

Monthly Hydrological Bulletin

INTRODUCTION

The Month of July was mainly characterized with mixture of cold and sunshine whereby the peak temperature recorded was 31°C in Coast area (Dar es Salaam) while the low temperature recorded was 10°C in Uluguru (Morogoro Dc) and Ukagulu mountains (Gairo Dc) respectively. Aside from temperature, the rainfall receive was low approximately 0mm in most parts of Kinyasungwe sub Catchment (Dodoma) while the maximum rainfall of 104mm was recorded in Ulugulu mountain followed by coast catchment that has record the rainfall of 50mm. The flow regime in Wami and Ruvu River experience the steep recession compared to last month of June although at mid of month there is a little raise of flow due to rainfall receive in catchment for both Wami and Ruvu river (*Figure 1*). Groundwater levels was also decreases especially in Mzakwe (Dodoma). Mindu Reservoir stocks for Morogoro water supply decrease slightly but remained Normal compared to log term average, generally according to the water use permit (Wami Ruvu source) the water demand is high compared to the water availability for both Wami and Ruvu River for this month of July, 2020.

2. FLOW VARIATIONS IN RIVERS

2.1. WAMI CATCHMENT

The monthly flow of Wami river at Dakawa (1G1) and Mziha river at Mziha (1GA2) had shown normal when compared to long term average, the flow still obey the steep recession when compared to last month although at the mid of July the river flow rise due to rainfall receive upstream the catchment. The flow trends in July were summarized in *Table 1* and *Figure 1*.



July, 2020

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Flow trends

2.2. RUVU CATCHMENT

The monthly flow trend in the most Ruvu tributaries such as 1H5¹, 1HA9A, 1HC2A, were considered as Normal compared to LTA except for 1H8A in last four day the flow were below Long term average (**Figure 1**).

Table 1: River flows summary

Station	Average m ³ /s (July)	LTA (1950-2010)	Min	Max
1G1	22.834	11.492	16.499	36.411
1GA2	0.856	0.520	0.640	1.593
1H5	11.649	11.750	8.447	31.551
1HA9A	0.538	0.621	0.200	2.099
1HC2A	4.715	3.420	3.833	10.723
1H8A	34.071	27.780	25.493	50.780

¹ 1H5 – Ruvu at Kibungo; 1HA9A – Ngerengere at Konga
1HA8 – Ruvu at Morogoro Road Bridge; 1HC2A – Mvuha at Tulo

Flow variations...

