

**Highlights:**

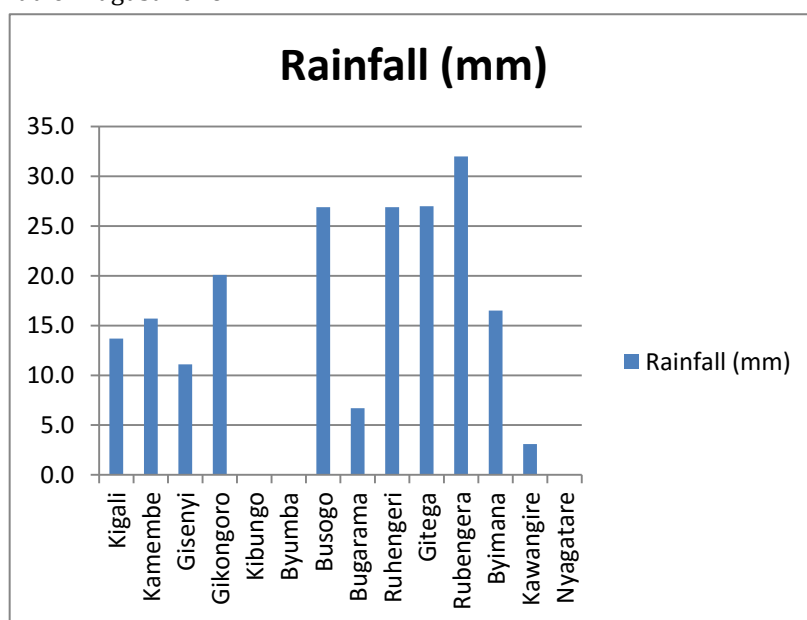
- The second dekad was generally dry with only two rainy days across the country; this amount is in the same climatology range.
- Soil Moisture Index (MI) from remote sensing shows the persistence of low moisture in all parts of the country.
- During the third dekad of August 2016, the country will experience cloudy conditions with less probability of light rain especially in the north-western part of Rwanda.

**I. Introduction**

- a) The second dekad of August 2016 was generally dry but, two-days were recorded wet in many parts of the country, especially central, south- and western parts of Rwanda. The cumulative rainfall recorded during the whole dekad showed that western part recorded the highest rainfall amount at Rubengera Station of about 32.0mm; while the lowest amount was observed at Nyagatare Station and Kibungo Station in Eastern Province; and Byumba Station (Northern Province) that reported trace rainfall (less than 0.85), Byumba Station was in below normal conditions in dry season at rainfall aspect.

Cumulative rainfall (in mm) recorded during the 2<sup>nd</sup> dekad of August 2016

Stations	Long Term Average	Rainfall (mm)
Kigali	9.6	13.7
Rusizi (Kamembe)	10.1	15.7
Rubavu (Gisenyi)	26.6	11.1
Nyamagabe (Gikongoro)	10.0	20.1
Ngoma (Kibungo)	5.8	0.0
Gicumbi (Byumba)	24.1	0.0
Busogo	23.3	26.9
Bugarama	5.2	6.7
Musanze (Ruhengeri)	18.8	26.9
Gitega	13.7	27.0
Rubengera	14.6	32.0
Byimana	10.2	16.5
Kawangire	6.4	3.1
Nyagatare	15.4	0.0



