

1. Overview

The hydrological situation in the Rukwa Basin during April 2023 was characterized by an increase of flow in all catchments as the Basin received more rainfall in the reporting period as indicated in **Figure 2**.

Figure 2 indicates that 90% 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 two catchments (Songwe and Momba) using the data recorded from the reference gauging stations which are Momba River at Tontera (Momba), Myovizi at Great North Road (Mbozi) and Ruanda River at Great North Road (Mbozi).

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

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

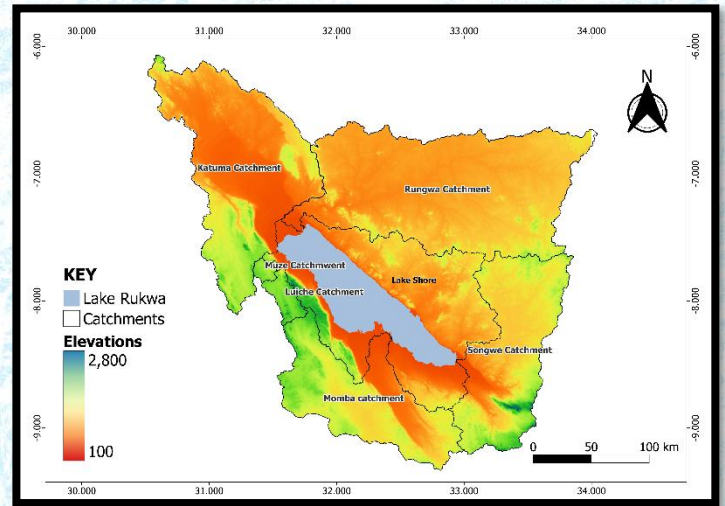


Figure 1: Catchments of Lake Rukwa Basin

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 April 2023, most parts of the basin received more rainfall (**Figure 2**) with an increase of 31% compared with the long-term average (**Figure 3**).

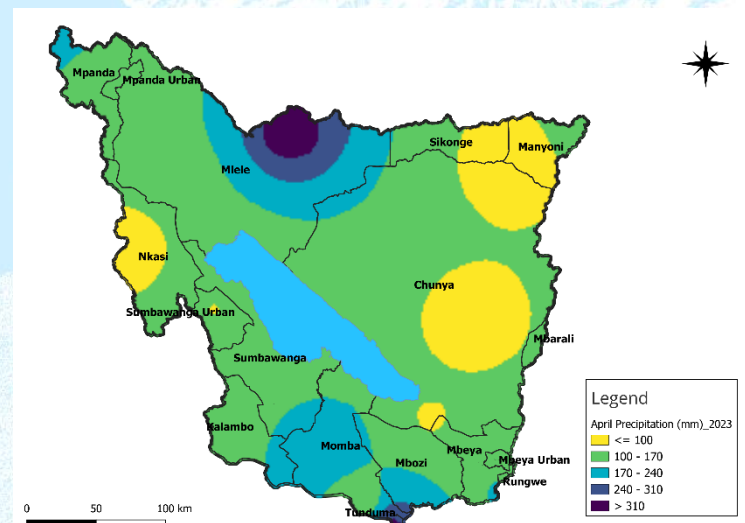


Figure 2: Rainfall variation in April 2023

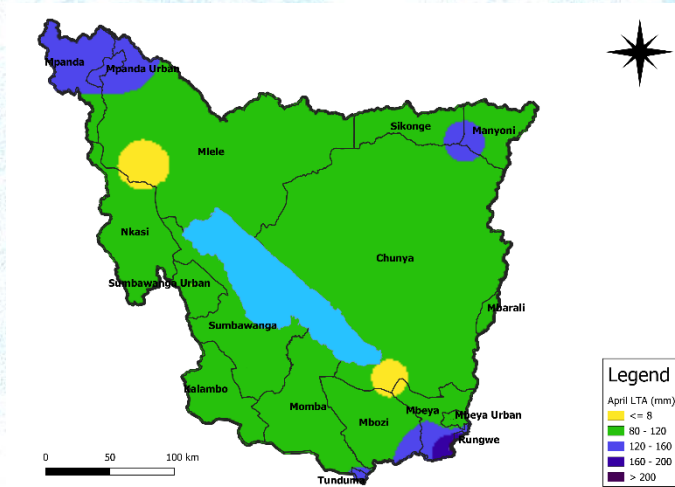


Figure 3: Long-term average rainfall distribution for April

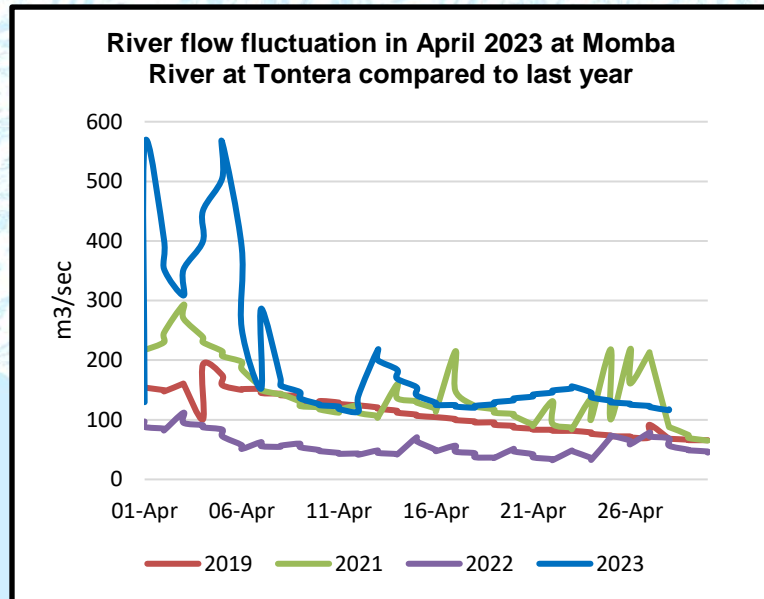
3. Flows in Rivers

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

At Momba station, the maximum and minimum daily flow observed was 564.8805m³/s and 113.5258m³/s respectively in April 2023. The monthly mean flow which passed across the station was 195.581m³/s.

