

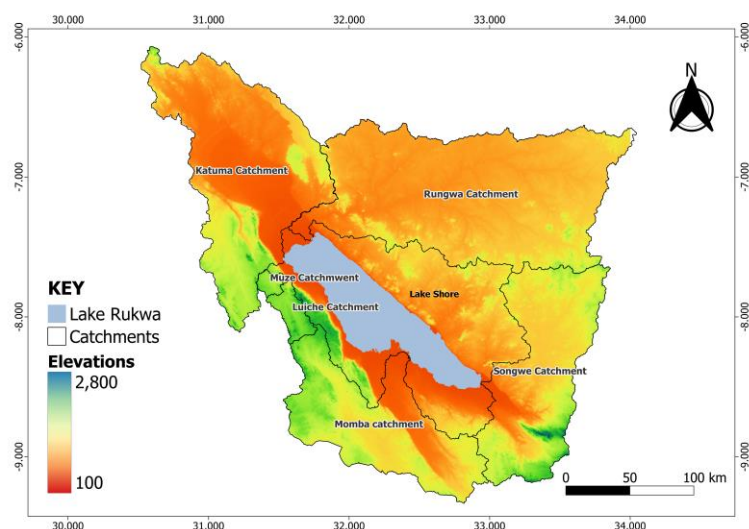


# Lake Rukwa Basin Water Board July Hydrological Bulletin



## 1. Overview

Lake Rukwa Basin is an internal drainage basin located in the southwestern part of Tanzania. The basin lies within the Rift Valley with Lake Tanganyika on the northwest and Lake Nyasa on the southwest. It covers an area of about 88,000 km<sup>2</sup> extending the regions of Mbeya, Songwe, Rukwa, Katavi, and small parts of Tabora and Singida. The basin is sub-divided into six major subbasins (**Figure 1**) including Katuma, Songwe, Momba, Rungwa, Lwiche, and Muze. All other basin areas around the lake and outside these six sub-basins have been designated as Lake Shore areas.



**Figure 1: Catchments of Lake Rukwa Basin**

This Basin Monitoring bulletin aims at providing a shared understanding of patterns of some of the water cycle components in our changing environment based on observed (collected) data. Estimates of water cycle parameters provide insights on available opportunities for water use, and water conservation and thereby enhance water use efficiencies.

This issue provides an analysis of Rainfall, river flows, and analysis of Water levels in Lake Rukwa during 2022 as compared to last year's records.

## 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 July 2022, the Rukwa Basin received **NO** rainfall (**Figure 2**) which make a decrease in rainfall by 100% as compared to the long-term average (**Figure 3**).



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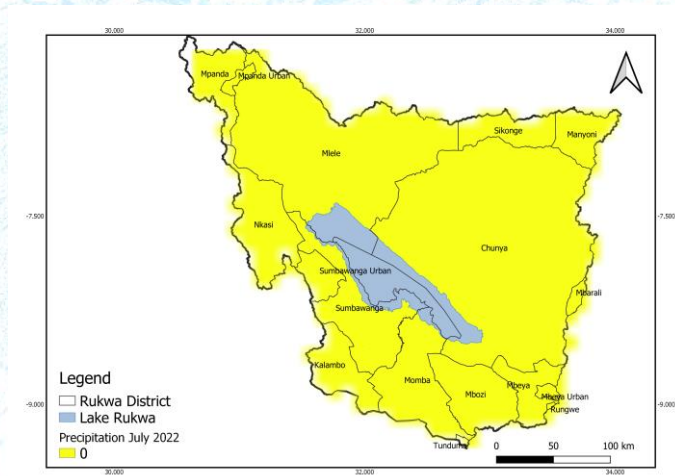


Figure 2: Rainfall variation in July 2022

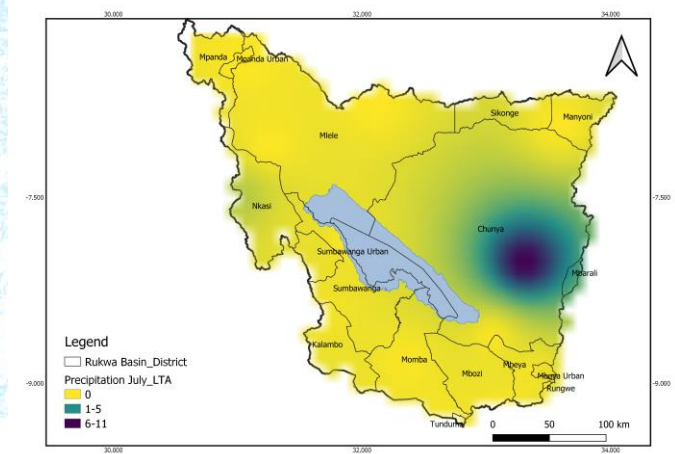


Figure 3: Long-term average rainfall distribution for July

## 3. Flows in Rivers

Flow in rivers in Rukwa Basin starts to decrease from June as it stops raining around May. Figure 4 indicates that most recorded flows in the basin are significantly low compared to that recorded in 2021 which shows the continuation

of decrease of water quantity in the rivers during the dry season.

