EARLY WARNING BULLETIN FOR FOOD SECURITY IN THE GAMBIA

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Focal Point: Department of Water Resources
TEL: (+220) 4227631 / 422 28 72/ 4224122
FAX: (+220) 422 50 09 / E-MAIL: dwr@gamtel.gm

1. SEASONAL (2025) RAINFALL PREDICTION & SOCIO-ECONOMIC IMPLICATIONS

1.1 Introduction

The Department of Water Resources (DWR) issues the Seasonal Rainfall Prediction (SRP) annually in fulfilment of its mandate to provide timely climate and weather advice to the Government and people of The Gambia. This prediction focuses on rainfall patterns during the critical July-August-September (JAS) period, offering guidance for planning and decision-making across both public and private sectors. The forecast is particularly important for climate-sensitive sectors including agriculture, aviation, construction, water resources, disaster risk reduction, health, energy, trade, and tourism, amongst others. DWR uses advanced forecasting tools and current scientific knowledge, drawing on sea surface temperature (SST) analyses, global climate model outputs, and regional expertise to issue the JAS outlook. Based on the 1991 - 2020 climatological reference period, the following consensus forecast is presented.

1.2 JAS 2025 Rainfall totals

The JAS 2025 seasonal rainfall is expected to range from **average to above-average** across The Gambia, with projected rainfall between **700 mm and 900 mm** (figure 1). Forecast probabilities indicate:

- 35% Chance of above-normal rainfall
- 45% Chance of near-normal rainfall
- 20% Chance of below-normal rainfall

This suggests a higher likelihood of normal rainfall across the country, although local variations are expected.

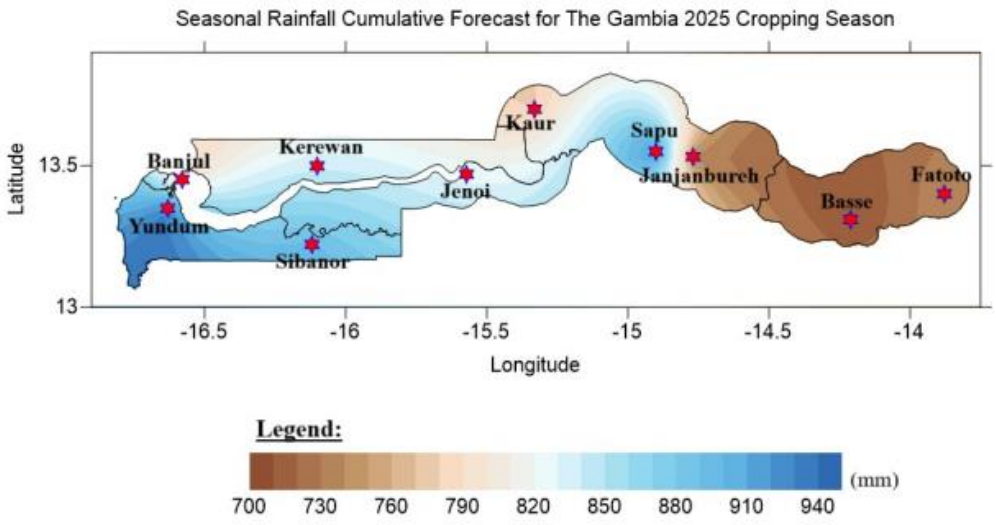

Figure 1: JAS 2025 Rainfall cumulative forecast in mm

Furthermore, the 2025 season is expected to be more variable than 2024, with a likely late to normal onset, flash flood events, and short to medium-duration dry spells early in the season, followed by longer or normal dry spells later.

1.3 Onset, cessation, and length of the season

- ✓ **Onset dates:**
  Eastern sector (URR & CRR): 12 - 19 June 2025
  Western sector (LRR, NBR & WCR): 20 - 25 June 2025 (figure 2).

These are expected to be one week later than average in many areas.