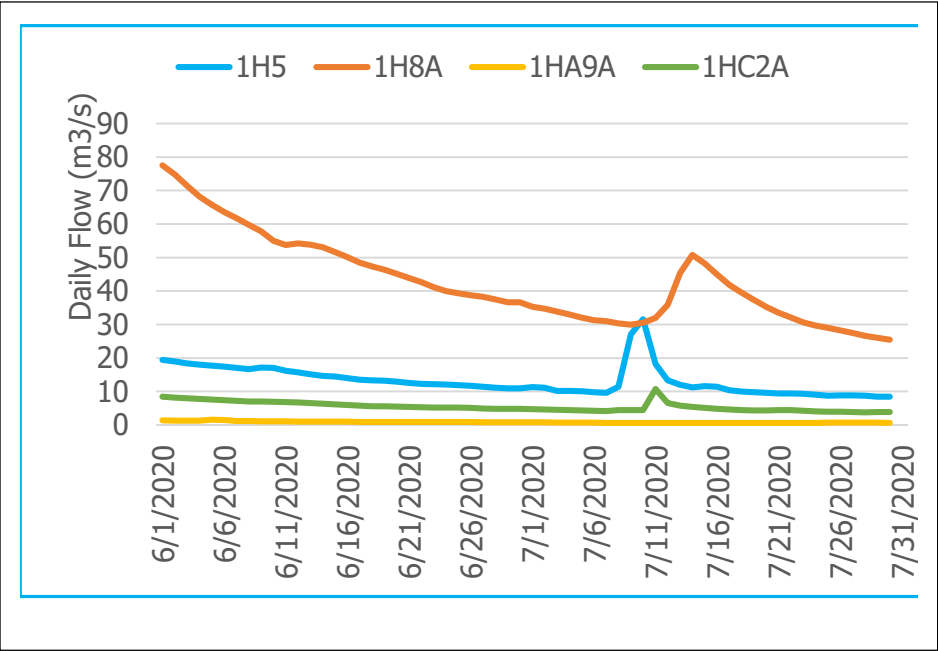
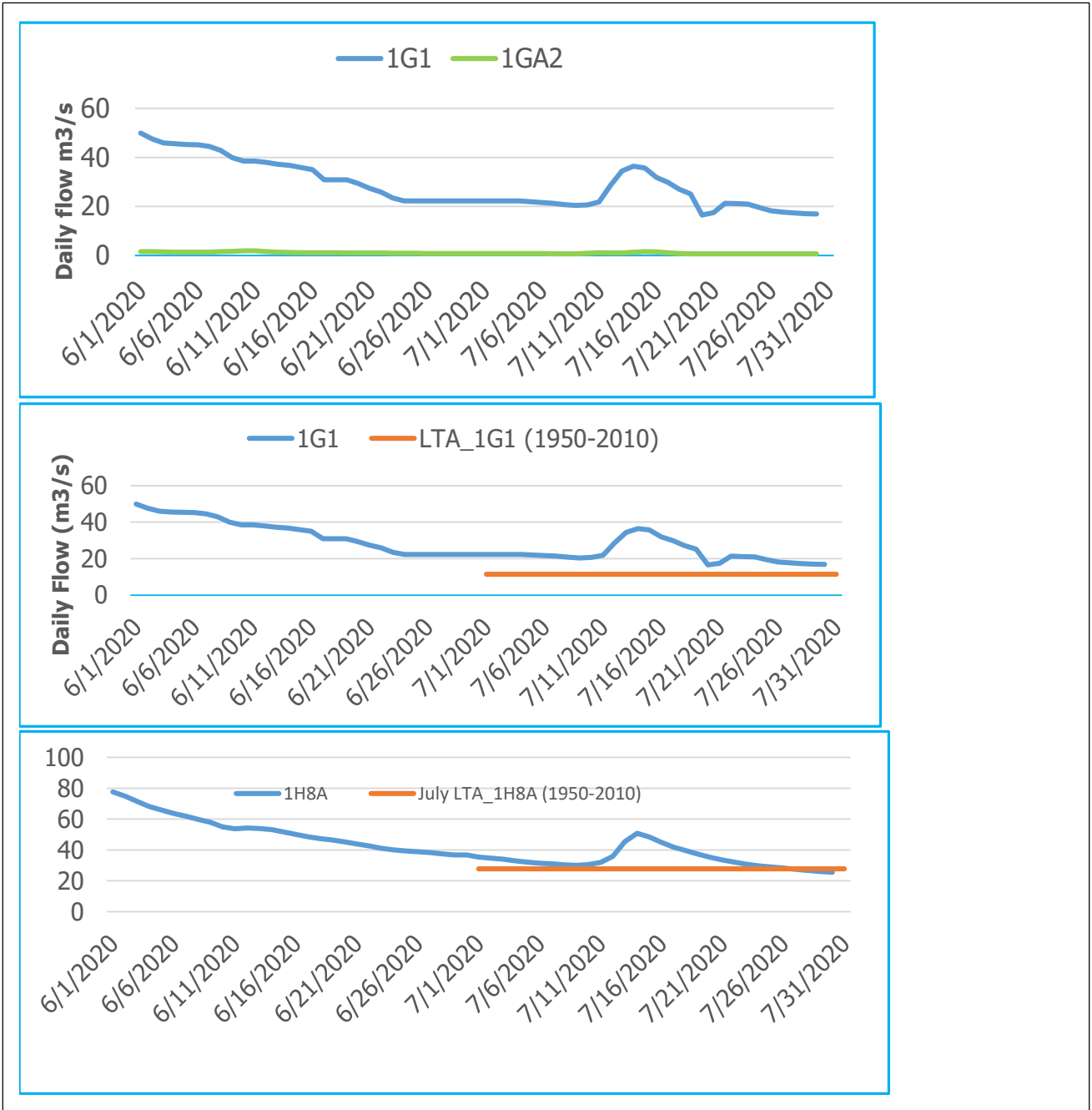


Figure 1: River Flows Analysis in the basin for the month of July, 2020



Rainfall trends

3.

RAINFALL TRENDS AT SELECTED STATION

The Upper Ruvu Sub Catchment which covers areas of Mvuha, Matombo, Kibungo, Morning side, Mgeta, Nyandila, Vinile and Bunduki have received high amount of rainfall compared to the other part of the basin. Actually, the trends decreased towards

the north-western direction, with an upper part of Wami Catchment experienced low amount of rainfall.

The highest rainfall recorded was 104 mm in Morning side station (Morogoro DC) and the lowest was 0 mm in Upper part of Wami catchment- Dodoma city (**Figure 3**).

In general, the rainfalls recorded in most of the stations within the basin for the month of July, 2020 were normal in comparison to LTA.

