

**Highlights:**

- Cumulative rainfall amount from the 1st to 31st August 2016 was generally below normal.
- Soil Moisture Index (MI) from remote sensing indicates a considerable declination during the month of August due to long dry-spell during the same month.
- During the first dekad of September 2016, the country will experience a wide spread improvement of activities compared to the last month (August).

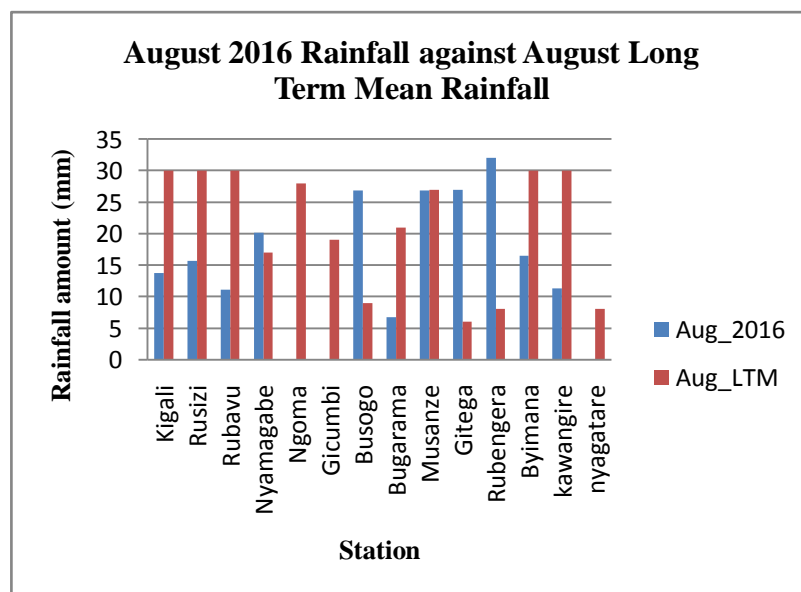
I. Introduction

- a) The month of August 2016 was generally dry with two stain dry-spells; the middle days of the month were recorded wet in many parts of the country, especially south-western at Nyamagabe Station and northern parts of Rwanda at Busogo and Musanze Stations. The cumulative rainfall recorded during the whole month showed that western part recorded the highest rainfall amount at Rubengera Station of about 32.0mm; while the lowest amount was observed at Nyagatare and Ngoma Stations in Eastern Province; and Gicumbi Station (Northern Province) that reported trace rainfall (less than 0.85); all the three stations are in below normal conditions during the dry season at rainfall aspect.

Cumulative rainfall (in mm)

Stations	August Dekad3	August 2016 Rainfall	August Long Term Mean
Kigali	NT	13.7	30
Rusizi (Kamembe)	NT	15.7	30
Rubavu (Gisenyi)	NT	11.1	30
Nyamagabe (Gikongoro)	NT	20.1	17
Ngoma (Kibungo)	NT	0	28
Gicumbi (Byumba)	0	0	19
Busogo	NT	26.9	9
Bugarama	NT	6.7	21
Musanze (Ruhengeri)	NT	26.9	27
Gitega	NT	27	6
Rubengera	NT	32	8
Byimana	NT	16.5	30
Kawangire	8.2	11.3	30
Nyagatare	NT	0	8

