



**Highlights:**

- The second dekad of September 2016 received rain at normal range country wide.
- **Moisture Index from remote sensing; shows an increase in soil moisture in all parts of the country**
- During the third and last dekad of September 2016, the country will experience cloudy conditions with less probability of light rain throughout the period especially in the north and western parts of Rwanda.

**I. Introduction**

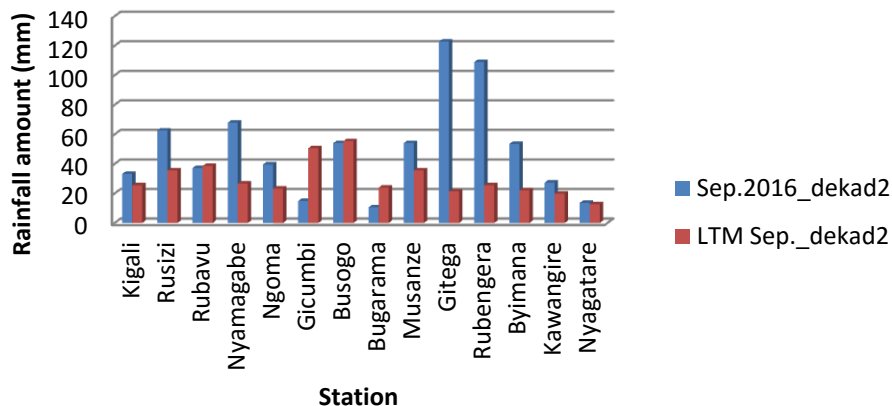
a) Though the second dekad of September 2016 had received enough rain, the stations of Rubavu and Bugarama in Western Province, and Gicumbi and Busogo in Northern Province didn't reach the long-term mean value while these stations are known to have considerably high amount of rain in the whole country.

**Cumulative rainfall (in mm) recorded at different stations**

Station	Sep.2016_ dekad2	LTM Sep._dek ad2
Kigali	33.2	25.5
Rusizi (Kamembe)	62.6	35.6
Rubavu (Gisenyi)	37.2	38.6
Nyamagabe (Gikongoro)	67.9	26.7
Ngoma (Kibungo)	39.6	23.3
Gicumbi (Byumba)	14.9	50.6
Busogo	54.1	55.4
Bugarama	10.6	23.9
Musanze (Ruhengeri)	54.1	35.6
Gitega	122.8	21.4
Rubengera	108.9	25.6
Byimana	53.5	22.1
Kawangire	27.3	19.8
Nyagatare	13.6	12.7

