



FAO Key Messages for South Sudan’s Climate Outlook for March-May 2024
Based on the 66th Greater Horn Of Africa Climate Outlook Forum (GHACOF 66)
Held in Munyonyo, Kampala, Uganda, 20-21 February 2024

1. SOUTH SUDAN CLIMATE OUTLOOK FOR MARCH TO MAY 2024 RAINFALL SEASON.

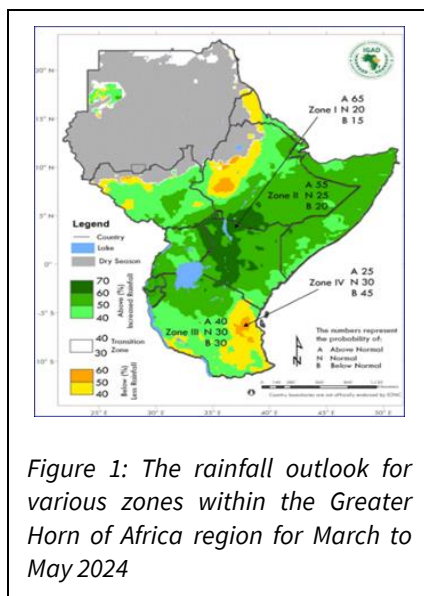


Figure 1: The rainfall outlook for various zones within the Greater Horn of Africa region for March to May 2024

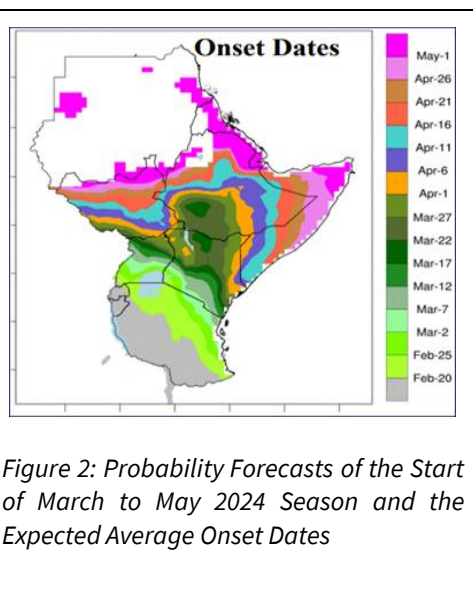


Figure 2: Probability Forecasts of the Start of March to May 2024 Season and the Expected Average Onset Dates

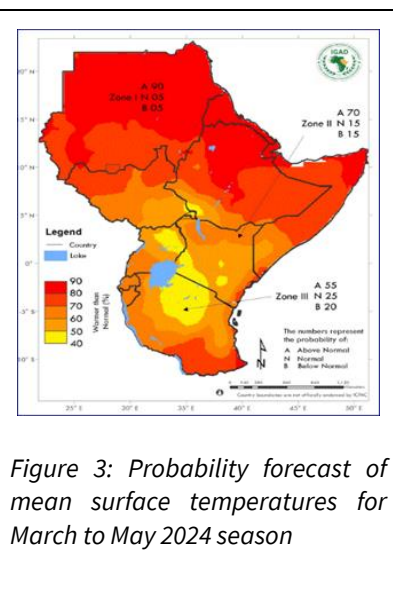


Figure 3: Probability forecast of mean surface temperatures for March to May 2024 season

March to May (MAM) constitutes an important rainfall season in South Sudan, particularly in the southern parts of the country, where MAM rainfall has significant contribution to the total annual rainfall as it is the beginning of the cultivation period in the bimodal rainfall zone in South Sudan (Equatorial region and the green belt) and parts of the unimodal areas in the central parts of the country.

Analysis of climate model predictions from 9 Global Producing Centres (9 GPCs) as depicted from the recently released Greater Horn of Africa (GHACOF 66) indicate that wetter than normal conditions are favoured over most parts of South Sudan. Forecast probabilities for wetter than normal conditions are in the range of 55%-65% over majority of the country (Figure 1). On the other hand, forecast probabilities favour below normal rainfall conditions over the central parts of Pibor County in Greater Pibor Administrative Area (GPAA).