- ✓ **Cessation dates:**
  Across the country: 20 - 26 October 2025

- ✓ **Length of the season:**
  Expected to last 122 - 125 days in most areas

- ✓ **Dry Spells:**
  Normal to long during the first 50 days of the season
  Short to medium towards the end of the season

- ✓ **River Gambia flow:**
  Expected to be normal to above normal

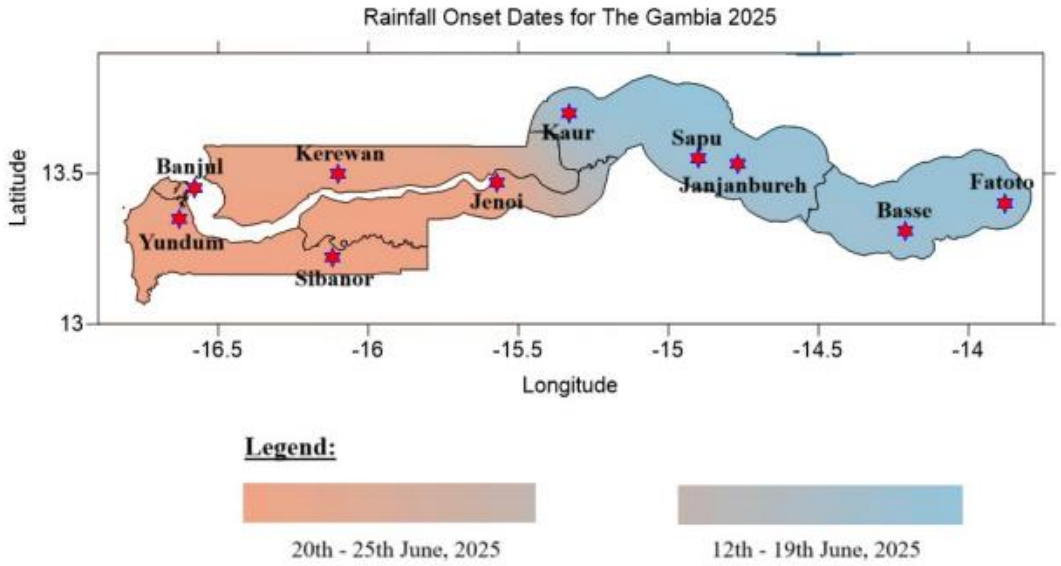

Figure 2: 2025 Forecast onset dates

1.4 Potential Socio-economic implications of 2025 Seasonal Rainfall prediction

The 2025 seasonal forecast, while generally predicting favorable conditions, may also present negative consequences, either alongside or in place of the expected benefits. In regions anticipating above-average rainfall, late to normal onset dates, above-average to average runoff, and short to medium dry spells, a range of challenges could emerge. These may include excess humidity, rapid saturation of low-lying areas, river overflows, rising groundwater levels, inadequate preparation for the agricultural season, disruptions to transhumance movements, impassable roads, and limited access to areas of critical economic, health, and livelihood importance.

The season's wet nature could also lead to widespread flooding and waterlogging, reducing arable land and damaging infrastructure such as homes, roads, markets, and schools. Potential consequences include crop and fodder losses, drowning of livestock and people, and increased outbreaks of waterborne diseases such as cholera, malaria, and schistosomiasis. Additional risks include pest infestations, water pollution, restricted movement of people and animals, soil erosion, silting of watercourses, weed proliferation, post-harvest losses, and loss of human and animal life.

1.4.1 Recommendations for Agricultural Stakeholders considering the 2025 Rainy Season Outlook in The Gambia

Given the anticipated wet conditions and the occurrence of short to medium dry spells during the 2025 rainy season in The Gambia, it is recommended that farmers, herders, water resource managers, relevant projects, NGOs, and authorities take the following measures:

- ✓ Invest in high-yielding, water-tolerant crops, such as rice and tubers.

