

# HYDROLOGICAL BULLETIN - MARCH, 2020



## WAMI/RUVU BASIN WATER BOARD

### 1. INTRODUCTION

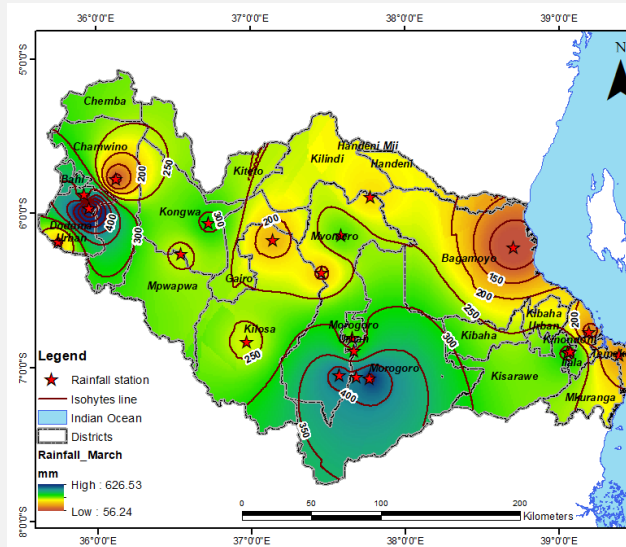


Wami/Ruvu Basin covers an area of about 66,820 square kilometers. The Basin is located in the Eastern side of Tanzania which lies between Longitudes  $35^{\circ} 30' 00''$  to  $40^{\circ} 00' 00''$  E and Latitudes  $05^{\circ} 00' 00''$  to  $07^{\circ} 30' 00''$ . The Basin is sub divided into three catchments known as Ruvu, Wami and Coast.

Hydrological flow situation in the Basin during the month of March was characterized by a continued increase of surface runoff due to high rainfall observed in most parts of the Basin. Furthermore, the flow analysis situation was carried out based on rainfall trends, flow variations in rivers and water level in reservoir.

## 2. RAINFALL TRENDS AT SELECTED STATIONS

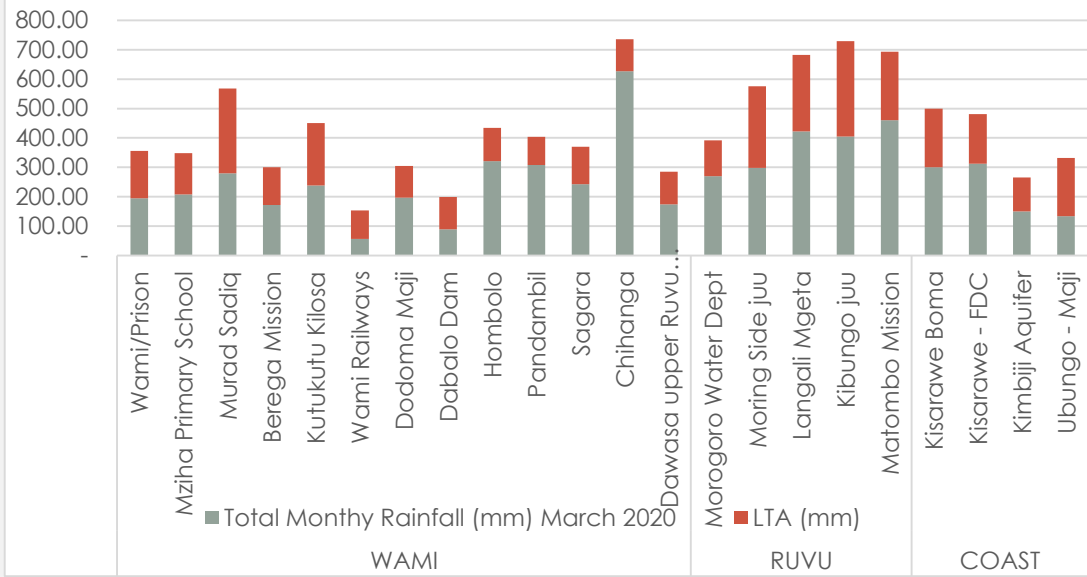
**FIGURE 2.1: RAINFALL DISTRIBUTION IN THE BASIN FOR MARCH 2020**



Rainfall recorded from selected stations within the Basin for March 2020 was above average in comparison to Long term average (LTA). This might high result flow in stream and Rivers as well as recharge of the ground Water aquifer in the Basin.

