Ministry of Water
Wami/Ruvu Basin Water Board

Monthly Hydrological Bulletin

March 2022

SUMMARY

Normally, the month of March is the beginning of wet season that commonly starts from March to May each year. Always, March is dominated by rainfall whereby the hydrograph for river flow, reservoirs and groundwater trends increases across the Basin. However, this year 2022 is different. The Basin experienced low rainfall in most parts in which the flow in rivers, the trends of groundwater level and reservoirs, the hydrographs decreased for both Wami and Ruvu catchment. The monthly mean flow for three gauge stations were Above Normal while seven and three gauge stations were Normal and Below normal respectively when compared to the LTA (1950-2010).

Inside this bulletin:

1. RAINFALL TRENDS

In March, 2022, most parts of the basin were considerably received little rainfall compared to the same month last year (**Figure 1**). In general, the distribution of rainfall Basin-wise was uneven whereby the maximum record observed was 283.5 mm at Uluguru Mountains areas in Ruvu catchment. Unlike March, 2021, the highest rainfall record observed was 497 mm in Wami catchment (Dodoma area). Actually, the average total rainfall records across the Basin in March, 2022, were below 80% of the Mean Annual Precipitation from 1960 to 2010 [mm].

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Rainfall Trends

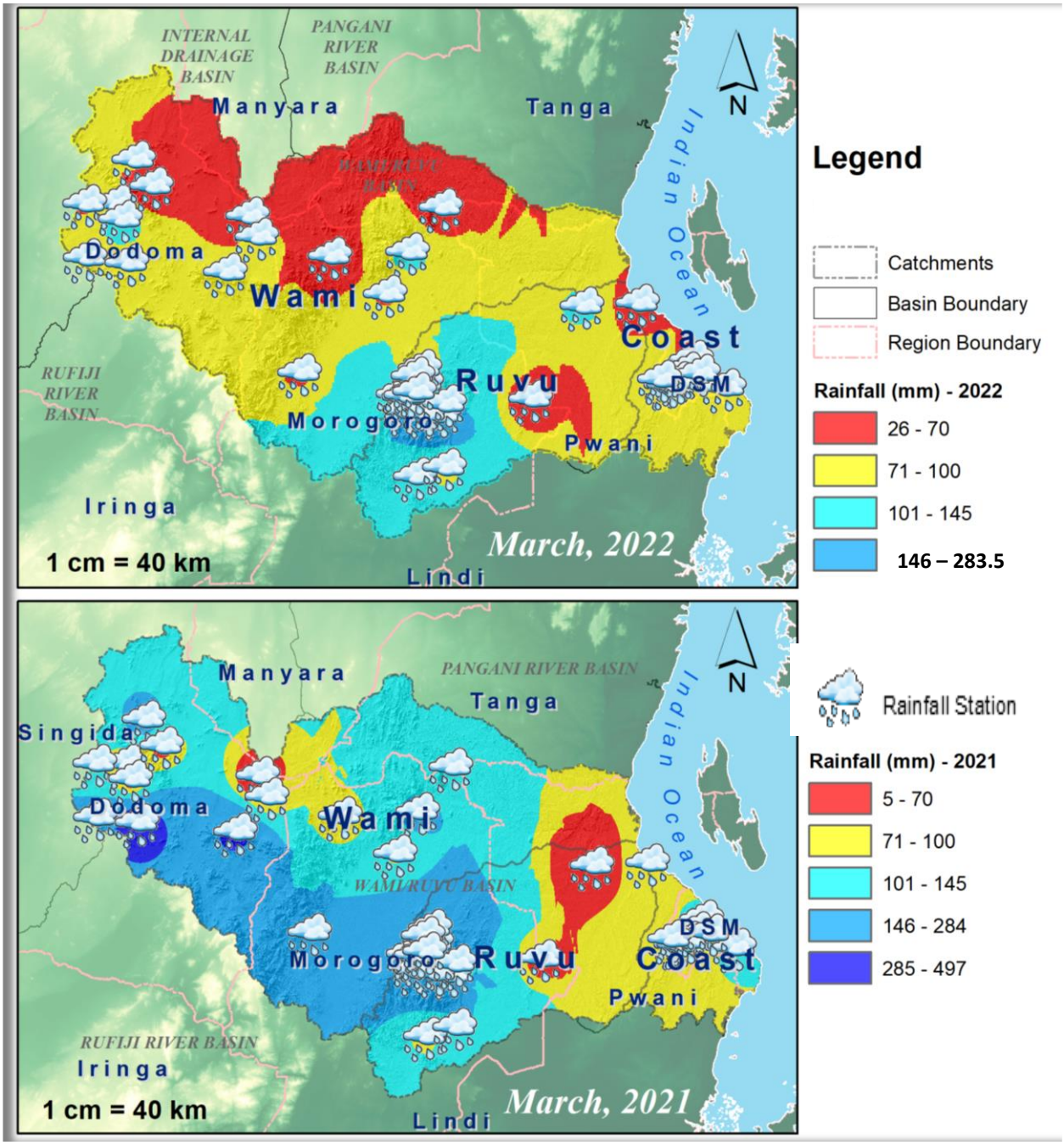


Figure 1: Rainfall Trends Map for the month of June, 2021

2. FLOW VARIATIONS

The monthly mean flow for Wami river was 95.9 m^3/s and Ruvu was 51.7m^3/s for the month of March, 2022.This means that when compared to LTA (1950-2010) and a year of 2021, the flow situations were Above Normal in Wami river and Normal in Ruvu river (**Figure 2**). In addition, two tributaries in Ruvu and one in Wami Catchment show that the river flows recorded were Below Normal. Based on this analysis, the available water is enough to supplement the total demand for both Catchments.