- ✓ Promote irrigated agriculture, particularly in the floodplains of the River Gambia, while carefully managing flood risks.
- ✓ Establish systems for rainwater collection and conservation for use during the dry season, supporting both agricultural and domestic needs.
- ✓ Deploy climate-smart agricultural practices to enhance yields of both crops and fodder, especially methods that effectively manage excess rainfall.
- ✓ Strengthen information dissemination and advisory services, including agro-hydro-meteorological support to farmers.
- ✓ Facilitate access to improved seeds and agricultural inputs that are suitable for the expected climatic conditions.
- ✓ Support agricultural insurance schemes to protect the livelihoods of producers.
- ✓ Prioritize upland areas for planting, particularly those along the River Gambia, to mitigate flood-related risks.
- ✓ Capitalize on projected above-average river runoff, by expanding irrigated agriculture in Upper River Region (URR) and Central River Region (CRR), while implementing safeguards against flooding.
- ✓ Enhance pest surveillance and control to protect crops from pest infestations.

1.4.2 Recommendations for Disaster Management Sector

The forecasted above-average rainfall and river flows suggest an elevated risk of flooding, with potential impacts including crop destruction, property damage, livestock loss, and threats to human lives in vulnerable communities. To address these risks, the following actions are recommended:

- ✓ Strengthen the dissemination of seasonal forecasts and updates to raise awareness, build local resilience, and inform decision-making.
- ✓ Support should be provided to media outlets, disaster risk reduction platforms, NGOs, and national early warning systems (EWSs).
- ✓ Enhance the monitoring and response capacities of agencies responsible for flood surveillance, disaster management, and humanitarian assistance.
- ✓ Discourage and prevent the occupation of flood-prone zones, whether for housing, farming, or grazing.
- ✓ Reinforce protective infrastructure, including dikes, and ensure regular maintenance of bridges and roadways.
- ✓ Clear drainage systems to improve the evacuation of rainwater and reduce flood risk.
- ✓ Monitor flood alert thresholds closely, especially in high-risk riverine areas.
- ✓ Designate and prepare reception sites for populations displaced by flooding or at risk of displacement.
- ✓ Encourage the cultivation of flood-tolerant crop varieties, suited to periods of excessive soil moisture.

- ✓ Stay updated on seasonal, short-, and medium-term forecasts issued by the Department of Water Resources.
- ✓ Conduct simulation exercises to strengthen preparedness and refine flood response plans.
- ✓ Enforce restrictions on settlement and agriculture in known flood-prone areas.
- ✓ Maintain strong collaboration between hydrological and meteorological services, ensuring coordinated and proactive flood risk management.

1.4.3 Recommendations regarding health risks

Wetlands and areas affected by flooding can create favorable conditions for the spread of water-related diseases such as cholera, malaria, diarrhea, and schistosomiasis. In light of this, the following measures are strongly recommended:

- ✓ Strengthen national health systems and disaster risk reduction platforms to enhance preparedness and response capabilities.
- ✓ Raise public awareness and disseminate early warning information on climate-sensitive diseases, in collaboration with meteorological, hydrological, and health services.
- ✓ Implement disease prevention measures, including vaccination of vulnerable populations and animals, promoting the use of mosquito nets, and pre-positioning essential medicines in areas likely to become inaccessible during floods.
- ✓ Monitor water quality and maintain strategic reserves of water treatment products.
- ✓ Sanitize populated areas and reduce exposure to contaminated water through effective drainage and regular cleaning of gutters and other water channels.
- ✓ Enhance vigilance against crop diseases and pests, such as armyworms and other harmful insects.

1.5 Conclusion

A seasonal forecast provides a probabilistic outlook on expected climatic conditions. When properly interpreted and applied, it serves as a valuable tool to reduce risk, strengthen resilience, and support productivity. The Department of Water Resources urges policymakers to use the JAS (July-August-September) seasonal forecast as an early warning resource, integrated with national planning frameworks and the Recovery-Focused National Development Plan (2023 - 2027).

An updated forecast for 2025 will be released by the Department at the end of June 2025, incorporating the most recent data and observations.

