

## INTRODUCTION

The month of May, 2021 was characterized by a recession flow regime much lower than the flow regime in 2020. This may be due to low rainfall observed in most parts of the Basin. However; the downstream stations in Ruvu and Wami Catchments indicated that the flows were **above normal** compared to the Long-Term Average (LTA). The available water in Ruvu and Wami river were enough to meet the demands by 82% of the total demand (abstraction). For the case of groundwater level, higher water table was observed on the upper part of Ruvu catchment and Pugu area in the Coast catchment as recharge on those areas are highly attributed by presence of Uluguru Mountains and Pugu hills respectively. Likewise, the water level in Mindu reservoir was **Normal**, with overall storage 85% of the total capacity.

## 1. FLOW VARIATION

The maximum river flow recorded in Ruvu and Wami from January to May, 2021 were 325.635 m<sup>3</sup>/sec and 315.084 m<sup>3</sup>/sec while in 2020 the flow were 411.071 m<sup>3</sup>/sec and 450.635 m<sup>3</sup>/sec respectively. Also, the minimum flow in Ruvu and Wami from January to May, 2021 were 46.562m<sup>3</sup>/sec and 42.349m<sup>3</sup>/sec while in May 2020, the flows were 58.626m<sup>3</sup>/sec and 82.541m<sup>3</sup>/sec. This implies that, from that span, the flow regime in 2021 indicates both peaks and minimum flows were dropped by more than 20% for both catchments compared to 2020 (**Fig.1**). Generally, the monthly mean flow was above normal except for the last fifteen and eighteen days of May for Ruvu and Wami river respectively whereby flows were below normal when compared to LTA and year of 2020 (**Fig.1**).

**WRBWB**WAMI/RUVU BASIN  
WATER BOARD

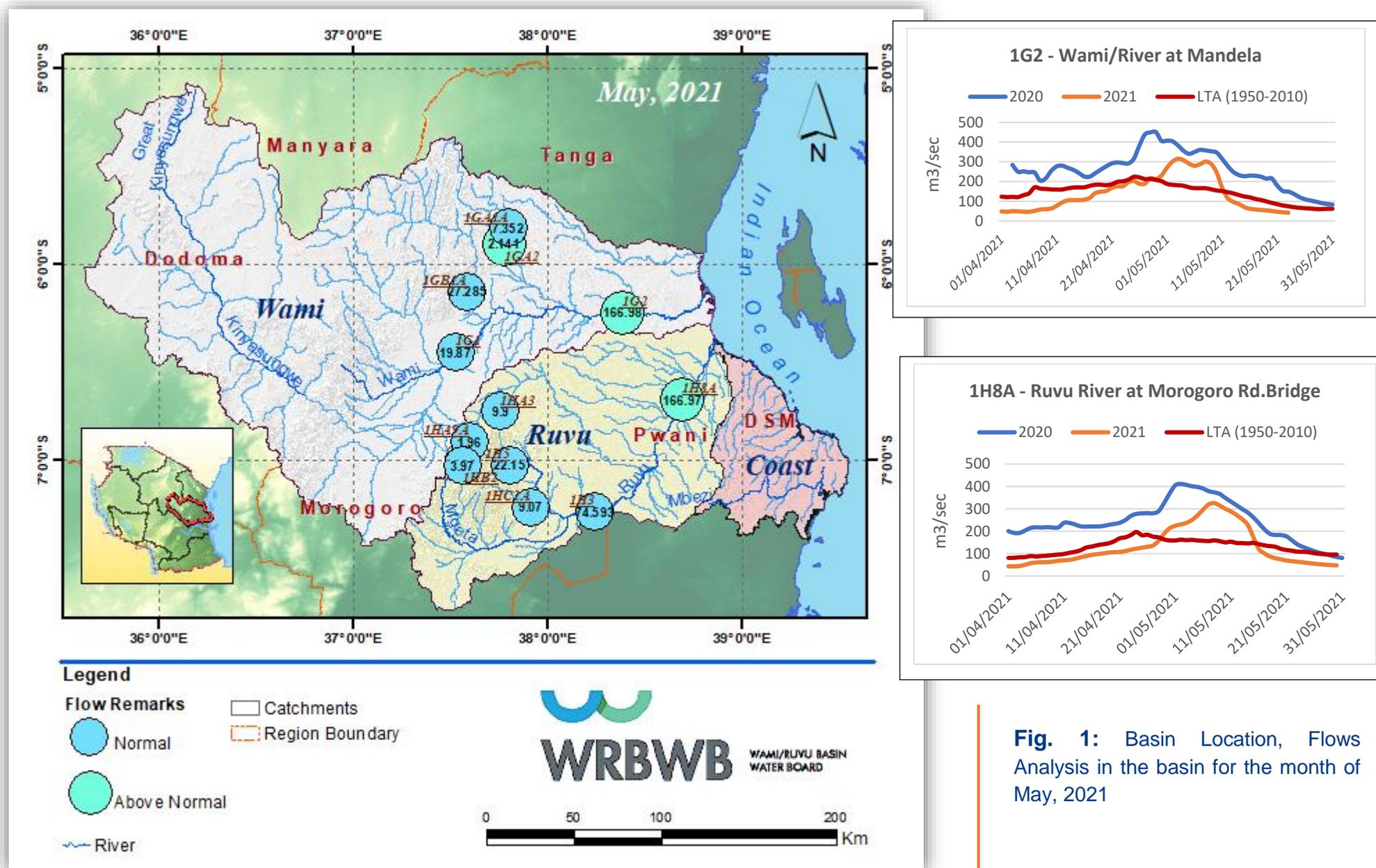
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## Flow Variation