Flow variations…

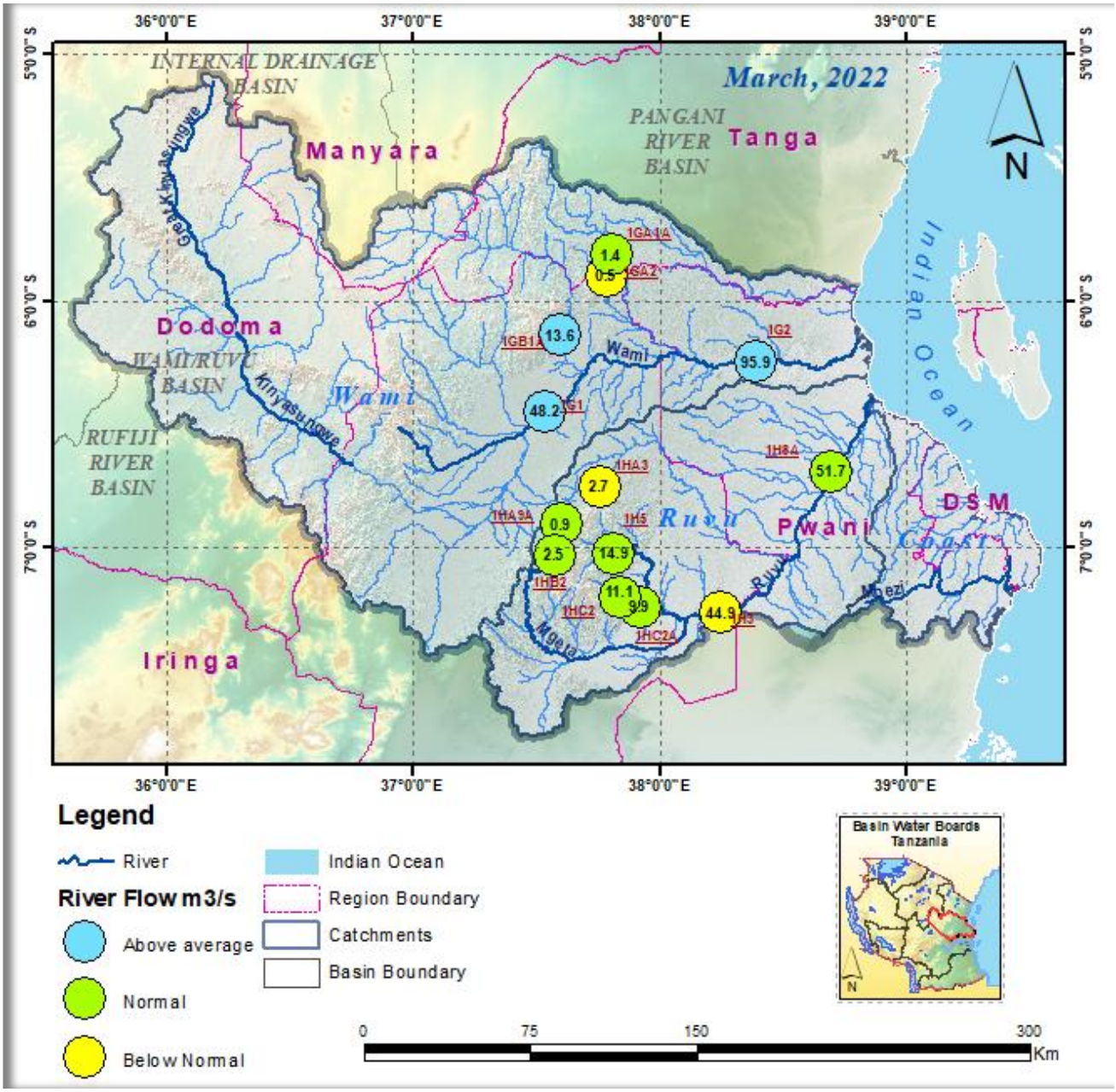