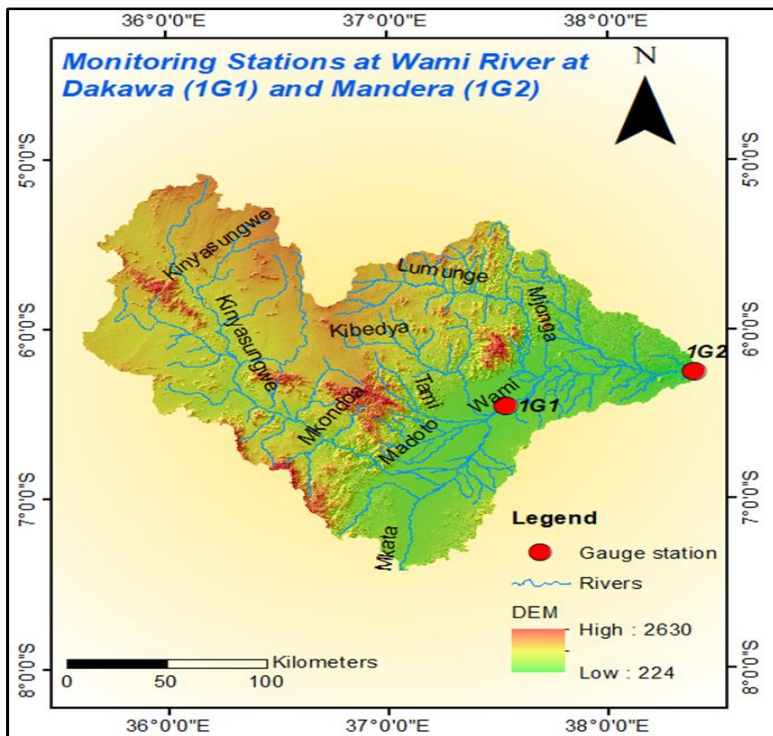
**Figure 2.1** Show distribution of Rainfall in the Basin for Month of March 2020, whereby high rainfall were observed at part of Dodoma and Uluguru mountain-Morogoro with a blue to light blue colour and normal rainfall were observed at Chemba, Chamwino, Kongwa, Mpwapwa, Kilosa, Mvomero, Morogoro Municipality, Kibaha, Kisarawe with green to yellow colour while the less rainfall were observed in Kilindi, Handeni, Gairo and Bagamoyo with red to orange colour.

**Figure 2.2** Show the trends of Rainfall compared to long term average at selected stations in the basin for the month of March 2020

