

Monthly Hydrological Bulletin

September, 2021

Issue No. 9

SUMMARY

The month of September, 2021 is the driest month characterized by decrease of flow regime within the river, reservoir water level and low rainfall recorded across the Basin. The monthly mean flow for six gauge stations were Normal as well as the six stations were recorded Below Normal when compared to the LTA(1950-2010).

Furthermore, the water levels trends in Mindu Reservoir, the stocks for Morogoro Urban Water Supply Authority (MORUWASA) decreased slightly and the levels were Below Normal compared to the long-term average (1997-2019).

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RAINFALL TRENDS

In September, most parts of Wami Catchment recorded little rainfall compared to Ruvu and Coast Catchment (**Figure 1**). The total rainfall records across the Basin were below 50% of the Mean Annual Precipitation from 1960-2010 [mm]. The highest rainfall record was 124 mm at Kibungo Juu station located at Uluguru Mountains in Ruvu Catchment.

FLOW VARIATIONS

The monthly mean flow for Wami river was 3.9 m³/s and Ruvu was 15.8m³/s for the month of September, 2021. This indicates that the flow situations were below Normal in Wami river and Normal in Ruvu river and its tributaries when compared to LTA and a year of 2020 (**Figure 2**).

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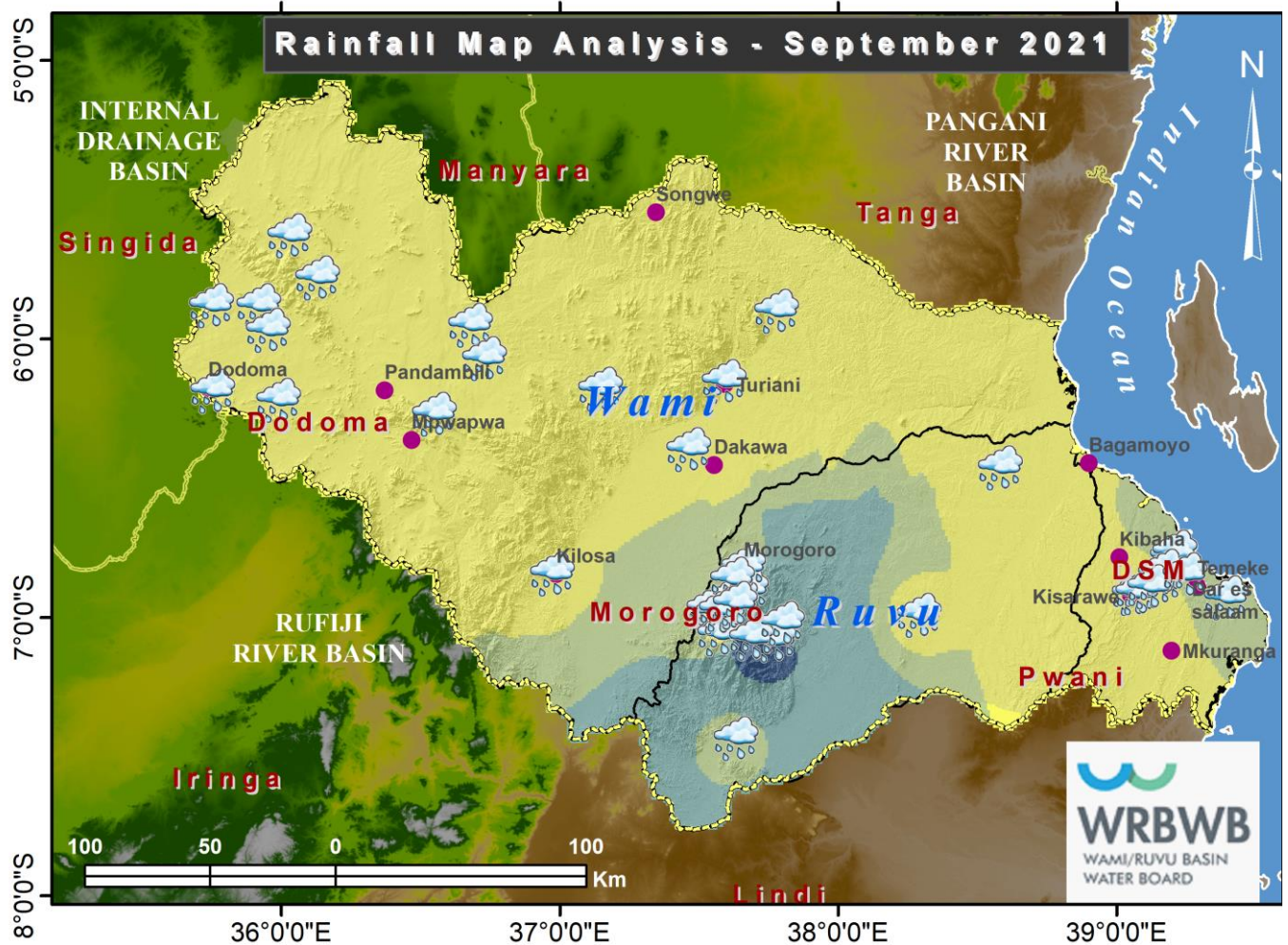
Hydrology Team

