



**Bulletin N°05/2020**

**Issued on 05 June 2020**

## **Climatological Bulletin of May 2020**

### **1. INTRODUCTION**

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

### **2. HIGHLIGHTS**

- **Rainfall performance in May 2020:** The accumulation of rainfall observed during this month was in normal range of the Long Term Mean (LTM) in Northern, Southern and Western provinces while in Eastern and Kigali city the observed rainfall was below the LTM.
- **Rainfall expected during June 2020:** During the month of June 2020, light rainfall ranging between 0mm and 30mm is expected over whole the country.
- **The impact associated with both observed and predicted climate conditions:** The observed rainfall for May 2020 was light to moderate over the whole country which led to postharvest loss and poor yield of late planted crops.
- The climate conditions expected for June 2020 may result into reduction of water reservoirs and high loss of soil moisture content which may lead to poor performance of pasture and foliage for livestock as well as poor performance of crops.

### **3. CLIMATE PATTERNS**

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

#### **3.1 Rainfall amounts in April 2020**

During the month of May 2020, rainfall amount recorded over Rwanda was ranging between 21.3mm and 213.8mm. High rainfall of 213.8mm was recorded at Busogo station in the Northern Province. The Northern, Southern and Western Province were wet comparatively to Eastern Province and Kigali City. The central region represented by Gitega and Kigali International Airport weather stations of Kigali City recorded 28.7mm and 27.8mm respectively. Nyamagabe and Byimana weather stations of the Southern Province received 108.6mm and 170.1mm respectively. The Western Province also received 105.4mm over Rusizi, Rubavu (113.2mm), Rubengera (170.9mm) and Bugarama recorded 67.4mm. Gicumbi, Busogo and Musanze weather stations of the Northern Province have received 104.9mm, 213.8mm and 141.4mm respectively.



The Eastern Province received rainfall ranging between 21.3mm (over Ngoma), 57.9mm (over Kawangire) and 65.9mm over Nyagatare. The reduced rainfall during the month of May 2020 was as a result of weak convergence and decreased moisture content over the region where Rwanda is located.

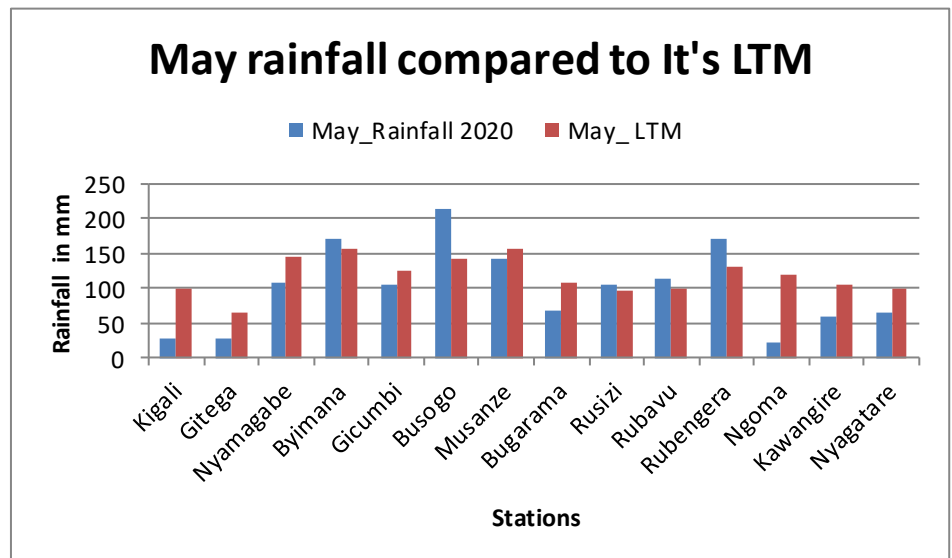
### 3.2 Rainfall performance in comparison to the Long Term Mean

Comparing the performance of the rainfall during the month of May 2020 with the Long Term Mean for the same period, it was observed that the cumulative rainfall for May 2020 was in normal range of Long Term Mean (LTM) in Northern, Southern and Western Province while in the Eastern and Kigali city was below the Long Term Mean (LTM).

