2024.

Figure 2 shows the deviation of the amount of rainfall from the normal (1991-2020) in the first dekad of 2024.
Normal to below-normal rainfall (i.e., negative anomalies) was experienced in most parts of Nigeria except in Lagos, Delta, Bayelsa, parts of Ogun, Edo, and Ondo states where above-normal rainfall (i.e., positive anomalies) were observed.

1.3 Comparison of Actual Rainfall Amount with the Normal (1991-2020) for the First Dekad of January 2024

The comparison of the actual (i.e., observed) rainfall amounts recorded against the long-term average (1991-2020) for the first dekad of January is shown in Figures 3A (for cities in the north) and Figure 3B (for cities in the south).

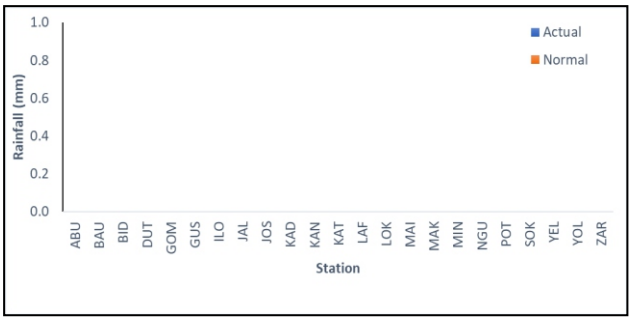

Figure 3A: Comparison of Observed Rainfall Amounts with the Normal for the Northern part of Nigeria in the First Dekad of January 2024.

Figure 3A shows that no rainfall was recorded in the northern parts of Nigeria during the first dekad of January 2024, and this is a similar scenario to the long-term average for the period under review.

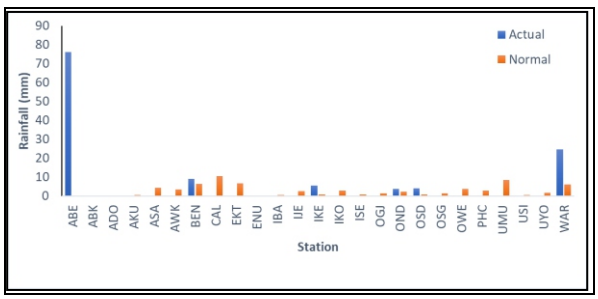

Figure 3B: Comparison of Observed Rainfall Amounts with the Normal for the Southern part of Nigeria in the First Dekad of January 2024.

As shown in Figure 3B, the southern cities recorded below-normal rainfall amounts except for Abeokuta (Ogun State), Benin (Edo State), Ikeja and Oshodi (Lagos State), Warri (Delta State), and Ondo (Ondo State), which had above-normal (30-year average) rainfall amount for the period under review.

1.4 Number of Rain Days

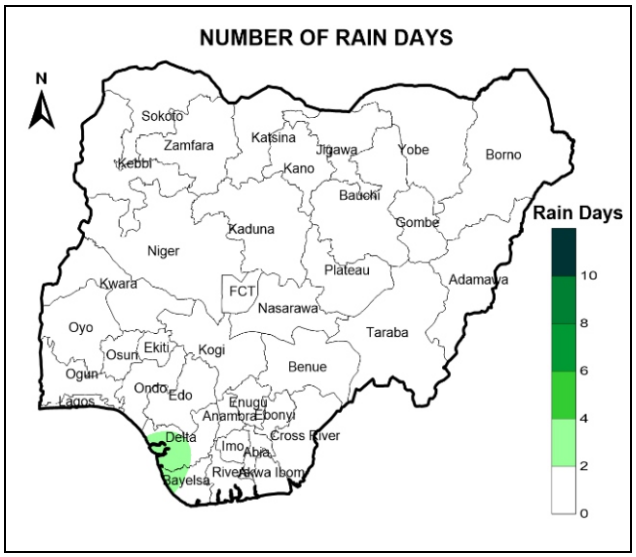

Figure 4: Number of Rain Days in the First Dekad of January 2024.

The distribution of the number of rain days across Nigeria for the first dekad of January 2024 is shown in Figure 4. The number of rain days throughout the dekad ranged from one (1) to three (3).
The highest number of rain days during the dekad was recorded in Warri (Delta State).

2.0 Soil Moisture Conditions in the First Dekad of January 2024

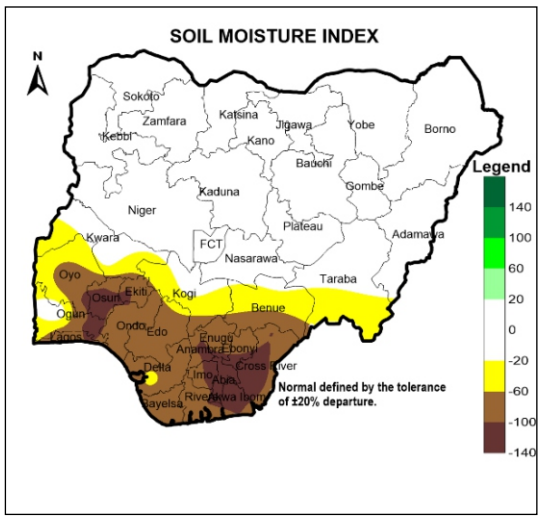

Figure 5: Soil Moisture Index (SMI) During the First Dekad of January 2024.

Figure 5 depicts the soil moisture conditions in various parts of Nigeria during the first dekad of January 2024. Below-normal soil moisture conditions were experienced in the southern states, as well as in parts of Benue, Kogi, and Kwara states.

3.0 Temperature Distribution

3.1 Maximum (Daytime) Temperature Distribution

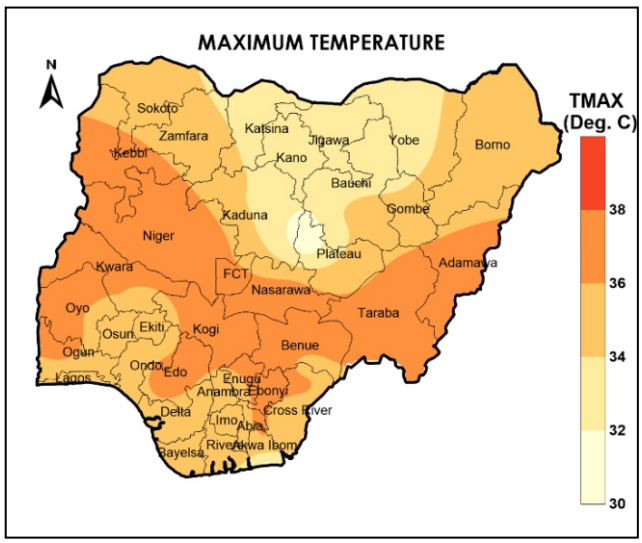

Figure 6: Maximum Temperatures Across Nigeria in the First Dekad of January 2024.

The daytime temperatures across Nigeria during the First dekad of January 2024 are shown in Figure 6.

The maximum temperatures ranged from 30.3^{0}C to 37.8^{0}C. The highest daytime temperature was observed in Jalingo (Taraba State), while the lowest was observed in Jos (Plateau State).

3.2 Maximum Temperature Departure from the Normal (30-year Average)

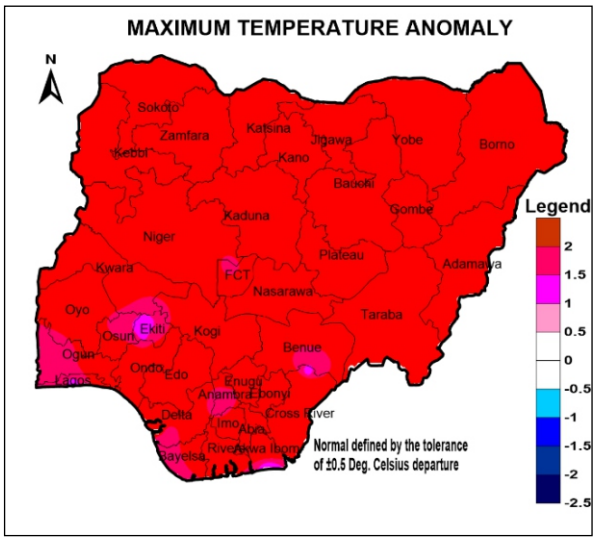

Figure 7: Maximum Temperature Anomaly Across Nigeria in the First Dekad of January 2024.

The maximum temperature anomaly for the first dekad of January 2024 is shown in Figure 7.
During the period under review, the entire country experienced warmer-than-normal daytime temperatures.

3.3 Minimum (Nighttime) Temperature Distribution

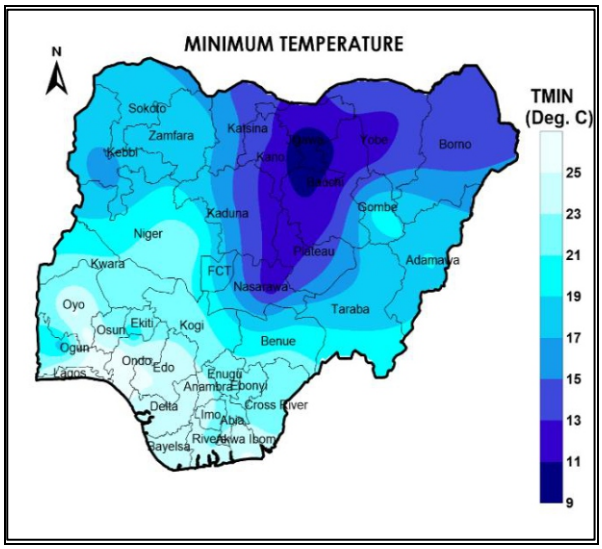

Figure 8: Minimum Temperatures Across Nigeria in the First Dekad of January 2024.

The minimum (nighttime) temperatures across Nigeria for the First dekad of January 2024 are depicted in Figure 8.
The minimum temperatures ranged from 9.4^{0}C to 25.6^{0}C.
Ibadan (Oyo State) recorded the highest nighttime temperature of 25.6°C while Dutse (Jigawa State) recorded the lowest nighttime temperature of 9.4°C.

3.4 Minimum Temperature Departure from the Normal (30-year Average)

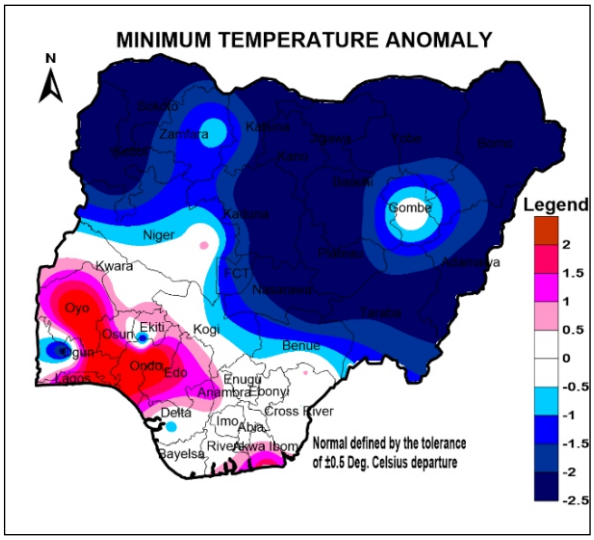

Figure 9: Minimum Temperature Anomaly Across Nigeria in the First Dekad of January 2024.

The minimum (night-time) temperature anomaly across Nigeria during the first dekad of January 2024 is shown in Figure 9. Most parts of Nigeria experienced normal to lower-than-normal nighttime temperatures except parts of Oyo, Ogun, Osun, Ekiti, Ondo, Lagos, Edo, Delta, Anambra, Rivers and Akwa Ibom states that experienced higher-than-normal nighttime temperatures (i.e., positive minimum temperature anomalies).

3.5 Temperature Humidity Index (THI)

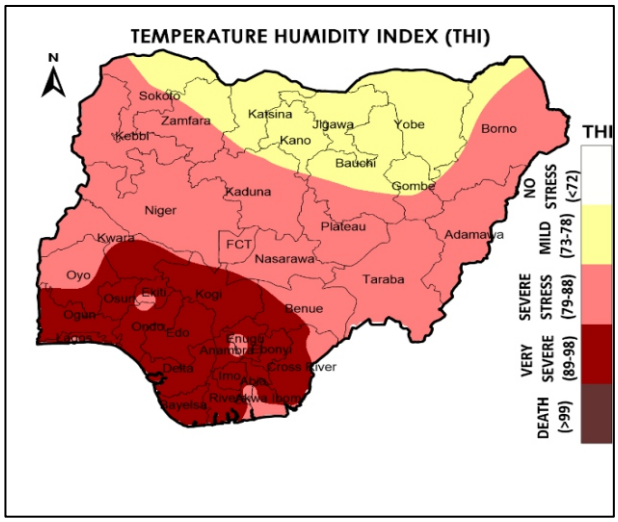

Figure 10 Temperature Humidity Index in the First Dekad of January 2024

The THI across Nigeria for the first dekad of January 2024 is presented in Figure 10. Mild conditions were experienced over the north, moderate conditions across the central states with severe conditions in the south. Livestock in the south will be under stress conditions. This discomfort can be alleviated by reducing stocking density, increasing water availability as well as feeding animals in the early hours of the morning. Additionally, livestock farmers should ensure adequate ventilation and air movement to animals housed indoors, provide shade for free-range animals, and sprinkler systems for cooling livestock. These considerations can help reduce the danger of heat stress on livestock and improve feeding efficiencies during the next dekad.

4.0 Weather/Agricultural Outlook for the 2nd Dekad (11-20) of January 2024

4.1 Weather Outlook

In the second dekad of January 2024, the Inter-Tropical Discontinuity (ITD) is projected to be at an average position of 7.2^{0}N. Dust haze is anticipated across the North and Central parts of the country with localized visibility of less than 1000 meters expected in the extreme northern states. Hazy conditions in the morning hours with partly cloudy skies in the afternoons are expected in the inland cities of the South and the coastal regions of the country. However, isolated thunderstorms are expected over parts of the coastal cities in the afternoon periods.

4.2 Advisory for the Second Dekad of January 2024

- Farmers are advised to provide clean and adequate drinking water for livestock because of the gradual increase in daytime temperatures across the country.
- In line with the forecast, the adoption of appropriate safety measures to protect farmers from exposure to dust particles suspended in the atmosphere is advised. The use of facemasks can be adopted.
- Farmers who suffer from respiratory disorders (such as asthma) and other illnesses are advised to exercise caution in the current weather conditions.
- It is recommended that poultry farmers in the north and central states provide their young chicks with adequate warmth, particularly at night when the temperatures are low.
- Fish farmers in the north should also pay close attention to the cold weather at night and reduce the amount of feed where necessary to avoid excess feed residue in water which could lead to eutrophication.
- Pond water levels should be monitored due to the high rate of evaporation of water during this period.

- Given that the dry season reduces the amount of easily accessible fodder, feeding for livestock kept on the free range should be augmented.
- It is recommended that farmers and other relevant stakeholders in the agricultural sector collaborate closely with NiMet to get additional insights into the weather changes and their potential impacts on the agricultural value chain.
- Further weather information can be accessed on the NiMet website, www.nimet.gov.ng, the NiMet weather App (available on Google Play and Apple Store), or NiMet offices in the 36 states of Nigeria and the FCT.

4.3 Agricultural Activities

- Vegetables, sugar cane, green beans, carrots, and tuber crops are some of the most regularly cultivated crops during this period.

2nd dekad (11-20) of January 2024

Summary of the Agrometeorological Bulletin for the dekad

The Agro-meteorological information for the Second dekad of January 2024 is presented in this publication. The summary of the rainfall and temperature outlook including the Temperature Humidity Index (THI) is presented hereunder.

- The highest observed rainfall amount of 5.6 mm was recorded in Ikeja (Lagos State).
- Normal to below-normal rainfall was experienced across the country.
- Below-normal soil moisture conditions were recorded in the southern states, and parts of Benue, Kogi, and Kwara states.
- The highest and lowest maximum (daytime) temperatures of 36.7^{0}C and 28.9^{0}C were recorded over Ebonyi and Plateau states respectively.
- Warmer-than-normal daytime temperatures were observed across the country.
- Nighttime temperatures ranged from 7.9^{0}C in Jigawa State to 25.7°C in Lagos State.
- The northern states including parts of Plateau state had mild THI, however, the central and most parts of the southern states had moderate THI conditions. Ogun, Lagos, Delta, Bayelsa, parts of Edo, and Rivers states had severe THI conditions.
- The Inter-Tropical Discontinuity (ITD) is projected to be at an average position of 7.0^{0}N during the second dekad of January 2024.
- Further weather information can be found on the NiMet website at www.nimet.gov.ng, the NiMet App (available on Google Play and Apple Store), or the nearest NiMet offices in all the states of the federation and the FCT.

1.0 Rainfall Pattern

1.1 Rainfall Amount

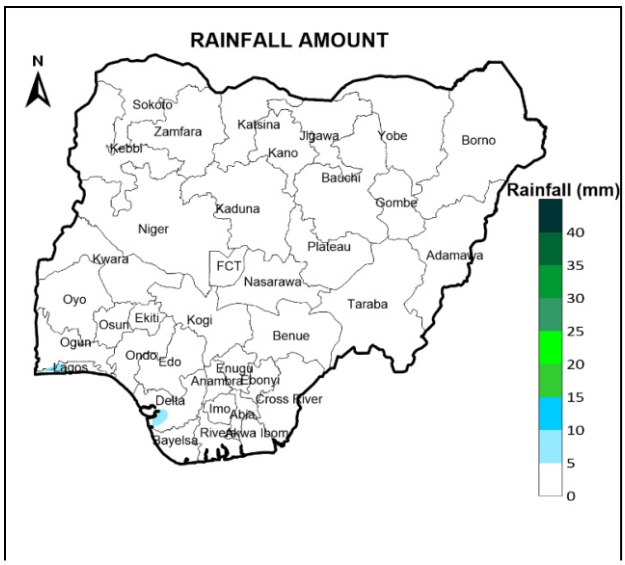

Figure 5: Rainfall Amounts across Nigeria in the Second Dekad of January 2024.

The rainfall amounts recorded for the Second dekad of January 2024 across the country ranged from 5.4 mm in Warri (Delta State) to 5.6 mm in Ikeja (Lagos State).

1.2 Rainfall Departure from Normal

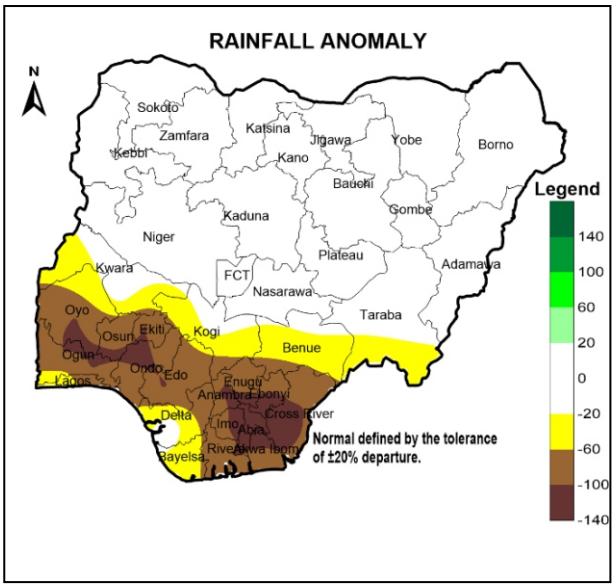

Figure 6: Rainfall Departure from the 30-year Average for the Second Dekad of January 2024.

The deviation of the amount of rainfall from the normal (1991-2020) for the second dekad of January 2024 is shown in Figure 2.

The entire country experienced normal to below-normal rainfall.

1.3 Comparison of Actual Rainfall Amount with the Normal (1991-2020) for the Second Dekad of January 2024

The comparison of the actual (i.e., observed) rainfall amounts recorded against the long-term average (1991-2020) for the Second dekad of January is shown in Figure 3A (for cities in the north) and Figure 3B (for cities in the south).

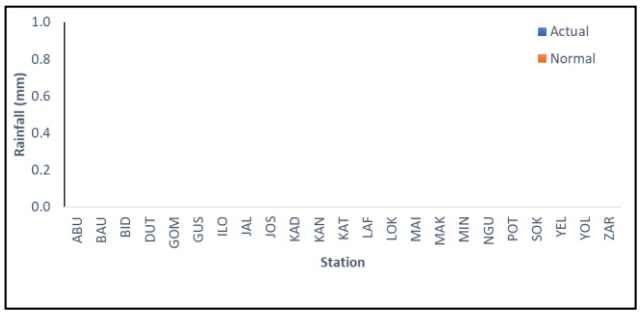

Figure 7A: Comparison of Observed Rainfall Amounts with the Normal for the Northern part of Nigeria in the Second Dekad of January 2024

Figure 3A shows that no rainfall was recorded in the northern states of Nigeria during the second dekad of January 2024 and is similar to the long-term (30-year) average for the same period in the northern part of Nigeria.