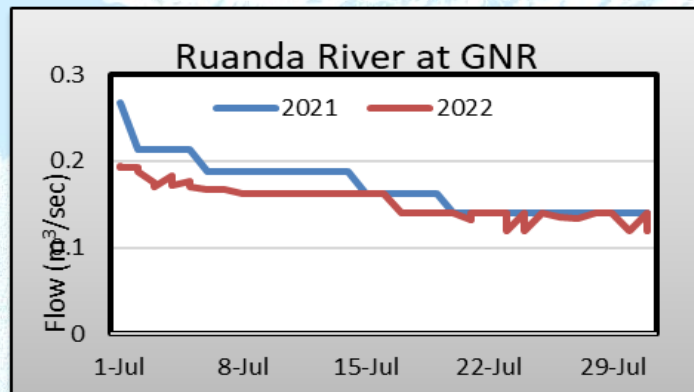
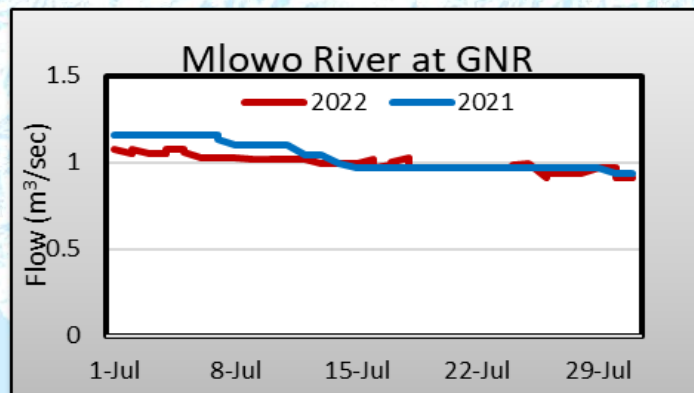
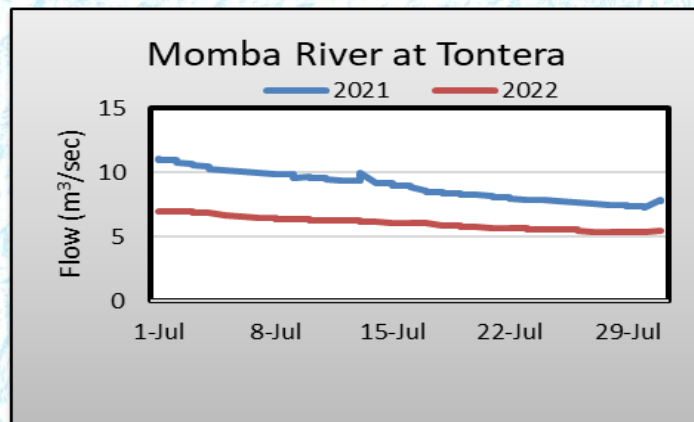


Figure 4: River flows variation

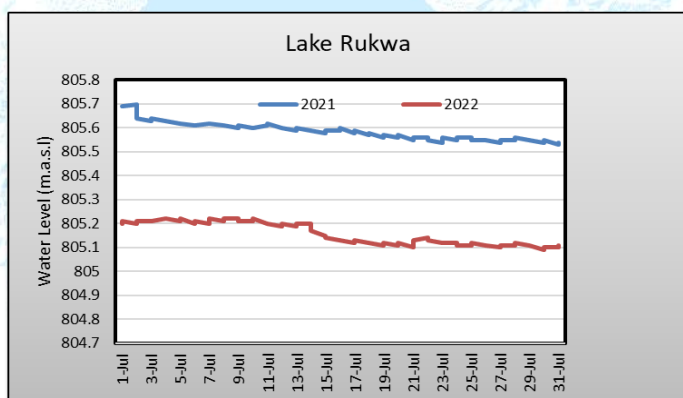


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## 4. Water level in Lake Rukwa

The main source of water for Lake Rukwa are the main rivers that depend on rainfall for their survival, as discussed above the decrease in the quantity of water tends to affect the water level in the Lake. The lake height for July 2022 is seen to be lower by 0.45 meters as compared to 2021 as indicated in **Figure 5**.



**Figure 5: Water level in Lake Rukwa at Mbangala**

## Conclusion

The amount of rainfall recorded all over the basin is very low compared to the long-term average of the reporting month. This marks a decrease in water quantity in the rivers.

As we are in the second month of the dry season and we have three months to go till rain season, this is a good indicator for a water utility to have a good plan for supplying water to the community because the received rainfall for 2021/2022 was below the average.