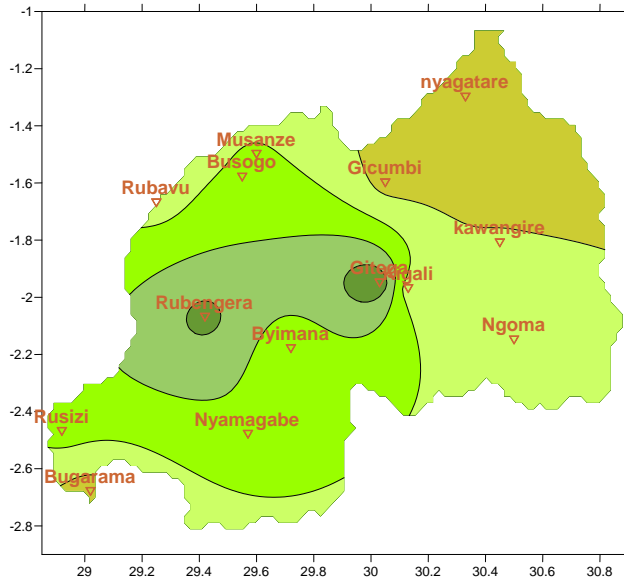
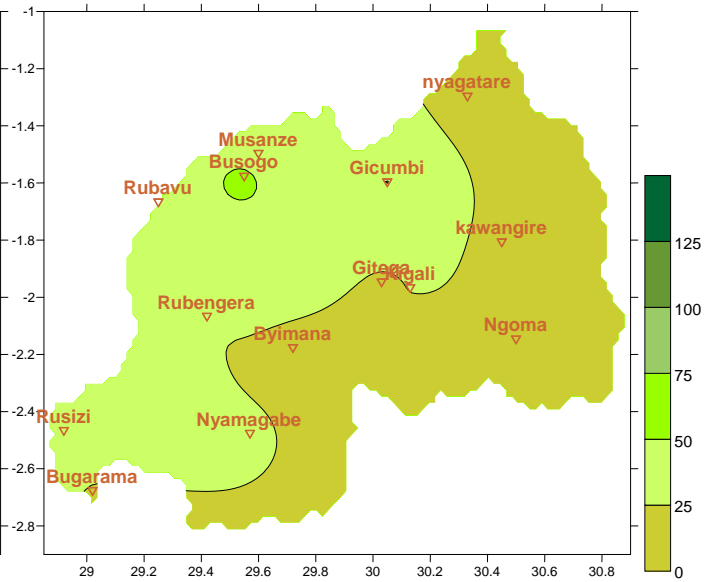
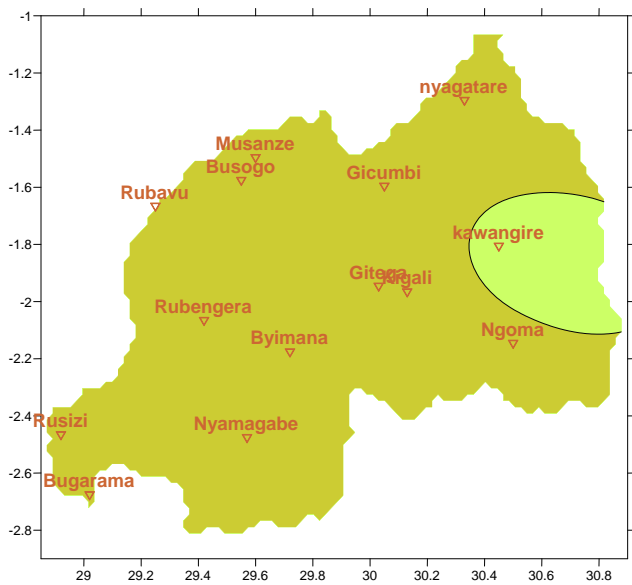
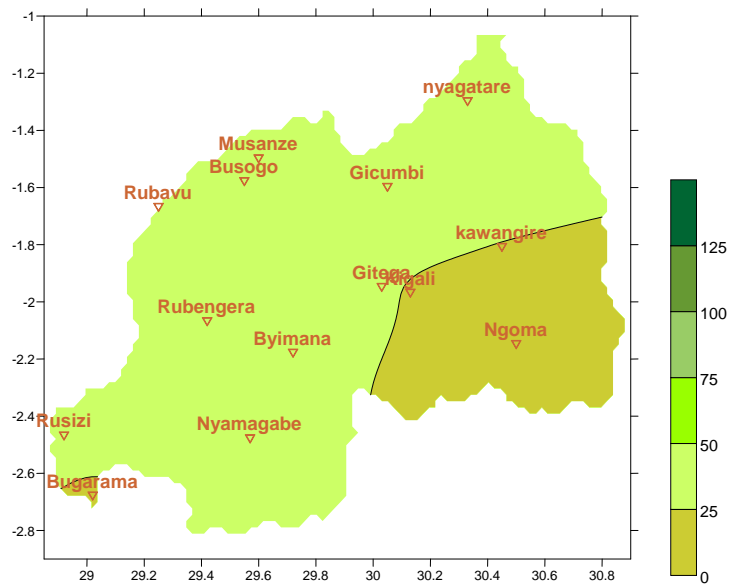
Table1

**11-20 September 2016 Rainfall against September Long Term Mean Rainfall**



Plot1

b) **Rainfall analysis:** The next maps show the rainfall recorded during specific period (dekad2 of September and dekad1 of September) monitored with the same dekad at long term average

**Map1: Total Rainfall (mm): (11<sup>th</sup>–20<sup>th</sup> Sep.2016)****Map2: Long Term Average Rainfall (mm): (11<sup>th</sup>–20<sup>th</sup> Sep.)****Map3: Total Rainfall (mm): (1<sup>st</sup>–10<sup>th</sup> Sep.2016)****Map4: Long Term Average Rainfall (mm): (1<sup>st</sup>–10<sup>th</sup> Sep.)**

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

### a) Eastern Province

All representing stations recorded a rainfall amount at normal range to above (see **Map.1&2**); analysis also shows the increase of rainfall has been consistent from the past dekad up to date (see **Map.1, 2, 3&4**).

### b) Northern Province

Only Gicumbi Station recorded the below amount for all the past days of September 2016 (20 days), other stations marked an increase in rainfall which is in the normal range to climatology (see **Map.1, 2, 3&4**).