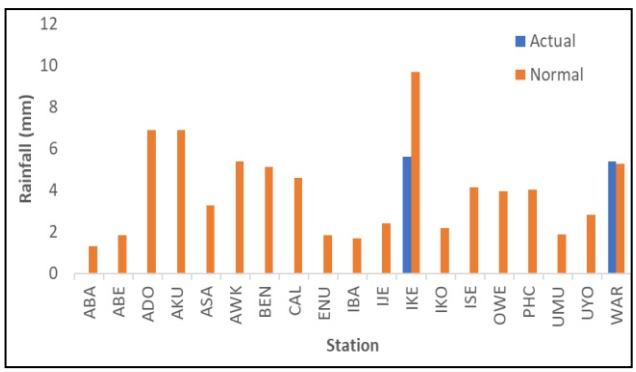

Figure 3B: Comparison of Observed Rainfall Amounts with the Normal for the Southern part of Nigeria in the Second Dekad of January 2024

Below-normal rainfall amount (lower than the 30-year average) was recorded in the southern part of the country except Warri (Delta State) which had above-normal rainfall.

1.4 Number of Rain Days

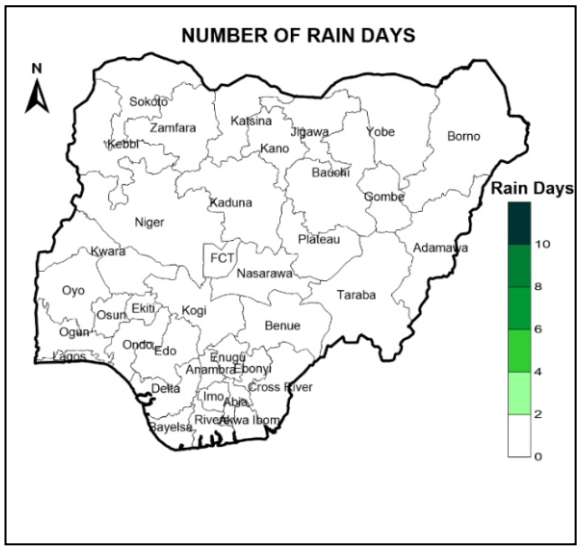

Figure 8: Number of Rain Days in the Second Dekad of January 2024.

Figure 4 shows the distribution of the number of rain days across Nigeria for the Second dekad of January 2024. During this dekad, Ikeja (Lagos State) and Warri (Delta State) recorded one rain day each.

2.0 Soil Moisture Conditions in the Second Dekad of January 2024

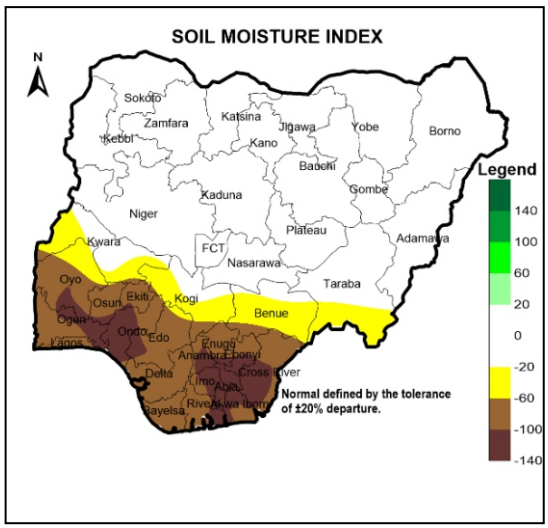

Figure 5: Soil Moisture Index (SMI) During the Second Dekad of January 2024.

The soil moisture conditions across Nigeria for the second dekad of January 2024 are shown in Figure 5. As with the first dekad, below-normal soil moisture conditions were experienced in the southern states, as well as in parts of Benue, Kogi, and Kwara states.

3.0 Temperature Distribution

3.1 Maximum (Daytime) Temperature Distribution

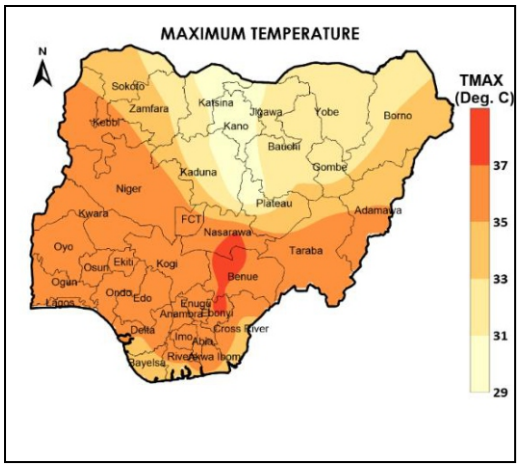

Figure 6: Maximum Temperatures Across Nigeria in the Second Dekad of January 2024.

Figure 6 shows the daytime temperatures in Nigeria in the Second Dekad of January 2024. The daytime temperatures recorded across the country during the dekad were between 36.7^{0}C and 28.9^{0}C. Abakaliki (Ebonyi State) recorded the highest daytime temperature (36.7^{0}C), while Jos (Plateau State) had the lowest temperature (28.9^{0}C).

3.2 Maximum Temperature Departure from the Normal (30-year Average)

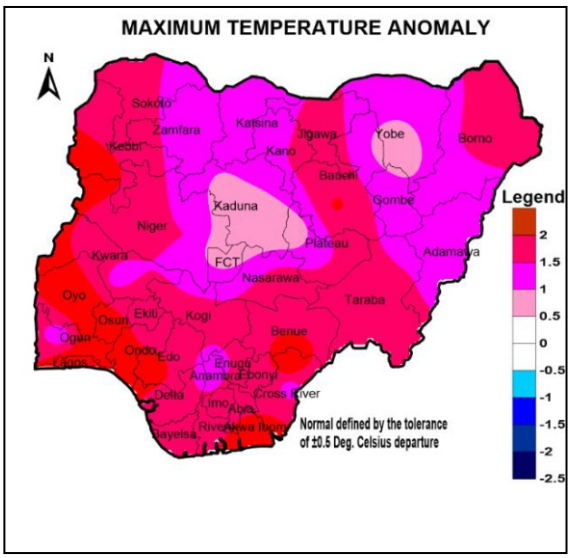

Figure 7: Maximum Temperature Anomaly Across Nigeria in the Second Dekad of January 2024.

Figure 7 shows the maximum temperature anomaly across the country for the second dekad of January 2024. Warmer-than-normal daytime temperatures were recorded all over Nigeria during the period.

3.3 Minimum (Nighttime) Temperature Trends

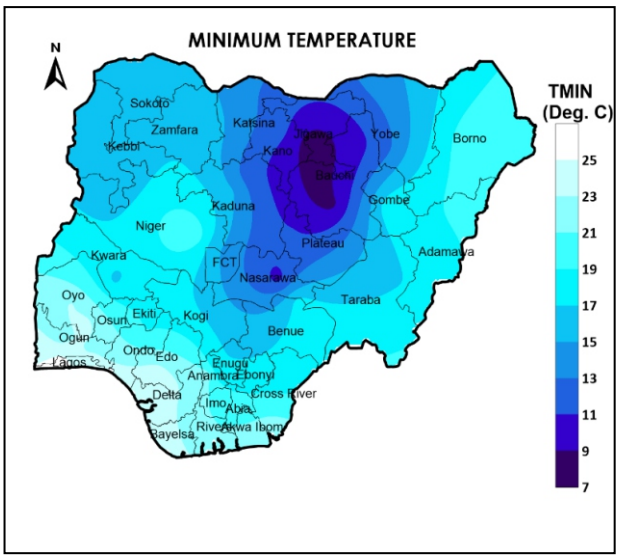

Figure 8: Minimum Temperatures Across Nigeria in the Second Dekad of January 2024.

The minimum (nighttime) temperatures across Nigeria for the Second dekad of January 2024 are shown in Figure 8. The minimum temperatures ranged from 7.9^{0}C to 25.7^{0}C. Dutse (Jigawa State) recorded the lowest nighttime temperature of 7.9°C, while Ikeja (Lagos State) recorded the highest nighttime temperature of 25.7°C.

3.4 Minimum Temperature Departure from the Normal (30-year Average)

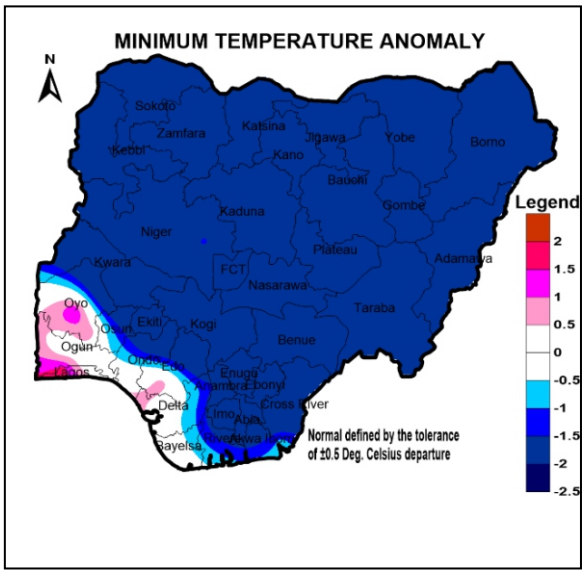

Figure 9: Minimum Temperature Anomaly Across Nigeria in the Second Dekad of January 2024.

The minimum (nighttime) temperature anomaly across Nigeria during the Second dekad of January 2024 is shown in Figure 9.

Most parts of Nigeria experienced colder-than-normal nighttime temperatures except parts of Oyo, Ogun, Osun, Lagos, Ondo, Edo, Delta, and Bayelsa states that experienced normal to warmer-than-normal nighttime temperatures.

3.5 Temperature Humidity Index (THI)

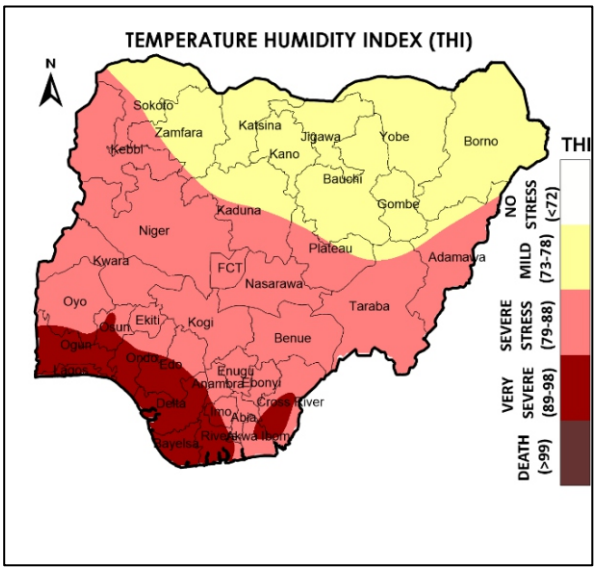

Figure 10 Temperature Humidity Index in the Second Dekad of January 2024

Figure 10 depicts the distribution of THI across Nigeria for the second dekad of January 2024. The northern states including parts of Plateau state had mild stress conditions, however, the central and most parts of the southern states had moderate conditions. Ogun, Lagos, Delta, Bayelsa, parts of Edo, and Rivers states had severe THI conditions. Animals in these states are likely to exhibit symptoms associated with heat stress conditions. Under heat stress conditions, animals such as chickens, sheep or goats have increased panting scores, will sweat, open their mouths, and will experience increases in respiration rate and rectal temperature. This may have adverse effects on biological functions, including depressed feed intake, feed efficiency and even water, protein, energy and mineral balances, which leads to overall reduced performance.

4.0 Weather/Agricultural Outlook for the Third Dekad (21-31) of January 2024

4.1 Weather Outlook

Dust haze is predicted for the north and central states, with isolated areas in the far north expecting visibility of less than a thousand meters (1,000m). The country's coastline region and inland cities in the South are predicted to have hazy conditions in the morning hours with partly cloudy conditions in the afternoon hours. Isolated thunderstorms are anticipated over the coastal region.

In the third dekad of January, the Inter-Tropical Discontinuity (ITD) is predicted to be at an average position of 7.0°N.

4.2 Advisory for the Third Dekad of January 2024.

- Farmers are advised to provide clean and adequate drinking water for livestock because of the increasing daytime temperatures across the country during the dekad.
- In line with the forecast, the adoption of appropriate safety measures to protect farmers from exposure to dust particles suspended in the atmosphere is advised. The use of facemasks can be adopted.
- Measures such as reduction in stocking density, increased water intake, and use of vitamins are highly recommended. These measures can help alleviate periods of heat stress as a result of high THI.
- It is recommended that poultry farmers in the north provide their day-old chicks with additional sources of heat, particularly at night when the temperatures are low.

- Fish farmers in the north may also pay close attention to the cold weather at night and reduce the amount of feed where necessary to avoid excess feed residue in water which could lead to eutrophication.
- Given that the dry season reduces the amount of easily accessible fodder, feeding for livestock on the free range should be augmented.
- It is recommended that farmers and other relevant stakeholders in the field of agriculture collaborate closely with NiMet to get additional insights into the weather changes and their potential impacts on the agricultural value chain.
- Further weather information can be accessed on the NiMet website, www.nimet.gov.ng, the NiMet weather App (available on Google Play and Apple Store), or the NiMet offices in the 36 states of Nigeria and the FCT.

4.3 Agricultural Activities During the Third Dekad of January

- Vegetables, sugar cane, green beans, carrots, onions, and tuber crops are some of the most regularly cultivated crops during this period.
- Harvesting of maize from irrigated farms is ongoing across the country.

3rd dekad (21-31) of January 2024

Summary of the Agrometeorological Bulletin for the dekad

The Agro-meteorological information for the third dekad of January 2024 is presented in this publication. The summaries of the rainfall, temperature outlook and the Temperature Humidity Index during the Dekad are as follows:

- The highest and lowest maximum (daytime) temperatures of 37.1^{0}C and 28.9^{0}C were recorded over Nasarawa and Katsina states respectively.
- Colder to warmer-than-normal daytime temperatures were observed across the country.
- The nighttime temperatures during the third dekad of January 2024 ranged from 9.7^{0}C in Jigawa State to 24.8°C in Lagos State.
- The Temperature Humidity Index (THI) conditions were mild over the north and parts of the central states with moderate conditions in the southern half of the central states and the entire south.
- The Inter-Tropical Discontinuity (ITD) is expected to traverse Nigeria between 5.5^{0}N and 6.0^{0}N during the first dekad of February 2024.
- Further weather information can be accessed on the NiMet website, www.nimet.gov.ng, the NiMet weather App (available on Google Play and Apple Store), or the NiMet offices in the 36 states of Nigeria and the FCT.

1.0 Rainfall Pattern

No rainfall was recorded in the country during the third dekad of January 2024.

2.0 Temperature Distribution

2.1 Maximum (Daytime) Temperature Distribution

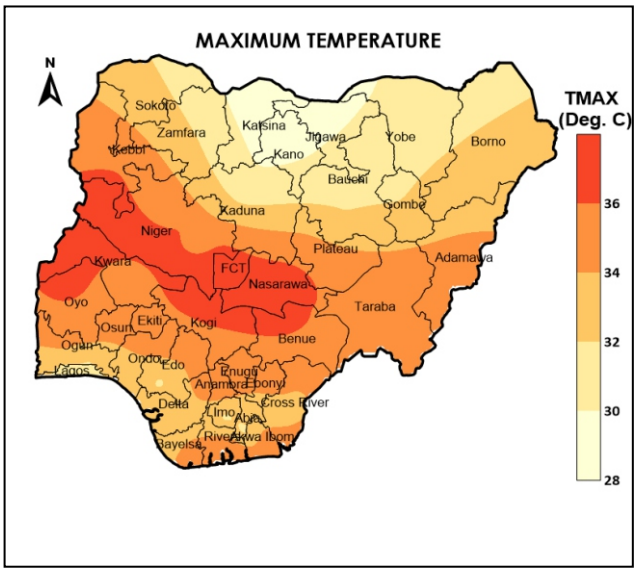

Figure 1: Maximum Temperatures Across Nigeria in the Third Dekad of January 2024.

The daytime temperatures across Nigeria during the third dekad of January 2024 are presented in Figure 1.

The maximum temperatures ranged from 37.1^{0}C to 28.9^{0}C during the dekad under review. The highest daytime temperature was recorded in Lafia (Nasarawa State), while the lowest was in Jos (Plateau State).

2.2 Maximum Temperature Departure from the Normal (30-year Average)

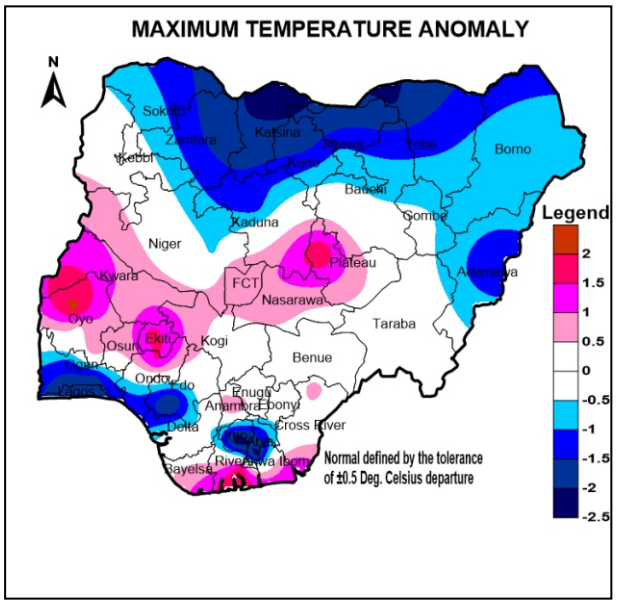

Figure 2: Maximum Temperature Anomaly Across Nigeria in the Third Dekad of January 2024.

Figure 2 shows the maximum temperature anomaly across the country for the third dekad of January 2024. Below-normal daytime temperatures (i.e., negative maximum temperature anomalies) were observed in most parts of the north. Ogun, Lagos, parts of Ondo, Edo, Delta, Abia, and Imo states also record below-normal daytime temperatures, while normal to warmer-than-normal daytime temperatures were observed in other parts of the country.

2.3 Minimum (Nighttime) Temperature Distribution

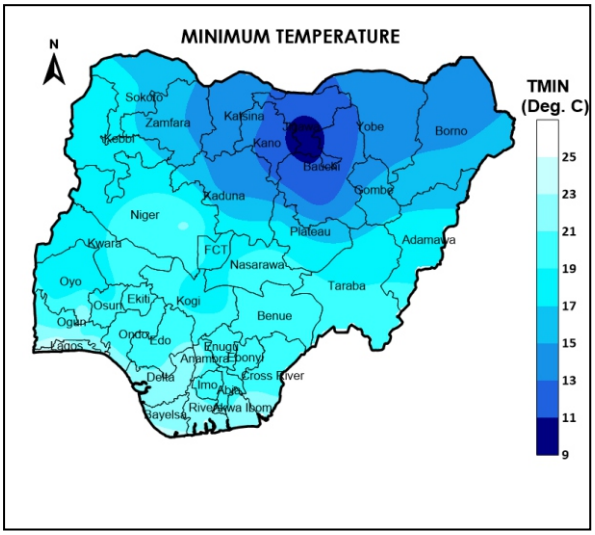

Figure 3: Minimum Temperatures Across Nigeria in the Third Dekad of January 2024.

The minimum (nighttime) temperatures across Nigeria for the third dekad of January 2024 are shown in Figure 3. The minimum temperatures ranged from 9.7^{0}C to 24.8^{0}C. Dutse (Jigawa State) recorded the lowest nighttime temperature of 9.7°C, while Ikeja (Lagos State) recorded the highest nighttime temperature of 24.8°C.

2.4 Minimum Temperature Departure from the Normal (30-year Average)

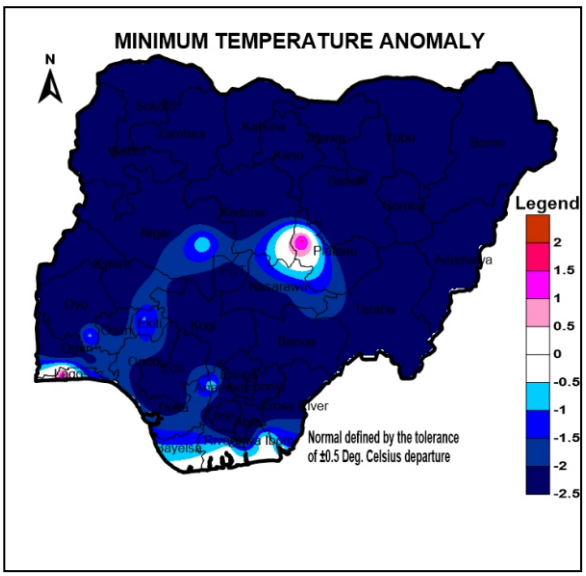

Figure 4: Minimum Temperature Anomaly Across Nigeria in the Third Dekad of January 2024.