Table1

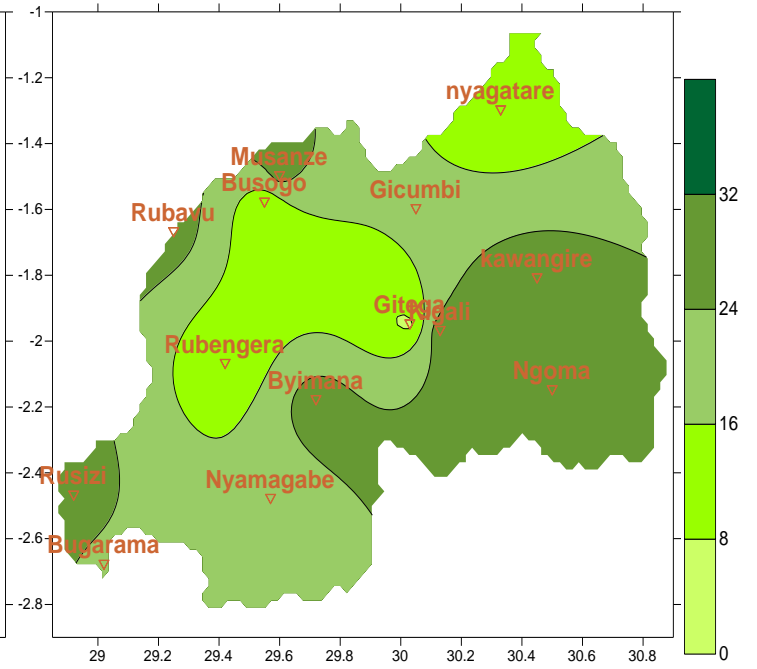
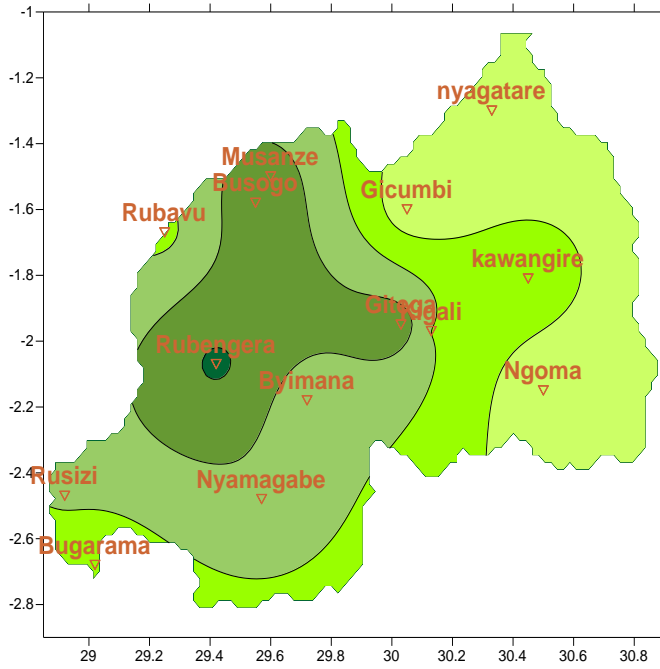


Plot1

b) **Rainfall analysis:** The Maps below show the rainfall recorded during the month of August monitored with the same period at long term average and the previous month (July 2016) in mm