2. PROGRESS OF THE RAINY SEASON

2.1 Synoptic Situation

The mean surface position of the Inter-Tropical Discontinuity (ITD), a boundary layer that separates the dry north-easterly trade winds from the moist south-westerlies, is currently advancing northward, signaling the gradual and steady onset of the monsoon surge into The Gambia. Its western axis lies just 1°N over The Gambia, extending across the central parts of eastern Senegal, central Mali and Niger, and then sloping into southern Chad.

Regions north of the ITD are characterized by dry, stable, and dusty atmospheric conditions, particularly over northern Mauritania, southern Algeria, and central Libya. In contrast, areas south of the ITD have been experiencing convective activities, leading to rainfall and thunderstorms, occasionally accompanied by strong winds, especially across the Gulf of Guinea states.

2.2 Weather summary for The Gambia

The last dekad of May 2025 experienced rapid Monsoon progression, marked by a significant moisture surge into the country, particularly over the eastern sector. This resulted in substantial rainfall and thunderstorms across the Upper River Region (URR) and Central River Region (CRR) from May 30 - 31, 2025. The recorded rainfall exceeding 30 mm is significant and indicates sufficient soil moisture to initiate farming activities. **However, the current forecast suggests a very low likelihood of additional substantial rainfall over the next 10 to 12 days. Consequently, it is vital to pay close attention to daily and dekadal weather forecasts, as well as to the advice provided by Agricultural Extension Workers.**

2.3 Weather outlook for next dekad from 01st - 10th June 2025

During the upcoming dekad, moisture accumulation and convective activity are expected to persist across the country. However, there is a very low probability of rain over the eastern sector on June 8, 2025.

2.4 Rainfall Situation

Significant rainfall was recorded during the last two days of the dekad (30th - 31st May 2025), with the heaviest amounts observed in the eastern and middle thirds of the country. In the east, Basse and Fatoto recorded 64.3 mm and 51.1 mm, respectively, each over two rainy days. In the middle third, Sapu registered the highest dekadal total of 61.6 mm, followed by Janjanbureh with 31.2 mm, Kaur with 16.3 mm, and Jenoi with 10.5 mm. In the western third, only Kerewan recorded rainfall, with a

dekadal total of 10.5 mm (see figure 3).

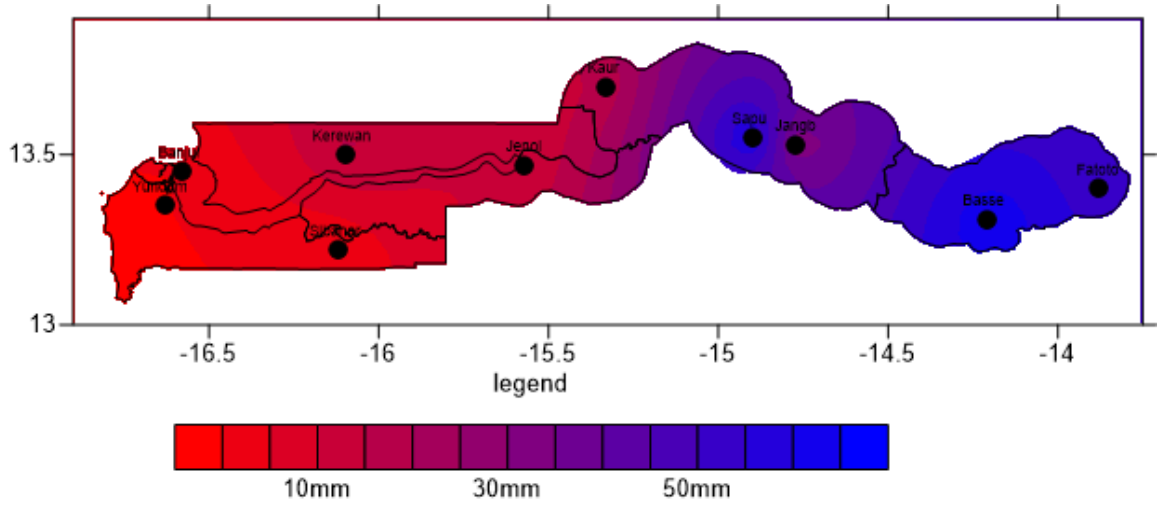

Figure 3: Dekadal rainfall totals (21st - 31st May 2025.