The predicated start of the MAM season for South Sudan indicates a high chance of early to normal onset over the Equatoria region, with rains likely to start as early as March 17, while onset dates will vary as the season progresses northwards with rains likely to effectively start from May in the northern parts of the country (Figure 2).

The temperature forecast from 9 GPCs indicates an increased likelihood of warmer than normal surface temperatures in South Sudan with northern parts of South Sudan expected to be the warmest (Figure 3).

2. SOUTH SUDAN STATE-BASED CLIMATE OUTLOOK: RAINFALL AND TEMPERATURE

Eastern Equatoria State:

The forecast indicates that most of Kapoeta East, Kapoeta South, Budi, Ikotos, Torit, Magwi and the southern parts of Lafon and Kapoeta North (*colored green*) counties have a 55% probability of experiencing above normal rainfall, while the rest of the State (*colored light green*) has a 40% probability of experiencing above normal rainfall. The probability of above normal temperature (*colored dark orange*) is 70%.

Central Equatoria State:

The forecast indicates that most of Terekeka, northern parts of Yei, Juba, Lainya, and eastern Kajo-Keji (*colored green*) counties have a 55% probability of experiencing above normal rainfall, while the rest of the State (*colored light green*) has a 40% probability of experiencing above normal rainfall. The probability of above normal temperature (*colored dark orange*) is 70%.

Western Equatoria State:

The forecast indicates that the southern parts of Tambura and Nagero (*colored yellow*) counties have a 45% probability of experiencing below normal rainfall, while the rest of the state (*colored light green*) has a 40% probability of experiencing above normal rainfall. Parts of Mundri East and Mundri West counties, including south-eastern Ibba County (*colored green*) have a 55% probability of experiencing above normal rainfall. The probability of above normal temperature (*colored dark orange*) is 70%.

Western Bahr-el Ghazal State:

The forecast indicates that Jur River, Wau and southern Raga counties (*colored light green*) have a 40% probability of experiencing above normal rainfall, while the central parts of Raga and extreme northern parts of Jur River (*colored yellow*) have a 45% probability of experiencing below normal rainfall. Northern Raga (*colored grey*) is expected to be dry. The probability of above normal temperature (*colored dark orange*) is 70%.

Northern Bahr-el-Ghazal State:

The forecast indicates that southern parts of Aweil Centre (*colored light green*) have a 40% probability of experiencing above normal rainfall, with the rest of the state (*colored yellow and orange*) having a 45% probability of experiencing below normal rainfall. Northern parts of the State (*colored grey*) are expected to be dry. The probability of above normal temperature (*colored dark orange*) is 90%.

Warrap State:

The forecast indicates that Tonj South, Tonj East, southern Gogrial West and Gogrial East counties (*colored light green*) have a 40% probability of experiencing above normal rainfall, while the rest of the state (*colored yellow and orange*) has a 45% probability of experiencing below normal rainfall. Northern parts of the State (*colored grey*) are expected to be dry. The probability of above normal temperature (*colored dark orange*) is 90%.

Lakes State:

The forecast indicates that Awerial, Yirol East and eastern parts of Yirol West counties (*colored green*) have a 55% probability of experiencing above normal rainfall, while the north-western parts of Rumbek North County (*colored yellow*) have a 45% probability of experiencing below normal rainfall. The rest of the State (*colored light green*) has a 40 % probability of experiencing above normal rainfall. The probability of above normal temperature (*colored dark orange*) is 70%.

Greater Unity State

The forecast indicates that Panyijiar, Mayendit and southern Leer counties (*colored light green*) have a 40% probability of experiencing above normal rainfall. The rest of the State (*colored grey*) is expected to be dry. The probability of above normal temperature (*colored dark orange*) is 70%.