The minimum (nighttime) temperature anomaly across Nigeria during the third dekad of January 2024 is shown in Figure 4. Most parts of Nigeria experienced colder-than-normal nighttime temperatures.

2.5 Temperature Humidity Index (THI)

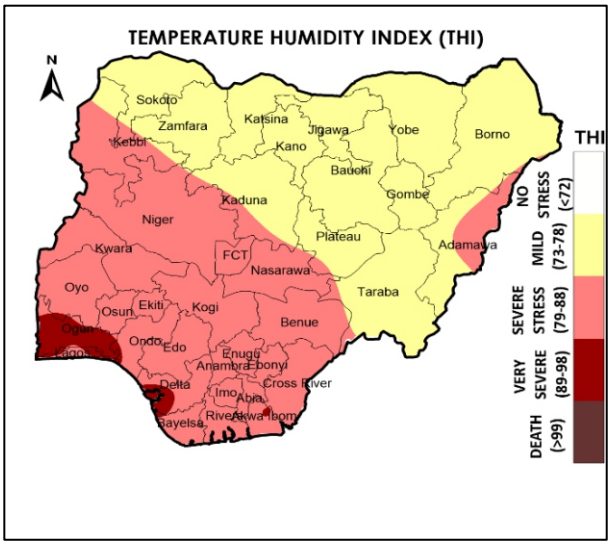

Figure 4 Temperature Humidity Index across Nigeria in the Third Dekad of January 2024

The THI for the third dekad of January is presented in Figure 4. The southern and central states had predominantly moderate THI. On the other hand, the northern part of the country had mild THI for the period under review. Livestock around the south would likely suffer some discomfort under moderate THI conditions. This could result in heat stress and or mortality. Therefore, some measures to ameliorate the resulting discomfort are necessary. Stocking density can be reduced in addition to the provision of clean drinking water for the livestock.

In Ogun state, severe THI condition prevails. Therefore, measures must be adopted to reduce the harsh effect on small animals such as chickens, goats as well as pigs. Farm animals in this area should be fed between 8.00 am and 10.00 am. Bear in mind that the animal's core temperature peaks approximately two hours after the environmental temperature peaks and takes four to six hours to lower back to normal temperature.

3.0 Weather/Agricultural Outlook for the first Dekad (01-10) of February 2024

3.1 Weather Outlook

Dry winds are expected to dominate the north and central states during the first dekad of February 2024, as such, dust haze is predicted over the north and central states, with localized visibility of less than 1,000m in Katsina, Zamfara, Borno and Yobe states.

Sunny and hazy conditions are anticipated over the Inland cities of the south and the coast in the morning hours. By afternoon, cloudy to partly cloudy conditions are expected in the south, with chances of thunderstorms along the coastline.

In the first dekad of February, the Inter-Tropical Discontinuity (ITD) is expected to traverse between 5.5^0N and 6.0^0N thereby allowing the penetration of moist southwesterly winds into the southern states.

3.2 Advisory for the First Dekad of February 2024.

- More water drinking points should be provided for livestock on the farms.
- Farmers are advised to provide clean and adequate drinking water for animals under intensive care.
- It is recommended that poultry farmers provide their chicks with additional sources of heat, particularly at night when the temperatures are low.
- Fish farmers should also pay close attention to the cold weather at night and reduce the amount of feed where necessary to avoid excess feed residue in water which could lead to eutrophication.
- Given that the dry season reduces the amount of easily accessible fodder, feeding for livestock on the free range should be augmented.
- It is recommended that farmers and other relevant stakeholders in the agricultural sector collaborate closely with NiMet to get additional insights into the weather changes and their potential impacts on the agricultural value chain.
- Further weather information can be accessed on the NiMet website, www.nimet.gov.ng, the NiMet weather App (available on Google Play and Apple Store), or the NiMet offices in the 36 states of Nigeria and the FCT.

3.3 Agricultural Activities During the First Dekad of February 2024.

- Vegetables, sugarcane, green beans, carrots, onions, and tuber crops are some of the most regularly cultivated crops during this period.
- Harvesting of maize from irrigated farms is ongoing across the country.

1st dekad (1-10) of February 2024

Summary of the Agrometeorological Bulletin for the dekad

The Agro-meteorological information for the first dekad of February 2024 is presented in this publication. The rainfall and temperature outlook, as well as the Temperature Humidity Index(THI) across Nigeria during the dekad, are summarized below.

- The highest recorded rainfall amount of 136.9mm was recorded in Ibom (Akwa Ibom) state. The number of rain days ranged from one (1) to six (6) days.
- Most parts of the country experienced normal to below-normal rainfall except Ibom (Akwa Ibom) with above-normal rainfall.
- The entire country experienced below-normal soil moisture conditions except for Akwa Ibom State with above-normal soil moisture conditions.
- The highest and lowest maximum (daytime) temperatures of 37.4°C and 27.6°C were recorded over Ebonyi and Kano States, respectively.
- The northern and central states experienced normal to colder-than-normal daytime temperatures, while the south was generally warmer than normal.
- The nighttime temperatures ranged from 10.8°C in Jos (Plateau State) to 25.6°C in Eket (Akwa Ibom State).
- The analysis of the THI indicates that Kano, Katsina and Jigawa states were under good conditions with no stress. However, other states including the central and southern cities experienced moderate heat stress.
- Harvesting of crops such as cashew, and oil palm, as well as other dry season crops such as vegetables, wheat and maize is ongoing across the country.
- The 2024 NiMet Seasonal Climate Prediction (SCP) is available to the public for reference. Further weather information is available on the NiMet website, www.nimet.gov.ng , the NiMet Weather App (available on Google Play and Apple Store), or the nearest NiMet offices in all the states of the federation and the FCT.

1.0 Rainfall Pattern

1.1 Rainfall Amount

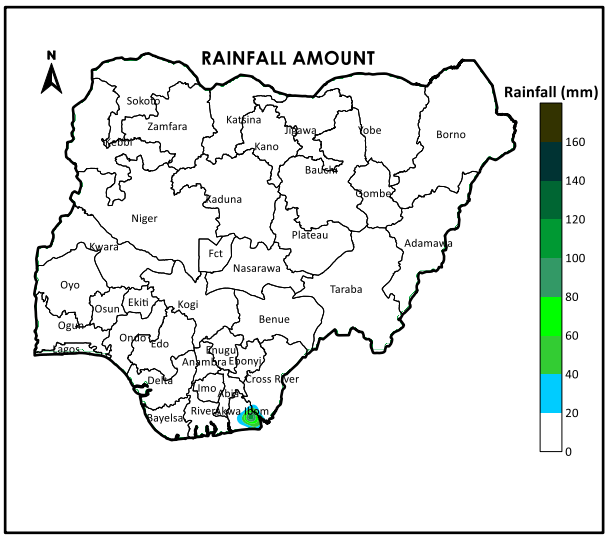

Figure 9: Rainfall Amount across Nigeria in the First Dekad of February 2024.

Figure 1 depicts the rainfall amounts recorded in the first dekad of February 2024. During the dekad, rainfall was only recorded in Ibom (Akwa Ibom State), and

Port Harcourt (Rivers State). The rainfall amounts recorded during the period ranged from 1.8 mm to 136.9 mm, with Akwa Ibom State recording the highest rainfall amounts.

1.2 Rainfall Departure from Normal

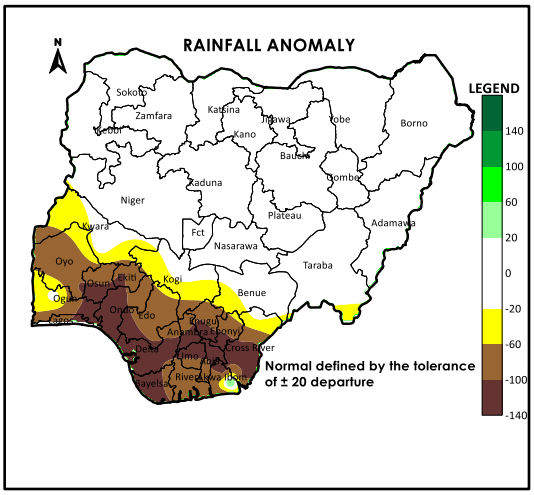

Figure 10: Rainfall Departure from the 30-year Average for the First Dekad of February 2024.

The rainfall deviation for the 30-year average is presented in Figure 2. The entire country experienced normal to below-normal rainfall except parts of Akwa Ibom which experienced above-normal rainfall.

1.3 Comparison of Observed Rainfall Amounts with the Normal for the First Dekad of February 2024

The comparison of the actual (i.e., observed) rainfall amounts recorded against the long-term average (1991-2020) for the first dekad of February 2024 is shown in Figures 3A (for cities in the north) and Figure 3B (for cities in the south).

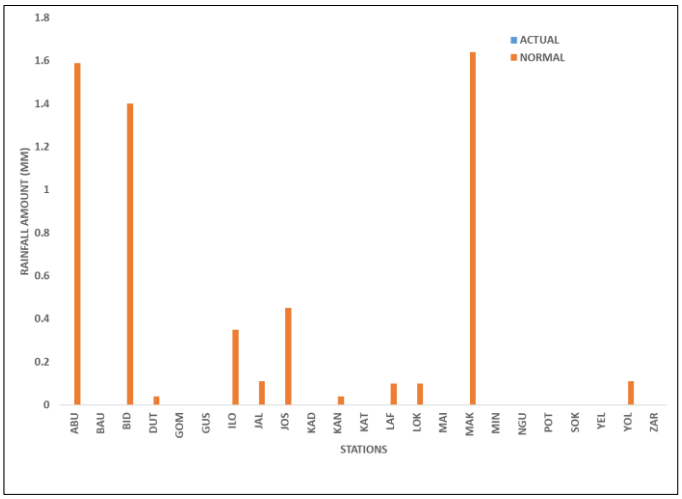

Figure 11A: Comparison of Observed Rainfall Amounts with the Normal for the Northern part of Nigeria in the First Dekad of February 2024.

Figure 3A shows that there was no rainfall recorded across the northern part of the country during the first dekad of February 2024. This is below the 30-year average for places such as Bida(Niger state), Makurdi(Benue state), and the FCT.

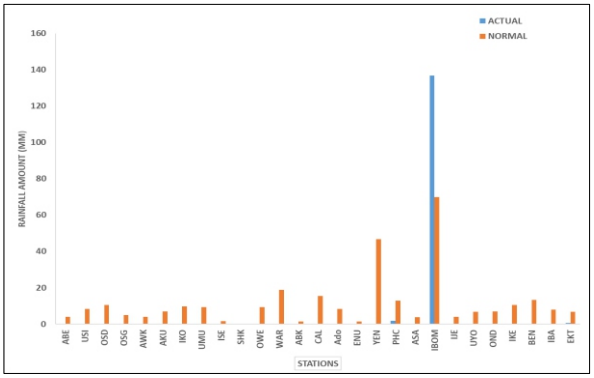

Figure 3B: Comparison of Observed Rainfall Amount with the Normal for the Southern part of Nigeria in the First Dekad of February 2024.

In the southern states as depicted in Figure 3B rainfall amounts above normal values (30-year average) were observed in Ibom (Akwa Ibom State) while below-normal (30-year average) rainfall amount was recorded in other states during the period under review.

1.4 Number of Rain Days

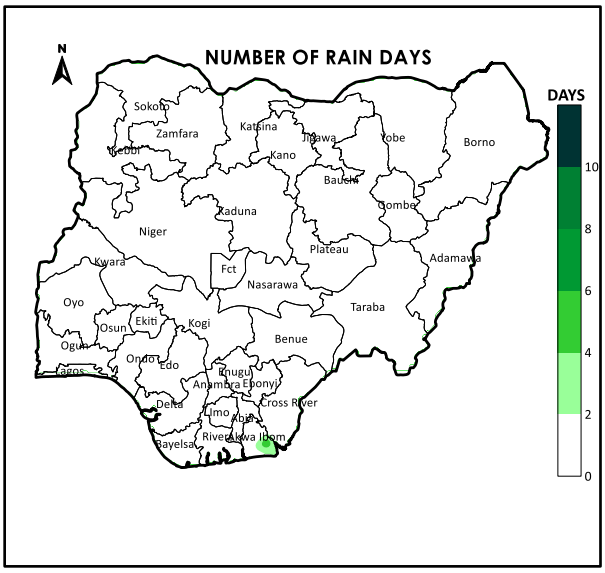

Figure 12: Number of Rain Days in the First Dekad of February 2024.

The distribution of the number of rain days across Nigeria for the first dekad of February 2024 is shown in Figure 4.

The number of rain days during the dekad ranged from one (1)to six (6) days. Ibom (Akwa Ibom State) had the highest occurrence of rainfall.

2.0 Soil Moisture Conditions in the First Dekad of February 2024

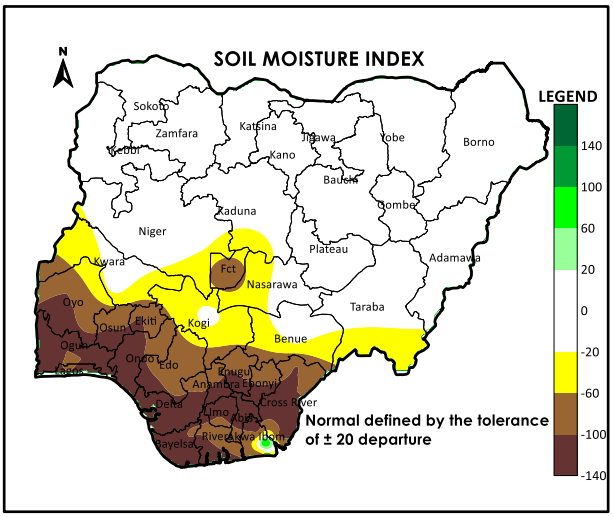

Figure 5: Soil Moisture Index (SMI) across Nigeria in the First Dekad of February 2024.

Figure 5 shows the soil moisture conditions across Nigeria in the first dekad of February 2024. The entire country experienced normal to below-normal soil moisture conditions except Ibom (Akwa Ibom State) which had above-normal soil moisture conditions. This could be attributed to the low rainfall amount recorded in the southern states,

3.0 Temperature Distribution

3.1 Distribution of Maximum (Daytime) Temperature Across Nigeria

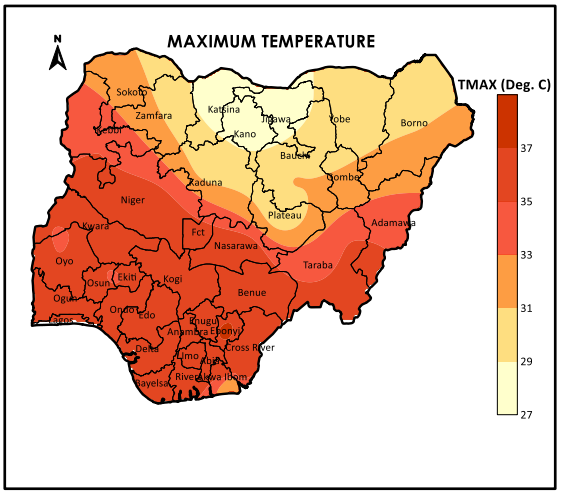

Figure 6: Maximum Temperature across Nigeria in the First Dekad of February 2024.

Daytime temperature values across Nigeria during the First dekad of February 2024 are shown in Figure 6. During the dekad, the maximum temperatures ranged from 37.4°C to 27.6°C. Ebonyi State recorded the highest daytime temperature of 37.4°C, while Kano State had the lowest of 27.6°C.

3.2 Maximum Temperature Departure from the Normal (30-year Average)

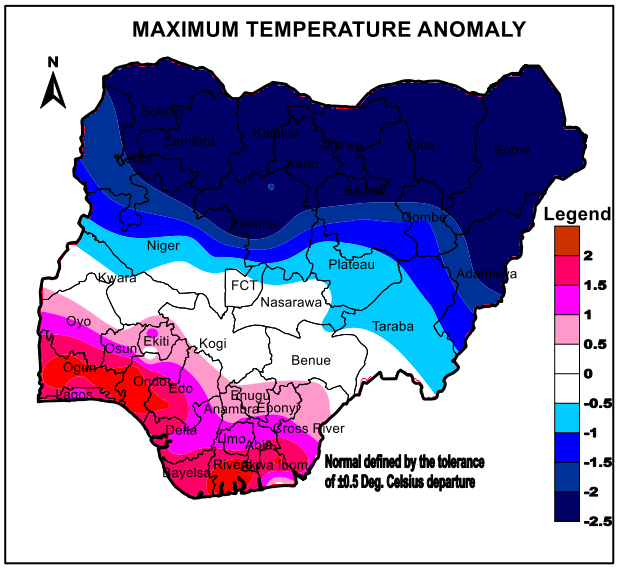

Figure 7: Maximum Temperature Anomaly Across Nigeria in the First Dekad of February 2024.

The maximum temperature anomalies in various parts of Nigeria for the first dekad of February 2024 are shown in Figure 7. The northern and central states experienced normal to colder-than-normal daytime temperatures. In contrast, the southern part of the country was warmer than normal during the dekad.

3.3 Minimum Temperature Distribution Across Nigeria

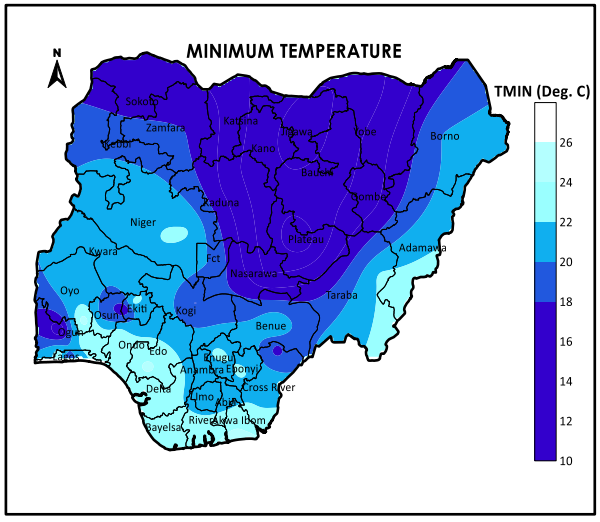

Figure 8: Minimum Temperature Across Nigeria in the First dekad of February 2024.

The minimum (nighttime) temperature values for the first dekad of February 2024 are presented in Figure 8. The minimum temperatures ranged from 10.8°C to 25.6°C. Jos (Plateau State) recorded the lowest nighttime temperature of 10.8°C, while the highest nighttime temperature of 25.6°C was observed in Eket (Akwa Ibom State).

3.4 Minimum Temperature Departure from the Normal (30-year Average)

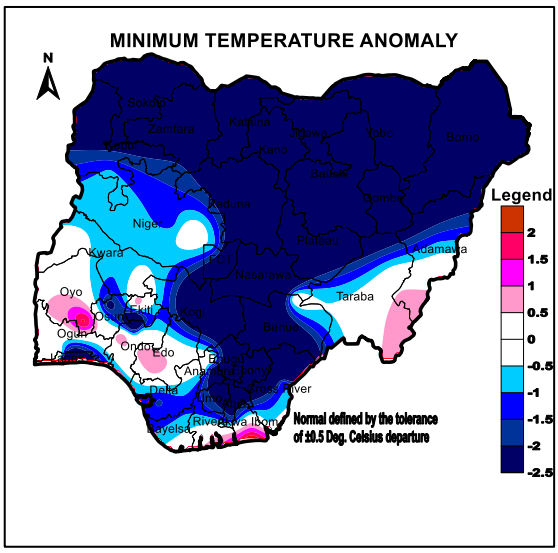

Figure 9: Minimum Temperature Anomaly Across Nigeria in the First Dekad of February 2024

The minimum (night-time) temperature anomaly across Nigeria during the First Dekad of February is shown in Figure 9. Most parts of Nigeria experienced colder-than-normal nighttime temperatures (i.e., negative minimum temperature anomalies), except parts of Oyo, Ondo, Edo, Akwa Ibom, Rivers, and Ekiti states that experienced warmer-than-normal nighttime temperatures.