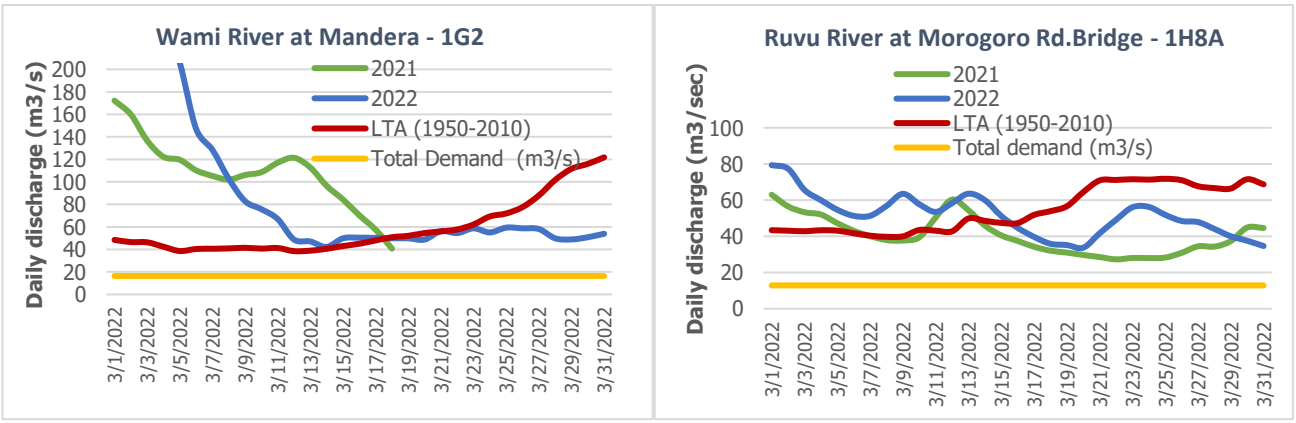