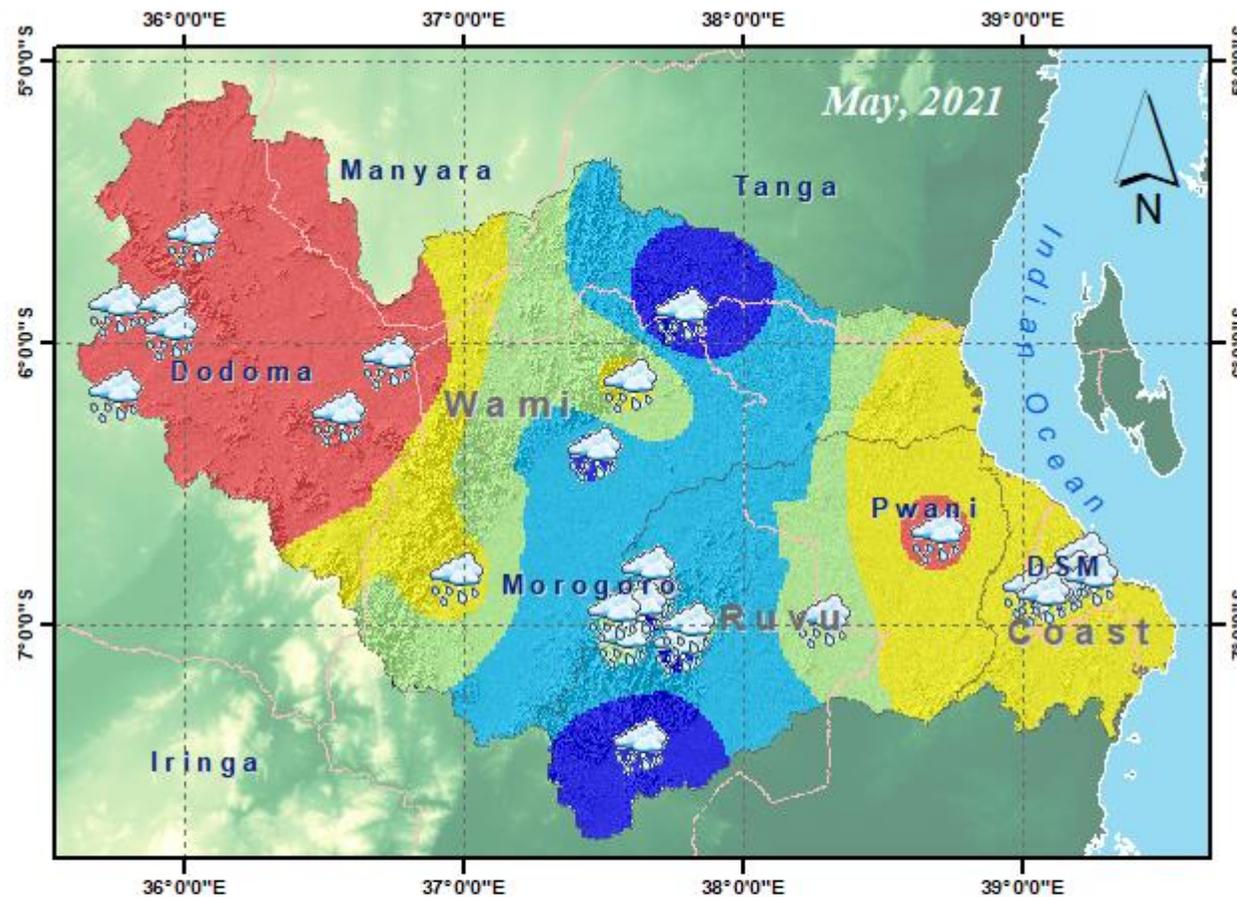


**Fig. 1:** Basin Location, Flows Analysis in the basin for the month of May, 2021

## 2. Rainfall Trends

In general, for the month of May, 2021 high rainfalls were recorded in the middle part of the basin whereby the highest rainfall was 107 mm recorded at Morning Side station located at Uluguru Mountains in Ruvu catchment.

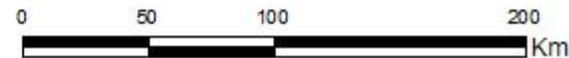
The lowest rainfalls were observed at the edge of Wami catchment in particular the Dodoma region (Fig.2).