3.5 Temperature Humidity Index (THI)

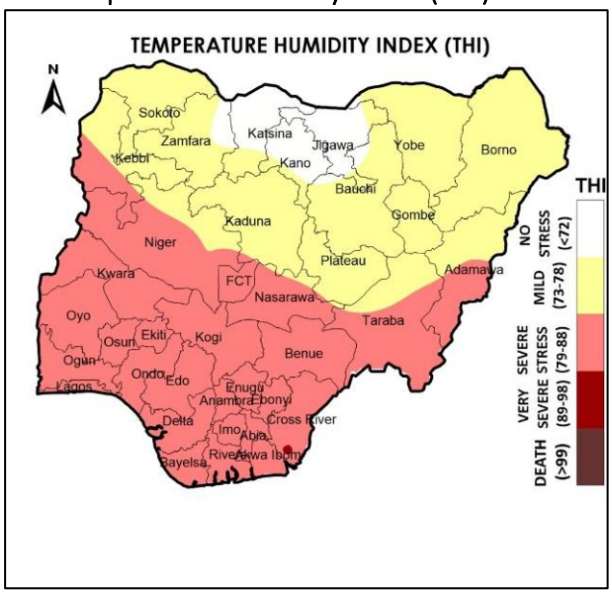

Figure 10 Temperature Humidity Index (THI) in the First Dekad of February 2024.

The THI across Nigeria for the first dekad of February 2024 is presented in Figure 10. Kano, Katsina and Jigawa states are under good conditions with no heat stress conditions. However, other states including the central and southern cities experienced moderate heat stress conditions.

Providing shade, plenty of air movement, limiting animal walking to short distances in the cool hours of the day and encouraging drinking of fresh clean water will help minimize production losses associated with heat stress conditions. As the onset of rains in the south approaches, temperature and humidity will continue to spike, resulting in possible heat stress for livestock. One of the best measures for alleviating heat stress is providing adequate clean, cool water for the animals.

4.0 Weather/Agricultural outlook for the Second Dekad (11-20) of February 2024.

4.1 Weather Outlook

In the second dekad of February 2024, the Inter Tropical Discontinuity is expected to oscillate between Lat 6.8^{0}N and 7.5^{0}N. Sunny and hazy conditions are expected over the entire country during the dekad. of February. However, slim chances of isolated thunderstorms are expected over the coastal belt and some places within the inland cities of the south.

4.2 Advisories for the Second Dekad of February 2024.

- Farmers are advised to commence land clearing and other land preparation activities for the coming rainy season across the southern parts of the country.
- Livestock farmers across the country should provide clean and adequate drinking water including multivitamins for their animals.
- It is recommended that farmers and other relevant stakeholders in the agricultural sector collaborate closely with NiMet to get additional insights into the weather changes and their potential impacts on the agricultural value chain.
- Further weather information is available on the NiMet website, www.nimet.gov.ng. the NiMet Weather App (available on Google Play and Apple Store) or the nearest NiMet offices in all the states of the country and the FCT.

4.3 Agricultural Activities for the Second Dekad of February 2024.

- Ongoing harvesting of crops such as cashew, and oil palm across the south-western zone of the country.
- Dry season farming of vegetables in the northern parts of the country.
- Land clearing and other land preparation activities across the southern parts of the country continue.
- Ongoing dry season farming of wheat and maize crops across the northern states.

2nd dekad (11-20) of February 2024

Summary of the Agrometeorological Bulletin for the dekad

The Agrometeorological Bulletin for the second dekad of February 2024 is presented in this edition of the publication. The summary of the key points in this bulletin is as follows:

- The highest observed rainfall amount of 223.4mm was recorded in Bayelsa State. The number of rain days ranged from one (1) to four (4) days.
- The entire country experienced below-normal soil moisture conditions except for Lagos, Bayelsa and parts of Osun, Ondo, Ogun, Delta and Rivers states with normal to above-normal soil moisture conditions.
- The highest and lowest maximum (daytime) temperatures of 39.9°C and 31.9°C were recorded over Niger and Akwa Ibom states respectively. The entire country experienced above-normal daytime temperatures except places around Adamawa, Borno, Akwa Ibom, and Rivers states, which had normal to below-normal daytime temperatures.
- The nighttime temperatures ranged from 15.2°C in Jos (Plateau State) to 27.1°C in Abakaliki (Ebonyi State).
- The analysis of THI indicates that mild to severe heat stress conditions prevailed in the north, severe heat stress in the central states with very severe heat stress conditions in the south.
- During the second dekad of February, the Inter-Tropical Discontinuity (ITD) traversed between Lat 7.3°N and Lat 7.5°N
- Dry season farming is ongoing in some parts of the country.
- The NiMet Seasonal Climate Prediction (SCP) is open to the public for reference. Further weather information is available on the NiMet website, www.nimet.gov.ng, the NiMet Weather App (available on Google Play and Apple Store), or the nearest NiMet offices in all the states of the country and the FCT.

1.0 Rainfall Pattern

1.1 Rainfall Amount

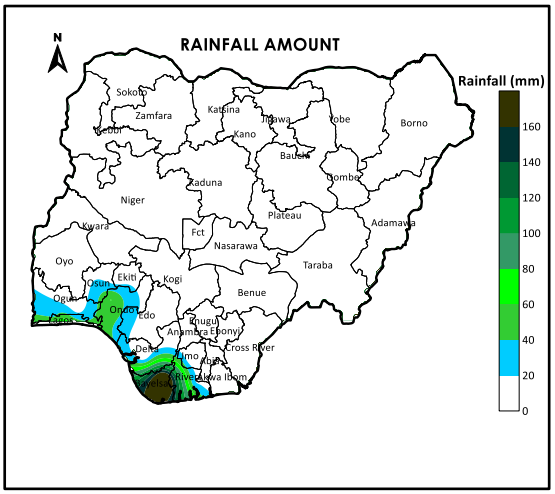

Figure 13: Rainfall Amount across Nigeria in the Second Dekad of February 2024.

Figure 1 depicts the rainfall amounts recorded in the second dekad of February 2024. During the dekad, rainfall was observed in Ijebu Ode and Abeokuta (Ogun State), Usi Ekiti and Ado Ekiti (Ekiti State), Oshogbo (Osun State), Akure and Ondo (Ondo State), Yenagoa (Bayelsa State), Uyo

and Eket (Akwa Ibom State), Port Harcourt (Rivers State), Warri (Delta State), Ikeja and Oshodi (Lagos State), and Benin (Edo State). The rainfall amounts recorded during the period ranged from 0.8 mm to 223.4 mm, with Bayelsa State recording the highest rainfall and the lowest in Warri (Delta State).

1.2 Rainfall Departure from Normal

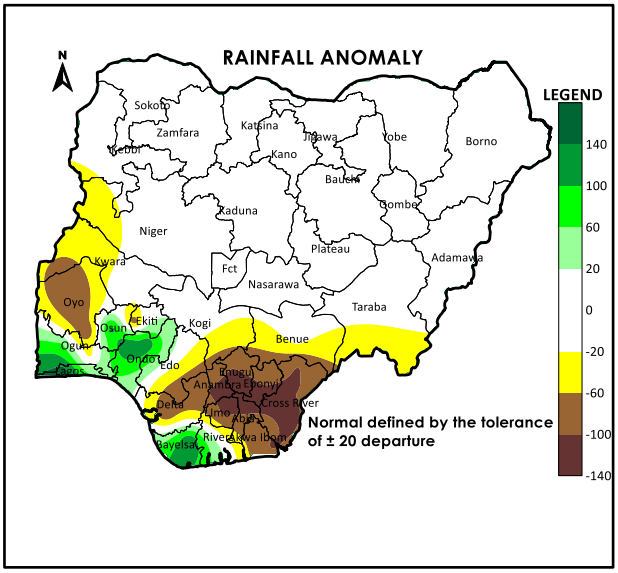

Figure 14: Rainfall Departure from the 30-year Average for the Second Dekad of February 2024.

The rainfall deviation for the 30-year average is presented in Figure 2. Above-normal rainfall was recorded in Lagos, Ogun, Ondo, Bayelsa, parts of Ekiti and Rivers states, while other places in the country recorded normal to below-normal rainfall amounts during the dekad under review.

1.3 Comparison of Observed Rainfall Amounts with the Normal for the Second Dekad of February 2024

The comparison of the actual (i.e., observed) rainfall amounts recorded against the long-term average (1991-2020) for the second dekad of January is shown in Figures 3A (for cities in the north) and Figure 3B (for cities in the south).

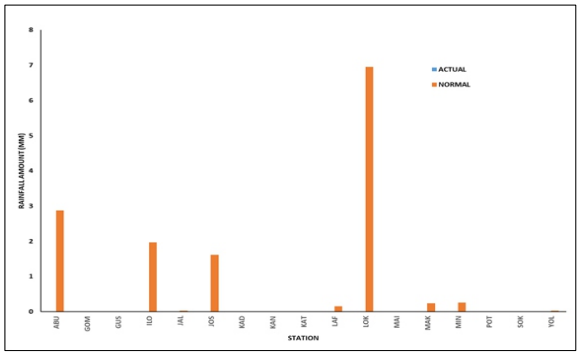

Figure 15A: Comparison of Observed Rainfall Amounts with the Normal for the Northern part of Nigeria in the Second Dekad of February 2024.

Figure 3A shows that there was no rainfall recorded across the northern part of the country during the second dekad of February 2024. This is below the 30-year average for places such as Ilorin (Kwara State), Jos (Plateau State), Lokoja (Kogi State), and the F.C.T.

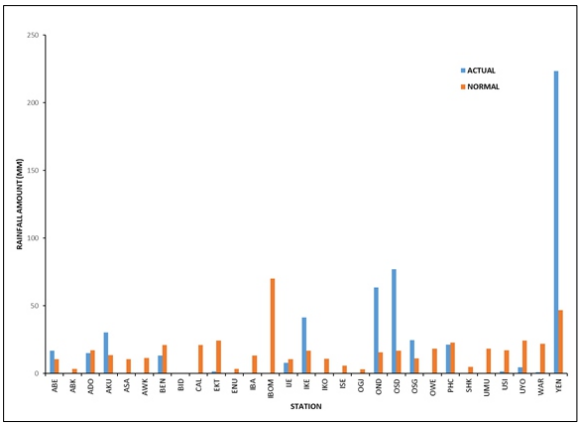

Figure 3B: Comparison of Observed Rainfall Amount with the Normal for the Southern part of Nigeria in the Second Dekad of February 2024.

In the southern states (as depicted in Figure 3B) rainfall amounts above normal values (30-year average) were observed in Abeokuta (Ogun State), Akure and Ondo (Ondo State), Ikeja and Oshodi (Lagos State), Oshogbo, (Osun State), and Yenagoa (Bayelsa State) during the period under review.

1.4 Number of Rain Days

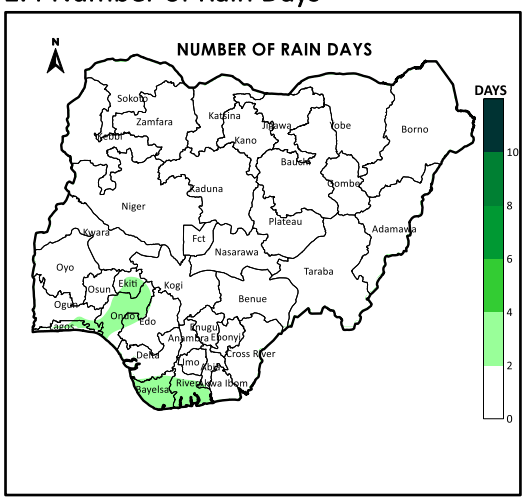

Figure 16: Number of Rain Days in the Second Dekad of February 2024.

The distribution of the number of rain days across Nigeria for the second dekad of February 2024 is shown in Figure 4.

The number of rain days during the dekad ranged from one(1) to four(4) days. Yenagoa (Bayelsa State) had the highest occurrence of rainfall.

2.0 Soil Moisture Conditions in the Second Dekad of February 2024

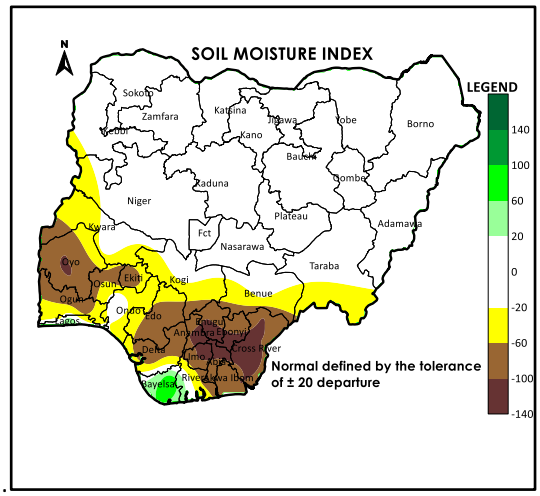

Figure 5: Soil Moisture Index (SMI) Across Nigeria in the Second Dekad of February 2024.

The entire country experienced normal to below-normal soil moisture conditions, except for Lagos and Bayelsa states where above-normal soil moisture conditions were experienced during the period.

3.0 Temperature Distribution

3.1 Maximum (Daytime) Temperature Distribution

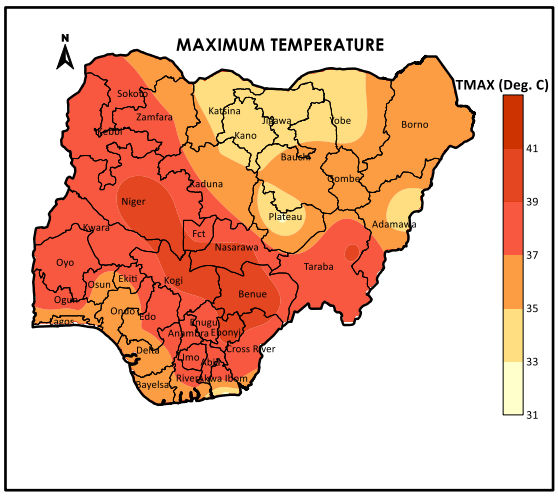

Figure 6: Maximum Temperature Distribution Across Nigeria in the Second Dekad of February 2024.

The daytime temperatures across Nigeria during the second dekad of February 2024 are shown in Figure 6. During the dekad, the maximum temperatures ranged from 39.9°C to 31.9°C Bida (Niger State) recorded the highest daytime temperature of 39.9°C, while Eket (Akwa Ibom State) had the lowest of 31.9°C.

3.2 Maximum Temperature Departure from the Normal (30-year Average)

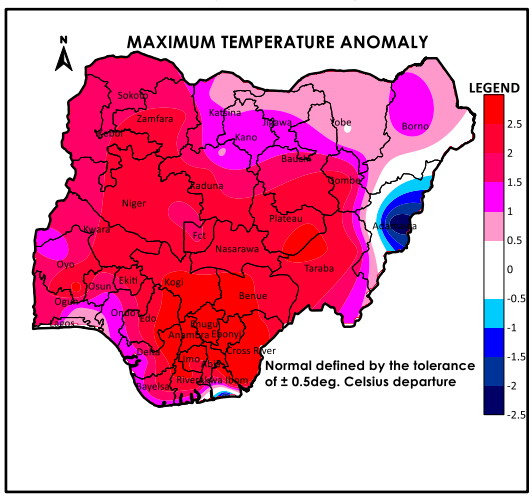

Figure 7: Maximum Temperature Anomaly Across Nigeria in the Second Dekad of February 2024

The maximum temperature anomaly across Nigeria in the second dekad of February 2024 is shown in Figure 7. During the dekad, the entire country experienced above-normal daytime temperatures except for places around Adamawa, and parts of Akwa Ibom states where below-normal daytime temperatures were recorded.

3.3 Minimum Temperature Distribution

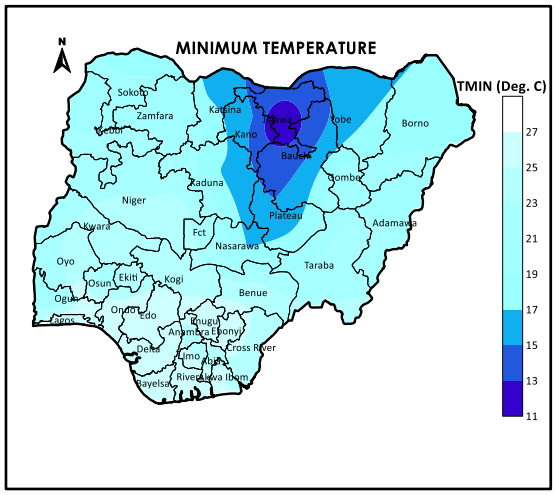

Figure 8: Minimum Temperature Across Nigeria in the Second Dekad of February 2024.

The minimum (nighttime) temperatures for the second dekad of February 2024 are presented in Figure 8. The minimum temperatures ranged from 15.2°C to 27.1°C. Jos (Plateau State) recorded the lowest nighttime temperature of 15.2°C, while the highest nighttime temperature of 27.1°C was experienced in Abakaliki (Ebonyi State).

3.4 Minimum Temperature Departure from the Normal (30-year Average)

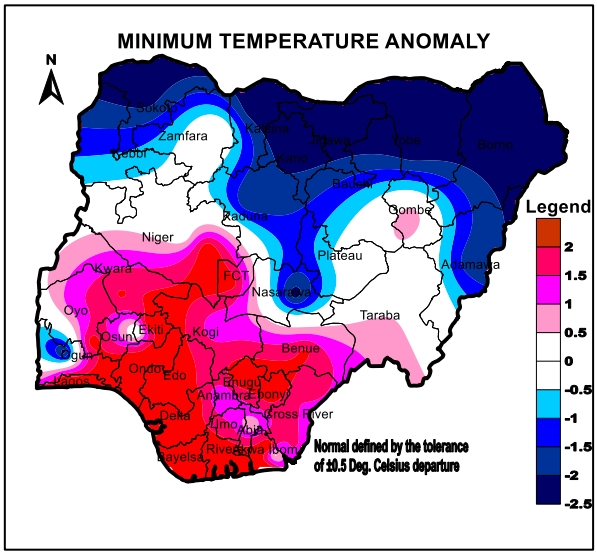

Figure 9: Minimum Temperature Anomaly Across Nigeria in the Second Dekad of February 2024.

The minimum (night-time) temperature anomaly across Nigeria during the Second Dekad of February 2024 is shown in Figure 9.

The southern part of the country and some places in the central states experienced higher-than-normal nighttime temperatures except parts of Ogun State, which had lower-than-normal temperatures. In contrast, the entire north and parts of central states experienced normal to higher-than-normal temperatures during the dekad (except parts of Gombe State).

3.5 Temperature Humidity Index (THI)

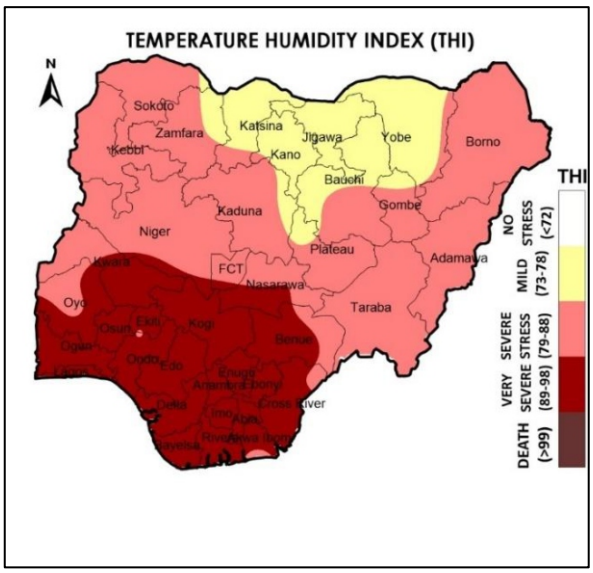

Figure 10 Temperature Humidity Index in the Second Dekad of February 2024.

The THI for the second dekad of February 2024 is presented in Figure 10. Mild to severe heat stress conditions were observed in the north, severe heat stress in the central states with very severe heat stress conditions in the south.

Generally, small ruminants can withstand short periods of heat stress if followed by cooler temperatures, such as nighttime temperatures. However, as shown in Figure 9, the nighttime temperatures during the dekad are warmer than normal.

4.0 Weather/Agricultural outlook for the Third Dekad (21-29) of February 2024.

4.1 Weather Outlook

In the third dekad of February 2024, the Inter Tropical Discontinuity is expected to be propagated northward to be at an average position of 9.5^0N, allowing the

penetration of southwesterly winds, transporting more moisture into the coastal and southern parts of the country. Consequently, the southern part of the country is expected to have intervals of sunshine, with cloudy skies in the afternoon/evening period. Over the coastal belt, there are prospects of thunderstorms in the afternoon periods.

In the central and northern states, sunny and hazy conditions are anticipated throughout the dekad.

4.2 Advisories for the Third Dekad of February.

- Farmers in the southern states are advised to intensify preparations towards the farming season.
- Farmers are advised to provide shade during the day to alleviate heat stress, especially in animals with darker coats.
- Minimize or avoid unnecessary animal work during peak heat periods (10 a.m. to 4:00 p.m.).
- Provide clean drinking water, reduce stocking density, and ensure animals are free of diseases that can further aggravate their conditions.
- Livestock farmers across the country should provide clean and adequate drinking water including multivitamins for their animals.
- It is recommended that farmers and other relevant stakeholders in the agricultural sector collaborate closely with NiMet to get additional insights into the weather changes and their potential impacts on the agricultural value chain.
- Further weather information is available on the NiMet website, www.nimet.gov.ng. the NiMet Weather App (available on Google Play and Apple Store) or the nearest NiMet offices in all the states of the country and the FCT.