Upper Nile State

The forecast indicates that Ulang, Maiwut, Longochuk, southern parts of Maban, southern parts of Malakal, eastern Panyikang, and south-eastern parts of Baliet counties (*colored light green*) have a 40% probability of experiencing above normal rainfall, while southern parts of Luakpiny/Nasir and Longochuk counties (*colored green*) have a 55% probability of experiencing above normal rainfall. The rest of the State (*colored grey*) is expected to be dry. The probability of above normal temperature (*colored dark orange*) is 90%.

Greater Jonglei State

The forecast indicates- that Pibor and southern Canal Pigi counties (*colored yellow*) have a 45% probability of experiencing below normal rainfall, while most parts of Bor South, southern parts of Twic East, and Uror counties (*colored green*) have a 55% probability of experiencing above normal rainfall. The rest of the State (*colored light green*) has a 40% probability of experiencing above normal rainfall. Fangak and most of Canal Pigi counties (*colored grey*) are expected to be dry. The probability of above normal temperature (*colored dark orange*) is 70%.

3. IMPLICATIONS, RISK AND RECOMMENDATIONS

Disaster Risk Management

- *Risks & Implications*
 - Enhanced rainfall is likely to cause displacement of populations, and destruction of property such as dwellings.
 - There is likely to be an increase in water-borne disease outbreaks such as Malaria and Diarrhea.
 - In areas prone to flooding, access to markets and market functionality is likely to be affected as road infrastructure deteriorates and markets flood respectively.
- *Mitigation measures*
 - Initiate interventions to improve infrastructure such as roads and dykes.
 - Preposition emergency food and medical supplies for response purposes.
 - Initiate mitigation measures to address conflict that is likely to be caused by flood-induced displacement / migration and competition over dry land.
 - Provide weather advisories and early warning messages through radio and other media to persons in flood prone areas so that they can take actions to lessen the impacts of the extreme weather conditions.

Agriculture and Food Security

- *Risk and Implications*
 - The risk of flooding is likely to increase food insecurity through disrupting market functionality, loss of livelihoods and productive assets by the affected populations and increase in water-borne diseases that will affect household labour availability.
 - The risk of flooding because of enhanced rainfall will also affect availability of pasture for pastoral communities, thus negatively impacting on their food security situation.

- *Mitigation Measures*
 - It is recommended to encourage farmers to plant fast maturing and flood-resistant crops varieties e.g. rice to take advantage of the excess water inundating their farmlands.
 - Farmers should be trained on post-harvest technologies to minimize crop losses associated with the flooding.
 - Train farmers on Climate-Smart Agriculture (CSA) practices to address the interlinked challenges of food security and climate change.

Water

- *Risks & Implications*
 - Limited availability of watering points for livestock, particularly in the northern parts of the country and areas with below normal rainfall is likely to lead to resource-based conflicts.
 - Increase in the Nile water levels¹ will lead to high flood risk during the forecast period and will likely result in flooded areas remaining so.
- *Mitigation measures*
 - Water harvesting and conservation activities should be encouraged in areas with below normal rainfall to support livestock keeping.
 - Peace conferences should be held to address resource-based conflicts (water and pasture) among pastoralists.

Livestock

- *Risks & Implications*
 - In drier areas, there is increased movement of animals in search of pasture and water, creating conducive conditions for increased cattle-related conflict, while in the wetter southern parts, increased conflict between pastoralists and farmers is likely.
 - In wetter areas in the southern parts of the country, an increase in water-borne animal diseases is expected.
- *Mitigation measures*
 - Enhanced surveillance, treatment, and vaccination against expected water-borne animal diseases.
 - Support pastoralists in drier areas to access pasture (promoting conservation of crop residues for use as animal feeds) and water (by promoting water conservation and harvesting).
 - Promote peace dialogues between pastoralists and farmers as appropriate.

¹ This is because of the increase in the upstream water levels, particularly in Lake Victoria and Lake Albert in Uganda.

Visit the CLIMIS Portal: <http://www.climis-southsudan.org>

View Rain Gauge Data on the CLIMIS Portal: http://www.climis-southsudan.org/agromet/rainfall_data

For more details, contact: FAO South Sudan: FAO-South-Sudan@fao.org