Data Collection &
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Legend



Rainfall Station



Town



Catchment Boundary



Basin Boundary

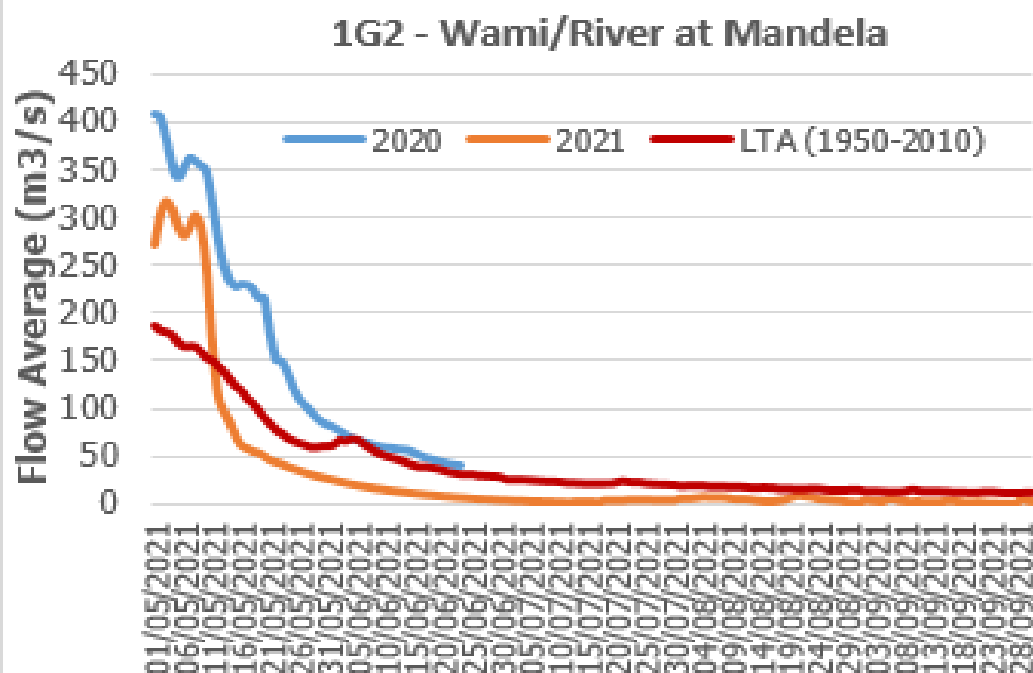
Rainfall (mm)