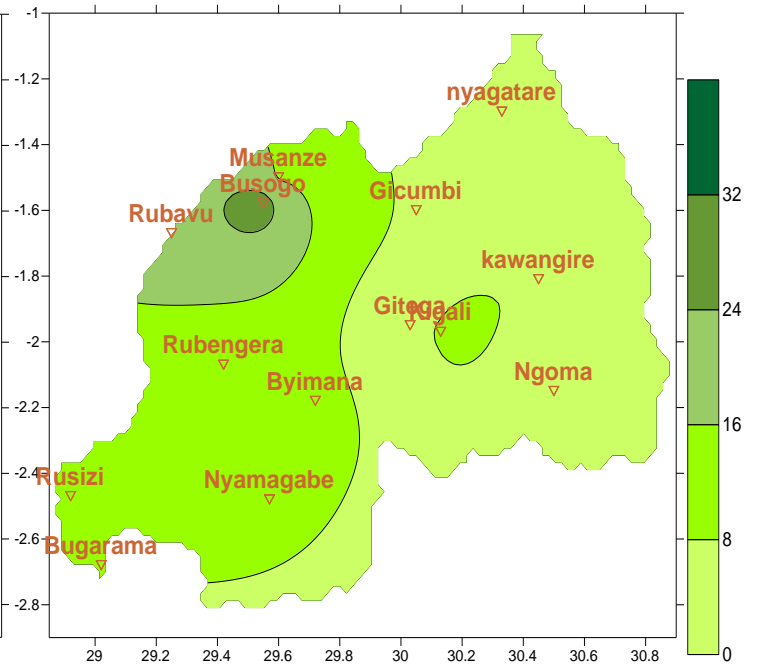
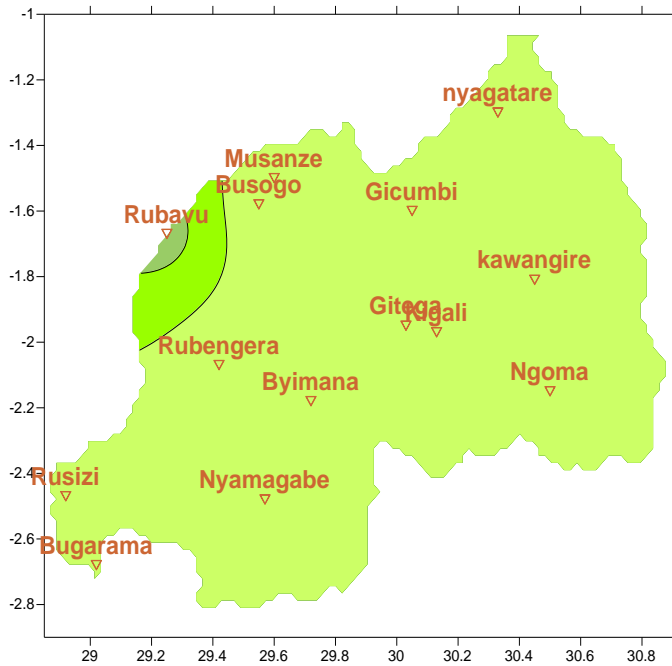
Map1: Total Rainfall: (1st –31st Aug. 2016)

Map2: Long Term Average Rainfall: (1st –31st Aug.)



Map3: Total Rainfall: (1st –31st Jul. 2016)

Map4: Long Term Average Rainfall: (1st –31st Jul.)



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

a) Eastern Province

All stations used in Eastern Province recorded below rainfall of the same month compared to long term mean (see **Map.1&2**). From previous month (Jul. 2016) to the end of Aug. 2016; rainfall captions are looking similar (see **Map.1&3**)

b) Northern Province

Musanze Station records range within the normal amplitude; while Busogo station recorded a high amount compared to mean level; and Gicumbi Station lies below normal conditions (i.e. the most northern part received enough rain for the same period: see **Map.1&2**). Comparing the month of July with that of August (**Map1&3**); August had a considerable inclination of rainfall amount

c) Southern Province

The comparison of the current situation with climatology (**Map1&2**); we observe a decrease in rainfall amount at all stations except at station Nyamagabe, where recorded 20.1 (which lies in the normal range, but has a high value compared to mean value). Considering **Map1&3**, we observe considerable inclination of rainfall amount of the month of August over that of July