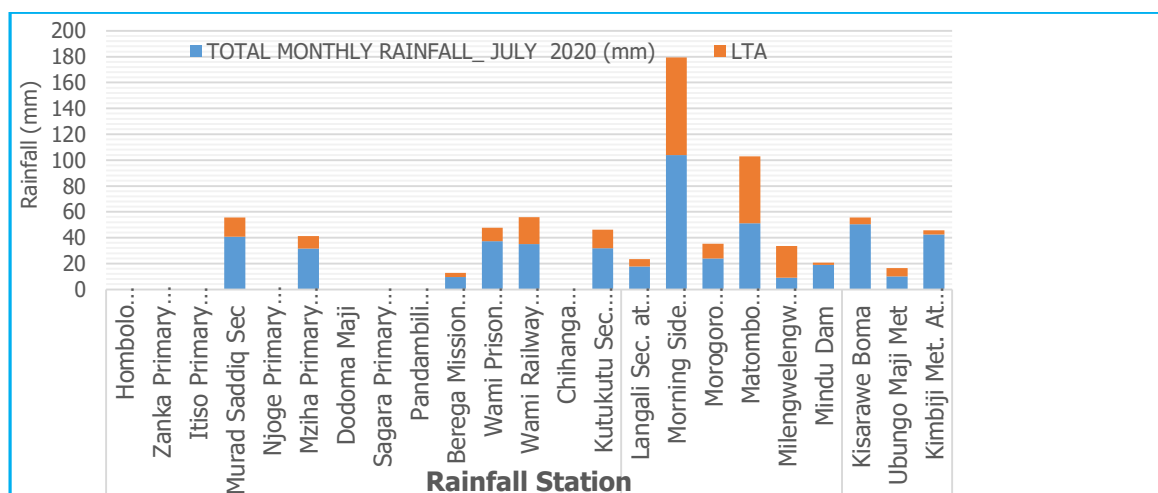


Fig 3; Total Rainfall received in most stations in the Basin – July, 2020

4. MINDU RESERVOIR

Water level of the reservoir in mid of month rise due to rainfall received upstream the catchment (**Figure 4**), although there is decrease of water level in the reservoir but the situation still remain normal when compared to LTA (1997-2019). The Monthly average recorded was 507.095 masl while the maximum water level recorded on 11th July, was 507.25 masl and the minimum level was 507.060 masl on 27th July, 2020.

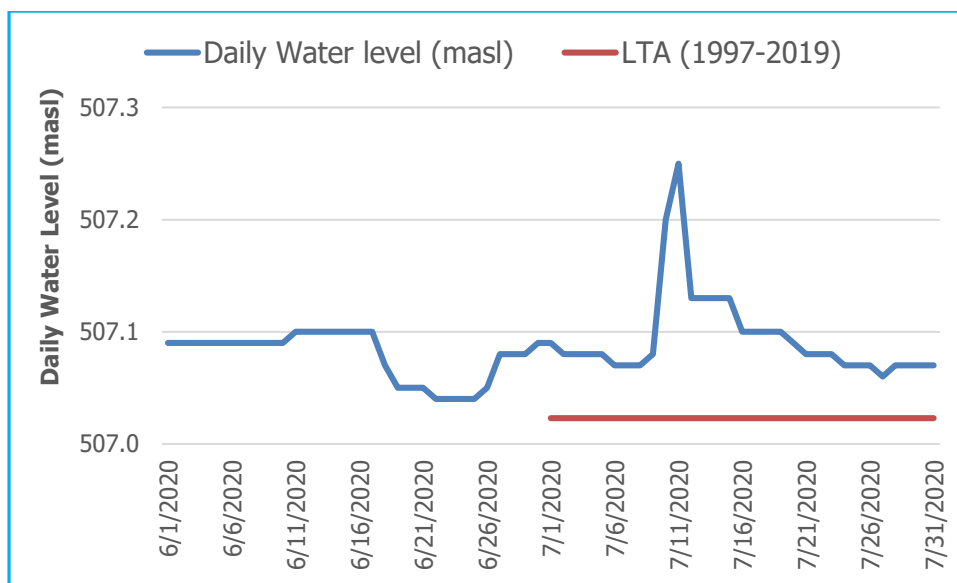


Figure 4: Mindu reservoir water level

5. REFERENCE

Source of data: Wami/Ruvu Basin Water Board

Front cover images: Top image – Mvuha ta Tulo Gauge station;

HYDROLOGICAL BULLETIN - JULY 2020

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Mito yetu, Maendeleo yetu Tuitunze

