



Bulletin N°07/2020

Issued on 04 August 2020

Climatological Bulletin of July 2020

1. INTRODUCTION

The bulletin has three main components, which include: (i) the review of climate conditions observed over Rwanda in July 2020, (ii) the prediction of the rainfall in August 2020 and (iii) the highlights on the socio-economic impacts associated with the both observed and predicted climate conditions.

2. HIGHLIGHTS

- **Rainfall performance in July 2020:** The accumulation of observed rainfall during this month was above the Long Term Mean (LTM) in the Northern Province at Busogo and Gicumbi stations, the rest parts of the country recorded below the LTM.
- **Rainfall expected during August 2020:** During the month of August 2020, light rainfall accumulated ranging between 0mm and 50mm is expected over whole country.
- **The impact associated with both observed and predicted climate conditions:** Over the country, light rainfall was observed in July 2020, which may lead to poor performance of crops where irrigation is not applicable. Due to the persistence of the dry weather conditions in August 2020, this will lead to water reservoir deplete and high loss of soil moisture among others.

3. CLIMATE PATTERNS

This section provides the climatological summary of the temperature and rainfall for July 2020 in comparison to the Long Term Mean over Rwanda.

3.1 Rainfall amounts in June 2020

During the month of July 2020, rainfall amount recorded over Rwanda was ranging between 0mm and 30.3mm. High rainfall of 30.3mm was recorded at Busogo station in the Northern Province. The Northern Province was wet comparatively to the rest of the country. The central region represented by Gitega and Kigali International Airport weather stations of Kigali City recorded 0.4mm and 5.4mm respectively. Nyamagabe and Byimana weather stations of the Southern Province recorded 3mm and 3.5mm respectively. The Western Province also recorded 1mm over Rusizi station, Rubavu (13.2mm), Rubengera (1mm) and no rainfall recorded at Bugarama station. Gicumbi, Busogo and Musanze weather stations of the Northern Province have recorded 13.8mm, 30.3mm and 15.2mm respectively.

The Eastern Province recorded rainfall ranging between 0mm over Kawangire, 1.5mm over Ngoma and 2.5mm over Nyagatare stations.



3.2 Rainfall performance in comparison to the Long Term Mean

Comparing the performance of the rainfall during the month of July 2020 with the Long Term Mean for the same period, it was observed that the cumulative rainfall for July 2020 was slightly decreased compared to the Long Term Mean (LTM) in most parts of country except in the Northern Province which was slightly above the Long Term Mean.

The Table and histogram below indicate the rainfall performance of July 2020 compared to the Long Term Mean for the same period over many years.

Stations	July 2020	July LTM
Kigali	5.4	12.1
Gitega	0.38	2
Nyamagabe	3	11.1
Byimana	9.8	12.4
Gicumbi	13.8	9
Busogo	30.3	29.6
Musanze	15.2	17.2
Rusizi	1	10.6
Rubavu	13.2	22.9
Bugarama	0	10.2
Rubengera	1	11.5
Ngoma	1.5	5.4
Kawangire	0	9.8
Nyagatare	2.5	3.2

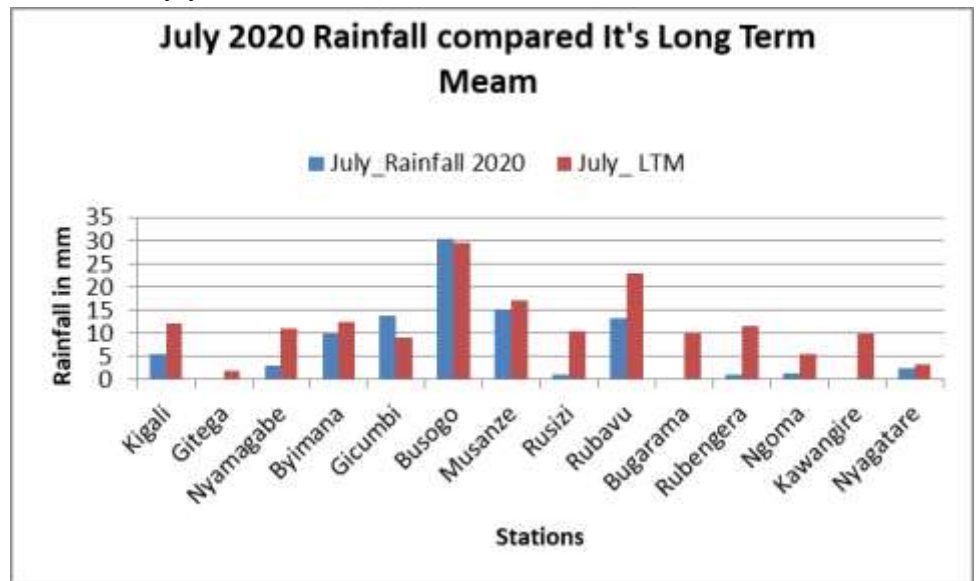
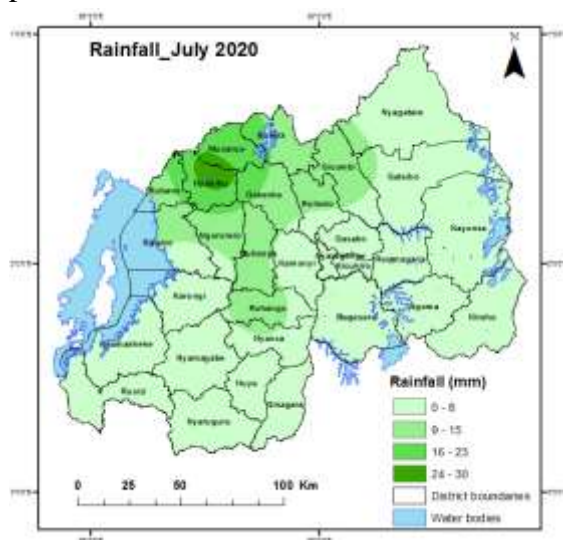


