REPUBLIC OF RWANDA

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Highlights:

- The first dekad of September was considerably wet in **the most parts of east** comparing to both its previous dekad and long term mean; while it was below normal range elsewhere within the country.
- **Moisture Index from remote sensing; shows an increase in soil moisture in all parts of the country**
- During the second dekad of September 2016, the country will experience cloudy conditions with less probability of light rain throughout the period especially in the northern part of Rwanda.

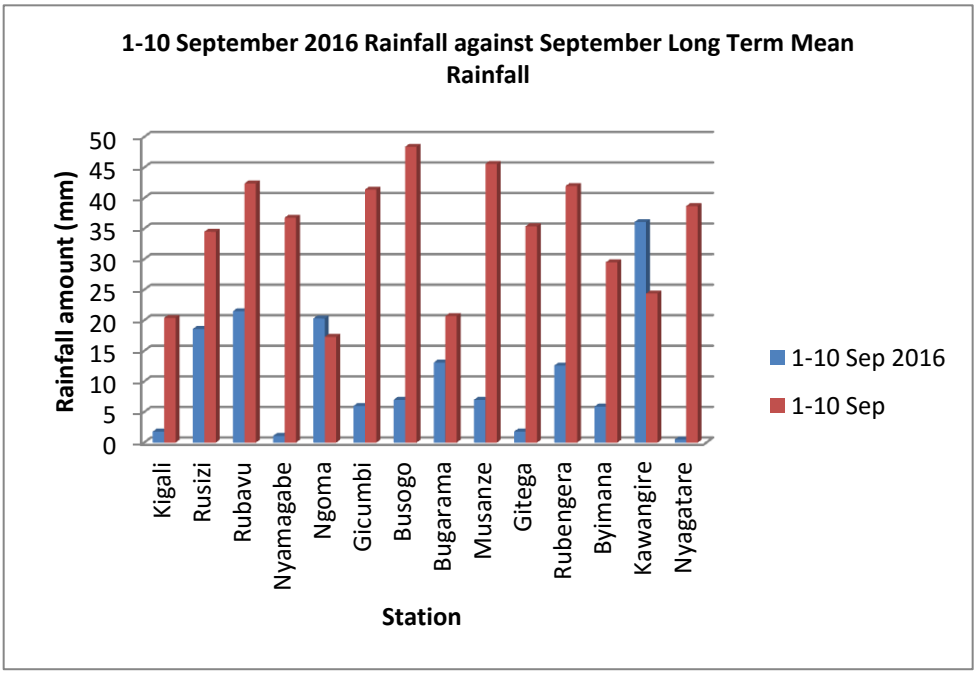
I. Introduction

a) The first dekad of September 2016 had some little rain except the central- and south-east which received enough rain. The cumulative rainfall during the whole period showed that eastern part recorded the highest rainfall amount at Kawangire Station of about 36.1mm; while the lowest amount recorded was 0.5mm in north-east at Nyagatare Station preceded by Nyamagabe Station (in Southern Province) with only 1.1mm; a station which normally receive a higher amount (mean= 36.8mm).

Cumulative rainfall (in mm) recorded during the 2nd dekad of August 2016

Station	Sep.2016 _dekad1	LTM Sep.
Kigali	1.8	20.4
Rusizi (Kamembe)	18.6	34.5
Rubavu (Gisenyi)	21.5	42.4
Nyamagabe (Gikongoro)	1.1	36.8
Ngoma (Kibungo)	20.3	17.3
Gicumbi (Byumba)	6	41.4
Busogo	7	48.4
Bugarama	13.1	20.7
Musanze (Ruhengeri)	7	45.6
Gitega	1.8	35.4
Rubengera	12.6	42
Byimana	5.9	29.5
Kawangire	36.1	24.4
Nyagatare	0.5	38.7