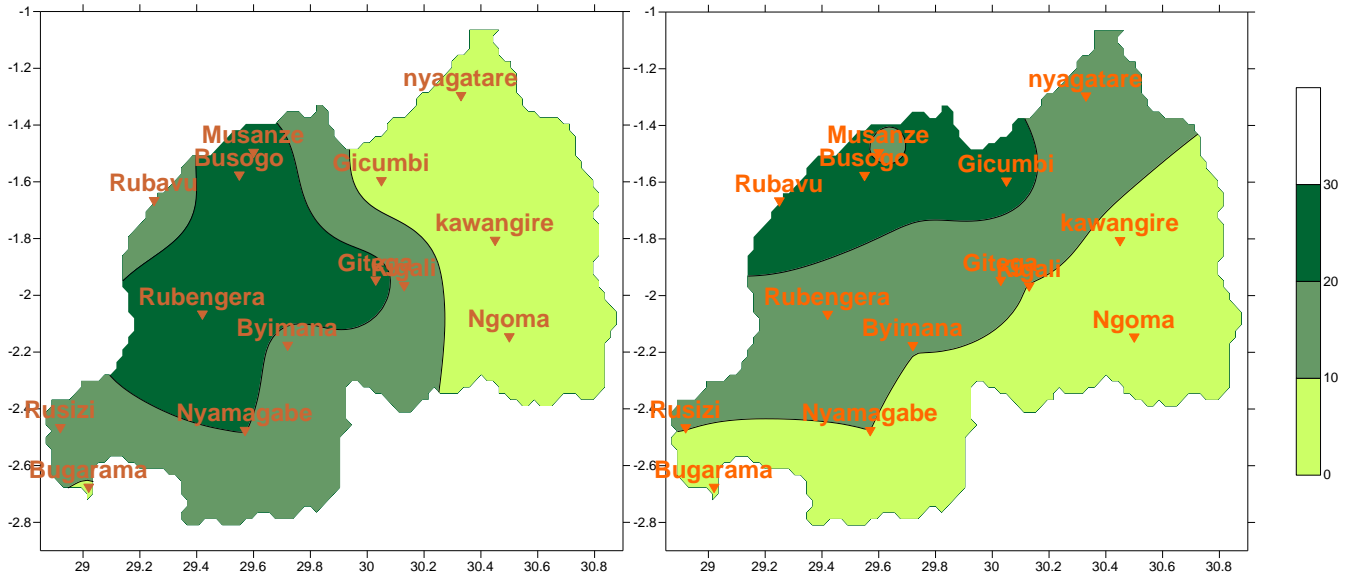
Plot1

Table1

**b) Rainfall analysis:** The Maps below show the rainfall recorded during dekad 2 of August monitored with the same dekad at long term average and the previous dekad

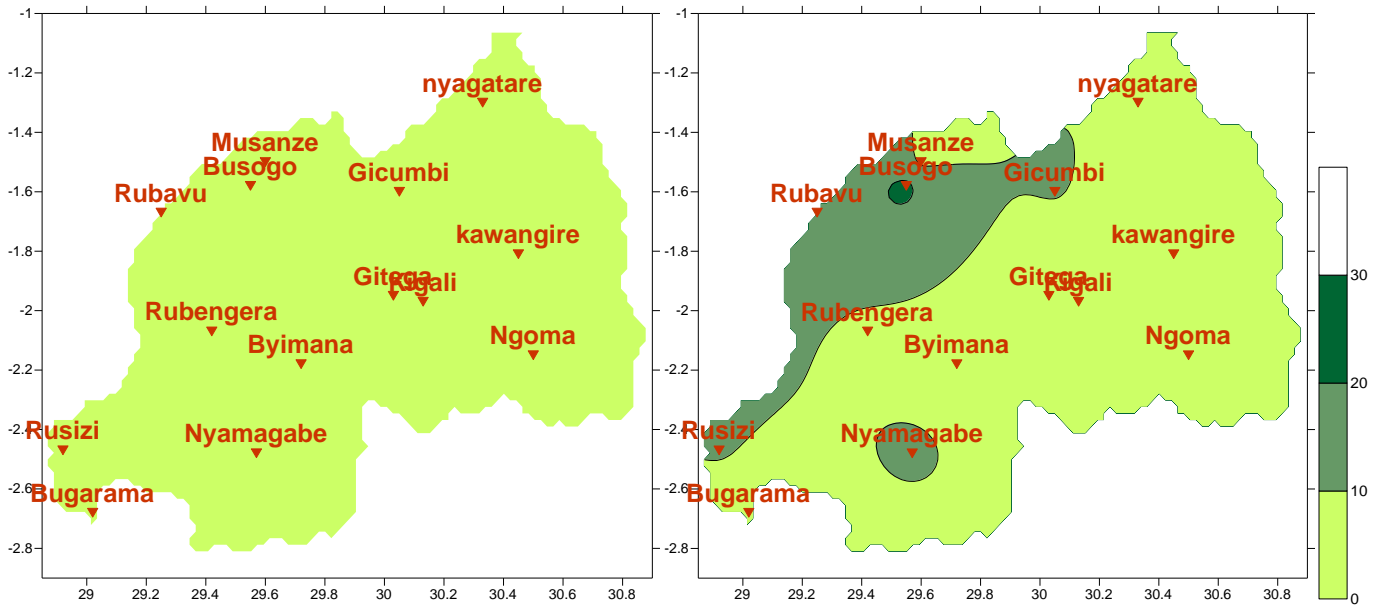
**Map 1: Total Rainfall (mm): (11<sup>th</sup>-20<sup>th</sup> Aug. 2016)**