### Legend



**WRBWB** WAMI/RUVU BASIN WATER BOARD



**Fig. 2:** Rainfall trends in Wami/Ruvu Basin – May 2021

### 3. GROUNDWATER TRENDS

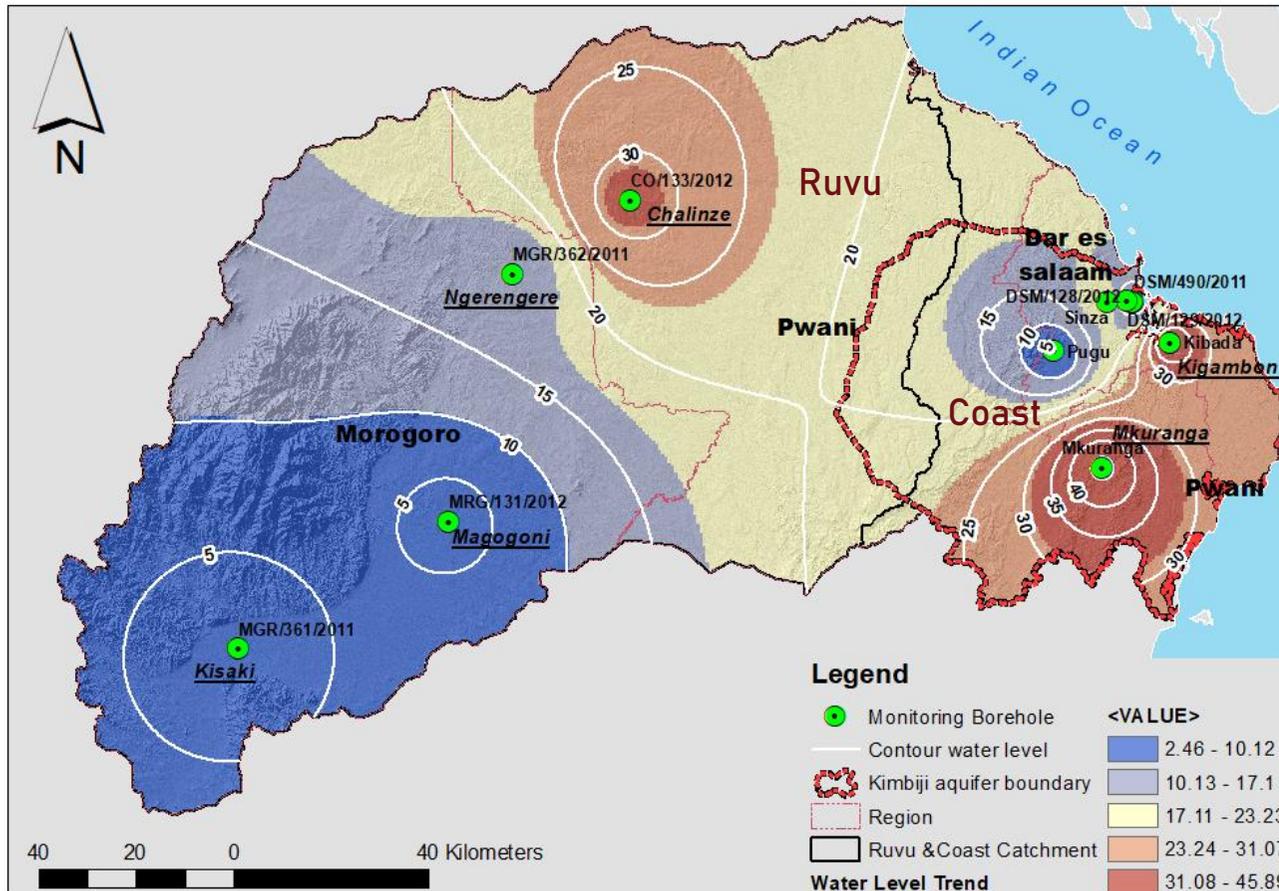


Fig. 3: Groundwater level map in the catchment of Ruvu and Coast, May 2021.

#### Groundwater Level

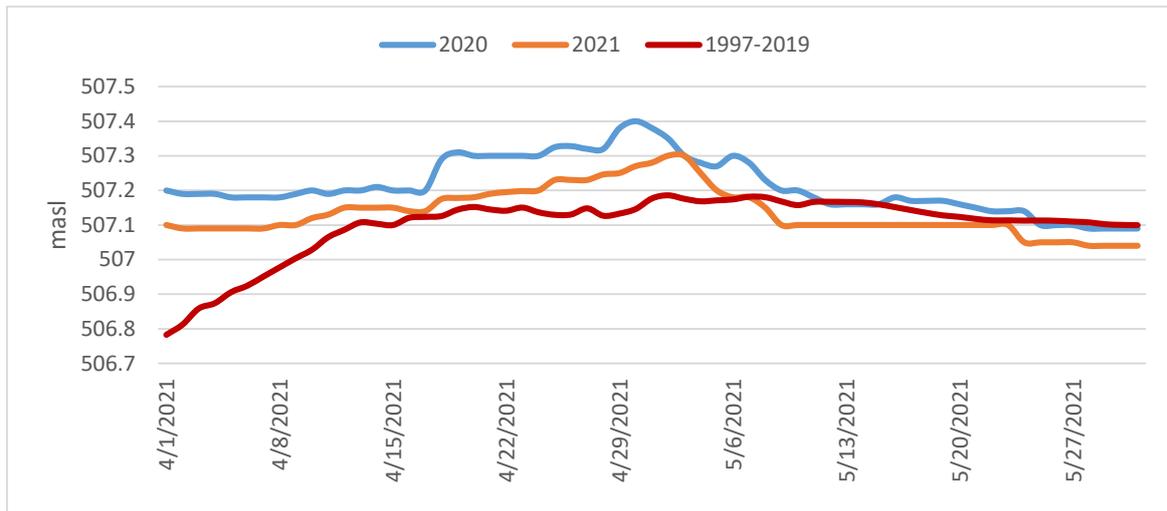
For the month of May 2021, the trend of groundwater in the basin are presented by the monitoring stations located at Coast and Ruvu Catchment (Fig.3).

The analysis indicated that, at the upper part of Ruvu catchment, the water table is higher (Kisaki, Magogoni) compared to the lower one. This is due to the presence Uluguru Mountains which recharge the Mgeta flood plain aquifer.

Similarly, the water table in the area of Pugu is higher than the rest part of the Coast catchment due to higher groundwater recharge caused by presence of Pugu hills.

## 4. WATER LEVEL IN THE MINDU DAM

The monthly mean water levels observed in Mindu reservoir was 507.119 masl which is Normal compared to LTA (1997-2019) of 507.143 masl for the month of May, 2021 (**Fig.4**), although for the last twenty-three days the level was below average when compared to the year 2020 and LTA.



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

## RECOMMENDATION

*Although, the available water in Ruvu and Wami river were enough to meet the demands by 82% of the total demand (abstraction), the communities are alerted to take a caution for any water deficit that will happen for the next days to come to full fill their demands.*