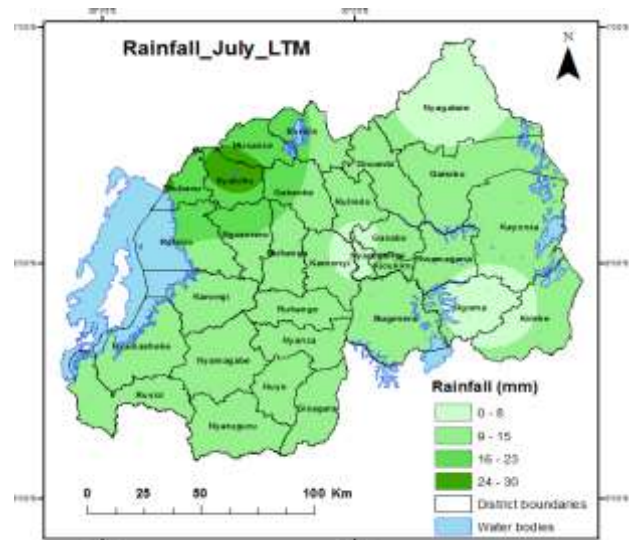
Table 1: Cumulative rainfall recorded as compared to the LTM

Figure 1: Rainfall performance as Compared to the Long Term Mean

Map 1 & 2 below show rainfall distribution during July 2020 and the Long Term Mean for the same period.



Map 1: Rainfall distribution of July 2020



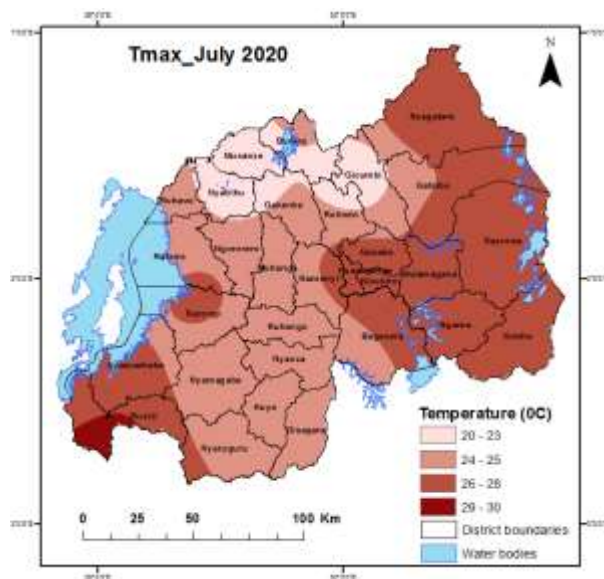
Map 2: July Long term mean rainfall distribution



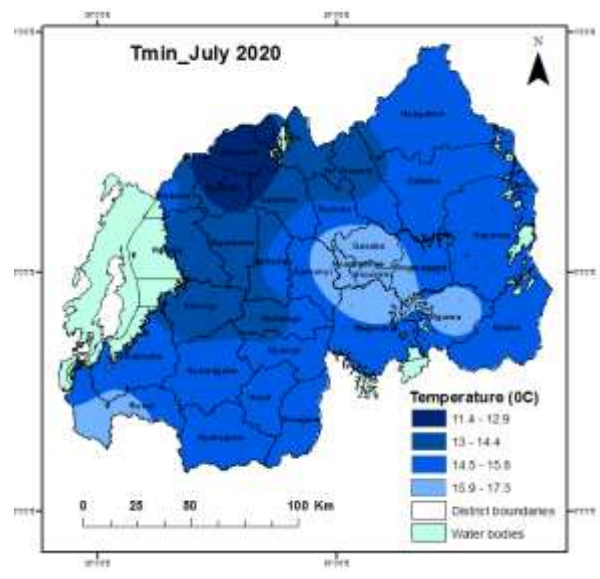
3.3 Temperature analysis

The lowest value of maximum temperature was 20.3°C that was observed in the Northern Province at Busogo weather station. The highest value of maximum temperature was observed in the South Western province at Bugarama station with 30.3°C.

