

FAO Key Messages: South Sudan Weather Outlook as depicted from Greater Horn of Africa Climate Outlook Forum (GHACOF27) 20-21 May 2024; Juba, South Sudan

June to September is an important rainy season for South Sudan contributing to about 70 percent of the annual rainfall in both bimodal and unimodal rainfall zones of South Sudan.

According to the latest report from ICPAC GHACOF67, South Sudan is likely to experience above-normal rainfall with the highest probability in the eastern part of the country.

Enhanced rainfall during this period may potentially contribute to flooding in flood-prone areas. Isolated areas in the north-western parts of South Sudan will likely experience below-normal rainfall conditions.

Early to normal onset of rainfall is predicted in most parts of South Sudan with the exception of northern parts of South Sudan which are likely to experience delayed rainfall starting from mid-June.

Warmer than usual conditions are predicted in most parts of the country with hotter temperatures expected in the western to north-western parts of the country.

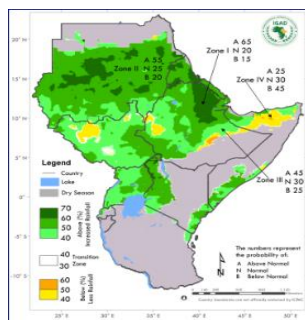


Figure 1 – Rainfall Forecast for JJAS. Source: ICPAC

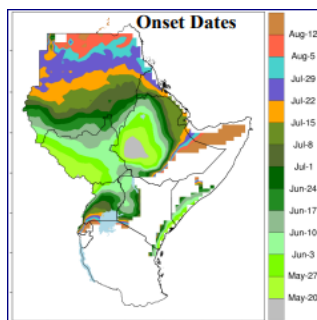


Figure 2 – Rainfall Onset Dates for JJAS. Source: ICPAC

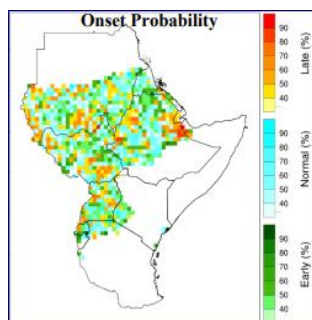


Figure 3 – Rainfall Onset Probability for JJAS. Source: ICPAC

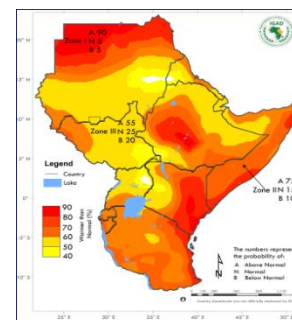


Figure 4 – Temperature Forecast for JJAS. Source: ICPAC

SOUTH SUDAN STATES-BASED CLIMATE OUTLOOK: JUNE-SEPTEMBER 2024

Eastern Equatoria state

The forecast indicates that northern parts of Kapoeta North and north-eastern parts of Kapoeta East (Figure 1 - coloured green) have a high chance of receiving above-normal rainfall while the rest of the state (coloured light green) has a moderate chance of receiving above-normal rainfall. Early onset of the season (Figure 2) is predicted in most parts of the state starting in May with delayed onset (Figure 3 - yellow and orange) in isolated areas in June. The forecast also indicates that the state (Figure 4 - coloured yellow) has a moderate chance of experiencing warmer than usual temperatures.

Central Equatoria State:

The forecast indicates that most of the state (Figure 1- coloured light green) has a moderate chance of receiving above-normal rainfall except for the north-western most part of Tali County (colored cyan) predicted to receive normal rainfall. Early onset of the season (Figure 2) is predicted in most parts of the state starting in May with delayed onset (Figure 3 - yellow and orange) in isolated areas in June. The forecast also indicates that the state (Figure 4 - coloured orange) has a high chance of experiencing warmer than usual temperatures.

Western Equatoria State

The forecast indicates that most of the state (*Figure 1 - coloured light green*) has a moderate chance of receiving above-normal rainfall, while most of Yambio, Maridi, Nzara and western Tambura bordering DRC (*Figure 1 - coloured green*) have a high chance of receiving above normal rainfall. Northern parts of Mundri and Mvolo (*Figure 1 - coloured cyan*) have a moderate chance of receiving normal rainfall. Early onset of the season (*Figure 2*) is predicted in most parts of the state starting in May with delayed onset (*Figure 3 - yellow and orange*) in isolated areas in June. That forecast also indicates that most of the state (*Figure 4 - coloured light orange*) have a high chance of experiencing warmer than usual temperatures while Nagero and Tambura (*Figure 4 - coloured deep orange*) have a very high chance of experiencing warmer than usual temperatures.