0 - 13.6

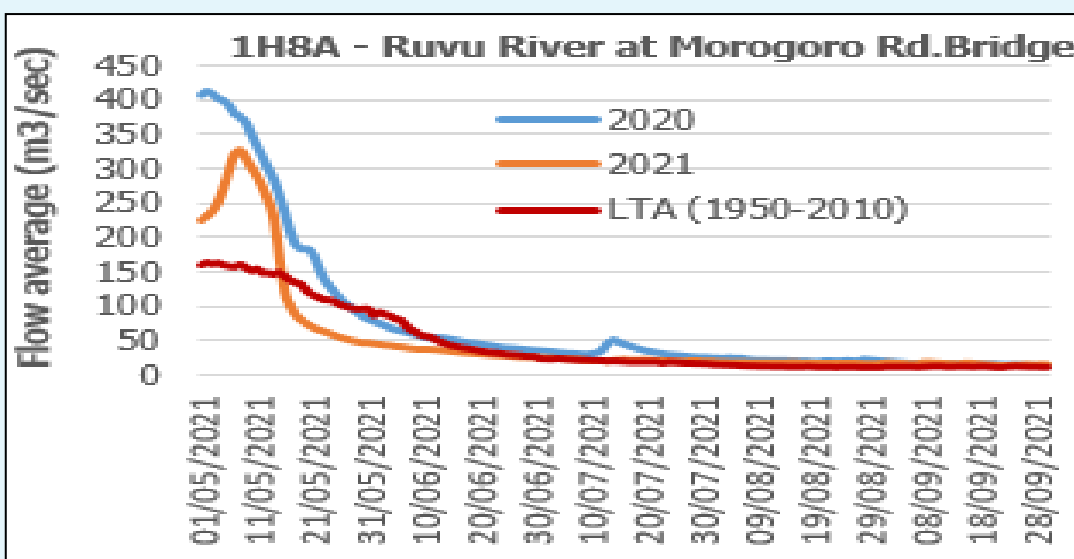
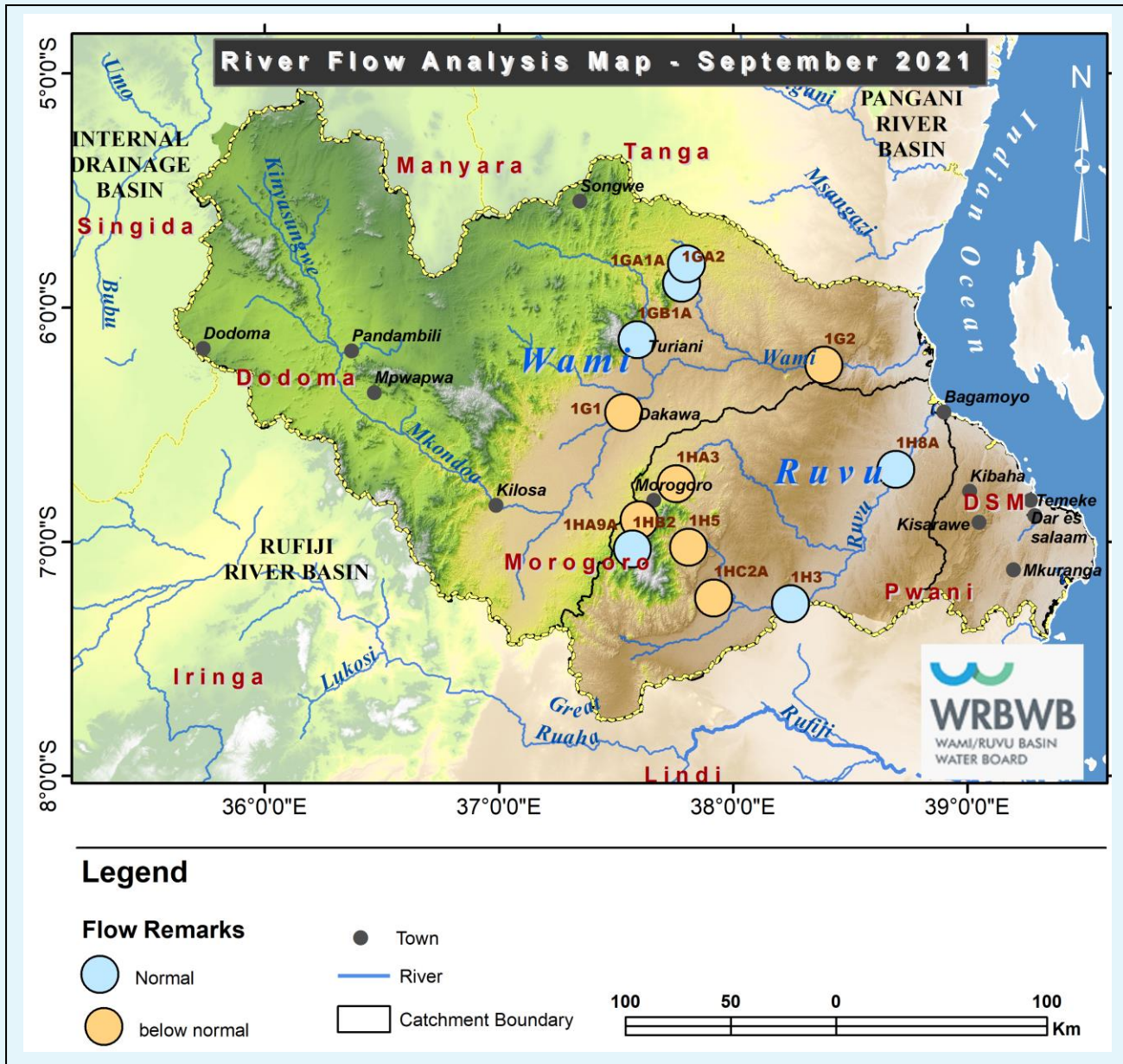
13.7 - 23.6

