



Monthly Hydrological

Bulletin Report (JNHPP)

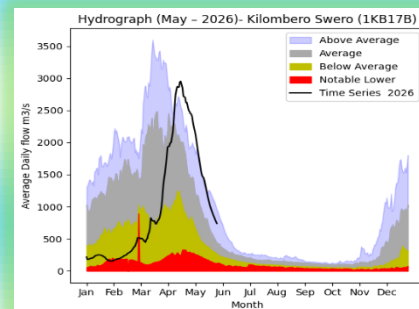
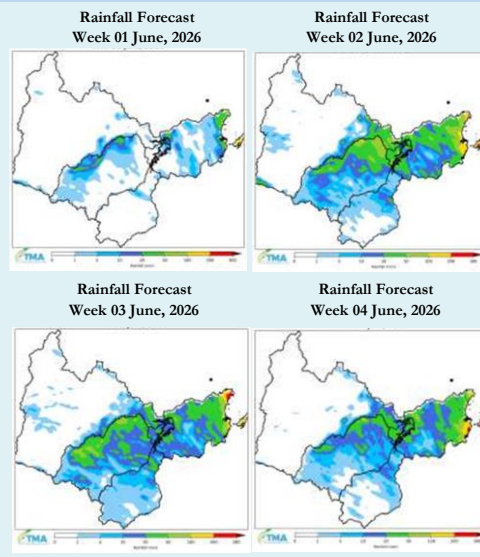
May (2026)

Summary of Water Status

The Julius Nyerere Hydropower Plant (JNHPP) receives water from three major rivers Great Ruaha, Kilombero, and Luwegu which form part of the Rufiji Basin. These rivers are vital for hydropower generation, agriculture, domestic use, and ecological balance.

In May 2026, water levels were 183% above the long-term monthly average, driven by moderate rainfall across the upper catchments of the three rivers and sustainable water resource management. By 31 May 2026, the reservoir balance at JNHPP was 100.09% above the long-term average for the month.

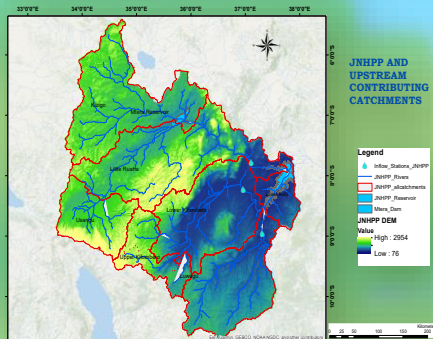
Water release operations at JNHPP were still ongoing by the end of May, having lasted approximately **46 days**. A total of **6.5 billion cubic meters** of water had been released, equivalent to **33.51% of the dam's live storage capacity of 19.4 billion cubic meters** as of 31 May 2026. Despite the increased downstream flow, no flooding incidents or livestock losses were reported, and river conditions remained stable, ensuring sufficient water availability for both social and economic uses.



Reservoir Water Status

In May 2026:

- The water levels and volume of water in the dam remained above the Maximum Operational Level, supporting hydropower generation. This resilience was supported by effective water resource management, and the above-average rainfall recorded during the *Masika* season of 2026 across the Great Ruaha, Kilombero, and Luwegu catchments.
- The water release operations at Julius Nyerere Dam were still ongoing by the end of May 2026, having lasted approximately **46 days**. By 31 May 2026, a total of **6.5 billion cubic meters** of water had been released, representing **33.51%** of the dam's live storage capacity of 19.4 billion cubic meters.



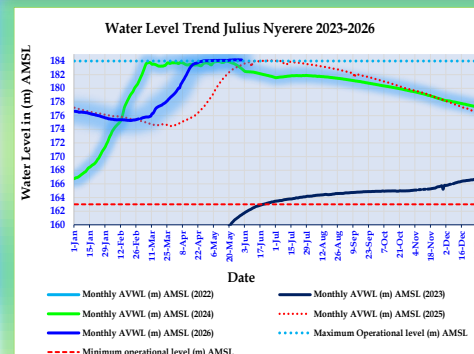
River Flow Status

River flow volumes during May 2026 remained above the long-term average (LTA: 2000–2025). As shown in table 1, monitoring station data indicate increased discharge compared to historical averages.

Table1: Water Flow Statistics Analysis – May 2026

No.	Station Code	River	Average Flow (m³/s) – May 2026	LTA – May (2000–2025)	Remarks
1	1KA3B	Great Ruaha at Msolwa	205.39	101.75	Notable High
2	1KB17B	Kilombero at Swero	1402.02	684.53	Notable High
3	1K3C	Luwegu at Mbarang'an du	42.68	30.00	Above Average

Inflow volumes into the Julius Nyerere Dam showed a gradual decline from May into June 2026. Nevertheless, reservoir levels remained resilient, staying above the long-term average. This indicates a stable river flow regime, which helps mitigate risks of reservoir depletion and enhances the efficiency of hydropower generation.



Weather Status

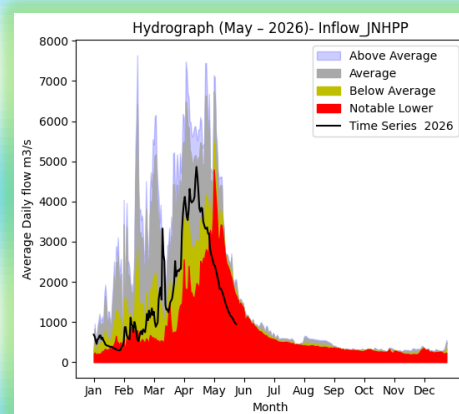
Rainfall – May 2026:

Rainfall recorded by meteorological stations across the Rufiji Basin ranged from **average to below average**, contributing to a gradual decline in river flow, especially in seasonal streams.

Forecast – June 2026:

According to the Tanzania Meteorological Authority (TMA):

- Extended **dry spells** are expected across most parts of the Rufiji Basin, with occasional **light rains** in eastern areas (Dar es Salaam, Coast, and parts of Morogoro).
- Average to **cool temperatures** will prevail, accompanied by dryness in the southern and central basin zones.



Recommendations

- Continue with integrated water resource management during the upcoming dry season (*Kipupwe*) to ensure stable and sustainable operation of the Julius Nyerere Dam as well as community activities.
- Ensure that water levels remain within the Maximum operation level for hydropower generation, thereby sustaining efficient electricity production and supporting other water uses.