As of May 31st, the country's average rainfall for the 2025 season stands at 25.0 mm, 237% higher than the same period last year (7.4 mm), but 2.7% below the long-term average (1991 - 2020), which is 25.7 mm.

2.5 Agrometeorological Situation

Average temperatures during the dekad varied across the country, ranging from 26°C in the western third to 32°C and 34°C in the middle and eastern thirds, respectively. Extreme temperatures recorded included a minimum of 20.4°C in the western region and maximums reaching up to 44°C in both the middle and eastern parts of the country.

The average relative humidity during the period was approximately 60%.

Winds were generally light to moderate across the country. However, a line squall with a maximum gust of 72 km/h was recorded in the eastern sector, accompanied by heavy rains.

3. AGRICULTURAL SITUATION

3.1 General situation

As the rainy season approaches, farmers across the country are busy preparing their land for the upcoming cropping season. This preparation involves clearing unwanted vegetation (Photo 1), such as grasses, stumps, and crop residues from their farms to facilitate easier cultivation. At the same time, many farmers are maintaining their simple farm tools, including sine hoes, seeders, and others,

in readiness for the season. These activities are crucial to ensuring smooth and efficient operations during land preparation, planting, and other farming activities.

In the West Coast Region, the digital registration of farmers, who are to be supported with inputs for the coming cropping season is currently underway. This initiative is part of Project 2 of the Programme to Strengthen Food and Nutrition Security in the Sahel (P2P2RS) and is being implemented by extension workers across the region.

Regional extension workers are actively engaged in sensitizing and registering farmers on the E-Extension platform (Photo 2). This digital platform is designed to facilitate the sharing of agricultural information between farmers, extension officers, and experts in various agricultural fields. Compared to traditional extension methods, E-Extension allows for broader outreach at a lower cost.

Photo 1: Farm clearing in Foni Kansala

Photo 2: Awareness creation on E extension platform

In the Central River Region, some farmers engaged in dry season rice cultivation are currently busy with transplanting. Crop phenology varies across the area, while a few fields in Janjanbureh have reached maturity, others in Jahally are at the panicle initiation stage.

Across the country, women gardeners are actively involved in vegetable production. While some are weeding their plots, others are harvesting and selling their produce, either at local markets or directly at the farm gate.

3.2 Pests and diseases situation

There are currently no major pest or disease outbreaks reported. However, an incident involving red spider mites was reported in a garden supported by the GIRAV matching grant in Fass Chamen, Fogni Bondali (see photo 3). The regional plant protection officer is in contact with the affected farmer to provide appropriate advice on control measures.



Photo 3a, b and c: Red spidermite attack on Okro, Bitter Tomato and Tomatoes respectively in Fass Chamen.

3.3 Livestock situation

The livestock situation in the country remains concerning, as farmland clearance has commenced across all six agricultural regions. Although there are currently no significant outbreaks of new diseases, access to animal feed is becoming increasingly difficult due to the widespread and indiscriminate burning of bushes in pursuit of charcoal, as well as the conversion of grazing areas into crop fields. Additionally, access to clean water poses a significant challenge in parts of the North Bank Region (NBR), Central River Region North (CRRN), and Central River Region South (CRRS), where many settlements are located far from reliable water sources. Meanwhile, the Department of Livestock Services continues its routine treatment of sick animals and conducts targeted vaccinations against diseases such as Newcastle disease and rabies across the country.

Banjul, June 1, 2025
National MWG of The Gambia

Composition of MWG:
Department of Water Resources (DWR) – Focal Point
Department of Planning - MOA
Department of Agriculture (DOA)
Department of Livestock Services (DLS)
Plant Protection Services - DOA
National Disaster Management Agency (NDMA)

Direct your comments and questions to:
The Director
Department of Water Resources
7 Marina Parade, Banjul
The Gambia
Tel: **(+ 220) 422 76 31 / 998 38 45**
Email: touraylm@yahoo.co.uk

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