Figure 2: Rivers Flow Analysis Map for the month of March, 2022



3. GROUNDWATER TRENDS

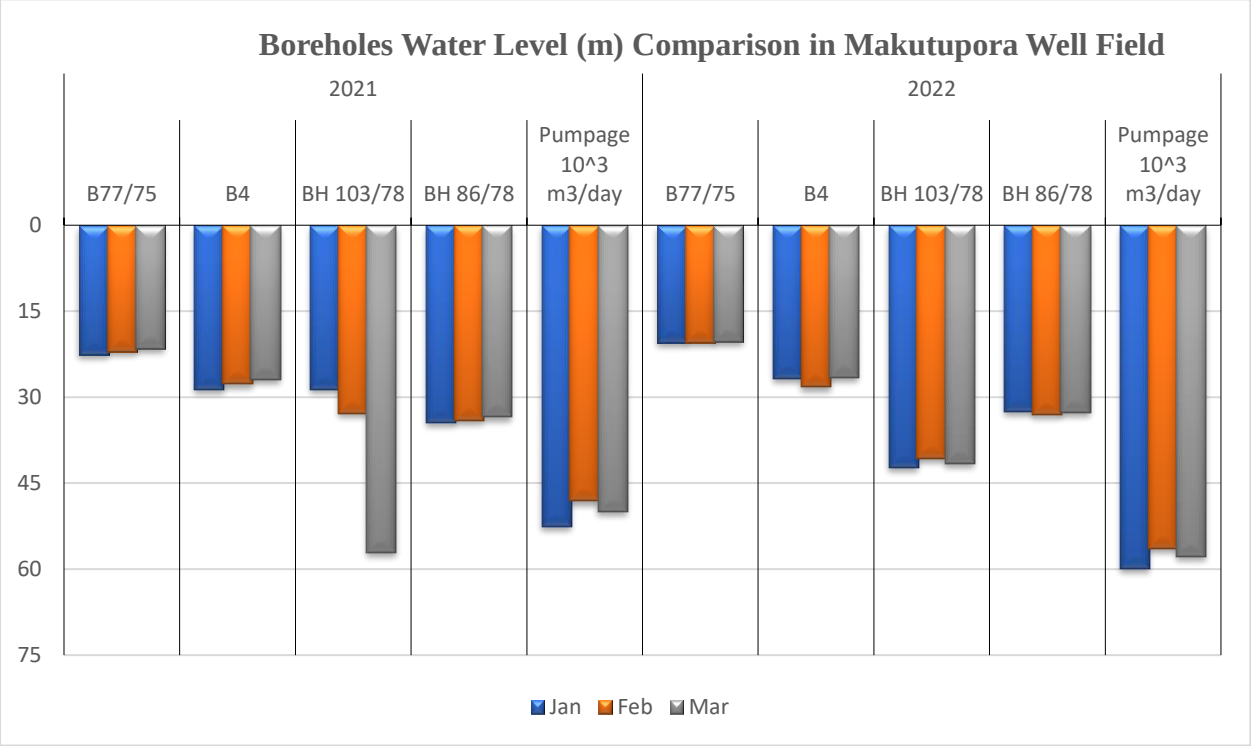


Figure 3: Comparison of water level in Makutopora well field

The monthly average water level for presented monitoring boreholes in Makutupora well field in March, 2022 was higher compared to March, 2021 (**Figure 3**). Similarly, as indicated on **Figure 3**, the average pumpage for the same month was higher than 2021 due to increase demand.

4. MINDU RESERVOIR

The monthly mean volume observed in Mindu Reservoir in March, 2022 was 11.7 MCM. This average volume is termed as Normal when compared with LTA (1997-2019) (**Figure 4**).

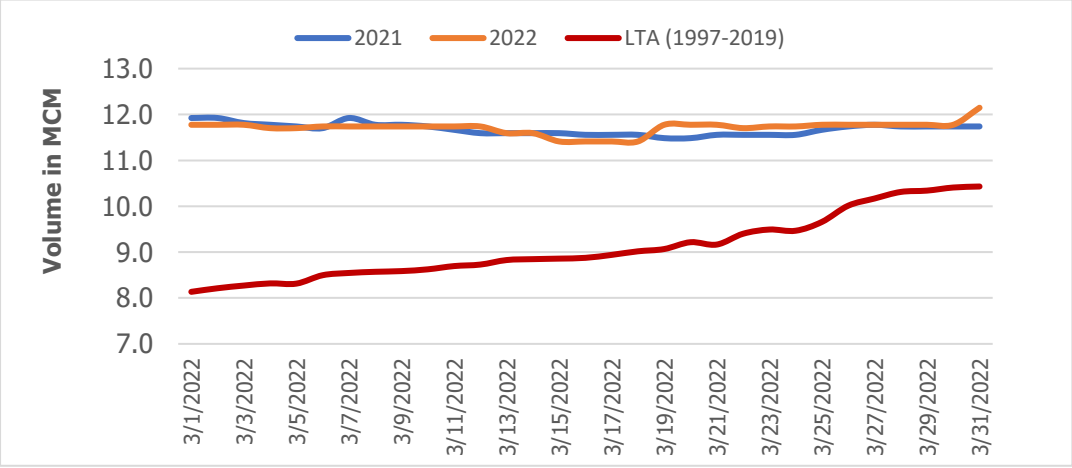


Figure 4: Comparison of monthly volume in Mindu Reservoir.

RECOMMENDATION:

The available water is enough to meet total demand within the Basin, although the all stake- holders are alerted to take a caution for any water deficit that will happen for the next days to come to full fill their demands