At Ruanda station, the maximum and minimum daily flow observed was 3.540m³/s and 0.388m³/s respectively in April 2023. The monthly mean flow which passed across the station was 1.318m³/s.

At Myovizi station, the maximum and minimum daily flow observed was 16.787m³/s and 3.687m³/s respectively in April 2023. The monthly mean flow which passed across the station was 7.742m³/s.





Lake Rukwa Basin Water Board

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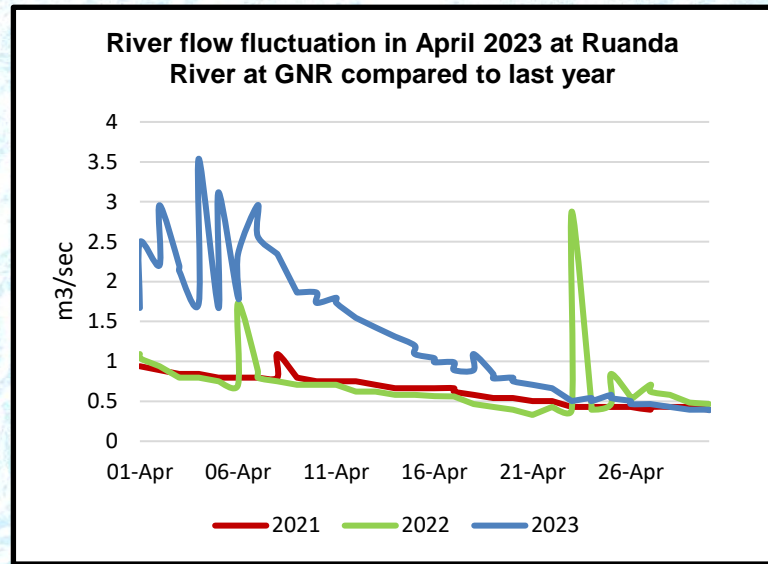
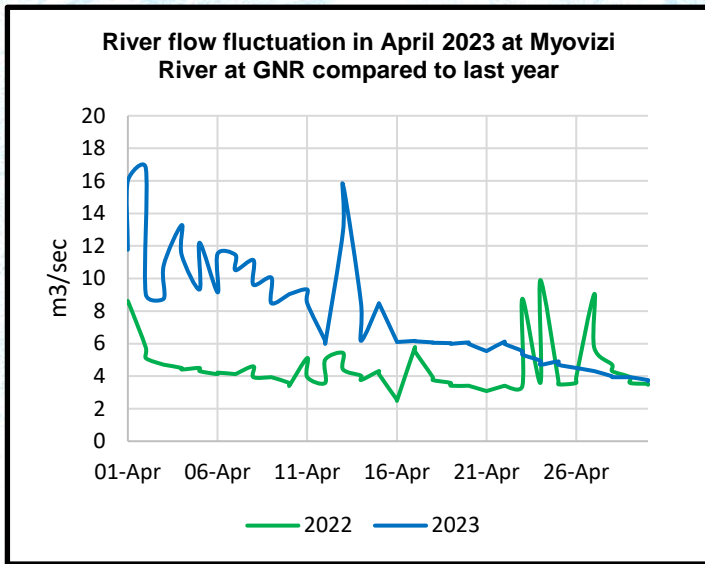


Figure 4: River flows fluctuation

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 April 2023 is seen to be higher compared to previous years as indicated in **Figure 5**.

Conclusion

The hydrological situation from April 1st to 30th, 2023 is characterized by increase in the water level in most of observed rivers in respective catchments, leading to increase in flows on the main course of the rivers and its tributaries.

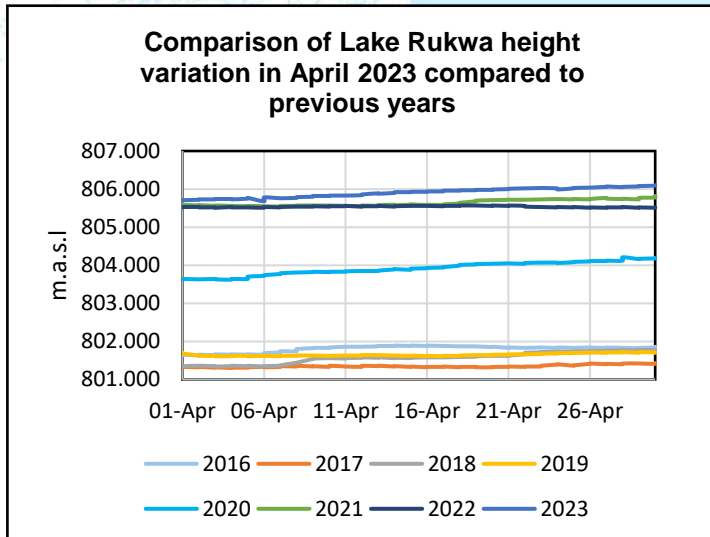


Figure 5: Water level in Lake Rukwa at Mbangala