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MARCH TO MAY 2026 SEASONAL CLIMATE OUTLOOK OVER UGANDA

1.0 INTRODUCTION

Uganda experiences two major rainfall seasons, namely; March-April-May (MAM) and September-October-November-December (SOND), as the first and second rainy seasons, respectively. However, Northern and parts of Eastern Uganda usually receive substantial rainfall during the June-July-August (JJA) season.

2.0 GENERAL FORECAST

Overall, the MAM 2026 rainfall forecast indicates that most parts of the country are expected to receive near average rainfall. However, parts of Northwestern region, areas around Lake Victoria and parts of the Eastern region are expected to experience near-normal (near average), tending to above normal (above average) rainfall conditions during the forecast period. The MAM 2026 seasonal rainfall outlook and the MAM rainfall climatology are provided in **Figures 1** (a) and 1 (b), respectively. The MAM seasonal temperature forecast (**Figure 2**) for MAM 2026 season indicates that temperatures will generally be warmer than normal across the country.

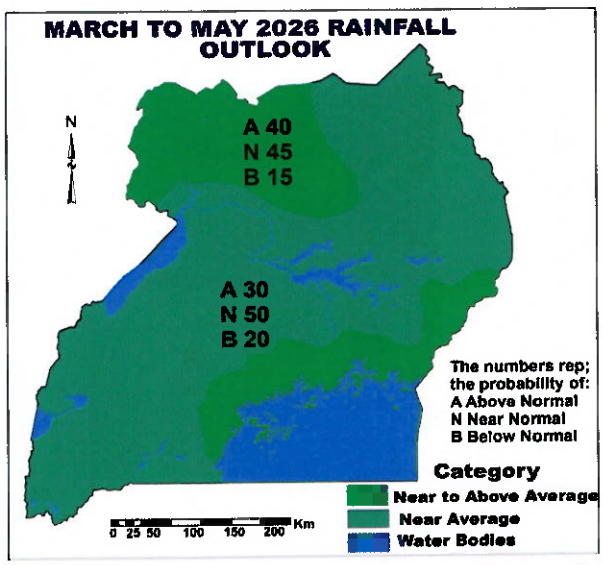

Figure 1 (a): MAM 2026 seasonal rainfall prediction.

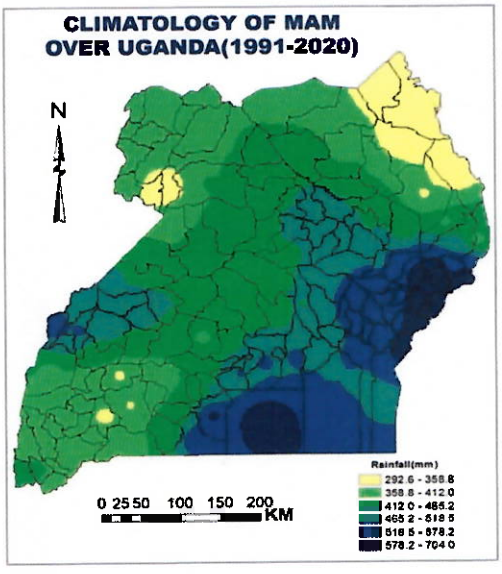

Figure 1 (b): MAM Climatology.

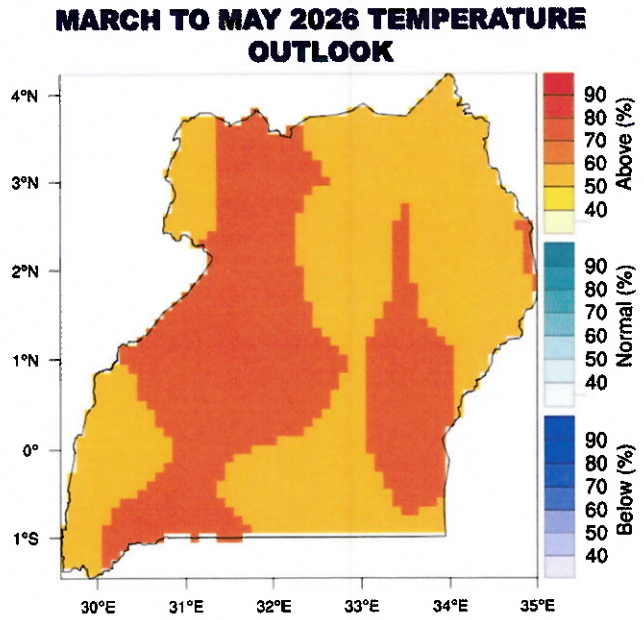

Figure 2: *MAM 2026 seasonal temperature forecast.*

3.0 MAM 2026 CLIMATE DRIVERS

The major climate drivers expected to influence the MAM 2026 rainfall performance over Uganda include:

