



Monthly Hydrological

Bulletin Report (JNHPP)

January (2026)

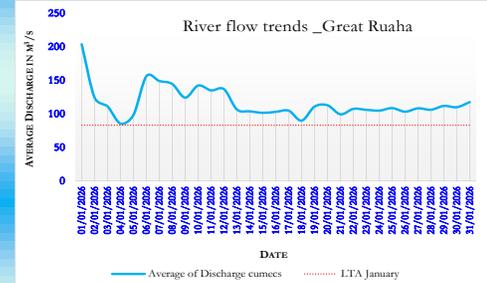
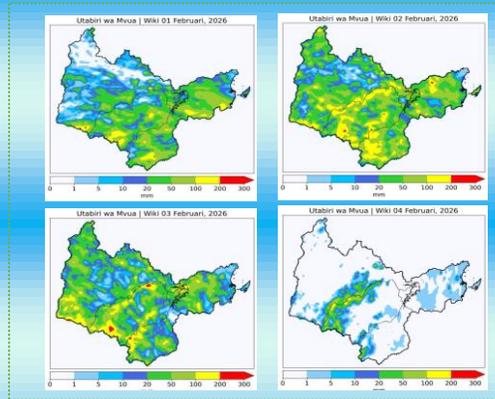
1 Summary of water status

The Rufiji River constitutes the sole inflow to the Julius Nyerere Hydropower Plant reservoir and is sustained by three major upstream catchments—**Kilombero, Great Ruaha, and Luwegu**. The combined catchment area is approximately **158,178 km²**, contributing a long-term mean annual flow of about **28.2 billion cubic metres (BCM)**, which underpins the hydrological reliability of the hydropower scheme.

In January 2026, average daily inflows were **448.7 m³/s (~38.77 Mm³/day)**, peaking at **974.8 m³/s**. Average daily outflows were **721.45 m³/s (~62.33 Mm³/day)**, with a maximum of **778.67 m³/s**. Despite higher releases as compared to the recorded inflows, reservoir levels were maintained during the month. This stability reflects recovery from December conditions, supported by short inflow surges.

Rainfall began in late December and continued into January. Monitoring stations recorded values ranging from **15–20% below the long-term average (LTA)**. Despite that rainfall conditions inflows were notably improving, hence confirming catchment resilience.

According to the **Tanzania Meteorological Authority (TMA)**, most areas of the Rufiji Basin are forecast to receive **below average-to-average rainfall** during the month of February. River flows are expected to rise by **~30% above current averages**, further strengthening



3 River flow Situation

During January 2026, reservoir inflows improved markedly, daily averaging flow **448.74 m³/s (~38.77 Mm³/day)** and peaking at **974.8 m³/s**. This represents a substantial increase compared to December 2025, when mean daily inflows were 301.18 m³/s and reservoir levels were at a low stage.

With rainfall expected to continue through February, inflows are projected to rise further, leading to a steady increase in reservoir water levels.

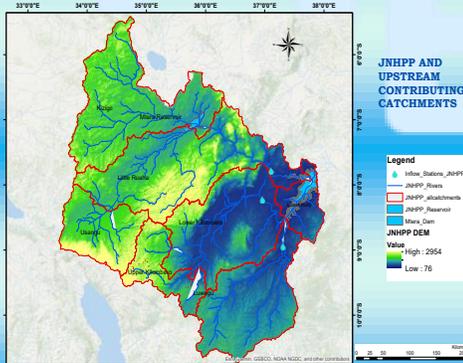
The reservoir elevation change has improved from -1.5m in December 2025, to -1.1m in January 2026, this reflecting improved hydrological conditions and the onset of seasonal recovery.

4 Reservoir Water Levels

Reservoir Status – JNHPP Dam (31 January 2026)

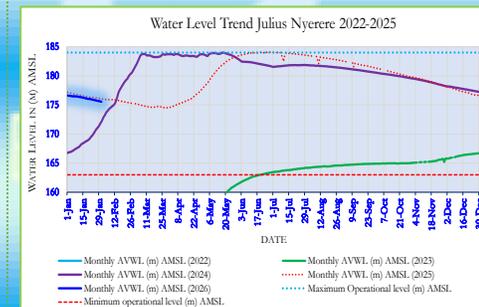
Hydrological observations at the **JNHPP Dam** indicate that by the end of January 2026, the reservoir water level reached **175.5 mamsl**, corresponding to a storage volume of **23.64 bcm**. The monthly mean level was **176.15 mamsl**, which is broadly consistent with January 2025, when the daily average reached **176.5 mamsl**.

Despite below-average rainfall recorded across extensive areas of the **Rufiji Basin**, early-season inflows from contributing sub-catchments facilitated reservoir recovery. This outcome highlights both the **resilience of storage capacity** and the **effectiveness of catchment hydrological response** to localized precipitation events.



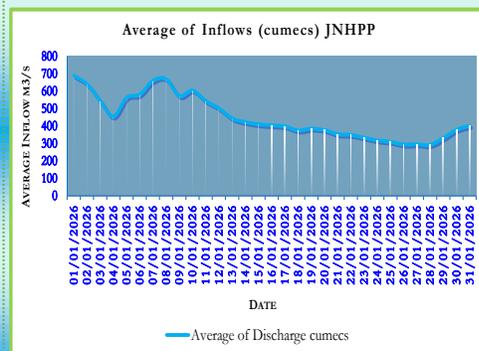
Below Table 1: Monthly Average Flow (MAF) (January 2026) Compared with Historical Maximums (2000–2024).

S/ N	Stations Code	River	MAF Cumecs (Jan) 2026	LTA MAF Cumecs 2000-2025 (Jan)	Remarks
1	1KA3 B	Great Ruaha at Msolwa	117	83	Above Average
2	1KB1 7	Kilombero at Swero	203	198	Within Average
3	1K3C	Luwegu at Mbarangand	106	97	Within Average



River flow Outlook – February 2026

Rainfall across Rufiji catchments is forecasted by TMA within the average. River flows may rise by **~30% above current averages** inflows, supporting reservoir recovery and ensuring reliable water for hydropower, irrigation, and downstream ecosystems.



2 Weather Situation

Weather Summary – January 2026:

The records from weather monitoring stations indicate below average-to-average rainfall at some areas in the catchments during January 2026. This weather pattern has substantial impact on river flows within the basin, affecting water levels and contributing to changes in the overall water situation.

Weather Outlook – February 2026:

During the month of February 2026, most areas within the Rufiji Basin are expected to experience rainfall. Figure 1 below present the forecasted weekly distribution of rainfall across the Rufiji Basin for the entire month of February 2026, as issued by the Tanzania Meteorological Authority (TMA).

5 Recommendations

Manage turbine operations, maintain ecological flow releases, and strengthen flood early-warning systems to ensure reliable hydropower, protect ecosystems, and safeguard communities during the wet season.