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

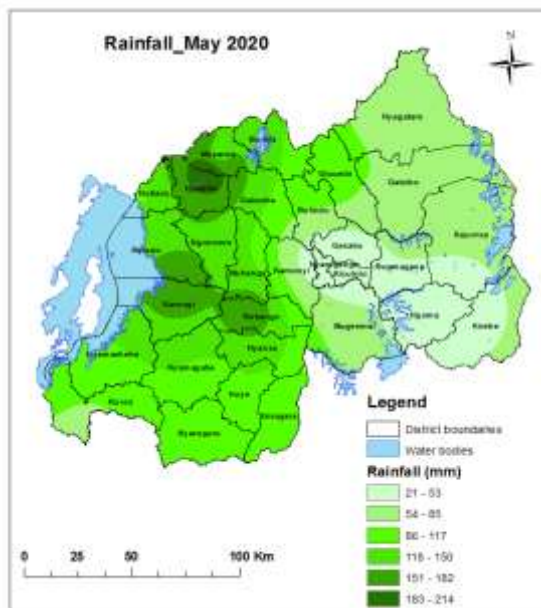
Stations	May 2020	May LTM
Kigali	27.8	100.1
Gitega	28.7	65.3
Nyamagabe	108.6	143.4
Byimana	170.1	156.3
Gicumbi	104.9	124.4
Busogo	213.8	141.6
Musanze	141.4	155.6
Bugarama	67.4	108.2
Rusizi	105.4	97.5
Rubavu	113.2	98.7
Rubengera	170.9	130.2
Ngoma	21.3	120.4
Kawangire	57.9	103.9
Nyagatare	65.9	99.5

**Table1:** Cumulative rainfall recorded as compared to the LTM

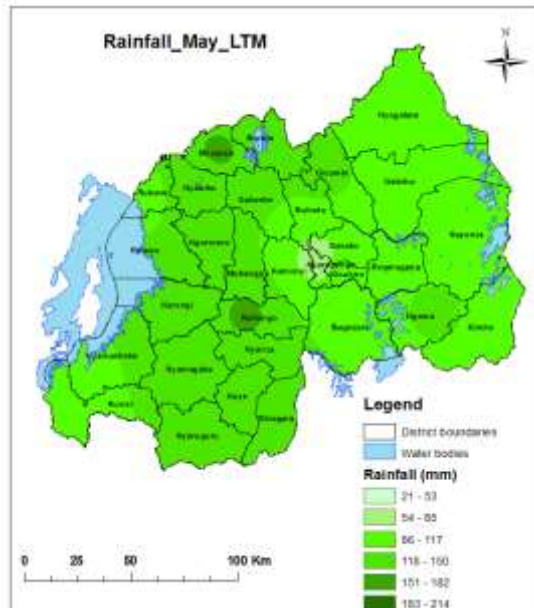


**Figure1:** Rainfall performance as Compared to the Long Term Mean

Map 2 & 3 above show rainfall distribution during May 2020 and the Long Term Mean for the same period.