Western Bahr-el-Ghazal State

The forecast indicates that most of the state (*Figure 1 - coloured light green*) is predicted to have a moderate chance of receiving above-normal rainfall while western parts of Raja County (*Figure 1 - coloured green*) are predicted to have a high chance of receiving above normal rainfall. However, most of Wau County and northern parts of Jur River County (*Figure 1 - coloured yellow*) are predicted to have a high chance of receiving below-normal rainfall. Normal onset of the season (*Figure 2*) is predicted in most parts of the state starting in late May with delayed onset (*Figure 3 - yellow and orange*) in isolated areas in June. The forecast also indicates that the state (*Figure 4 - coloured deep orange*) has a very high chance of experiencing warmer than usual temperatures.

Northern Bahr-el-Ghazal State

The forecast indicates that most of Aweil South, southern Aweil Centre, Aweil East and the western part of Aweil West (*Figure 1 - coloured yellow*) are predicted to have a moderate chance of receiving below-normal rainfall while the rest of the state (*Figure 1 - coloured light green*) predicted to have a moderate chance of receiving above normal rainfall. Normal onset of the season (*Figure 2*) is predicted in most parts of the state starting in late May with delayed onset (*Figure 3- yellow and orange*) in isolated areas in June. The forecast also indicates that most of the state (*Figure 4 - coloured deep orange*) has a very high chance of experiencing warmer than usual temperatures while Aweil East and part of Aweil South counties (*Figure 4 - coloured orange*) have a high chance of experiencing warmer than usual temperatures.

Warrap State

The forecast indicates that most of Warrap state, i.e. Twic, Gogrial West, Gogrial East and Warrap counties (*Figure 1 - coloured yellow*) are predicted to have a moderate chance of experiencing below-normal rainfall, while Tonj South and most of Tonj East counties (*Figure 1 - coloured light green*) are predicted to have a moderate chance of experiencing above normal rainfall. Normal onset of the season (*Figure 2*) is predicted in most parts of the state starting in late May with delayed onset (*Figure 3 - yellow and orange*) in isolated areas in June. The forecast also indicates that the state (*Figure 4 - coloured orange*) has a high chance of experiencing warmer than usual temperatures.

Lakes State

The forecast indicates that most of Lakes state (*Figure 1 - coloured light green*) is predicted to have a moderate chance of experiencing above normal rainfall with the exception of south-eastern part of Wulu (*Figure 1 - coloured cyan*) predicted to have a low to moderate chance of experiencing normal rainfall. Early onset of the season (*Figure 2*) is predicted in most parts of the state starting in May with delayed onset (*Figure 3-yellow and orange*) in isolated areas in June. The forecast also indicates that the state (*Figure 4 - coloured orange*) has a high chance of experiencing warmer than usual temperatures.

Unity State

The forecast indicates that most of Unity State (*Figure 1 - coloured light green*) is predicted to have a moderate chance of experiencing above-normal rainfall while Rubkona (*Figure 1 - coloured green*) is predicted to have a high chance of experiencing above-normal rainfall. Early onset of the season (*Figure 2*) is predicted in most parts of the state starting in late May with delayed onset (*Figure 3 - yellow and orange*) in isolated areas in June. The forecast also indicates that the state (*Figure 4 - coloured orange*) has a high chance of experiencing warmer than usual temperatures.

Upper Nile State

The forecast indicates that most of the state (*Figure 1 - coloured light green*) has a moderate chance of experiencing above-normal rainfall, while eastern parts of Malakal and northern parts of Balliet counties (*Figure 1 - coloured yellow*) are predicted to have a moderate chance of experiencing below normal rainfall. The south-western part of Melut County (*Figure 1 - coloured cyan*) is predicted to have a low to moderate chance of experiencing normal rainfall. Normal onset of the season (*Figure 2*) is predicted in most parts of the state starting in early June with delayed onset in Renk, Fashoda, and Melut (*Figure 3 – coloured yellow and orange*) starting from mid to late June. The forecast also indicates that the state (*Figure 4 - coloured orange*) has a high chance of experiencing warmer than usual temperatures.

Jonglei State

The forecast indicates that most of the state (*Figure 1 - coloured light green*) has a moderate chance of experiencing above-normal rainfall while Uror and Akobo counties (*Figure 1 - coloured green*) are predicted to have a high chance of experiencing above-normal rainfall. Normal onset of the season (*Figure 2*) is predicted in most parts of the state starting in late May with delayed onset (*Figure 3 - green*) in isolated areas in early May. The forecast also indicates that the state (*Figure 4 - coloured orange*) has a high chance of experiencing warmer than usual temperatures.