4.3 Agricultural Activities for the Third Dekad of February.

- The harvesting of crops such as cashew, and oil palm is ongoing across the south-western zone of the country.
- Dry season farming of vegetables in the northern part of the country is ongoing.
- Land clearing and other land preparation activities are being carried out across the country.
- Dry season farming of wheat and maize crops is ongoing.

3rd dekad (21-29) of February 2024

Summary of the Agrometeorological Bulletin for the dekad

The Agrometeorological Bulletin for the third dekad of February 2024 is presented in this edition of the publication.

- The highest observed rainfall amount of 100.9mm was recorded in Bayelsa State. The number of rain days ranged from one (1) to five (5) days. The north and central parts of the country experienced normal to below-normal rainfall.
- Most parts of the country experienced normal to below-normal soil moisture conditions except for Lagos, Bayelsa, Ondo, Ogun, Rivers, and parts of Akwa Ibom states which had above-normal soil

moisture conditions.

- The highest and lowest maximum (daytime) temperatures of 39.8°C and 31.3°C were recorded over the Adamawa and Plateau states respectively. Most parts of the country experienced normal to above-normal daytime temperatures except places around Yobe, Borno, Ogun, Osun, Oyo, Ondo, Lagos, Akwa Ibom, and Rivers states which had below-normal daytime temperatures.
- The nighttime temperatures ranged from 15.9°C in Dutse (Jigawa State) to 26.3°C in Abakaliki (Ebonyi State) and Makurdi (Benue State) respectively.
- During the third dekad of February 2024, the Inter-Tropical Discontinuity (ITD) traversed between Lat 9.5^{0}N and Lat 9.7N.
- Dry season farming is ongoing in some parts of the country.
- The 2024 NiMet Seasonal Climate Prediction (SCP) is available to the public for reference. Further weather information is available on the NiMet website, www.nimet.gov.ng , the NiMet Weather App (available on Google Play and Apple Store), or the nearest NiMet offices in all the states of the country and the FCT.

1.0 Rainfall Pattern

1.1 Rainfall Amount

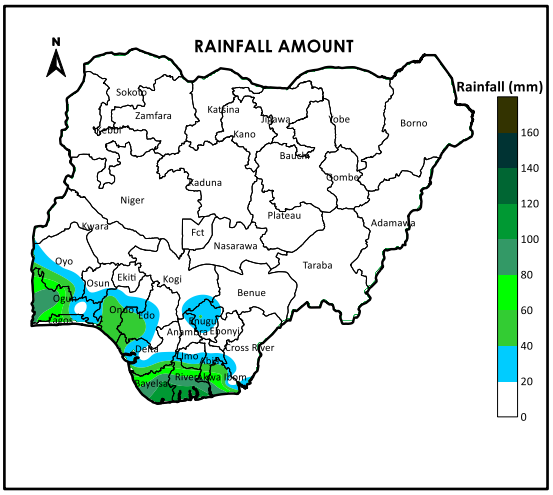

Figure 17: Rainfall Amount Across Nigeria in the Third Dekad of February 2024.

Figure 1 depicts the rainfall amounts recorded across Nigeria in the third dekad of February 2024. During the dekad, rainfall was recorded in Ijebu Ode and Abeokuta (Ogun State), Oshogbo (Osun State), Akure and Ondo (Ondo State), Enugu (Enugu State), Yenagoa (Bayelsa State), Uyo and Eket (Akwa Ibom State), Port Harcourt (Rivers State), Warri (Delta State), Ikeja and Oshodi (Lagos State), as well as Benin (Edo State). The rainfall amounts recorded during the period ranged from 0.3mm in Dutse (Jigawa state) to 100.9mm in Yenagoa (Bayelsa State).

1.2 Rainfall Departure from Normal

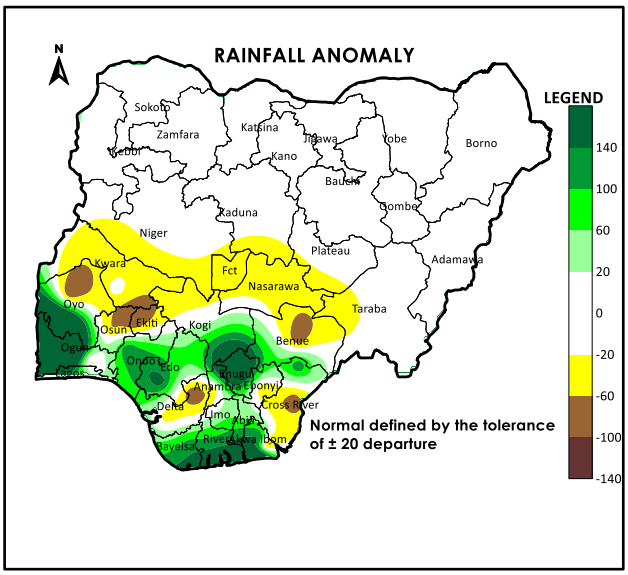

Figure 18: Rainfall Departure from the 30-year Average for the Third Dekad of February 2024.

The rainfall deviation from the 30-year average for the dekad under consideration is presented in Figure 2. The north and central parts of the country experienced normal to below normal rainfall (i.e., negative anomalies), while most places in the south experienced above-normal rainfall (i.e., positive anomalies) except parts of Cross River, Delta, Ebonyi, Ogun, Oyo, Osun and Ekiti States where below-normal rainfall was recorded.

1.2 Comparison of Observed Rainfall amounts with the Normal for the Third Dekad of February 2024.

The comparison of the actual (i.e., observed) rainfall amounts recorded against the long-term (1991 – 2020) average for the third dekad of February 2024 is shown in Figures 3A (for cities in the north) and Figure 3B (for cities in the south).

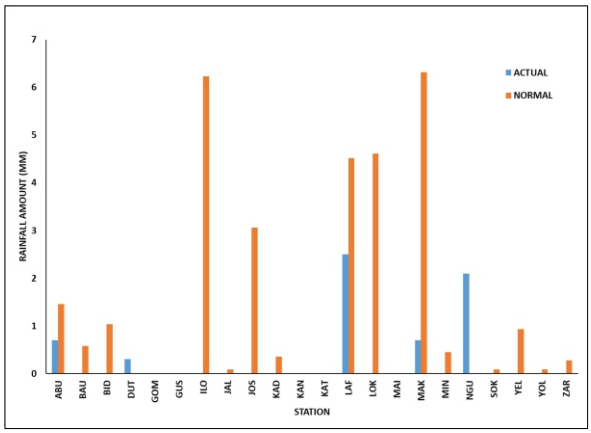

Figure 19A: Comparison of Observed Rainfall Amounts with the Normal for the Northern part of Nigeria in the Third Dekad of February 2024.

Figure 3A indicates that only Nguru (Yobe State) recorded above-normal rainfall values during the third dekad of February 2024 while other states had rainfall amounts within or below their long-term (30 years) averages.

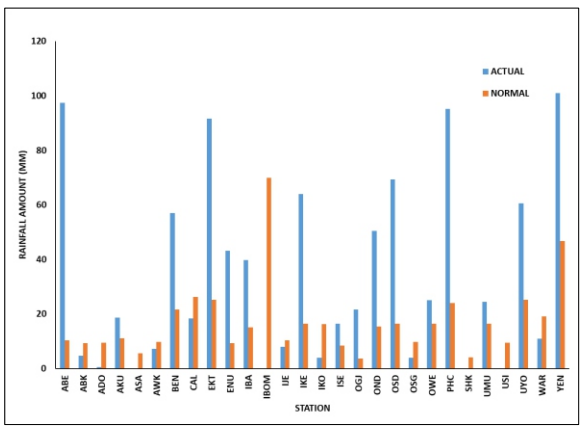

Figure 3B: Comparison of Observed Rainfall Amount with the Normal for the Southern part of Nigeria in the Third Dekad of February 2024.

In the southern states, as depicted in Figure 3B, most places recorded above-normal rainfall amounts. However, below-normal (30-year average) rainfall amounts were recorded in Abakaliki (Ebonyi State), Ado-Ekiti and Usi-Ekiti (Ekiti State), Asaba (Delta State), Calabar and Ikom (Cross River State),

Ibom (Akwa Ibom state), Ijebu Ode (Ogun State), Oshogbo, (Osun State), Shaki (Oyo State), and Warri (Delta State) during the period under review.

1.4 Number of Rain Days

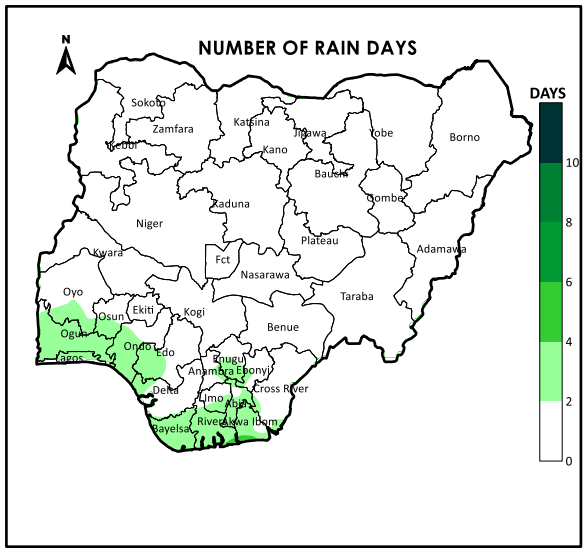

Figure 20: Number of Rain Days in Third Dekad of February 2024.

The distribution of the number of rain days across Nigeria for the third dekad of February 2024 is shown in Figure 4.

The number of rainy days during the dekad ranged from one (1) to five (5) days. Eket (Akwa Ibom State) had the highest occurrence of rainfall.

2.0 Soil Moisture Conditions in the Third Dekad of February 2024

Soil Moisture Index (SMI) is a parameter for quantifying soil moisture conditions at any location.

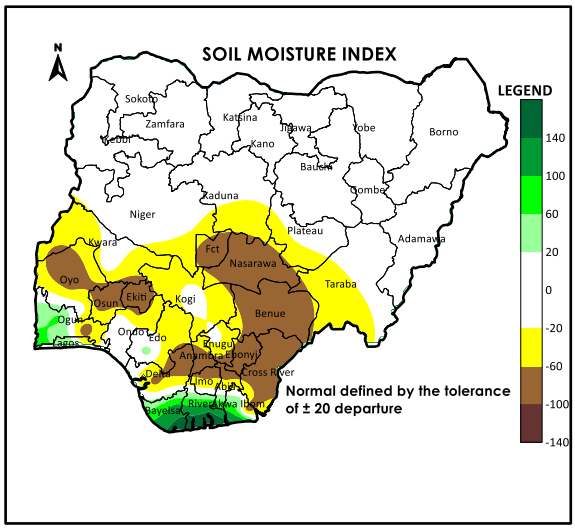

Figure 5: Soil Moisture Index (SMI) across Nigeria in the Third Dekad of February 2024.

Figure 5 depicts the soil moisture conditions in various parts of Nigeria for the third dekad of February 2024. Most parts of the country experienced normal to below-normal soil moisture conditions except for Lagos, Bayelsa, Ondo, Ogun, Rivers, and parts of Akwa Ibom that had above-normal soil moisture conditions.

3.0 Temperature Distribution

3.1 Maximum (Daytime) Temperature Distribution in the 3rd Dekad of February 2024

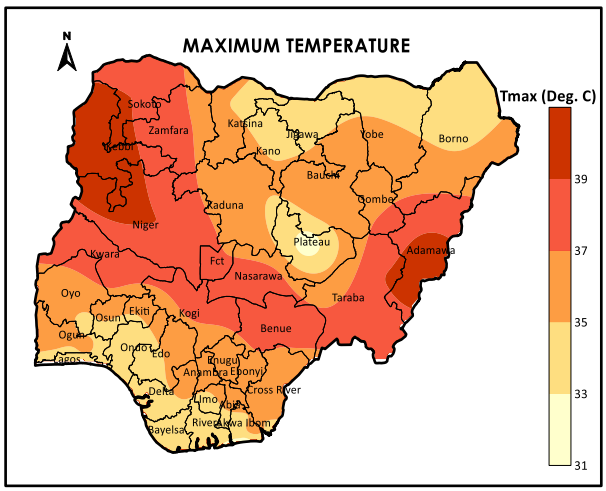

Figure 6: Maximum Temperature across Nigeria in the Third Dekad of February 2024.

The daytime temperatures across Nigeria during the third dekad of February 2024 are shown in Figure 6. During the dekad, the maximum temperatures ranged from 39.8°C to 31.3°C. Adamawa State recorded the highest daytime temperature of 39.8°C, while the lowest daytime temperature of 31.3^{O}C was observed in Plateau State.

3.2 Maximum Temperature Departure from the Normal (30-year Average)

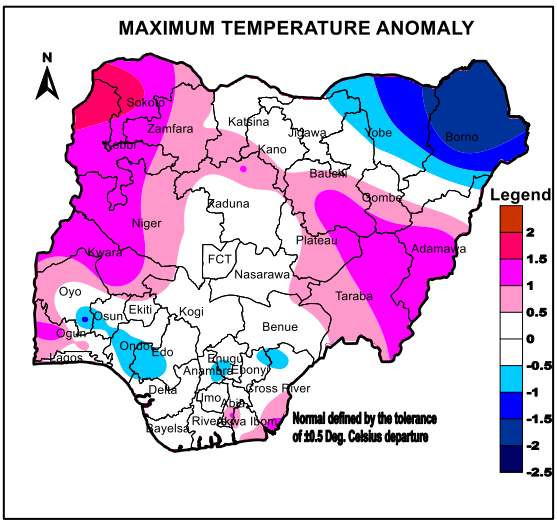

Figure 7: Maximum Temperature Anomaly across Nigeria in the Third Dekad of February 2024.

The maximum temperature anomaly across Nigeria for the third dekad of February 2024 is shown in Figure 7. During the dekad, most parts of the country experienced normal to above-normal daytime temperatures except places around Yobe, Borno, Osun, Oyo, Ondo, Enugu, and parts of Cross River state that experienced colder-than-normal daytime temperatures (i.e., negative maximum temperature anomalies).

3.3 Minimum Temperature Distribution

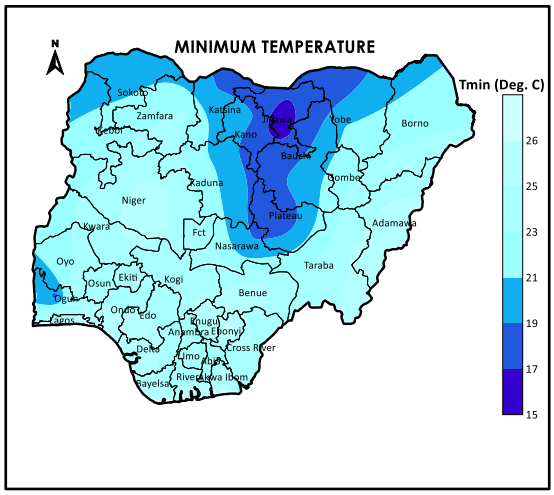

Figure 8: Minimum Temperature Across Nigeria in the Third Dekad of February 2024.

The minimum (nighttime) temperatures across Nigeria for the third dekad of February 2024 are shown in Figure 8. The minimum temperatures ranged from 15.9°C to 26.3°C. Dutse (Jigawa State) recorded the lowest nighttime temperature of 15.9°C, while the highest nighttime temperature of 26.3°C was observed in Abakaliki (Ebonyi State) and Makurdi (Benue State).

3.4 Minimum Temperature Departure from the Normal (30-year Average)

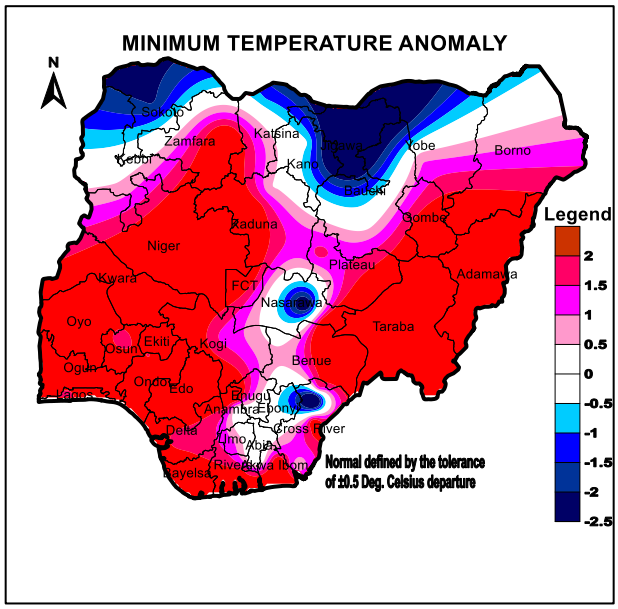

Figure 9: Minimum Temperature Anomaly Across Nigeria in the Third Dekad of February 2024.

The minimum (night time) temperature anomaly across Nigeria during the Third Dekad of February is shown in Figure 9.

Most parts of the country experienced normal to warmer-than-normal nighttime temperatures except for parts of Cross River, Nasarawa, Kebbi, Sokoto, Katsina, Jigawa, Kano, Bauchi, Yobe, and Borno states with colder-than-normal temperatures.

3.5 Temperature Humidity Index (THI)

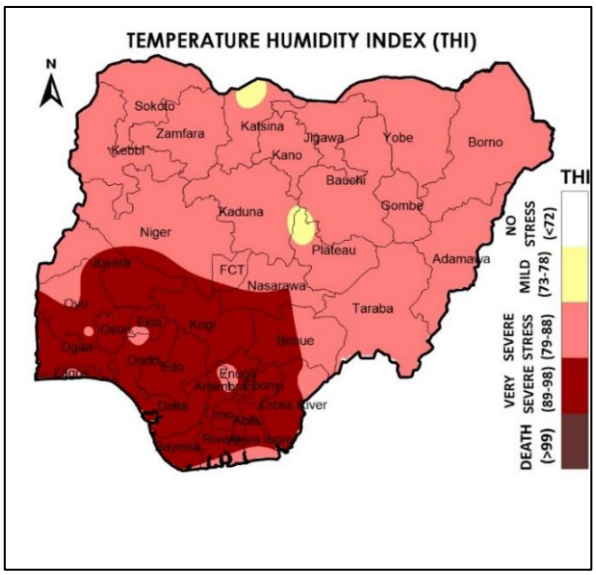

Figure 10 Temperature Humidity Index in the Third Dekad of February 2024.

The THI for the third dekad of February 2024 is presented in Figure 10. As shown, the level of heat stress conditions across the country varies from severe to very severe conditions. Very severe heat stress with THI values above 89 tending towards 99 was experienced in the southern state. Animals here will exhibit a high rate of respiration and increased rectal temperatures. Because we anticipate higher temperatures particularly over the south as a characteristic of temperature during the onset of rains (please refer to the 2024 SCP for details), the scenario will be exacerbated in the coming dekad.

Therefore, farmers must alleviate the suffering of farm animals by providing clean drinking water, ensuring the water supplied is cool, providing shade, reducing exposure to solar radiation, and avoiding feeding livestock in the afternoon period. There is a need for shelter modification as well as microenvironment modification. Furthermore, vitamins can be provided to ameliorate stress conditions.

4.0 Weather/Agricultural outlook for the First Dekad (01-10) of March 2024.

4.1 Weather Outlook

The onset of the rainy season is expected in the first dekad of March 2024, in some states in the coastal region (see the 2024 NiMet SCP for details). The Inter-Tropical Discontinuity is expected to traverse between Lat 9.5°N to 10.2°N. Cloudy skies with intervals of sunshine in the morning hours and prospects of thunderstorms in the afternoon in the south are anticipated. Sunny and hazy conditions are expected in the north during the morning hours, with chances of thunderstorms in the high-ground areas of Adamawa, Taraba, Niger, and the FCT in the afternoon period.

4.2 Advisories for the First Dekad of March 2024.

- Farmers are advised to continue with land clearing and other land preparation activities for the upcoming rainy season in the southern states.
- Livestock farmers across the country are advised to provide clean and adequate drinking water, including multivitamins for their animals.
- Construction of fishponds is advised to be carried out during this period before the onset of the rainy season.
- It is recommended that farmers and other relevant stakeholders in the agricultural sector collaborate closely with NiMet to get additional insights into the weather changes and their potential impacts on the agricultural value chain.
- Further weather information is available on the NiMet website, www.nimet.gov.ng. the NiMet Weather App (available on Google Play and Apple Store) or the nearest NiMet offices in all the states of the country and the FCT.