### c) Southern Province

The last dekad (dekad1 September 2016) showed a below normal to a large extent in this region, however, this region has received rain at normal range within this second dekad of September 2016 (see **Map.1, 2, 3&4**).

### d) Western Province

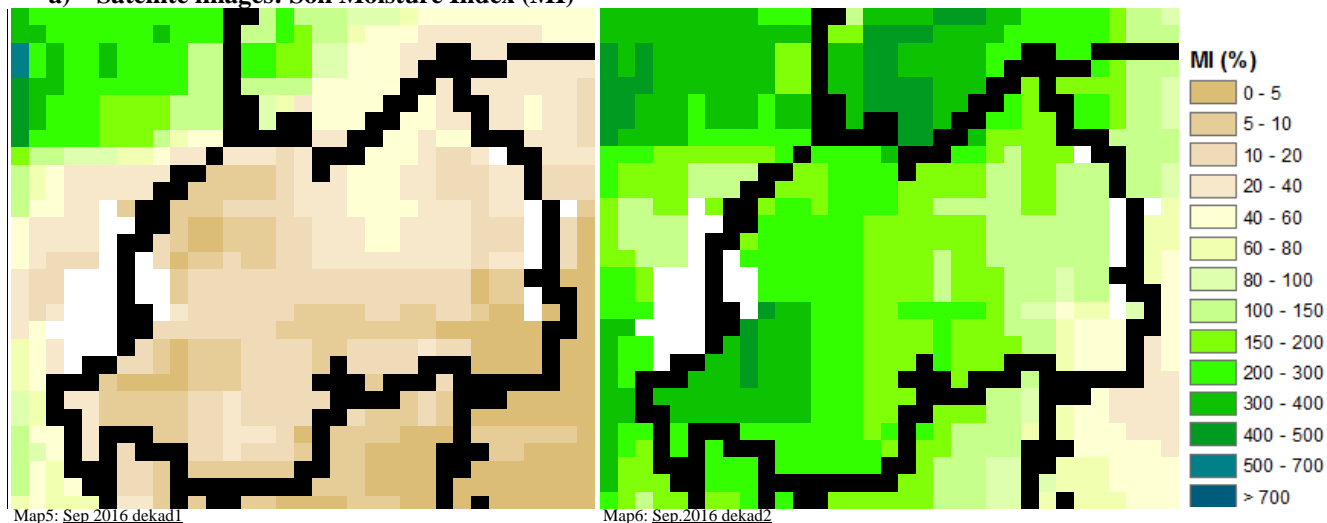
The western part received an above normal rainfall amount at all stations (see **Map1&2** and **Map3&4**).

### e) Kigali Region

The central part with 2 representative stations Kigali and Gitega; received above normal rainfall amount compared to climatology (see **Map.1&2**); especially the western part of Kigali City (Gitega station with 122.8 mm).

### III. Agricultural impact.

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



During dekad2 of September 2016, the above satellite images show that there was a considerable increase of soil moisture and vegetation cover comparing to its previous dekad. This is in agreement with the rainfall that was recorded at different stations country wide during the second dekad of September 2016

In most parts of the country, the moisture index  $MI > 100$  (see **Map5&6**); this insures moist soil for different varieties of crop. These coming next ten days (dekad3 of September 2016; from 21<sup>st</sup>-30<sup>th</sup>), we expect rain to continue moistening the soil, especially in the north and western parts of Rwanda and a decrease in rainfall amount for the southern part of Eastern Province, the central part and the Southern Province. Farmers are advised to harvest rain-water in this A-Season which will be used to support farms during the dry spell especially the regions expected to have less rainfall amount (stated above).

#### b) Rainfall forecast for the 3<sup>rd</sup> dekad of September 2016

The dekad3 of September 2016 (from 21<sup>st</sup>-30<sup>th</sup>), we expect rain to continue moistening the soil, especially in the north and western parts of Rwanda and a decrease in rainfall amount for the southern part of Eastern Province, the central part and the Southern Province:

**Kigali City;** expects a reduction in rainfall activity from the start of this third dekad and an onset rainfall towards the end of this month (2016 September).

**Eastern Region;** is expecting to experience more activities in the north and less in the southern part.

**Western Region;** is expecting to experience convective rain throughout the period especially the northern part of this region.

**Northern region;** is expecting to experience predominantly convective rain throughout the period

**Southern Region;** is expecting to have predominantly mostly cloudy with likelihood of light rain showers in the late hours

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