Pibor Administrative Area

The forecast indicates that most of the administrative area (*Figure 1 - coloured green*) has a high chance of experiencing above-normal rainfall. However, the southwestern part of the Administrative Area (*Figure 1 - coloured light green*) is predicted to have a moderate chance of experiencing above-normal rainfall. Normal onset of the season (*Figure 2*) is predicted in most parts of the state starting in June with early onset (*Figure 3-green*) in isolated areas in May. The forecast also indicates that the administrative area (*Figure 4 - coloured orange*) has a high chance of experiencing warmer than usual temperatures.

Ruweng Administrative Area

The forecast indicates that most of the administrative area (*Figure 1- coloured light green*) has a moderate chance of experiencing above-normal rainfall. Delayed onset of the season (*Figure 2*) is predicted in most parts of the state starting in mid-June with normal onset (*Figure 3 - blue*) in isolated areas in early June. The forecast also indicates that the administrative area (*Figure 4 - coloured orange*) has a moderate chance of experiencing warmer than usual temperatures.

SEASONAL IMPLICATIONS, RISK AND RECOMMENDATIONS.

Agriculture and Food Security

Risk and implications

Positive

- Enhanced rainfall will improve crop performance and production at the end of the season.
- Enhanced rainfall will also improve vegetation conditions and increase the availability of wild foods.
- With the availability of wild foods, households will be able to harvest and sell wild food for income.
- In terms of gender, the availability of food at the household level is likely to reduce domestic conflict.
- Harvest and wild food will be available, supplementing food deficits in rural areas, hence improving food security as households will diversify their food consumption during this season.

Negative

- Enhanced rainfall increases women's workload on farms and running domestic chores as they will be expected to spend more time in farm work-weeding, harvesting etc.
- Enhanced rainfall in waterlogged areas is likely to increase crop water logging, root-rots diseases affecting crop performance and reduce yield, especially for non-water tolerant crop varieties.
- Below-normal rainfall will enhance the availability of crop water stress, FAW, variegated grasshoppers and other worms that affect crop performance and production.

Mitigation measures

- Farmers are to be trained in crop post-harvest technologies to minimize harvest losses.
- Encourage farmers in areas expected to have enhanced rainfall or in flood-prone areas to plant water-tolerant crop varieties such as rice and in areas with below-normal rainfall to plant drought-tolerant crop varieties.
- In terms of gender participation, men are encouraged to take a more active role in the general management of farms such as weeding, harvesting and post-harvest management of harvest.
- Create a mechanism for response and prevention of the occurrence of gender-based conflict and violence over households' scarce resources in the event of displacement.
- Preposition of agricultural inputs in flood-prone areas.
- Introduction of water and drought-tolerant crops.

Livestock

Risk and implications

- Enhanced rainfall in the central and eastern parts of the country will improve water and pasture availability for livestock and enhance milk production.
- Enhanced rainfall in eastern and central parts of the country is likely to increase water flow triggering flash floods leading to displacement and migration of pastoral communities to more secured areas. This can also lead to conflict between pastoralists and farmers as cattle may encroach into farms. This may also promote gender-based violence.
- Enhanced rainfall is likely to increase, livestock diseases and waterborne pests.

Mitigation measures

- Livestock disease surveillance, vaccination, and treatment need to be scaled up before migration commences.
- Initiate community dialogue between farmers and pastoralists to reduce conflict over resources.

Disaster Risk, Water, and floods

Risk and implications.

- Enhanced rainfall in flood-prone areas in Upper Nile, Jonglei, Unity and western parts of Ethiopia and around Lake Victoria basin will increase the volume of water flowing into the Nile and its tributaries resulting in flash floods in flood-prone riverine areas and lowlands in the eastern parts of the country.
- Enhanced rainfall will also cause infrastructure destruction and reduce access to markets and other social services.
- As the season progresses, the presence of stagnant waters will provide a conducive environment for the prevalence of waterborne pests and diseases such as cholera, malaria etc.
- Water contamination is eminent during heavy rainfall due to the flow of running water carrying dirt into water wells, open ponds, streams, and rivers.

Mitigation measures

- Advise communities in flood-prone areas to relocate to high grounds in case of flood or construct dyke to control water flowing into settlements.
- Construction of water conservation structures in areas with below-normal rainfall for livestock and household use.
- Encourage the use of boats in flood-prone areas to access markets and other services.
- Improvement of feeder roads to markets.
- Advise communities to use clean water from boreholes and taps for domestic use or use boiled and sieved water in areas without clean water sources.
- Encourage communities to use malaria preventive measures such as sleeping under a mosquito net.

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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

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