i) The positioning and orientation of the Inter-Tropical Convergence Zone (ITCZ) over Uganda, in conjunction with moisture advection from the Congo Air Mass are expected to play a significant role in modulating rainfall amounts and distribution during the MAM 2026 rainfall season;

ii) The intra-seasonal variation of the tropical wind system known as Madden Julian Oscillations (MJO) is currently in a neutral phase and is projected to remain so over the next two weeks. It is therefore not expected to significantly influence the onset of MAM 2026 rainfall. However, its potential impact during the season will depend on its phase and strength. An active (enhanced) phase during April or May, may increase rainfall episodes, while the suppressed phase may interrupt rainfall progression and cause dry spells.

iii) The local and regional features such as large water bodies (including Lake Victoria) and highland areas are likely to enhance localized convection and influence spatial rainfall distribution during the season;

iv) The development of Tropical Cyclones over the southwestern Indian Ocean, can significantly influence regional atmospheric circulation patterns. Such systems may alter moisture transport and wind flow, potentially disrupting or modulating the progression and distribution of the MAM 2026 seasonal rainfall over Uganda. Continuous monitoring of tropical cyclone activity is being undertaken, and timely advisories will be issued, should any system pose a potential impact on the rainfall performance.

Based on the above considerations and scientific analyses, the Ministry of Water and Environment, through the Department of Meteorological Services, has generated the detailed MAM 2026 Seasonal Rainfall Outlook as presented below.

4.0 DETAILED FORECAST FOR DIFFERENT REGIONS

4.1 WESTERN REGION

4.1.1 Southwestern Region *(Districts: Kisoro, Rubanda, Kabale, Rukiga, Kanungu, Rukungiri, Ntungamo, Rwampara, Mbarara, Isingiro, Kiruhura, Kazo, Ibanda, Kitagwenda, Buhweju, Bushenyi, Sheema, Mitooma, Rubirizi, and Kasese)*

This region is experiencing showers over several places, indicating that the seasonal rainfall onset has been established. The peak of the rainfall season is expected between early and late April, with cessation expected towards late May.

Overall, this region is expected to receive **near normal,** with an increased likelihood of **above normal** rainfall during this season.

4.1.2 Mid-Western Region *(Districts: Bundibugyo, Ntoroko, Kabarole, Bunyangabu, Kamwenge, Kyenjojo, Kyegegwa, Kibaale, Kakumiro, Kagadi, Kikuube, Hoima, Buliisa, and Masindi)*

The ongoing intermittent rainfall across the Mid-Western Region signals the onset of the seasonal rains, which are expected to become fully establish by early March. The peak of the season is expected between mid and late April, with cessation expected around mid and late May.

Overall, the region is expected to experience **near normal** with a tendency to **above-normal** rainfall during the MAM 2026 season.

4.2 CENTRAL REGION AND LAKE VICTORIA BASIN

4.2.1 Western Areas of Central Region *(Districts: Lyantonde, Sembabule, Mubende, Kasanda, Kyankwanzi, Kiboga, Luwero, Nakaseke, and Nakasongola)*

The region is currently experiencing intermittent rainfall, indicating the onset of the seasonal rainfall, which are expected to become fully established by early March. The peak of the seasonal rainfall is predicted to be around mid to late April, with cessation expected around Late May.

Overall, this region is expected to receive **near normal** rainfall during this season.

4.2.2 Central Areas of Western Lake Victoria Basin *(Districts: Kalangala, Kampala, Wakiso, Masaka, Lwengo, Mpigi, Butambala, Kalungu, Kyotera, Rakai, Bukomansimbi, Gomba, and Mityana)*

Most parts of this region are currently experiencing showers and thunderstorms, indicating that the seasonal onset has been established. The peak of the seasonal rainfall is expected between mid and late April, with cessation projected around late May.