Map1: Rainfall distribution of May 2020

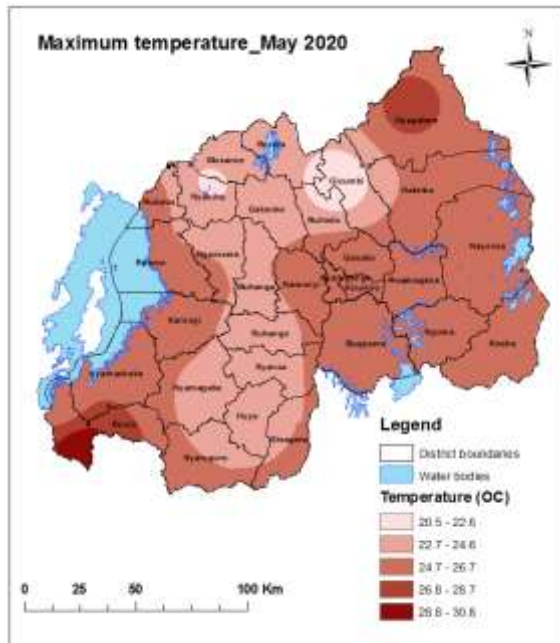


Map2: May Long term mean rainfall distribution

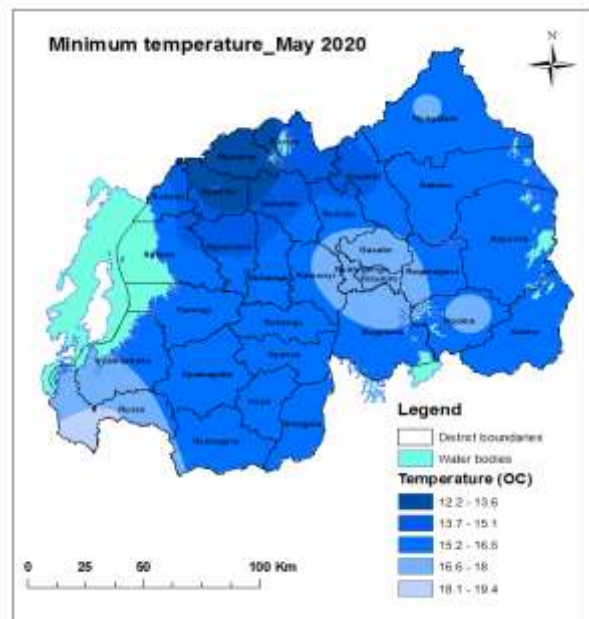
### 3.3 Temperature analysis

The highest value of maximum temperature was  $30.8^{\circ}\text{C}$  which was observed in the South Western region at Bugarama weather station. The lowest value of maximum temperature was observed in the Northern Province at Gicumbi station with  $20.8^{\circ}\text{C}$ .

The lowest value of minimum temperature was ranged between  $12.2$  (Busogo and Musanze) stations and  $19.4^{\circ}\text{C}$  at Bugarama station. The Northern and Southern Provinces were cooler compared to the Eastern, Central regions and Western Provinces of the country (Figure 4 and 5).



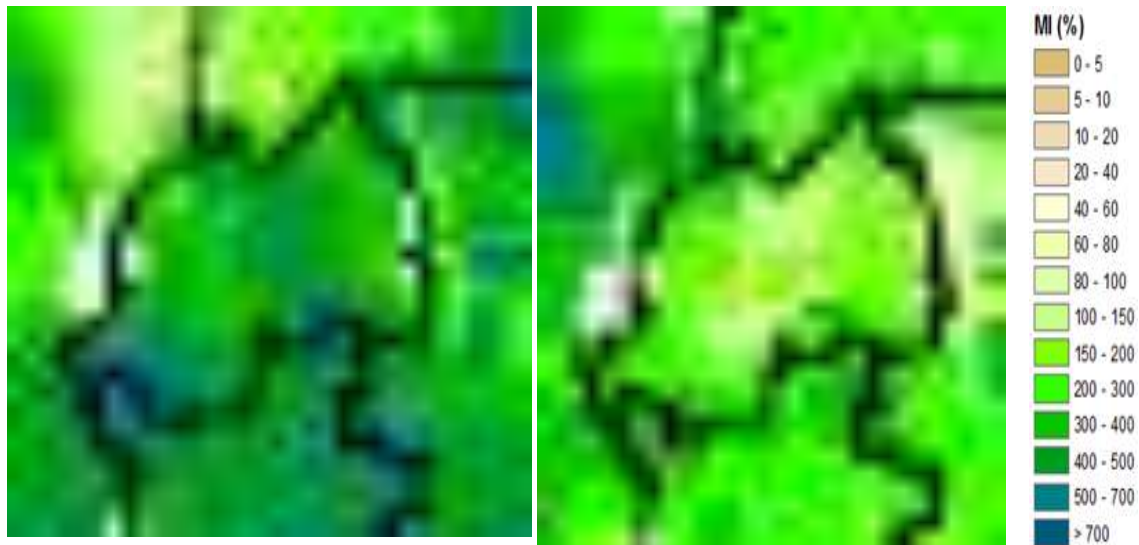
Map3: May Maximum Temperature



Map4: May Minimum Temperature

#### 4. Soil Moisture Index (MI)

Comparing the soil moisture of April and May 2020, the satellite derived moisture is showing that the soil moisture was decreased during the month of May as a result of dry weather conditions observed over some parts the country during the 3<sup>rd</sup> dekad of May 2020 (see **Map6 & 7**). The reduced soil moisture is expected to continue in June 2020, as results of expected persistent dry conditions within the forecasted period.



Map 5: April 2020

Map6: May 2020

## 5. Rainfall forecast for June 2020

Light rainfall ranging between 0 and 30mm is expected in June 2020 across the country. Spatial distribution (map7 below) shows that rainfall will range between 20 and 30mm is expected in Rubavu District, parts of Rutsiro, Nyabihu, Musanze, Burera, Nyamagabe, Nyaruguru, Nyamasheke and Rusizi Districts. Rainfall ranging between 10 and 20mm is expected in remaining parts of Districts of Western Province, Northern Province, half northern parts of Gicumbi and Rulindo Districts, northern parts of Muhanga, Nyamagabe and half western parts of Nyaruguru Districts.

The remaining parts of the country are expected to experience rainfall between 0 and 10mm. The expected rain will result from local effects.

The rainfall expected in June 2020 is slightly below Long Term Average rainfall of June across the country. The Long Term Average range for June is normally between 0 mm and 50mm.