4.3 Agricultural Activities During the First Dekad of March 2024.

- Harvesting of crops such as cashew and oil palm is ongoing across the southwestern zone of the country.
- Dry season farming of vegetables is on in the northern part of the country.
- Land clearing and other land preparation activities are being carried out across the country.
- Dry season farming of wheat and maize crops is ongoing in the country.

1st dekad (1-10) of March 2024

Summary of the Agrometeorological Bulletin for the dekad

The Agrometeorological Bulletin for the first dekad of March 2024 is presented in this edition of the publication. The highlights of the rainfall and temperature outlook during the period are as follows:

- The highest observed rainfall amount of 209.7mm was recorded in Asaba(Delta state). The number of rain days ranged from one (1) to six (6) days. These were recorded in Asaba and Zaria respectively. Above-normal rainfall was recorded in most parts of the south.
- The north and central states experienced normal to below-normal soil moisture conditions. On the other hand, the southern states (excluding Oyo State and parts of Akwa Ibom State) had above-normal soil moisture conditions.
- The highest daytime (maximum) temperature during the period was 42.0°C, while the lowest was 29.9°C. These were recorded in Borno state and Akwa Ibom state, respectively. Generally, the northern states recorded higher temperatures.
- Above-normal daytime temperatures prevailed across most parts of the north and central states. The southern part of the country had normal to lower-than-normal temperatures.
- Dutse (Jigawa State) recorded the lowest nighttime temperature of 17.5°C, while the highest nighttime temperature of 28.0°C was recorded in Yola (Adamawa State).
- The analysis of the Temperature-Humidity Index (THI) indicates that the entire country was under moderate to very severe heat stress during the period.
- The Inter-Tropical Discontinuity (ITD) traversed Nigeria between Lat 9.5^0N and 10.2^0N during the first dekad of March 2024.
- The onset of the rainy season in the coastal zone of the country is expected during the dekad.
- The 2024 NiMet Seasonal Climate Prediction (SCP) is available for reference. Further weather information is available on the NiMet website (www.nimet.gov.ng), the NiMet Weather App (available on Google Play and Apple Store), or the nearest NiMet offices in all the states of the federation and the FCT.

1.0 Rainfall Pattern

1.1 Rainfall Amount

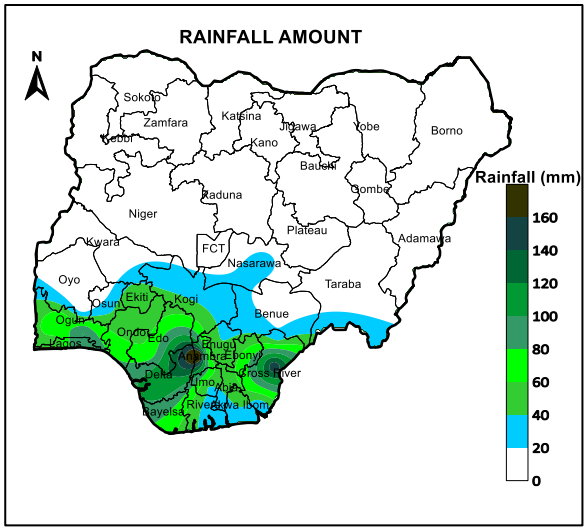

Figure 21: Rainfall Amount across Nigeria in the First Dekad of March 2024.

Figure 1 depicts the rainfall amounts recorded across the country in the first dekad of March 2024. During the dekad, there was rainfall in most parts of the southern states except some locations in Oyo State where rainfall was in trace amounts. The rainfall amounts recorded across the country ranged from 0.4mm to 209.7mm, with Asaba (Delta State) recording the highest rainfall amount, while the lowest rainfall amount was recorded in Ibadan (Oyo State).

1.2 Rainfall Departure from Normal (1991-2020 average)

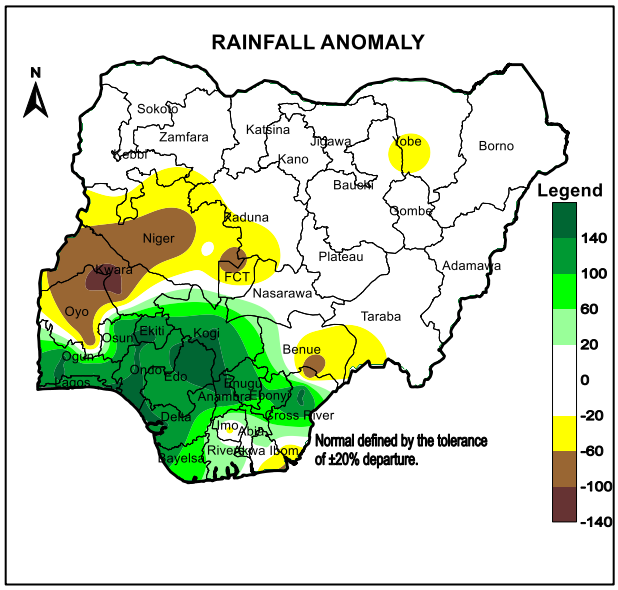

Figure 22: Rainfall Departure from the 30-year (1991 – 2020) Average for the First Dekad of March 2024.

The rainfall deviation from the 30-year average is presented in Figure 2. The north and central parts of the country experienced normal to below-normal rainfall (i.e., negative anomalies). However, most places in the south experienced above-normal rainfall (i.e., positive anomalies) except Oyo, Ogun, and parts of Akwa Ibom state that recorded below-normal rainfall.

1.3 Comparison of Observed Rainfall amounts with the Normal for the First Dekad of March 2024.

The comparison of the actual (i.e., observed) rainfall amounts recorded against the long-term average (1991-2020) for the first dekad of March 2024 is shown in Figure 3A (for cities in the north) and Figure 3B (for cities in the south).

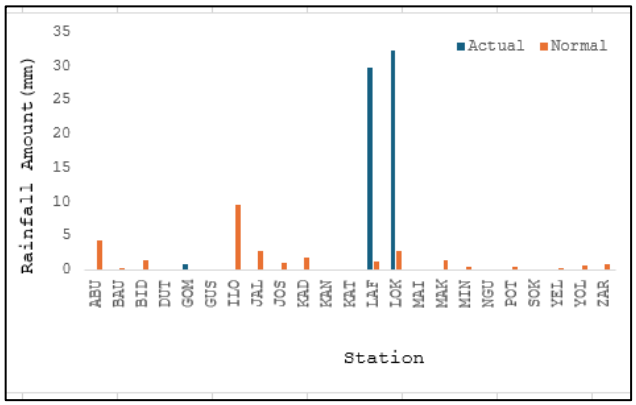

Figure 23A: Comparison of Observed Rainfall Amounts with the Normal for the Northern part of Nigeria in the First Dekad of March 2024.

As depicted in Figure 3A, Lafia (Nasarawa State), and Lokoja (Kogi State) recorded rainfall amounts above their long-term averages (30-year average) while other areas had normal to below-normal rainfall.

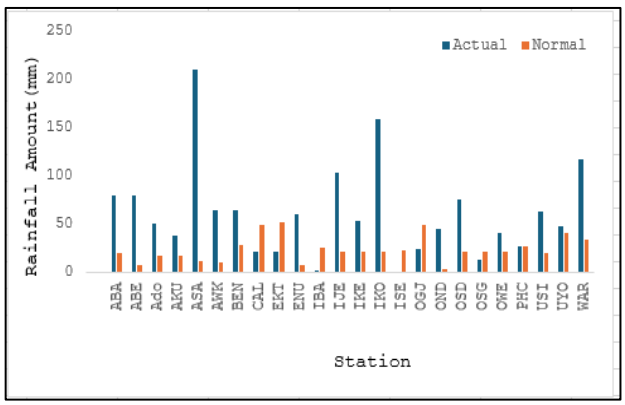

Figure 3B: Comparison of Observed Rainfall Amount with the Normal for the Southern part of Nigeria in the First Dekad of March 2024.

In the southern states, as depicted in Figure 3B, most places recorded rainfall amounts that were above their long-term averages (30-year average). However, below-normal rainfall amounts were recorded in Calabar and Ogoja (Cross River State), Eket (Akwa Ibom), Oshogbo, (Osun State)as well as Iseyin and Ibadan (Oyo State).

1.4 Number of Rain Days

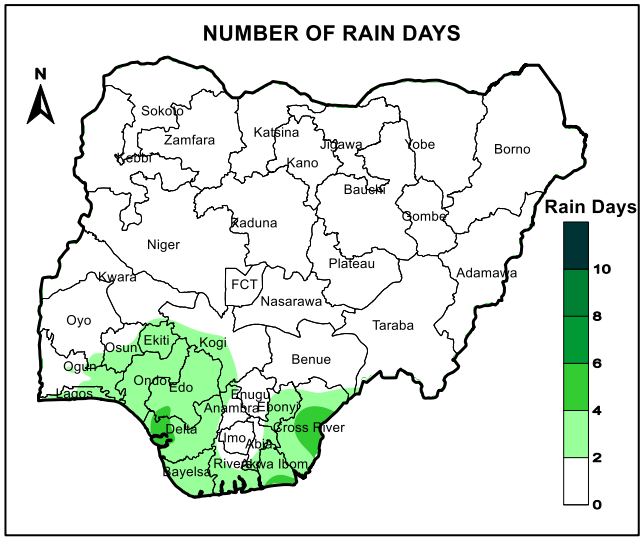

Figure 24: Number of Rain Days in the First Dekad of March 2024.

The distribution of the number of rain days across Nigeria in the first dekad of March 2024 is shown in Figure 4.

The number of rain days during the dekad ranged from one (1) to six (6) days. Ikom (Cross River State) had the highest occurrence of rainfall.

2.0 Soil Moisture Conditions in the First Dekad of March 2024

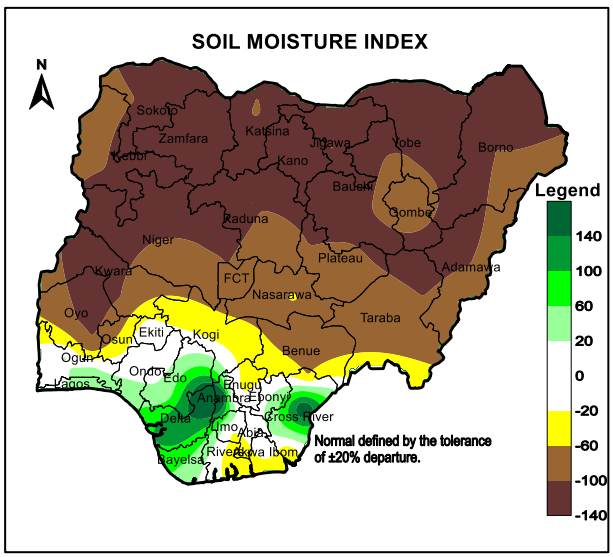

Figure 5: Soil Moisture Index (SMI) across Nigeria in the First Dekad of March 2024

Figure 5 depicts the soil moisture conditions in various parts of Nigeria for the first dekad of March 2024. The north and central states experienced below-normal soil moisture conditions. However, the southern states generally had above-normal soil moisture except for Ogun, Ekiti, Osun, Oyo, Enugu states, and parts of Rivers as well as Akwa Ibom states which had normal to below-normal soil moisture conditions.

3.0 Temperature Distribution

3.1 Maximum (Daytime) Temperature Distribution

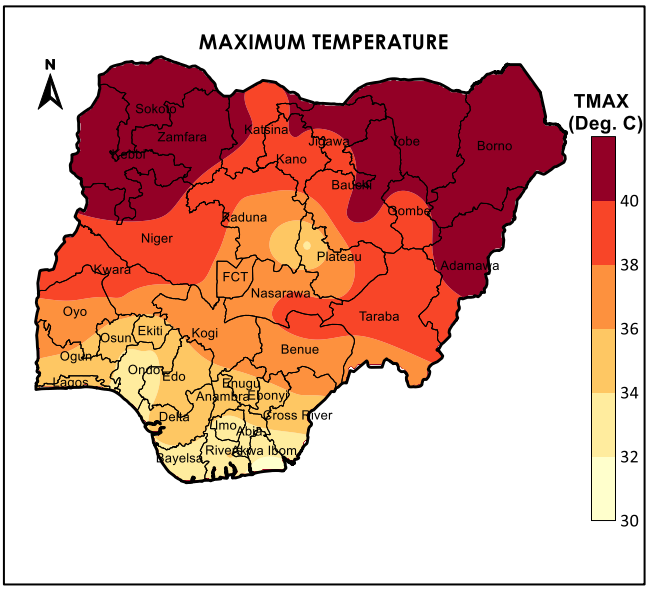

Figure 6: Maximum Temperature across Nigeria in the First Dekad of March 2024.

The daytime temperatures across Nigeria during the first dekad of March 2024 are shown in Figure 6. During the dekad, the maximum temperatures ranged from 42.0°C to 29.9°C. Borno State recorded the highest daytime temperature of 42.0°C, while the lowest daytime temperature of 29.9^{O}C was recorded in Akwa Ibom State. During the period, the northern and central states recorded high daytime temperatures.

3.2 Maximum Temperature Departure from the Normal (30-year (1991 – 2020) Average)

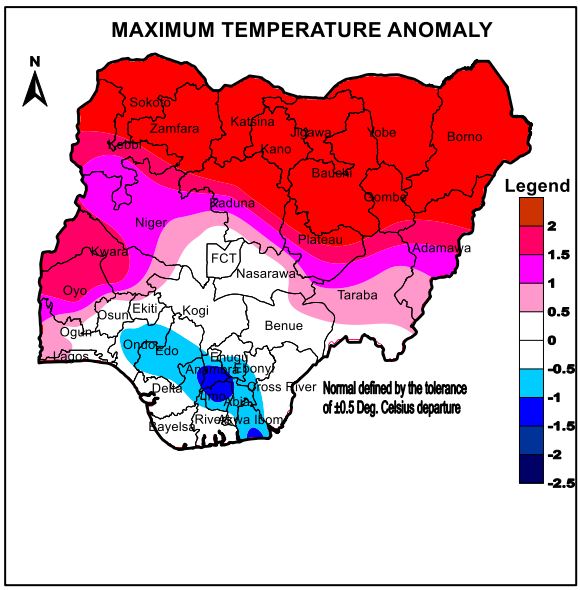

Figure 7: Maximum Temperature Anomaly across Nigeria in the First Dekad of March 2024.

The maximum temperature anomaly for the first dekad of March 2024 is shown in Figure 7. During the dekad, most parts of the country experienced normal to above-normal daytime temperatures except a few locations around the south where below-normal temperatures were experienced. The inland cities of the south as well as Ondo, Edo, and Akwa Ibom recorded below-normal daytime temperatures.

3.3 Minimum Temperature Distribution

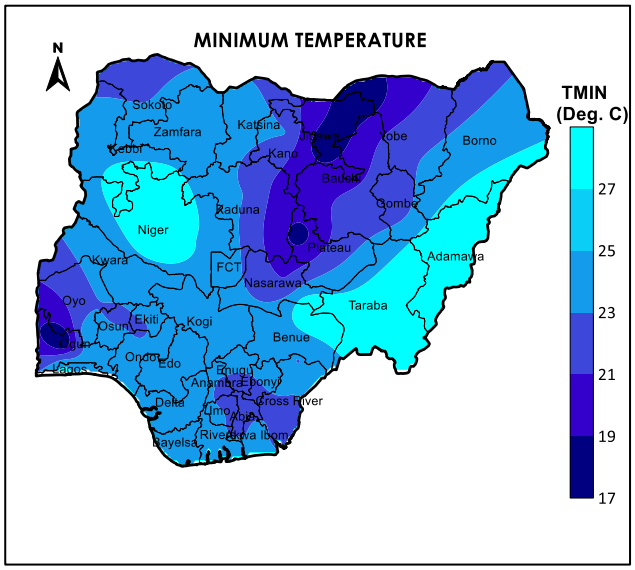

Figure 8: Minimum Temperature Across Nigeria in the First Dekad of March 2024.

The minimum (nighttime) temperatures for the first dekad of March 2024 are presented in Figure 8. Minimum temperatures across the country ranged from 17.5°C to 28.0°C. Dutse (Jigawa State) recorded the lowest nighttime temperature of 17.5°C, while the highest nighttime temperature of 28.0°C was recorded in Yola (Adamawa State).

3.4 Minimum Temperature Departure from the Normal (30-year Average)

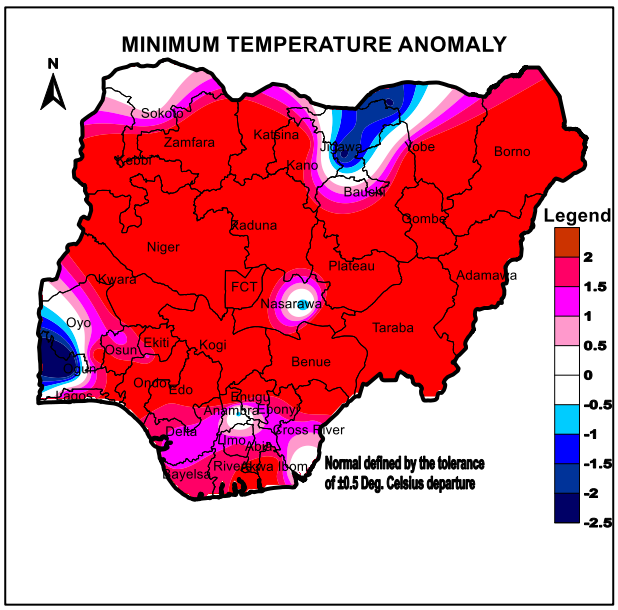

Figure 9: Minimum Temperature Anomaly Across Nigeria in the First Dekad of March 2024.

The minimum (night-time) temperature anomaly across Nigeria during the First Dekad of March is shown in Figure 9.

Most parts of the country experienced warmer-than-normal nighttime temperatures, except parts of Jigawa and Ogun states that experienced lower-than-normal nighttime temperatures.

3.5 Temperature Humidity Index (THI)

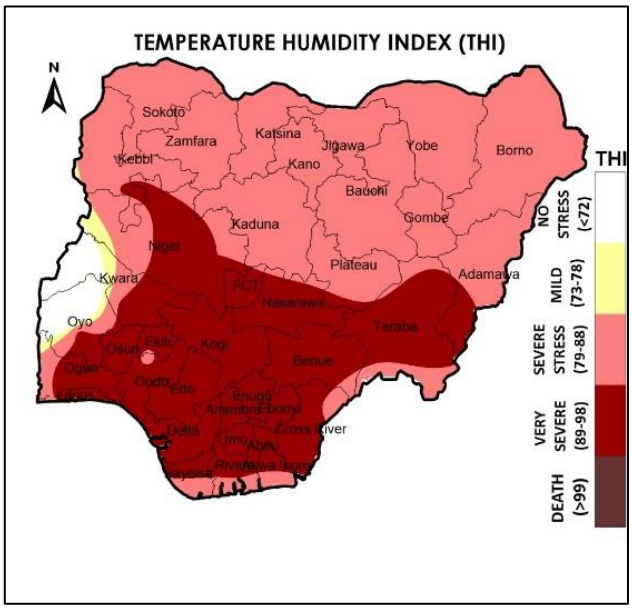

Figure 10 Temperature Humidity Index (THI) in the First Dekad of March 2024.

The THI for the first dekad of March is presented in Figure 10. The entire country was under moderate to very severe heat stress conditions. THI values over the central and southern states ranged between 89 and 98. Such heat stress conditions could lead to a high mortality rate among farm animals, particularly broilers. This situation is further exacerbated by the fact that the southern states are expected to witness the onset of

the rainy season within this period. During this period, temperatures are highest and therefore the levels of discomfort are also high.

4.0 Weather/Agricultural outlook for the Second Dekad (11-20) of March 2024.

4.1 Weather Outlook

In the second dekad of March 2024, temperatures are expected to be higher with higher temperatures over the northern states. A northward pull-up of the Inter Tropical Discontinuity (ITD) is expected. Therefore, more moist winds are expected over the southern states including some parts of the central cities. The ITD is expected to oscillate between Lat 9.5^0N and 10.2^0N. Cloudy skies with intervals of sunshine and prospects of thunderstorms are anticipated over the south in the coming dekad.

Sunny and hazy conditions over the central and northern states. Dust haze in good visibility is expected over the extreme north.