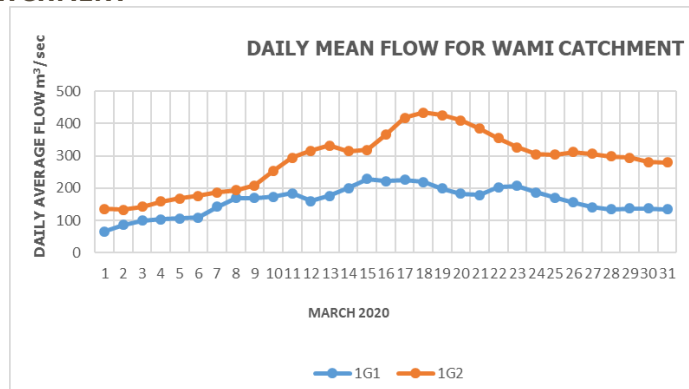


**FIG 2.2 MONTHLY RAINFALL TREND IN SELECTED STATIONS**

### 3. FLOW VARIATIONS IN RIVERS



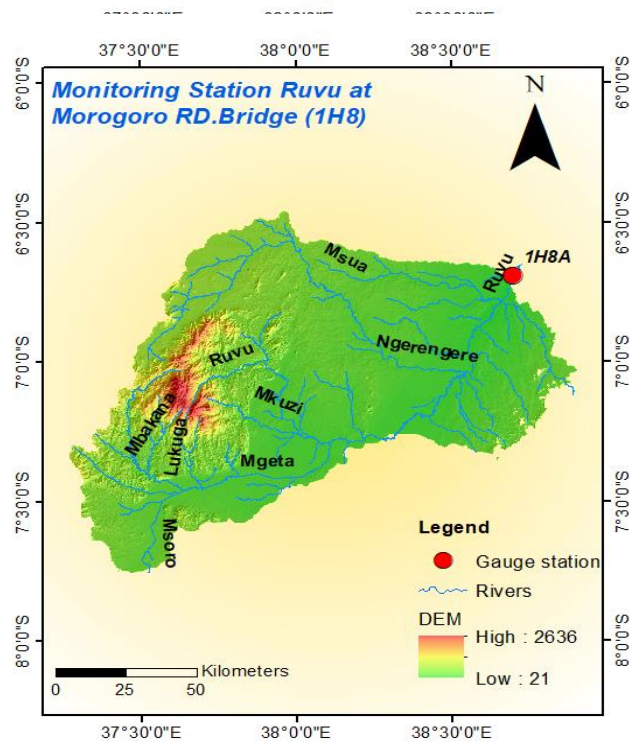
**FIG. 3.1: REPRESENTATIVE STATIONS WITHIN WAMI CATCHMENT**



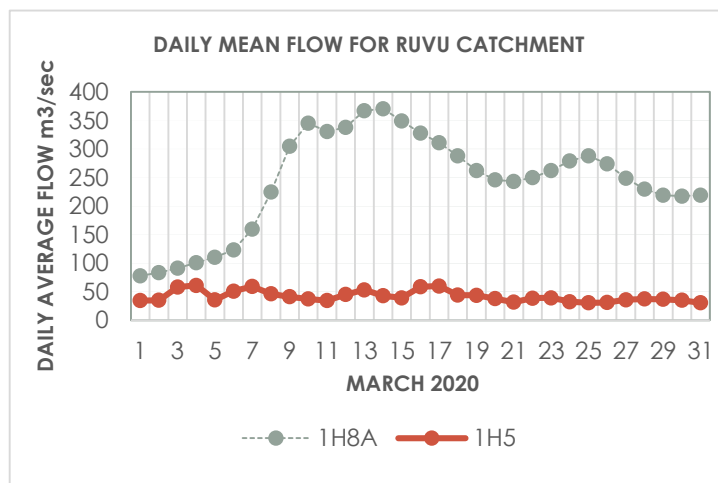
**FIG. 3.2: FLOW VARIATION RECORDED AT REPRESENTATIVE'S STATION WAMI CATCHMENT.**

## WAMI CATCHMNET

Wami at Dakawa (**1G1**) and Wami at Mander stations represent the Wami Catchment (Fig. 3.1). The flow observed in March 2020 were above average compared to long term average values. The average flow values recorded at Wami/Dakawa and Wami/Mander Station was 161.81m³/s and 289.97m³/s respectively. The maximum flow observed was **228.09 m³/s on 15 of March, 2020** and Minimum value was **66.62m³/s on 01<sup>st</sup> March 2020** at Wami Dakawa. While at Wami/Mander Station The same situation was observed at a downstream Wami/Mander station, the maximum flow observed was **434.048m³/s on 18 of March, 2020** and Minimum value was **133.84m³/s on 02<sup>st</sup> March 2020**. (Fig. 3.2).