The mean minimum temperature was ranged between 11.4 at Busogo station which is the lowest and 17.3°C was observed in Kigali City. The Northern and Southern Provinces were cooler compared to the Eastern, Central and Western Provinces of the country (Map 3 and 4).



Map3: July Maximum Temperature



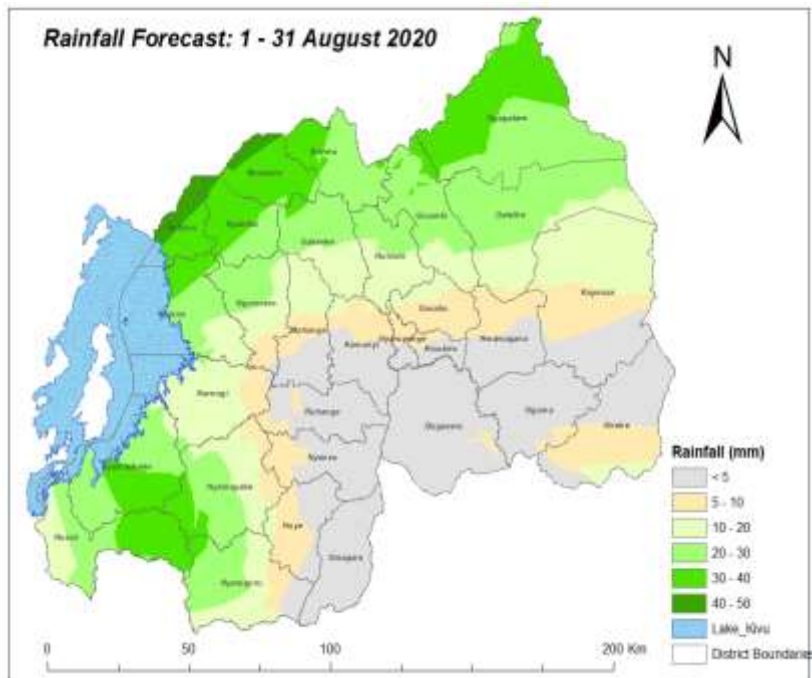
Map4: July Minimum Temperature

4. Soil Moisture Index (MI)

Comparing the soil moisture of June and July 2020, it is observed that the soil moisture was decreased during the month of July as a result of persistence of dry weather conditions observed during the observation period over most parts the country. The reduced soil moisture is expected to continue in August 2020, as results of expected persistent dry conditions within the forecasted period.



5. Rainfall forecast for August 2020



Map 5: Rainfall prediction for August 2020

Rainfall expected in August 2020 is spatially distributed as shown in the map below. Rainfall ranging between 30 and 50mm is expected in Rubavu, Musanze parts of Rutsiro, Nyabihu, Burera and Nyungwe forest. Rainfall between 20 and 30mm is expected in surrounding areas of Nyungwe forest, northern parts of Northern Province and Eastern province.

6. IMPACTS ON SOCIO-ECONOMIC SECTORS

The socio-economic impacts associated with observed climatic conditions and the likely impact in the forecasted period are illustrated below:

6.1 Impacts of observed climate condition.

During the month of July 2020, it was observed that there is a slight decrease in rainfall accumulation compared to the Long Term Mean (LTM) in most parts of country. With persistence of dry conditions experienced, led to increase of poor crop, water, and pasture performance.

6.2 Potential likely impacts for the August 2020.

Considering that the month of August is one of the driest months contributing to the dry season of June to August, the increased water stress, reduced performance in crop and pasture conditions and water resource availability is expected. The drier areas over Eastern, South-eastern (Amayaga) and Central plateau of the country should be closely monitored.

Remaining parts of the country are expected to receive rainfall ranging between 0 and 20mm whereas southern parts of Eastern Province and Amayaga region expect to have less than 5mm. The expected rainfall is well distributed within three dekads of August 2020 in North West, Kivu belt, Nyungwe forest and its surrounding areas while rainfall expected in remaining parts will be observed mostly in third dekad of August.

Rainfall during the first and second dekads of August 2020 will be influenced by local effects (Topography and Lake Kivu) but towards the end of the month it will be associated with slow drifting of Inter Tropical Convergence Zone (ITCZ) which signifies start of September to December rainfall season.



N.B: This forecast should be used in conjunction with the Six hours, Daily (24-hour), Three (3), Five (5) Seven (7) and 10 days forecasts issued by the Rwanda Meteorology Agency (Meteo Rwanda).