Overall, the region is expected to receive **near normal** rainfall, with a high likelihood of **above normal** rainfall during the MAM 2026 season.

4.2.3 Eastern Areas of Central Region *(Ditricts: Mukono, Buikwe, Kayunga, and Buvuma)*

The showers and thunderstorms currently being experienced across most parts of this region indicate that the onset of seasonal rains has been established. The peak period of the rainfall season is expected between mid and late April, with cessation around late May. Overall, the region is expected to receive **near normal**, with a tendency to **above normal** rainfall during this season.

4.3 EASTERN REGION

4.3.1 Eastern Lake Victoria and Southeastern Region *(Districts: Jinja, Mayuge, Kamuli, Iganga, Bugiri, Namayingo, Luuka, Namutumba, Buyende, Kaliro, Busia, and Tororo)*

Intermittent rains being experienced across several parts of this region signal the onset of the seasonal rainfall, which is expected to get fully establish by early March. The peak rainfall is expected from mid-April to early May, with cessation around early June. Overall, **near normal** rainfall is expected.

4.3.2 Eastern Parts of Kyoga Region *(Districts: Pallisa, Kibuku, Budaka, Butaleja, Butebo, Kumi, Kalaki, Kaberamaido, Soroti, Serere, Bukedea, and Ngora)*

Most parts of this region are currently receiving isolated rains. This is an indication of the onset of the seasonal rainfall, which is expected to get establish by early March.

Rainfall over this region is projected to reach its peak from late April to mid-May, with a slight reduction in early June.

Overall, **near normal** rainfall is expected, with a slight tendency towards **above normal** rainfall.

4.3.3 Mount Elgon Region *(Districts: Mbale, Manafwa, Namisindwa, Bududa, Sironko, Bulambuli, Kapchorwa, Kween, Bukwo)*

The current showers and thunderstorms being experienced over most parts of this region indicate an established onset of the seasonal rains. The peak rainfall season is expected from late April to early May, with a slight relaxation around early June. Overall, **near normal** to **above normal** rainfall is expected over this region during the season.

4.4 NORTHERN REGION

4.4.1 Northeastern Region *(Districts: Katakwi, Amuria, Kapelebyong, Napak, Moroto, Nabilatuk, Nakapiripirit, Amudat, Abim, Kotido, Kaabong, and Karenga)*

Light and intermittent rains are currently being observed in some areas. The onset of the seasonal rains over this region are expected around early to mid-March.

The peak rainfall is expected between late April and early May, with a slight reduction around mid-June. Overall, **near-normal** rainfall is expected over this region during MAM 2026 season.

4.4.2 Northwestern Region *(Districts: Arua, Maracha, Koboko, Terego, Yumbe, Obongi, Moyo, Adjumani, Madi Okollo, Zombo, Nebbi, and Pakwach)*

The intermittent light rains currently being received over parts of northwestern region signal the onset of the seasonal rainfall, which is expected to get established by early to mid-March. The peak rainfall is expected from mid-April to early May, with a slight reduction around mid-June 2026.

Overall, the region is expected to receive **near normal**, with a slight tendency towards **above normal** rainfall during this season.

4.4.3 Central Northern Region *(Districts: Gulu, Omoro, Lamwo, Nwoya, Amuru, Oyam, and Kiryandongo)*

Most areas of this region are currently receiving intermittent rains, signaling the onset of the seasonal rains, which is expected to get established by early March. The peak rainfall is projected to occur between mid-April to early May, with a slight relaxation around mid-June.

Overall, **near normal,** with a slight tendency to **above normal** rainfall is expected over this region during the season.

4.4.4 Eastern Areas of Northern *Region* *(Districts: Dokolo, Amolatar, Alebtong, Lira, Kole, Otuke, Pader, Kitgum, Apac, and Agago)*

The on and off rains in parts of this region indicate the onset of seasonal rainfall, which is expected to get establish by early March. The peak seasonal rainfall is expected to be experienced between mid-April to early May, with a slight relaxation around mid-June. Overall, **near normal** rainfall is expected, with a slight tendency to **above normal** rainfall.