4.2 Advisories for the Second Dekad of March.2024.

- Farmers in the south are advised to intensify preparations towards the first farming season.
- Livestock farmers across the country should provide clean and adequate drinking water, fortified with multivitamins, for their livestock following the anticipated increase in temperatures.
- Availability of clean water can help alleviate the discomfort being experienced by animals during this period.
- Fish farmers can minimize feeding during warm hours. Similarly, broilers should be fed early hours of the morning and stocking density can be reduced.
- Ensure proper ventilation in the animal pen while ensuring adequate biosecurity.
- Farmers can feed animals during the early hours of the morning and limit feeding during the hot period of the day.
- Poultry farmers are encouraged to reduce stocking density and provide proper ventilation for birds.
- It is recommended that farmers and other relevant stakeholders in the agricultural sector collaborate closely with NiMet to get additional insights into the weather changes and their potential impacts on the agricultural value chain.
- Further weather information is available on the NiMet website, www.nimet.gov.ng. the NiMet Weather App (available on Google Play and Apple Store) or the nearest NiMet offices in all the states of the country and the FCT.

4.3 Agricultural Activities for the Second Dekad of March.2024.

- Harvesting of crops such as cashew, and oil palm is ongoing across the south-western zone of the country.
- Land clearing and other land preparation activities are being carried out towards the farming season.
- Dry season farming of wheat and maize crops is ongoing.

2nd dekad (11-20) of March 2024

Summary of the Agrometeorological Bulletin for the dekad

The Agrometeorological Bulletin for the Second dekad of March 2024 is presented in this edition of the publication. The highlights of the rainfall and temperature outlook, as well as the Temperature Humidity Index(THI) are as follows:

- The highest observed rainfall amount of 98.0mm was recorded in Uyo (Akwa Ibom state).
- The number of rain days ranged from one (1) to five (5) days.
- Most parts of the country experienced normal to below-normal rainfall. However, above-normal rainfall was recorded in the following places during the dekad: Zaria (Kaduna State), Minna (Niger State), Ilorin (Kwara State), Oyo, Akwa Ibom and Cross River states.
- Below-normal soil moisture conditions were recorded across the country except for Cross Rivers and Akwa Ibom states where above-normal soil moisture conditions were recorded.
- Adamawa State recorded the highest daytime temperature of 41.6°C, while Akwa Ibom State had the lowest daytime temperature of 30.5°C.
- Most parts of the country experienced above-normal daytime temperatures.
- The nighttime temperatures ranged from 17.6°C in Abeokuta (Ogun State) to 29.6°C in Yola (Adamawa State).
- The analysis of the Temperature-Humidity Index (THI) indicates that the entire country was under moderate to very severe heat stress conditions during the period.
- The 2024 NiMet Seasonal Climate Prediction (SCP) is open to the public for reference. Further weather information is available on the NiMet website (www.nimet.gov.ng), the NiMet Weather App (available on Google Play and Apple Store), or the nearest NiMet offices in all the states of the federation and the FCT.

1.0 Rainfall Pattern

1.1 Rainfall Amount

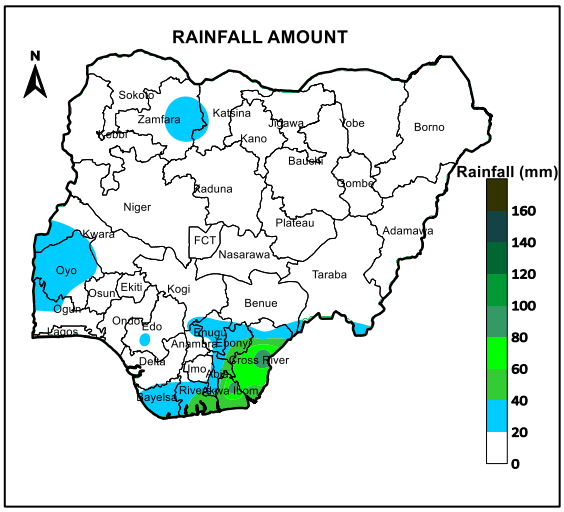

Figure 25: Rainfall Amount across Nigeria in the Second Dekad of March 2024.

Figure 1 depicts the rainfall amounts recorded in various places of the country in the Second dekad of March 2024. During

the dekad, there was a decline in rainfall distribution and amount when compared with the first dekad of March 2024. The rainfall amounts recorded during the period ranged from 0.9mm to 98.0mm. Uyo (Akwa Ibom State) recorded the highest rainfall amount.

1.2 Rainfall Departure from Normal

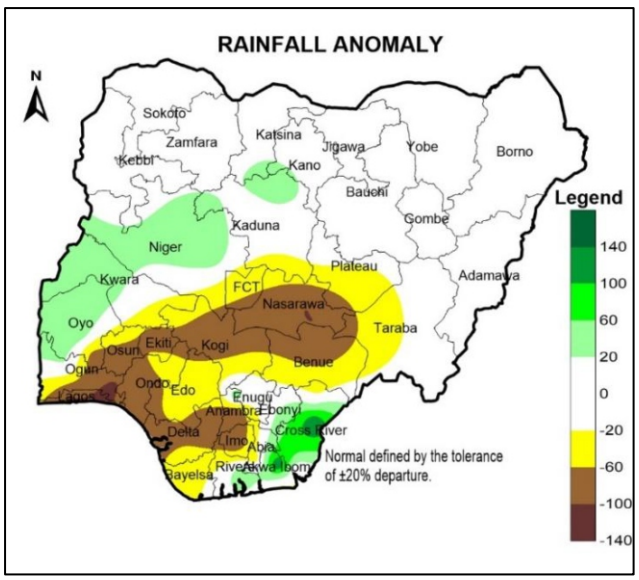

Figure 26: Rainfall Departure from the 30-year Average for the Second Dekad of March 2024.

The rainfall deviation from the 30-year average is presented in Figure 2. The north and central parts of the
country experienced normal-to-below-normal rainfall (i.e., negative anomalies) except Zaria (Kaduna State), Minna (Niger State) and Ilorin(Kwara State) where above-normal rainfall was recorded. Similarly, most locations in the south had below-normal rainfall except Oyo, Akwa Ibom and Cross River states which recorded above-normal rainfall.

1.3 Comparison of Observed Rainfall amounts with the Normal for the Second Dekad of March 2024.

The comparison of the actual (i.e., observed) rainfall amounts recorded against the long-term (1991-2020) average for the second dekad of March 2024 is shown in Figures 3A (for cities in the north) and Figure 3B (for cities in the south).

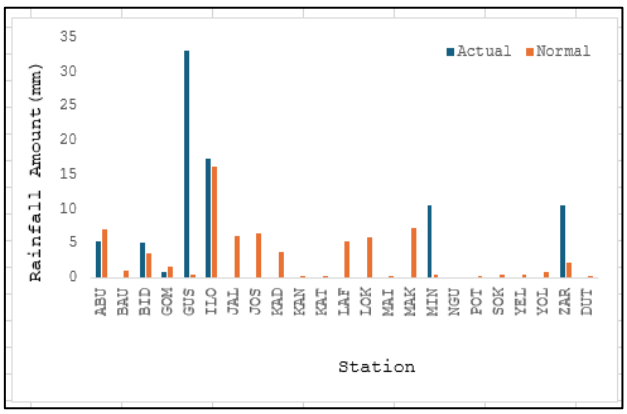

Figure 27A: Comparison of Observed Rainfall Amounts with the Normal for the Northern part of Nigeria in the Second Dekad of March 2024.

Figure 3A indicates that rainfall amounts were above normal (30-year average) in Gusau (Zamfara State), Minna (Niger State) as well as Zaria (Kaduna State). Other places recorded normal to below normal of their long-term values for the dekad under consideration.

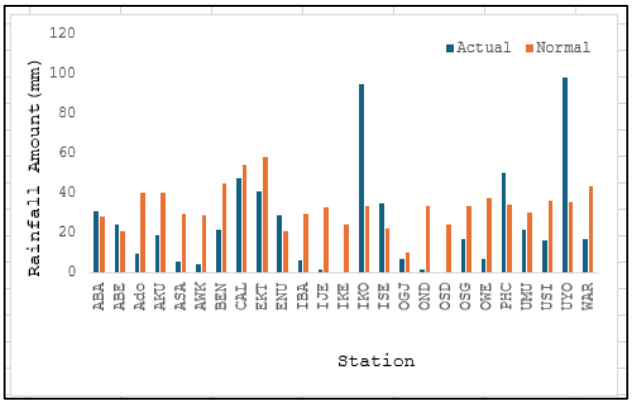

Figure 3B: Comparison of Observed Rainfall Amounts with the Normal for the Southern part of Nigeria in the Second Dekad of March 2024.

In the southern states, as depicted in Figure 3B, most cities recorded below-normal rainfall amounts during the dekad. However, Ikom (Cross River State), Iseyin (Oyo State), Aba (Abia State), Port Harcourt (Rivers State) and Uyo (Akwa Ibom State) recorded above-normal rainfall for the dekad under review.

1.4 Number of Rain Days

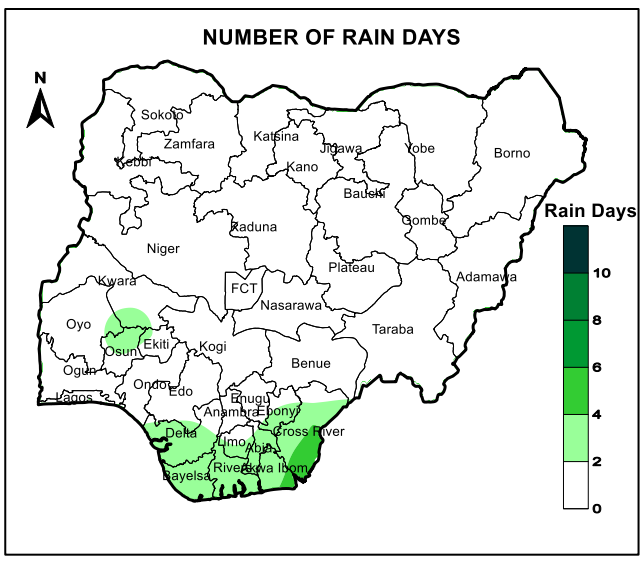

Figure 28: Number of Rain Days in the Second Dekad of March 2024.

The distribution of the number of rain days across Nigeria for the Second dekad of March 2024 is shown in Figure 4.

The number of rain days during the dekad ranged from one (1) to five (5) days. Calabar (Cross River State) had the highest occurrence of rainfall.

2.0 Soil Moisture Conditions in the Second Dekad of March 2024

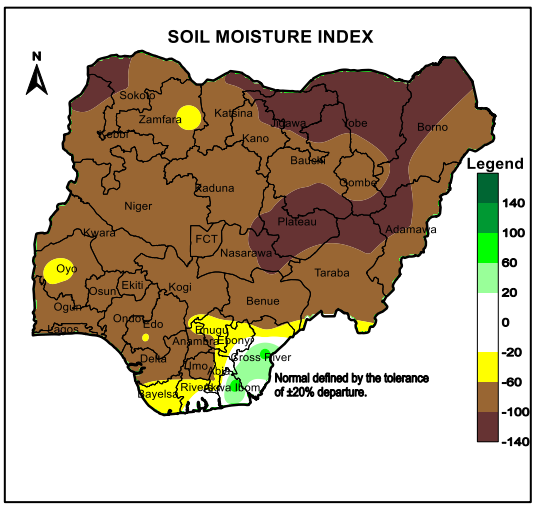

Figure 5: Soil Moisture Index (SMI) across Nigeria in the Second Dekad of March 2024.

Figure 5 depicts the available soil moisture conditions in various parts of Nigeria for the Second dekad of March 2024. Most parts of the country experienced below-normal soil moisture conditions except Cross Rivers and Akwa Ibom states where above-normal soil moisture conditions were recorded during the period.

3.0 Temperature Distribution

3.1 Maximum (Daytime) Temperature Distribution

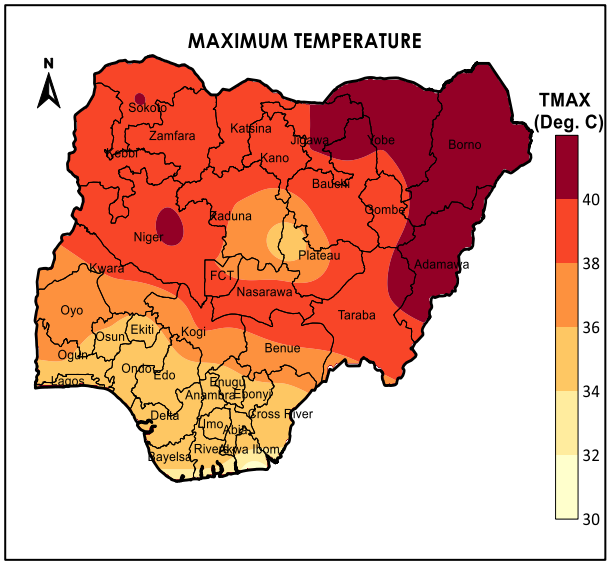

Figure 6: Maximum Temperature Across Nigeria in the Second Dekad of March 2024.

The daytime temperatures across Nigeria during the Second dekad of March 2024 are shown in Figure 6. During the dekad, the maximum temperatures ranged from 41.6°C in Adamawa state to 30.5°C in Akwa Ibom State.

3.2 Maximum Temperature Departure from the Normal (30-year (1991 – 2020) Average)

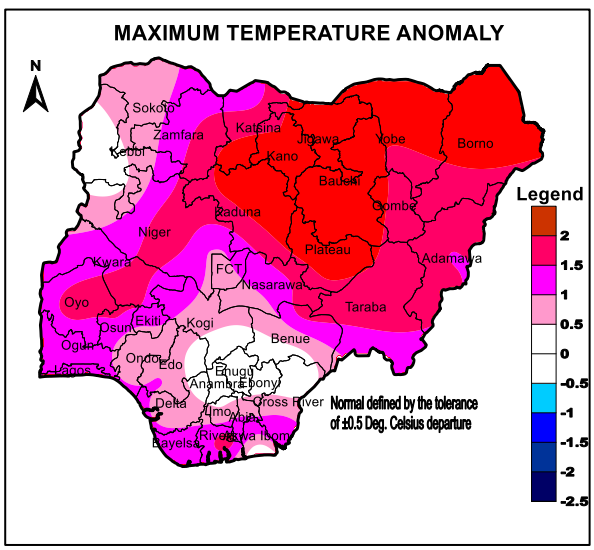

Figure 7: Maximum Temperature Anomaly Across Nigeria in the Second Dekad of March 2024.

The maximum temperature anomaly for the Second dekad of March 2024 is shown in Figure 7. During the dekad, above normal (i.e., positive anomaly) daytime temperatures were recorded across the country except in Anambra, Enugu and Ebonyi states which had normal daytime temperatures.

3.3 Minimum Temperature Distribution

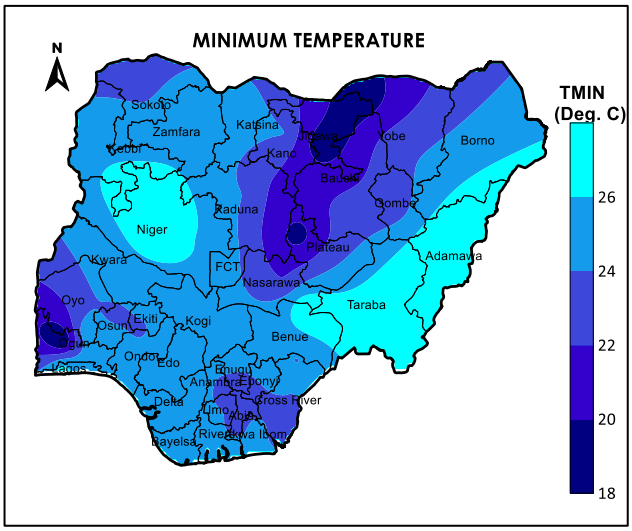

Figure 8: Minimum Temperature Across Nigeria in the Second Dekad of March 2024.

The minimum (nighttime) temperatures in various parts of Nigeria for the Second dekad of March 2024 are presented in Figure 8. The minimum temperatures ranged from 17.6°C in Abeokuta (Ogun state) to 29.6°C in Yola (Adamawa state).

3.4 Minimum Temperature Departure from the Normal (30-year (1991 – 2020) Average)

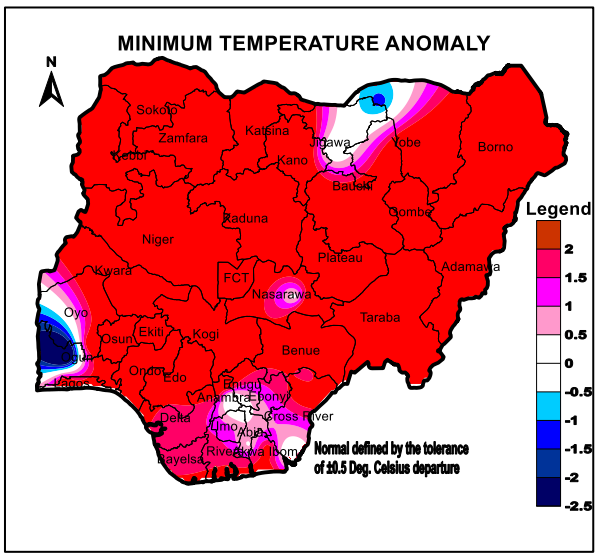

Figure 9: Minimum Temperature Anomaly Across Nigeria in the Second Dekad of March 2024.

The minimum (night-time) temperature anomaly across Nigeria during the Second Dekad of March is shown in Figure 9.

Most parts of Nigeria experienced warmer-than-normal nighttime temperatures except for parts of Ogun State which had below-normal temperatures.

3.5 Temperature Humidity Index (THI)

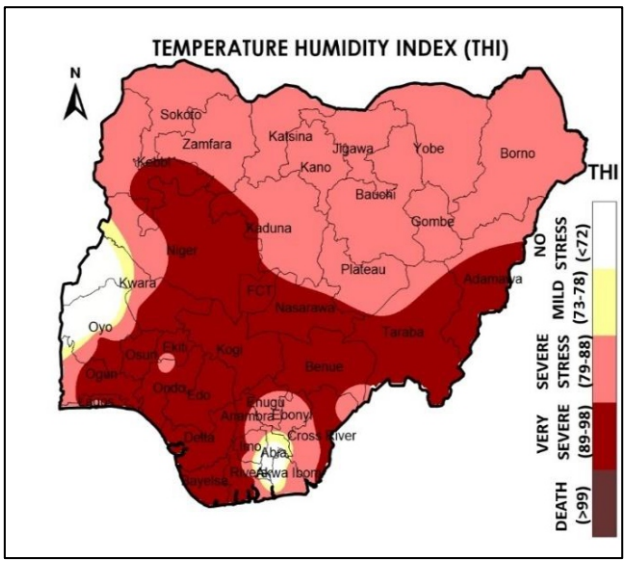

Figure 10 The Temperature Humidity Index for the Second Dekad of March 2024

The THI for the second dekad of March 2024 is presented in Figure 10. Moderate heat stress condition was experienced in most parts of the north. On the other hand, severe heat stress conditions prevailed in the central and southern states. Cattle become heat-stressed starting at an average THI of 68 with the levels of stress increasing with increasing THI values. Except for Oyo and Kwara states, THI values across the country ranged from 88-98 during the dekad. Therefore, farmers are advised to adopt measures to help cushion the effects of high temperatures and relative humidity on farm animals.

4.0 Weather/Agricultural outlook for the Third Dekad (21-31) of March 2024.

4.1 Weather Outlook

In the third dekad of March 2024, temperatures are expected to be higher; with prospects of exceeding 40°C in the northern states. A northward shift of the Inter Tropical Discontinuity (ITD) is expected. Therefore, more moist winds are expected over the southern states and some parts of the central cities. The ITD is expected to oscillate between Lat 9.5^{0}N and 10.5^{0}N. Cloudy skies with intervals of sunshine in the morning hours and prospects of thunderstorms are anticipated over the south in the coming dekad.

Sunny and hazy conditions over the central and northern states are expected in the morning hours with patches of cloud in the afternoon periods.

4.2 Advisories for the Third Dekad of March 2024.

- Farmers in the south are advised to intensify preparations towards the first farming season.
- Heat stress in animals can be significantly reduced by ensuring proper ventilation, lowering the temperature of drinking water, feeding between 8.00 am and 10.00 am, as well as providing vitamins to replenish lost electrolytes.
- With the transition into the rainy season in the south, THI is likely to increase in this part of the country. Therefore, farmers are advised to reduce stocking density.
- Livestock farmers across the country should provide clean and adequate drinking water fortified with multivitamins for their animals in anticipation of an increase in temperatures.
- Poultry farmers are encouraged to reduce stocking density and provide proper ventilation for birds.
- A gradual reduction in the movement of flocks especially during the afternoon hours for animals under the free-range system is advised.
- It is recommended that farmers and other relevant stakeholders in the agricultural sector collaborate closely with NiMet to get additional insights into the weather changes and their potential impacts on the agricultural value chain.
- Further weather information is available on the NiMet website, www.nimet.gov.ng. the NiMet Weather App (available on Google Play and Apple Store) or the nearest NiMet offices in all the states of the country and the FCT.