23.7 - 43.6

43.7 - 124.8



NB: Approximately, similar average monthly flow in Wami was observed in 1960, i.e. the return period of 61 years.



WATER LEVEL TRENDS IN THE MINDU DAM

The monthly mean water levels observed in Mindu reservoir in September, 2021 was 506.530 m.a.s.l. In comparison with LTA (1997-2019), the observed data is termed as Below Normal (**Figure 4**).

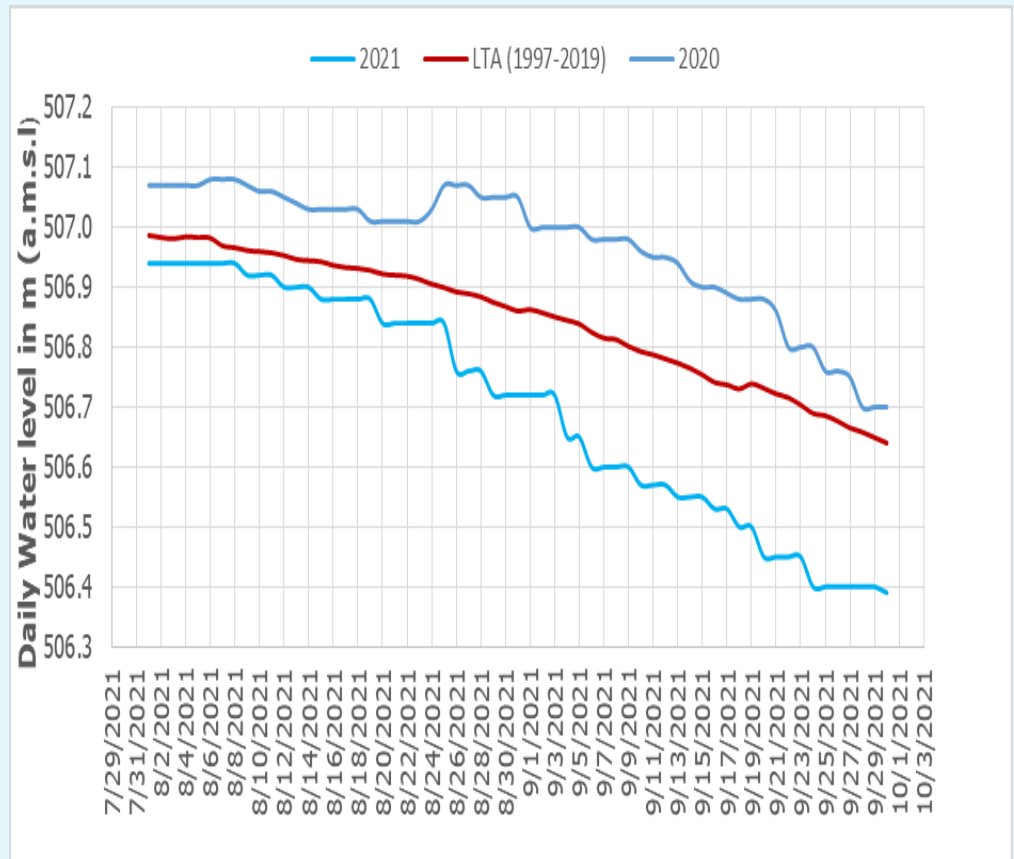


Figure 4: Comparison of daily water level (masl) in 2020 and LTA (1997-2019) with 2021 in Mindu Reservoir

RECOMMENDATION

Based on the **River Flow**, all stakeholders especially Water utilities and irrigation were advice to take caution by either take the water rational option during this driest month in order to secure the minimum environmental flow within the Catchments