5.0 IMPLICATIONS OF THE CURRENT FORECAST

The forecast of near normal to above normal during the MAM 2026 season is likely to have significant implications on socio-economic activities, including agriculture and food security, health, energy and water resources, among others.

Areas projected to receive near-normal rainfall are expected to experience rainfall amounts within their long-term climatological averages. This implies that rainfall is likely to be sufficient to support normal agricultural production and other socio-economic activities that are dependent on seasonal rainfall.

It is also worth noting that localized episodic flash flood events may occur in areas that are expected to receive near normal rainfall as a result of isolated heavy downpours. Similarly, in localized areas expected to receive above-normal rainfall, poor rainfall distribution may as well occur.

Continuous monitoring of weather conditions and the issuance of timely advisories will therefore be essential to minimize risks and maximize the benefits associated with the seasonal rainfall.

6.0 SECTOR SPECIFIC ADVISORIES

Based on the MAM 2026 seasonal forecast, the following potential impacts and sector-specific advisories are provided.

6.1 AGRICULTURE AND FOOD SECURITY	
6.1.1 Crops	
Potential Positive Impacts • Increased water availability for agriculture and livestock; • Improved yields for rain-fed crops that require wet conditions; • Favorable conditions for perennial crops such as coffee,	**Potential Negative Impacts** • Increased risk of waterlogging and leaching, particularly in low-lying areas with poor drainage; • Higher incidence of crop pests and diseases, particularly in mono-cropping systems and vegetable farms including fungal and

tea and Banana, among others; • Enhanced natural productivity in water bodies, supporting aquatic ecosystems.	bacterial infections; • Crop damage due to flash floods, hailstorms, and strong winds; • Post-harvest losses resulting from damp conditions, leading to mold growth, rotting, and aflatoxin contamination. • Soil erosion and loss of fertility in steep, bare or overgrazed areas.

Advisories for Crop Farmers

- Plant crops at the onset of rains using high-yielding, and improved varieties;
- Use a mix of long-maturing and short-duration crops to maximize yields;
- Apply good agronomic practices, including timely weeding, proper spacing, thinning and fertilizer management;
- Implement soil and water conservation measures, including mulching, drainage channels, and contour farming;
- Monitor and control pests and diseases through integrated pest management (IPM);
- Establish nurseries in well-drained areas to minimize waterlogging and disease risks;
- Properly harvest, dry, and store produce in improved storage facilities such as silos, cribs, or hermetic bags to reduce post-harvest losses;
- Apply climate smart practices including solar drying;
- Practice water harvesting and storage for future use during dry spells;
- Invest in value addition and proper market timing to maximize economic returns.

6.1.2 Fisheries

Potential Positive Impacts	Potential Negative Impacts
• Improved water quality due to increased inflows that help dilute and disperse pollutants; • Enhanced availability of natural fish food sources in lakes, rivers and other water bodies boosting fish production; • Higher production for flood-adaptive fish species due to expanded breeding and feeding habitats; • Improved living habitats (ambiance) to make fish more active in water bodies that increases the catch.	• Increased movement of water weeds, hindering fishing activities; • Fish losses due to flooding of ponds and uncontrolled water overflow; • Increased siltation in fish ponds, potentially reducing dissolved oxygen levels and overall water quality; • Damage to fisheries Infrastructure, including pond banks, cages, nets and landing sites; • Post-harvest losses due to transport disruptions in some places especially along the rural murram roads; • Increased risks of water accidents and loss of fishing equipment during hash weather conditions.

Advisories for Fisheries

- Protect and maintain clear waterways around fish farms;
- Raise pond dykes and stock fish in ponds to take advantage of increased water availability;
- Use elevated drying racks and roofed platforms for fish handling and processing;
- Use lifesaving equipment for example life jackets for safety and avoid night travel on lakes;
- Report surges of weeds to the nearest local authority;
- Enhance use of sea-worthy boats.
- Regularly follow weather updates and advisories before you set out onto lakes and rivers for any activities.

6.1.3 Livestock

Potential Positive Impacts

- Replenishment of water sources for livestock;
- Improved pasture growth and availability of grasses for grazing.

Potential Negative Impacts

- Increased incidence of livestock diseases and parasites, including ticks, foot and mouth disease, and trypanosomiasis;
- Damage to pastures, especially in flood-prone areas due to water logging;
- Overstocking in shelters during heavy rains, leading to disease outbreaks;
- Animal poisoning from contaminated flood water;
- Loss of livestock due to waterlogging, lightning and cold weather exposure.