4.3 Agricultural Activities for the Third Dekad of March 2024.

- Harvesting of crops such as cashews and oil palm is ongoing.
- Dry season farming of vegetables is ongoing in the northern part of the country.
- Land clearing and other land preparation activities are ongoing in the southern states.
- Dry season farming of wheat and maize crops is ongoing.

3rd dekad (21-31) of March 2024

Summary of the Agrometeorological Bulletin for the dekad

The Agrometeorological Bulletin for the third dekad of March 2024 is presented in this edition of the publication. The highlights of the rainfall and temperature outlook, as well as the humidity temperature index (HTI) during the decade are as follows:

- The highest observed rainfall amount of 100.9mm was recorded in Bayelsa State.
- The number of rain days during the dekad ranged from one (1) to four (4) days.
- Normal to below normal rainfall (i.e., negative anomalies) was experienced across the country except for places around Ogun and Osun states, parts of Anambra State and the FCT that recorded above-normal rainfall.
- The entire country had below-normal soil moisture conditions during the dekad.
- The highest and lowest maximum (daytime) temperatures of 42.4°C and 30.2°C were recorded over Adamawa and Akwa Ibom states, respectively. The entire country recorded above-normal daytime temperatures.
- Minimum temperatures ranged from 14.9°C to 28.7°C. Dutse (Jigawa State) recorded the lowest nighttime temperature of 14.9°C, while the highest nighttime temperature of 28.7°C was observed in Makurdi (Benue State).
- Heat Stress to Extreme Heat Stress conditions were predominant over the entire country. Kebbi State recorded THI values above 99.
- The 2024 NiMet Seasonal Climate Prediction (SCP) is available for reference. Further weather information is available on the NiMet website (www.nimet.gov.ng), the NiMet Weather App (available on Google Play and Apple Store), or the nearest NiMet offices in all the states of the federation and the FCT.

1.0 Rainfall Pattern

1.1 Rainfall Amount

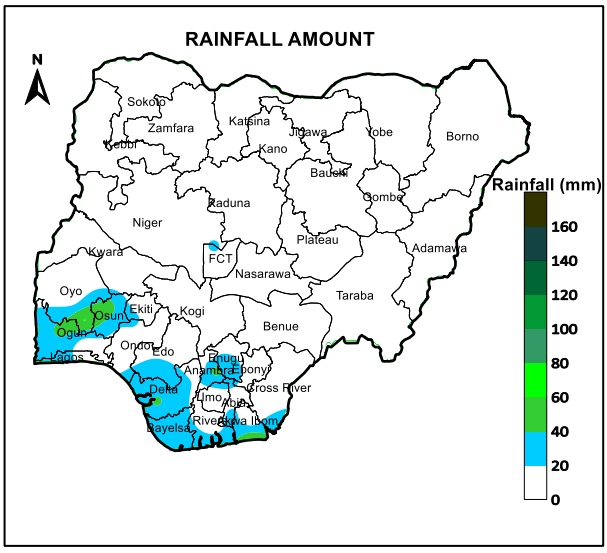

Figure 29: Rainfall Amount across Nigeria in the third Dekad of March 2024.

Figure 1 depicts the rainfall amounts recorded across the country in the third dekad of March 2024. During the dekad, rainfall amounts ranged from 0.9mm to 64.5mm. The highest rainfall amount was recorded in Ibadan (Oyo state), while the

lowest was recorded in Owerri (Imo state). When compared with the second dekad, rainfall declined in the third dekad over the entire south.

1.2 Rainfall Departure from Normal

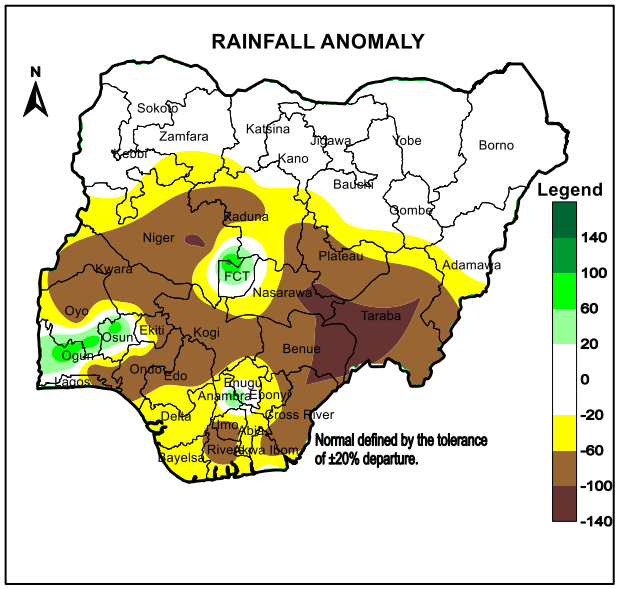

Figure 30: Rainfall Departure from the 30-year Average for the third Dekad of March 2024.

The rainfall deviation from the 30-year average is presented in Figure 2. Normal to below normal rainfall (i.e., negative anomalies) was experienced and recorded across the country except for places around Ogun, Osun, parts of Anambra and the FCT that had above-normal rainfall.

1.3 Comparison of Observed Rainfall amounts with the Normal for the Third Dekad of March 2024.

The comparison of the actual (i.e., observed) rainfall amounts recorded against the long-term (1991-2020) average for the third dekad of March 2024 is shown in Figure 3A (for cities in the north) and Figure 3B (for cities in the south).

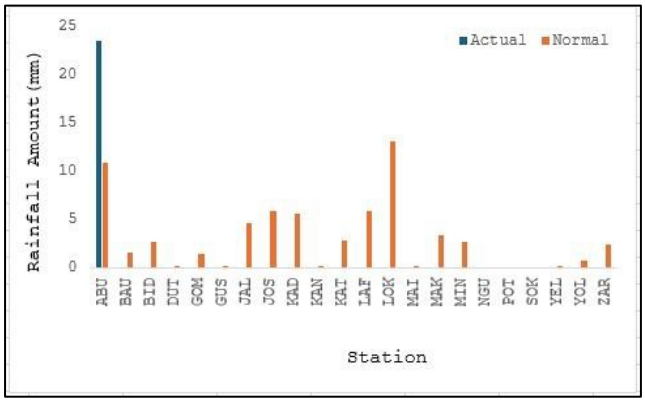

Figure 31A: Comparison of Observed Rainfall Amounts with the Normal for the Northern part of Nigeria in the Third Dekad of March 2024.

Figure 3A indicates that only the FCT recorded above-normal rainfall when compared to the 30-year average during the third dekad of March 2024. In other parts of the north, rainfall values were within or below their long-term averages(30-year).

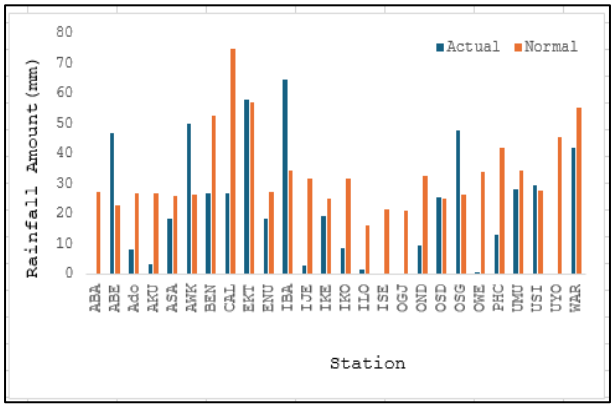

Figure 3B: Comparison of Observed Rainfall Amount with the Normal for the Southern part of Nigeria in the Third Dekad of March 2024.

In the southern states, as depicted in Figure 3B, most states recorded rainfall amounts below the normal. However, above-normal (30-year average) rainfall amounts were recorded in Abeokuta (Ogun State), Ibadan (Oyo State), Awka (Anambra State), and

Oshogbo (Osun State)during the period under review.

1.4 Number of Rain Days

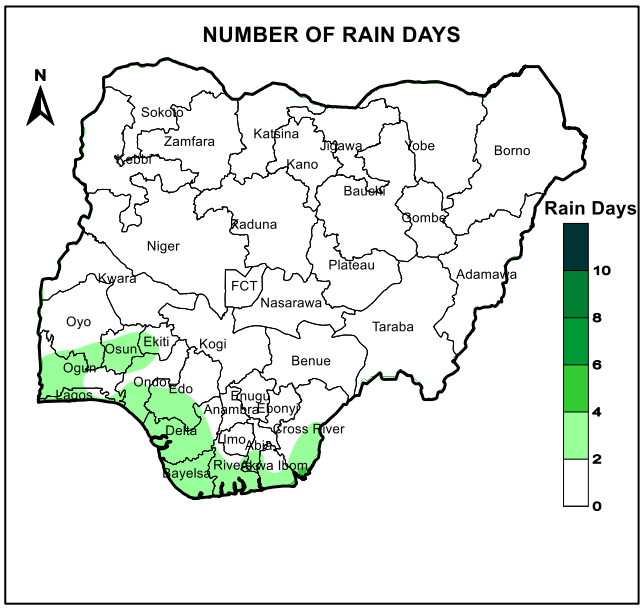

Figure 32: Number of Rain Days in Third Dekad of March 2024.

The distribution of the number of rain days across Nigeria for the third dekad of March 2024 is shown in Figure 4. The number of rain days during the dekad ranged from one (1) to four (4) days. Eket (Akwa Ibom State) had the highest occurrence of rainfall.

2.0 Soil Moisture Conditions in the Third Dekad of March 2024

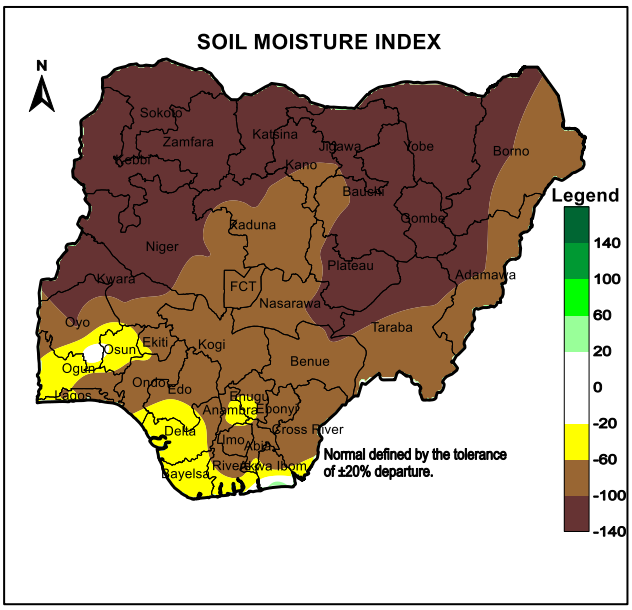

Figure 5: Soil Moisture Index (SMI) across Nigeria in the Third Dekad of March 2024.

Figure 5 depicts the available soil moisture conditions in various parts of Nigeria for the third dekad of March 2024. The entire country had below-normal soil moisture conditions.

3.0 Temperature Distribution

3.1 Maximum (Daytime) Temperature Distribution

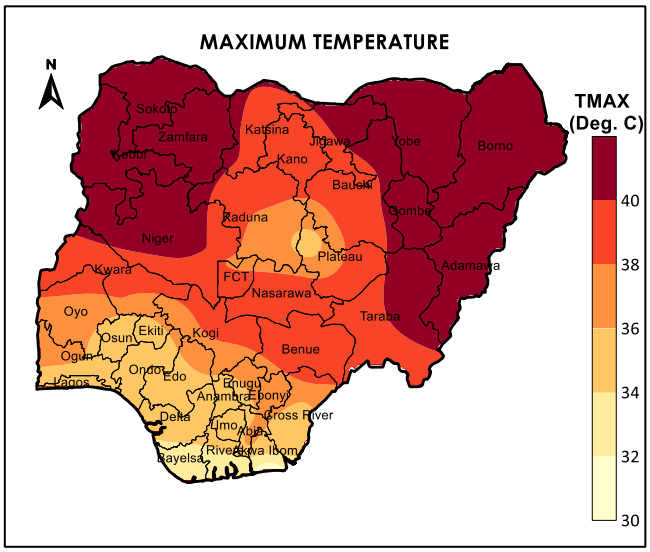

Figure 6: Maximum Temperature Across Nigeria in the Third Dekad of March 2024.

The daytime temperatures across Nigeria during the third dekad of March 2024 are shown in Figure 6. During the dekad, the maximum temperatures ranged from 40.4°C to 30.2°C. Adamawa State recorded the highest daytime temperature of 40.4°C, while Akwa Ibom State had the lowest temperature of 30.2°C.

3.2 Maximum Temperature Departure from the Normal (30-year Average)

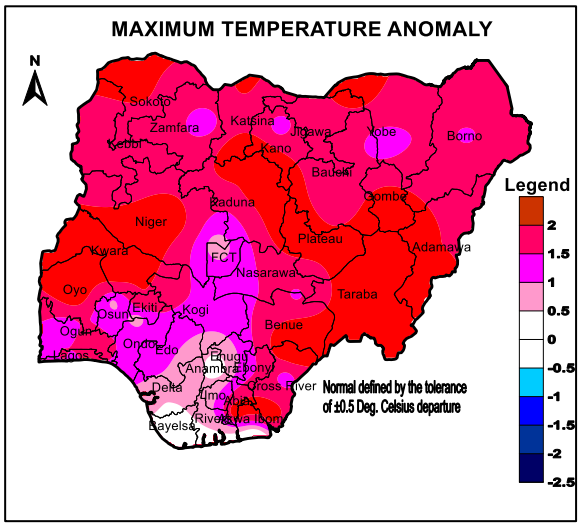

Figure 7: Maximum Temperature Anomaly across Nigeria in the Third Dekad of March 2024.

The maximum temperature anomaly for the third dekad of March 2024 is shown in Figure 7. During the dekad, the entire country recorded above-normal daytime temperatures. Most parts of the country were generally hotter than usual.

3.3 Minimum Temperature Distribution

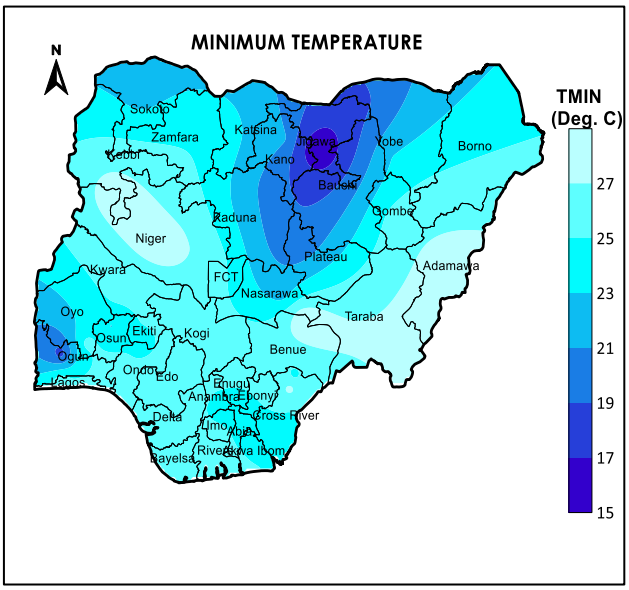

Figure 8: Minimum Temperature Across Nigeria in the Third Dekad of March 2024.

The minimum (nighttime) temperatures for the third dekad of March 2024 are presented in Figure 8. The minimum temperatures ranged from 14.9°C in Dutse (Jigawa state) to 28.7°C in Makurdi (Benue state).

3.4 Minimum Temperature Departure from the Normal (30-year Average)

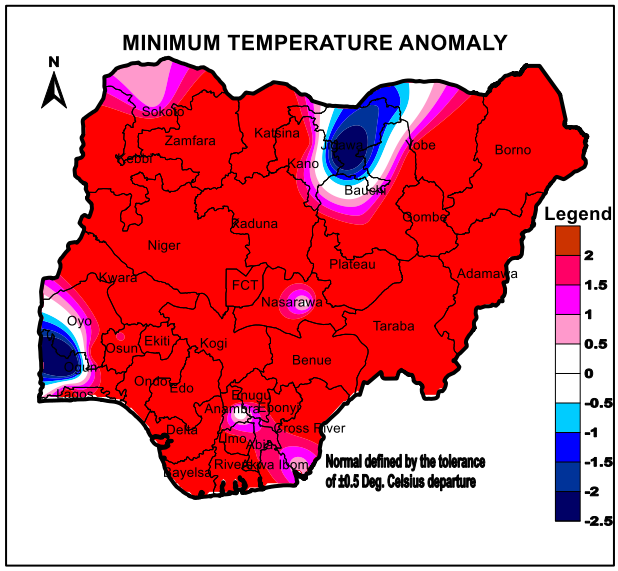

Figure 9: Minimum Temperature Anomaly across Nigeria in the Third Dekad of March 2024.

The minimum (night-time) temperature anomaly across Nigeria during the third Dekad of March is shown in Figure 9.

Most parts of the country experienced warmer-than-normal nighttime temperatures except for parts of Ogun and Jigawa states with colder-than-normal temperatures at night.

3.5 Temperature Humidity Index (THI)

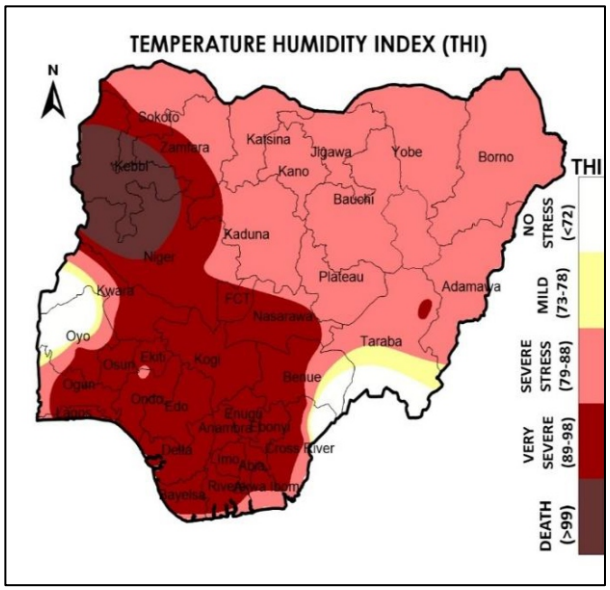

Figure 10 The Temperature Humidity Index for the Third Dekad of March 2024.

The THI for the third dekad of March is presented in Figure 10. The entire country was predominantly under heat stress to extreme heat stress conditions. Kebbi State recorded THI values above 99.

When the THI rises above 82, a very significant reduction in feed conversion ratio and milk production of farm animals is likely. Cattle show signs of severe stress and may ultimately die. Excessive heat can lead to significant death rates.

4.0 Weather/Agricultural outlook for the First Dekad (01-10) of April 2024.

4.1 Weather Outlook

In the first dekad of April 2024, temperatures are expected to rise, with higher temperatures over the northern states. A northward displacement of the Inter Tropical Discontinuity (ITD) is expected during the dekad. It will oscillate between Lat 9.5^0N and 10.2^0N. Therefore, more moist winds are expected over the southern states including some parts of the central cities. Relative humidity as well as dew point temperatures are expected to increase. This may result in more rainfall activities. The Temperature Humidity Index is expected to increase across the entire country in April.
Cloudy skies with intervals of sunshine are expected in the south. Thunderstorms may also occur in the afternoon period.
The north and central states are expected to be sunny in the morning with chances of thunderstorms around the high grounds of the central states in the afternoon.

4.2 Advisories for the First Dekad of April 2024.

- Farmers in the south are advised to intensify preparations towards the first farming season.
- It is important to give cattle and other small ruminant animals enough water, shade, and ventilation in addition to reducing animal movements to cope with the stress. Animals under intensive care should be provided with vitamins to ameliorate the stress. Feeding animals during the early hours of the morning can suffice.
- Livestock farmers across the country are advised to provide clean and adequate drinking water, fortified with multivitamins for their animals in anticipation of an increase in temperatures.
- Farmers can feed animals during the early hours of the morning and reduce feeding during the hot period of the day.
- Poultry farmers are encouraged to reduce stocking density and provide proper ventilation for birds.

- A gradual reduction in the movement of flocks especially during the afternoon hours for animals under the free-range system is advised.
- It is recommended that farmers and other relevant stakeholders in the agricultural sector collaborate closely with NiMet to get additional insights into the weather changes and their potential impacts on the agricultural value chain.
- Further weather information is available on the NiMet website, www.nimet.gov.ng. the NiMet Weather App (available on Google Play and Apple Store) or the nearest NiMet offices in all the states of the country and the FCT.

4.3 Agricultural Activities for the First Dekad of April 2024.

- Harvesting of crops such as cashew and oil palm is ongoing across the southwestern zone of the country.
- Dry season farming of vegetables is on in the northern part of the country.
- Land clearing and other land preparation activities are being carried out across the country.
- Dry season farming of wheat and maize crops is ongoing in the country.

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