

1. Overview

The hydrological situation in the Rukwa Basin during May 2023 was characterized by medium flow in all catchments as the Basin received low rainfall in the reporting period compared to the LTA as indicated in **Figure 2**.

Figure 2 indicates that 50% of the area located in the Basin received more rainfall compared to the long-term average (**Figure 3**)

The flow analysis situation was carried out on the Songwe catchment using the data recorded from the reference gauging stations which are Mlowo River at Great North Road (Mbozi), Myovizi at Great North Road (Mbozi), and Ruanda River at Great North Road (Mbozi).

Figures 4 show the comparative hydrographs for the month of May 2023 with previous years.

Figure 5 shows Lake level fluctuations in May 2023 compared to previous years.

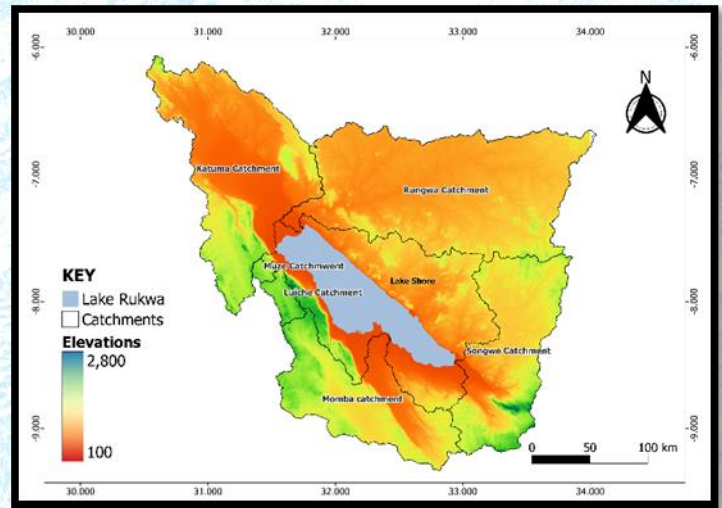


Figure 1: Catchments of Lake Rukwa Basin

2. Rainfall Trend in the Basin

The monthly distribution of rainfall over the basin is characterized by unimodal rainfall patterns (End of October to Mid of May).

In May 2023, most parts of the basin received less rainfall (**Figure 2**) with a decrease of 29% compared with the long-term average (**Figure 3**).