d) Western Province

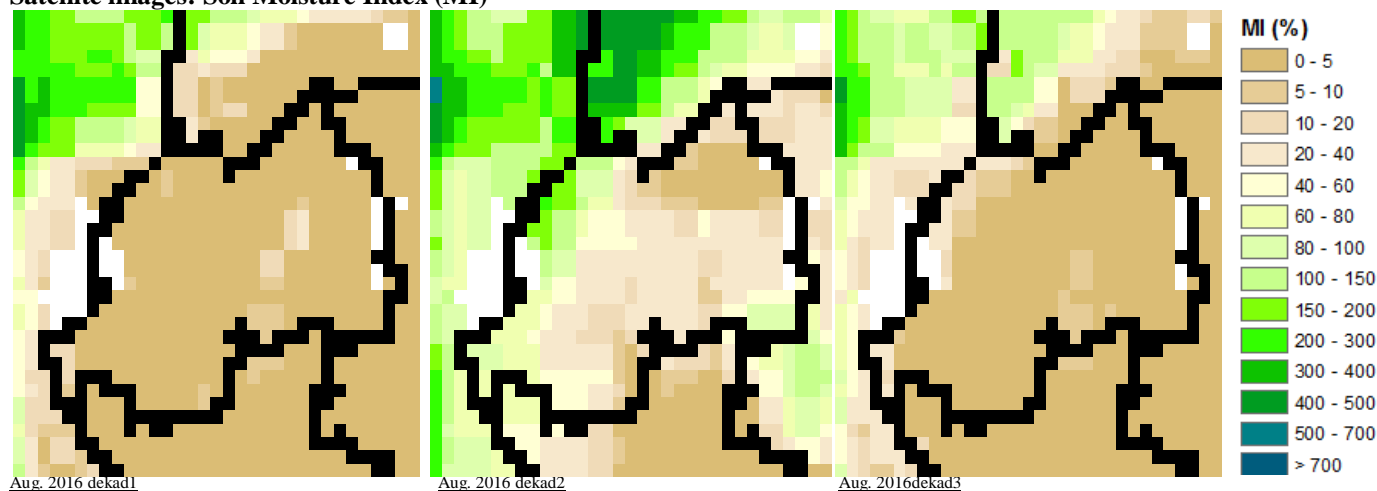
Only Rubengera Station recorded an above normal rainfall within the month of August (see **Map1&2**). Rubavu Station recorded not only below normal, but also a remarkable decrease in rainfall amount compared the previous month (**Map1, 2&3**) while Rusizi and Bugarama Stations had an increase in rainfall amount but reach the normal range for the same period; i.e. rainfall was not normally distributed.

e) Kigali Region

The central parts of the country with two (2) representative stations (Gitega and Kigali); was marked by a switch, where the western part of the region received above and the eastern part of the same region received below normal range (see **Map1&2**) with a considerable inclination of rainfall amount of the month of August over that of July.

III. Agricultural impact.

Satellite images: Soil Moisture Index (MI)



During “Aug. 2016 dekad2”, the above satellite images show that there is a slight increase of moisture and vegetation cover comparing to “Aug. 2016 dekad1”, and then “Aug. 2016 deka3” which was predominantly dry, presents a reduce on soil moisture to a large extend (similar to dekad1); this is in agreement with the rainfall reports for dekad1&3 that were recognized as dry spells of the month of August this year (see **table1**). In All parts of the country, the moisture index is below 50% (see **Aug. 2016 dekad3**) and this is not sufficient for crops (especially those with high amount of water requirement). This coming next ten days (next dekad; the first dekad of September), we are expecting increase in cloud cover with less precipitable water (i.e. below to normal range). Farmers are also advised to continue to prepare their fields for coming season (A-season) to maintain their agriculture activities.

IV. Rainfall Outlook for the 1st dekad of September 2016

During this Dekad (1st – 10th of September 2016) it is expected to have an increase in cloud amounts (from few to mostly cloudy) from east to west and south to north; light rain country wide increasingly to north and the most western parts of the country.

Below there are specific regions details:

Kigali City; is expecting cloudy days with low probability of light rain showers that will range from normal to below compared to mean level.

Eastern Region; is expecting cloudy days with low probability of having convective light rain that will range from normal to below compared to mean level.

Western Region; is expecting to be mostly cloudy in the most period of the dekad with a chance of convective rainfall throughout the period that may go from normal to above normal range.

Northern region; is expecting to be predominantly mostly cloudy especially for northwestern part; with a chance of convective rainfall throughout the period that may go from normal to above normal range.

Southern Region; is expecting cloudy days with low probability of having convective light rain that will range from normal to below compared to mean level increasingly from east to west within the same region.

The 1st dekad of September 2016; will be characterized by cloudy conditions that may produce rain especially in the north and western parts of the country.

N.B: This forecast should be used in conjunction with the daily (24-hour), Three (3) and Five (5) days Forecast issued by Meteo Rwanda in Weather/Climate and Services Division.