Advisories for Livestock Farmers

- Strengthen vaccination programs and ensure timely treatment and deworming of animals;
- Install lightning arrestors;
- Store animal feeds properly to prevent spoilage;
- Improve drainage in animal shelters and construct waterproof roofs where necessary;
- Relocate animals from flood-prone areas during periods of heavy rainfall;
- Harvest and store pasture as hay or silage before the peak rainfall periods;
- Restrict grazing near contaminated or stagnant water sources.

6.1.4 Bee keeping	
Potential Positive Impacts • Adequate soil moisture to support flowering and nectar production, leading to higher honey yields; • Increased bee population due to abundance of flowering plants during the rainy season.	**Potential Negative Impacts** • Reduced foraging time due to regular rains; • Increased incidences of hive pests such as wax moths and small hive beetles; • Higher risk of fungal and bacterial infections due to excessive moisture and weakened colony immunity; • Destruction of hives caused by strong winds and heavy rainfall.
Advisories for Beekeepers • Protect hives by placing them under tree canopies or shelters to reduce exposure to heavy rainfall and direct winds; • Secure hives firmly using stands and ropes to prevent wind damage or overturning; • Encourage planting of bee-attractive and nectar-rich flowers and conserve natural pollinator habitats; • Avoid the use of harmful pesticides near apiaries to protect bee colonies; • Regularly inspect hives to detect and manage pests and diseases early.	
6.2 WATER, ENVIRONMENT AND ENERGY	
Potential Positive Impacts • Increased water availability for domestic and agricultural use; • Reduced irrigation costs due to reliance on natural rainfall; • Improved groundwater recharge and replenishment of surface water resources; • Enhanced hydropower generation resulting from increased inflows into dams and reservoirs, potentially reducing power shortages.	**Potential Negative Impacts** • Increased risk of urban and riverine flooding resulting into bursting of river banks and dams; • Sedimentation and debris accumulation in hydropower plants and water supply systems; • Contamination of water sources due to surface runoff, increasing the risk of water borne disease outbreaks; • Submerging and destruction of water supply systems; • Increased spread of water weeds affecting water transport and hydropower operations; • Heavy rainfall and storms that could damage electricity lines, transformers, and hydropower plants, causing blackouts.

Advisories for Water, Environment and Energy

- Continuously monitor water levels in rivers, lakes and reservoirs to support early warnings systems;
- Increase storage of water supply into overhead tanks;
- Encourage communities to install rain water harvesting systems;
- Improve drainage networks and de-silt channels and dams to minimize flood risks;
- Protect and restore riverbanks and catchment areas through afforestation and soil conservation measures;
- Energy sector is encouraged to maximize power production;
- Enhance waste disposal systems to prevent water contamination;
- Avoid coming in contact with damaged or collapsed electrical poles and wires;
- Encourage communities to use available water treatment systems or technologies;
- Inspect and reinforce electricity infrastructure to reduce vulnerability to storm-related damage;
- Encourage conservation and protection of wetlands;
- Enhance agroforestry and re-afforestation.

6.3 HEALTH

Potential Positive Impacts

- Improved household nutrition due to increased food production;
- Higher household incomes family incomes, potentially improving access to healthcare services.

Potential Negative Impacts

- Increased risk of disease outbreaks, including malaria, cholera, and other-borne and respiratory infections;
- Disruption of health services due to flooding and damaged infrastructure;
- Psychological distress and trauma resulting from loss of life, property or livelihoods;
- Increased risk of malnutrition in areas affected by crop destruction or flooding.

Advisories for Health

- Strengthen community sensitization and public health education on disease prevention and hygiene practices;
- Promote the use of insecticide-treated mosquito nets and safe water handling practices;
- Pre-position and adequately stock essential medicines and emergency medical supplies in health facilities;
- Provide psychosocial support for affected individuals and communities;
- Install lightning arrestors and other safety measures in health facilities where necessary;
- Increase outreach services especially to communities that have been cutoff;
- Enhance disease surveillance and rapid response mechanisms in flood-prone areas;
- Ensure timely receipt and dissemination of weather updates through various communication platforms to support preparedness and response planning within the health sector.