**Map2: Long Term Average Rainfall (mm): (11<sup>th</sup>-20<sup>th</sup> Aug.)**



**Map3: Total Rainfall (mm): (1<sup>st</sup>-10<sup>th</sup> Aug.2016)**

**Map4: Long Term Average Rainfall (mm): (1<sup>st</sup>-10<sup>th</sup> Aug.)**



## II. Detailed observed Rainfall during the second dekad of August 2016

### a) Eastern Province

All stations used in Eastern Province recorded normal to below rainfall of the dekad; the northern part of Eastern Province reported less rainfall amount compared to the mean value. From previous dekad (1<sup>st</sup> dekad of Aug. 2016) to the 2<sup>nd</sup> Aug. 2016 (current), rainfall captions are looking similar (see **Map.1&3**)

### b) Northern Province

The most north and western parts of the Northern Province reported below normal (at Gicumbi station) and above normal (at Musanze and Busogo Stations) rainfall of the mentioned period; the most eastern part in this province recorded a high amount of rainfall (Busogo and Musanze Stations)

By comparing the current dekad (dekad of Aug. 2016) to its previous dekad it is observed that there was an increase of rainfall amount (**Map1&3**)

### c) Southern Province

The comparison of the current situation (**Map.1**) with both climatology and the previous dekad (**Map2&3**); we observe that rain, in this province increased southwards; in only 2 days, rain reach and exceeded the mean value (Nyamagabe and Byimana Stations).

### d) Western Province

Only the north-western part (Gisenyi station in Rubavu District) recorded below normal rainfall for the mentioned period (**Map1, 2&3**); again here, the slight increase of rainfall is not of great important since we didn't receive rain for many consecutive days.

### e) Kigali Region

The central parts of the country also received rain in mentioned 2 days in the middle of the second dekad of dekad with 27 mm at Gitega station (west part of the city) and only 13 mm at Kigali airport (East part of the city).

## III. Agricultural impact.

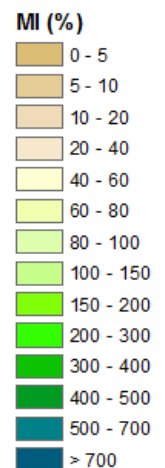
### Satellite images: Soil Moisture Index (MI)



Aug. 2016 dekad1



Aug. 2016 dekad2



During Aug. 2016 dekad2, the above satellite images show that there is a slight increase of moisture and vegetation cover comparing the dekad1 (previous dekad). This is in agreement with the rainfall that was recorded by the middle of the second dekad while the first was completely dry which triggered the soil moisture to slightly increase. In most parts of the country, the moisture index is below 50% and this is not sufficient for crops (especially those with high amount of water requirement). This coming next ten days (next dekad), we are expecting increase in cloud cover with less precipitable water (i.e. light rain increasing westwards). Farmers are also advised to continue to prepare their fields for coming season to maintain their agriculture activities.

#### **IV. Rainfall Outlook for the 3<sup>rd</sup> dekad of August 2016**

During this 3<sup>rd</sup> Dekad (21<sup>st</sup>-31<sup>st</sup> of August 2016) it is expected to have an increase in cloud amounts (from few to mostly cloudy) from east to west and south to west; light rain activities along side north and the most western parts of the country. Dry conditions are expected over the period of end of the dry season.

Below there are specific regions details:

**Kigali City;** is expecting sunny interval days with low probability of light shower during middle days of this dekad and mostly cloudy for the remaining days.

**Eastern Region;** is expecting to experience partly clouds conditions with a low probability of having convective light rain in the afternoon within the starting days of the dekad.

**Western Region;** is expecting to experience mostly cloudy in the most period of the dekad with a chance of light convective rain throughout the period especially in the most north of this western region.

**Northern region;** is expecting to experience predominantly cloudy mornings with a little chance of having light rain in the late hours

**Southern Region;** is expecting to have predominantly partly cloudy in the morning hours and mostly cloudy with a low probability of light rain showers in the middle of the third dekad of August 2016

The 3<sup>rd</sup> dekad of August 2016; will be characterized sunny and cloudy intervals that may increase in amount to give rain in the north and western parts.

**N.B: This forecast should be used in conjunction with the daily (24-hour), Three (3) and Five (5) days Forecast issued by the forecasting Division.**