



Monthly Hydrological

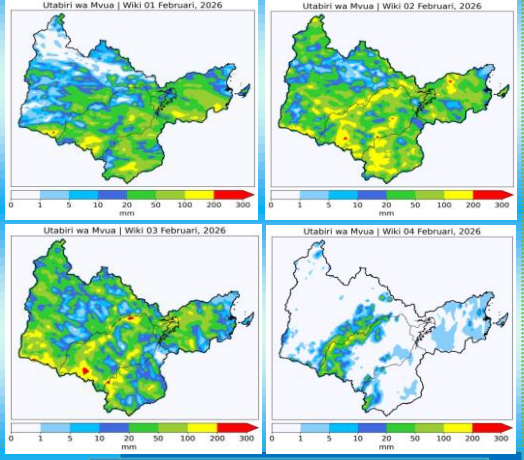
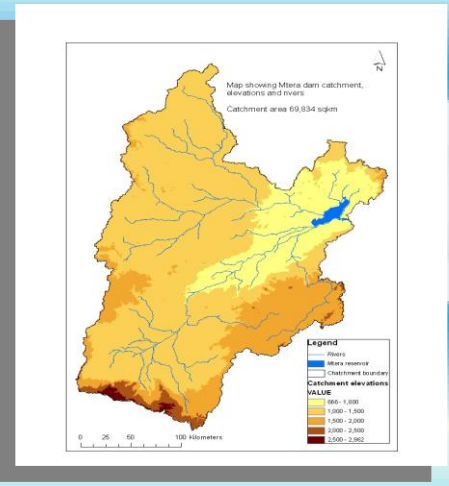
Bulletin Report (Mtera Dam)

January (2026)

1 Summary of water status

The Mtera Dam receives its entire inflow from the Great Ruaha Catchment, which is drained by three major tributaries—**Kizigo, Great Ruaha, and Little Ruaha**. The catchment system spans an area of approximately **69,834 km²** and constitutes a vital hydrological source supporting hydropower generation, irrigation, domestic water supply, and the maintenance of ecological systems.

During **January 2026**, rainfall persisted across of the catchment, with many areas recording **below-average to near-average totals**. Forecast from the **Tanzania Meteorological Authority (TMA)** indicate that rainfall is expected to be **below average to average during February**, supporting continued hydrological recovery. Observations show that river flows are gradually improving, despite the difference when compared to the long-term average.



3 River flow Situation

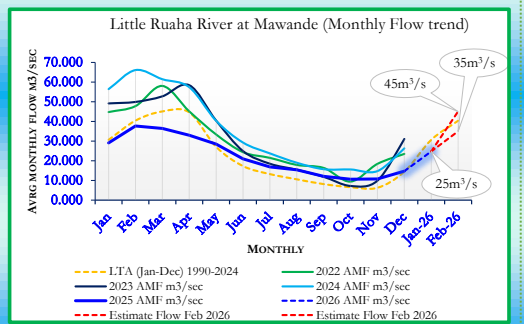
Hydrological monitoring across key stations in the Great Ruaha Subbasin shows varied river flow conditions compared to long-term averages (2000–2025). While the **Great Ruaha at Msembe** remains significantly below average, the **Little Ruaha at Mawande** and **Kizigo at Chinugulu** recorded flows within their long-term average, indicating relative stability.

S/ N	Station s Code	River	Avg Flow Cumecs (Jan) 2026	LTA Cumecs 2000-2025 (Jan)	Remarks
1	1KA59	Great Ruaha at Msembe	0.612	39.88	Notable lower
2	1KA31	Little Ruaha at Mawande	24.747	30.955	Average
3	1KA42 A	Kizigo at Chinugulu	60.355	67.29	Average

Hydrological Implications

Hydropower Generation: Stable flows from the Little Ruaha and Kizigo catchments are sustaining downstream energy production, though depressed conditions in the Great Ruaha limit overall contributions.

Flood Risk Outlook: With rainfall expected to continue through February, flows are projected to strengthen, requiring close monitoring of downstream conditions and preparedness measures.



2 Weather Situation

Weather Summary – January 2026: The records from weather stations indicate below average-to-average rainfall condition at some area 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 condition. Figure 1 above 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).

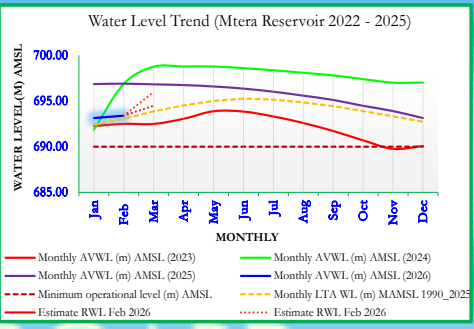
4 Reservoir Water Levels

Hydrological monitoring indicates that the **Mtera Dam** recorded a reservoir water level increase relative to the long-term average (LTA) for January (2000–2025).

The **monthly mean level** in January 2026 was **693.40 m a.m.s.l.**, compared to the LTA of **693.06 m a.m.s.l.**, representing a **positive deviation of +0.34 m.**

This positive deviation indicates stable reservoir storage conditions, even though rainfall across large parts of the basin remained below average during the month. The observed reservoir response is primarily linked to early-season inflows generated by enhanced precipitation within the contributing sub-catchments.

Furthermore, hydrological assessments of other major reservoirs within the **Rufiji Basin** revealed levels consistently above their respective long-term January averages.



5 Recommendations

- i. **Water Storage Operations** – Manage reservoir operation sustainably to optimize the balance between electricity generation with long-term water availability.
- ii. **Agriculture practices** – Improve irrigation efficiency to ensure sustainable utilization of water Resource within the basin.
- iii. **Precautionary Releases and Downstream Safety** – When reservoir levels approach maximum operational thresholds, controlled releases must be undertaken to preserve dam safety. Such releases should be accompanied by precautionary measures for downstream communities and river users, including timely flood warnings, regulated discharge schedules to minimize abrupt flow changes, and coordination with irrigation and domestic water stakeholders to safeguard livelihoods and ecosystem integrity.