**FIG. 3.3: REPRESENTATIVE STATIONS WITHIN RUVU CATCHMENT**



**FIG 3.4; FLOW VARIATION RECORDED AT REPRESENTATIVE'S STATION RUVU CATCHMENT**

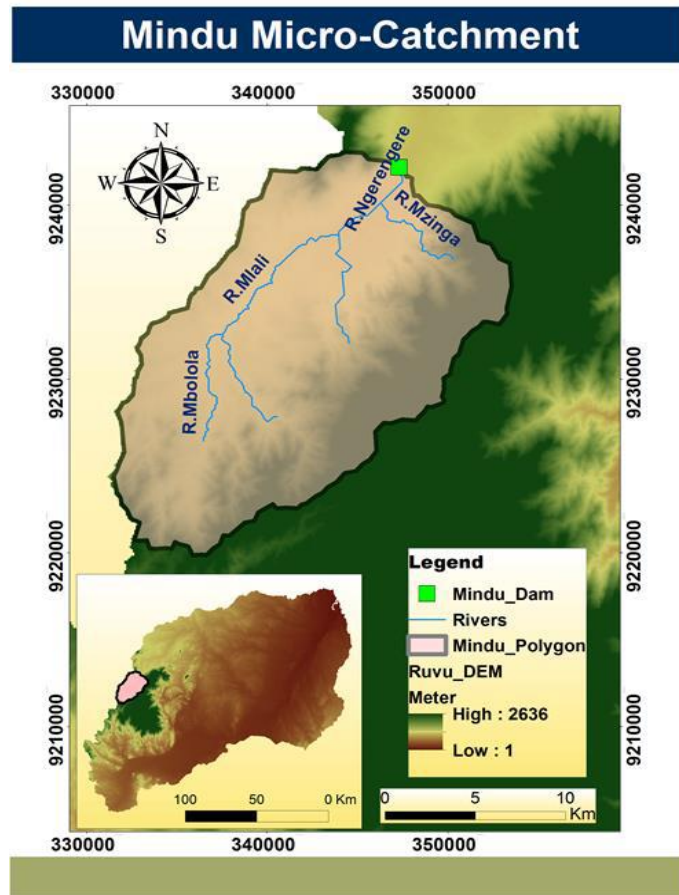
## RUVU CATCHMNET

Ruvu River at Morogoro road bridge station (1H8A) and Ruvu Kibungo (1H5) station represent Ruvu catchment (Fig. 3.3) 1H8A is the last station in the lower reach of the Basin and it is used for Catchment Surface Water Monitoring such as both DAWASA intakes (lower and upper Ruvu intakes); the station gives the whole picture of the Catchment.

Generally, the monthly mean flow for Ruvu Kibungo and Ruvu at Morogoro road Bridge was **41.99m³/s** and **243.38m³/s** respectively. The maximum flow observed was **61.30 m³/s on 4<sup>st</sup> of March, 2020** and Minimum value was **30.73m³/s on 25<sup>rd</sup> March 2020** at Ruvu Kibungo. While at Ruvu Morogoro road Bridge The same situation was observed at a downstream Ruvu Morogoro road Bridge station, the maximum flow observed was **370.39 m³/s on 14 of March, 2020** and Minimum value was **77.86m³/s on 1<sup>st</sup> March 2020**. (Fig. 3.4).



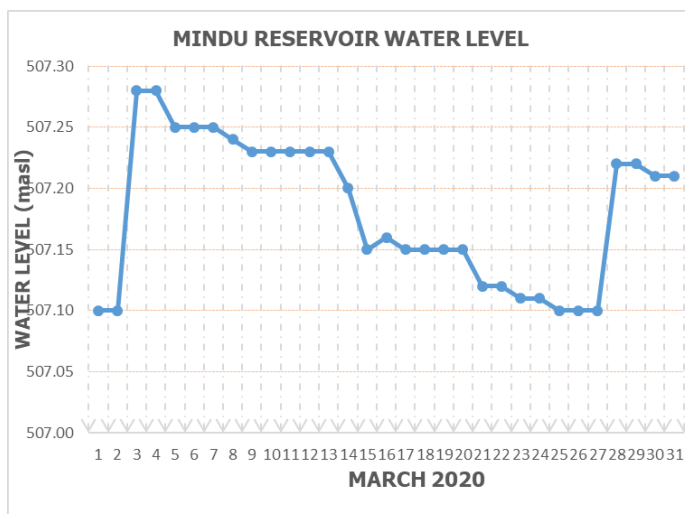
#### 4. WATER LEVEL IN RESERVOIR



#### MINDU RESERVOIR

In general, the Water levels observed in Mindu reservoir was above average compared to long term average for the month of March, 2020 (fig 4.1)

The maximum Water level recorded for this month of March, 2020 was 507.28 masl on 04 and the minimum level was 507.10 masl on 27<sup>th</sup> March, 2020 while the average Water level recorded within this month was 507.18 masl



**FIGURE 4.1; VARIATION OF WATER LEVEL FOR MINDU DAM**

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**WAMI/RUVU BASIN WATER BOARD**

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