6.4 DISASTER RISK MANAGEMENT

Potential Positive Impacts	Potential Negative Impacts
▪ Replenishment of water sources including rivers, lakes, and underground water reserves, enhancing water security.	▪ Heavy rains may lead to flash floods in low-lying areas and landslides in mountainous regions especially in Elgon, Kigezi, and Rwenzori regions; ▪ Destruction of homes, roads, and social infrastructure; ▪ Increased risk of waterborne diseases; ▪ Loss of lives and displacement of communities; ▪ Increased road accidents due to poor visibility and slippery road conditions; ▪ Increased incidences of lightning; ▪ Increased water levels in major lakes and rivers, leading to possible overflow.

Advisories for Disaster Risk Management

National Level:

- The Ministries responsible for Works, Education, and Energy should ensure road maintenance, school contingency planning, and reinforcement of power infrastructure;
- The Ministry of Health should intensify disease surveillance and pre-position essential medical supplies;
- The Uganda Red Cross and other humanitarian agencies should prepare emergency response teams and relief supplies;
- Marine police and local authorities should enhance water rescue and safety mechanisms;
- Install lightning arrestors in all installations, public and private buildings.

District and Community Level:

- Communities should construct drainages around their homesteads and gardens;
- Avoid being in the open spaces and taking shelter under tall trees during rains;
- Urban and local councils should de-silt and open the drainages;
- Install lightning arrestors in all installations, public and private buildings;
- Conduct community education and awareness on potential disasters;
- Schools and families should establish alternative access routes for learners where flooding disrupts transport;
- Households in flood and landslide prone areas should relocate to safer locations or to host families;
- District disaster committees should be activated;

• District disaster contingency plans should be reviewed and update; • Authorities should promote public awareness campaigns on early warning signs and disaster preparedness; • Report any disaster incidences to the National Emergency Coordination and Operation Centre (NECOC) at the Office of the Prime Minister through the toll free number 0800177777	
6.5 EDUCATION SECTOR	
Potential Positive Impacts • Increased water availability for school use through water harvesting systems.	**Potential Negative Impacts** • Heavy rains may result into; loss of lives, injuries, damage of school facilities, disrupting learning activities; • Increased incidences of water related diseases; • Increased incidences of lightning strikes; • Increased absenteeism: Flooded roads and bridges may make it difficult for learners and teachers to reach schools.
Advisories for the Education Sector • Strengthen school infrastructure, including roofing and drainage systems; • Develop and implement school contingency and emergency preparedness plans; • Promote rainwater harvesting for safe water supply in schools; • Coordinate with local authorities to ensure safe access routes for learners and staff; • Encourage children to put on rubber shoes.	

7.0 CONCLUSION

During March to May 2026 season, most parts of Uganda are expected to experience **near-normal to above-normal rainfall**. The onset of rains will vary by region, with most areas experiencing rainfall from early to mid-March. The peak rainfall is expected between April and May. This MAM seasonal rainfall is expected to end by early to mid-June in most parts of the country.

The predicted rainfall requires timely action to mitigate risks and take advantage of favorable conditions. This forecast should guide planning in all climate-sensitive sectors to enhance economic resilience and community well-being.

The Ministry of Water and Environment, through the Department of Meteorological Services will continue monitoring the weather patterns and regularly issue updates to support planning and decision-making.

Dr. Alfred Okot Okidi
PERMANENT SECRETARY

APPENDIX

Explanation of Key Terms

Categorical Analysis

Categorical analysis involves comparing actual rainfall observations with the Long-Term Mean (LTM) to classify rainfall conditions into three categories: Above Normal (enhanced), Near Normal (average), or Below Normal (suppressed).

Above Normal

Rainfall is classified as above normal when the total amount exceeds 125% of the Long-Term Mean (LTM). In most cases, this leads to positive impacts on socio-economic activities, particularly when the increase is above the average.

Near Normal

This refers to rainfall totals ranging between 75% and 125% of the LTM. Under these conditions, normal socio-economic activities are expected to proceed without significant disruptions.

Below Normal

Rainfall falls into this category when it is less than 75% of the LTM. In such cases, socio-economic activities may experience increasing levels of stress, with the severity depending on the degree of rainfall deficiency.