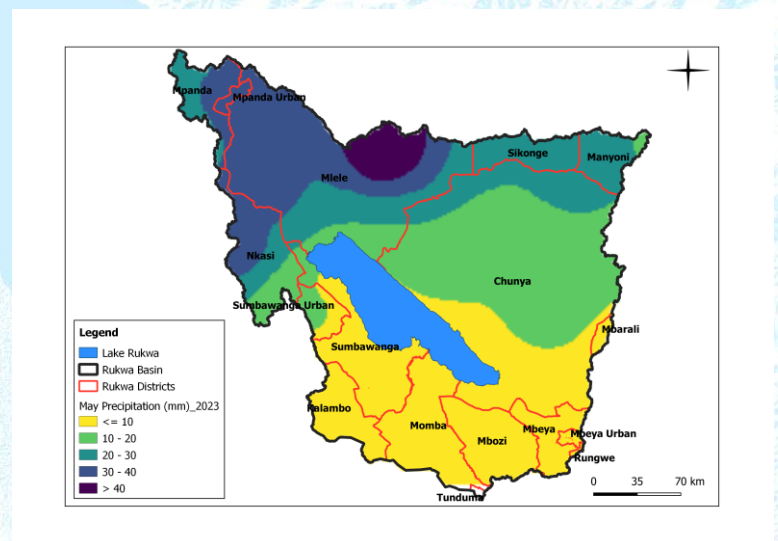


Figure 2: Rainfall variation in May 2023

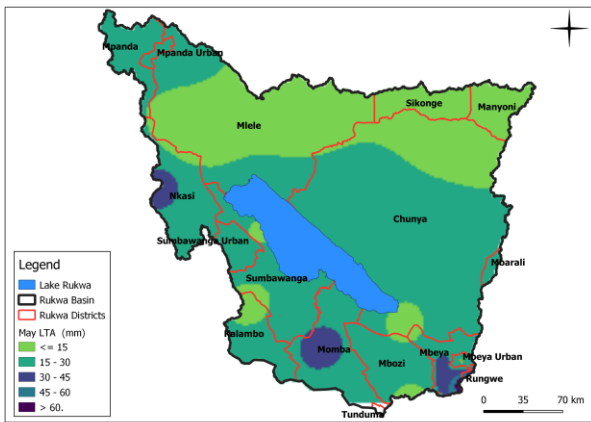


Figure 3: Long-term average rainfall distribution for May

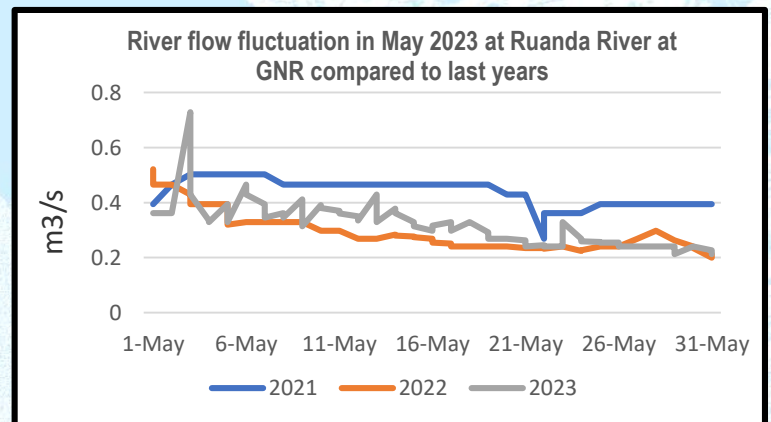
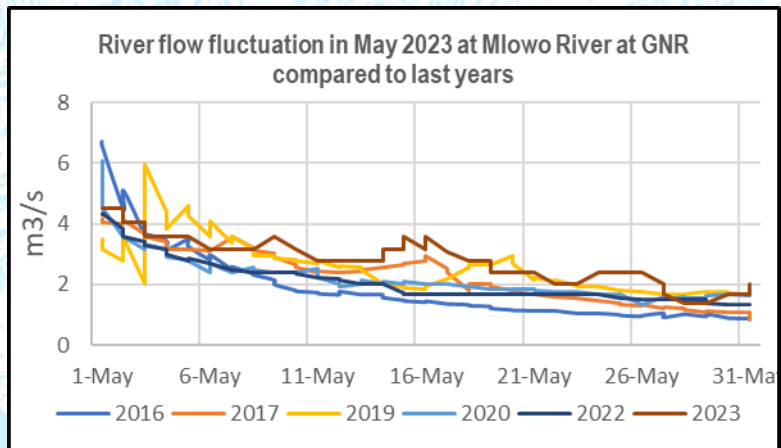
3. Flows in Rivers

At all stations representing the mentioned catchments above, the hydrological situation during the month of May 2023 was characterized by the ongoing decrease in river levels due to a shortage of rainfall in the reporting period for most parts of the Basin.

At Mlowo station, the maximum and minimum daily flow observed was 4.520m³/s and 1.373m³/s respectively in May 2023. The monthly mean flow which passed across the station was 2.791m³/s.

At Ruanda station, the maximum and minimum daily flow observed was 0.729m³/s and 0.213m³/s respectively in May 2023. The monthly mean flow which passed across the station was 0.319m³/s.

At Myovizi station, the maximum and minimum daily flow observed was 3.687m³/s and 1.856m³/s respectively in May 2023. The monthly mean flow which passed across the station was 2.682m³/s.



Lake Rukwa Basin Water Board

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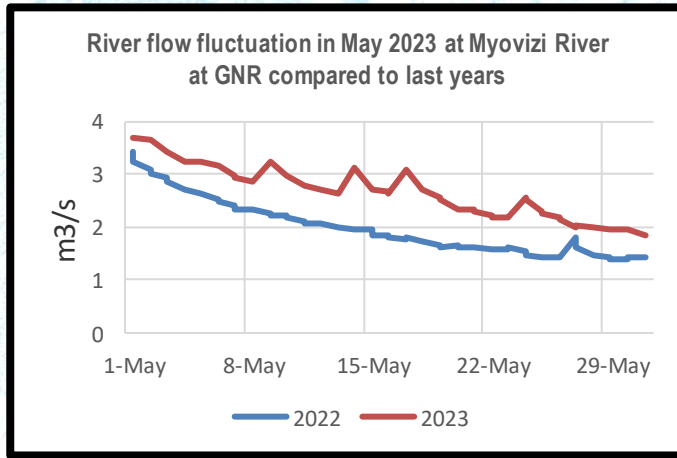


Figure 4: River flows fluctuation

4. Water level in Lake Rukwa

The main source of water for Lake Rukwa is the main rivers that depend on rainfall for its survival, the lake height for May 2023 is seen to be higher compared to previous years as indicated in **Figure 5**.

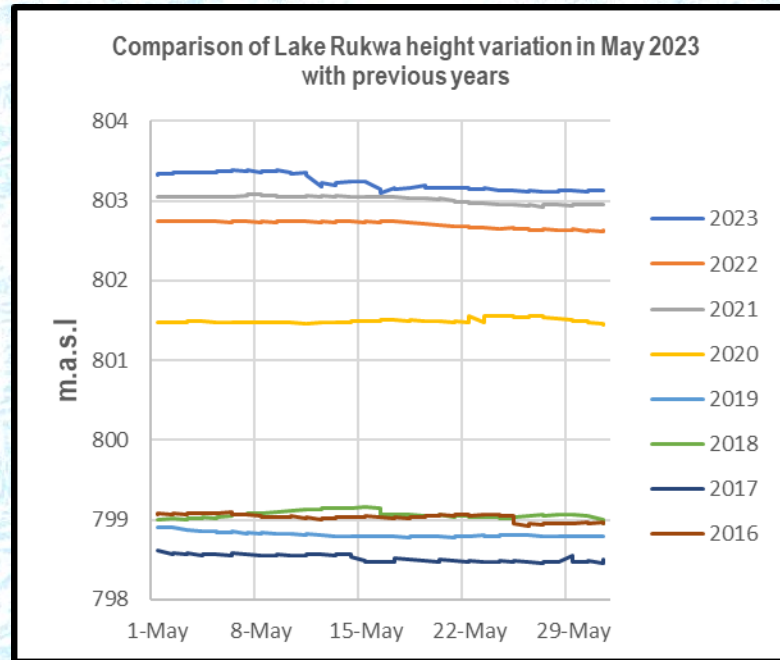


Figure 5: Water level in Lake Rukwa at Mbangala

Conclusion

The hydrological situation from May 1st to 31th, 2023 is characterized by the decrease in the water level in most observed rivers in respective catchments, leading decrease in flows on the main course of the rivers and its tributaries.