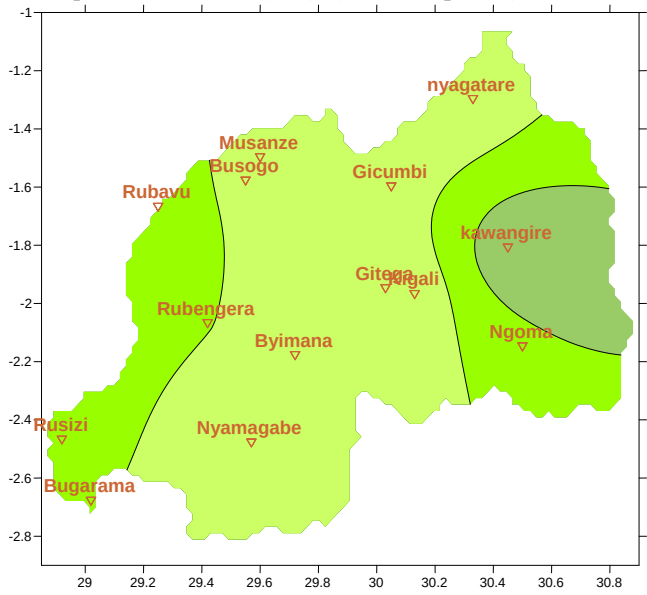
Table1



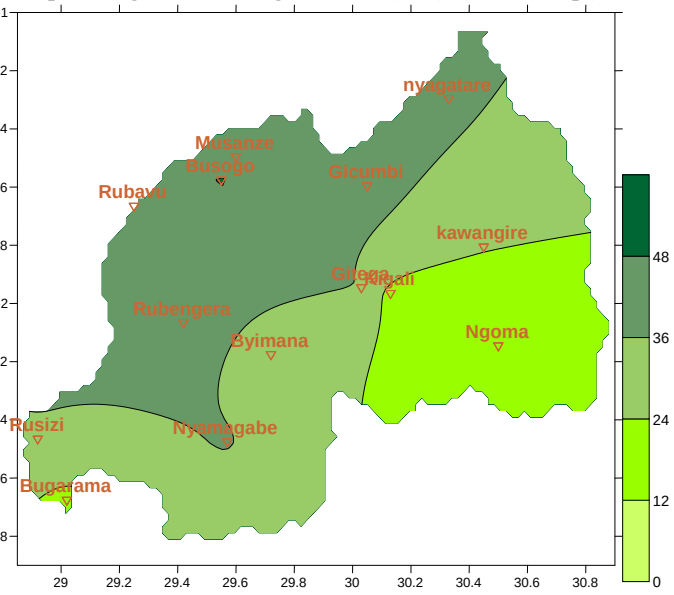
Plot1

b) **Rainfall analysis:** The next maps show the rainfall recorded during the specific dekad (dekad1 of September and deka3 of August) monitored with the same dekad at long term average

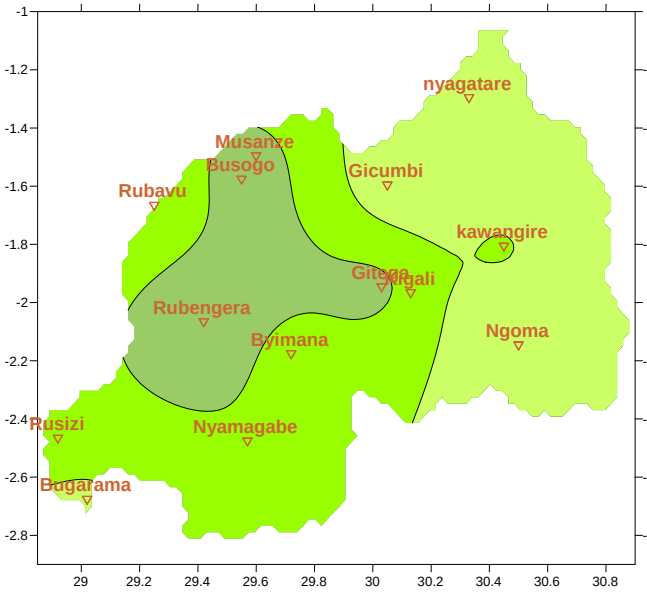
Map1: Total Rainfall (mm): (1st–10th Sep.2016)



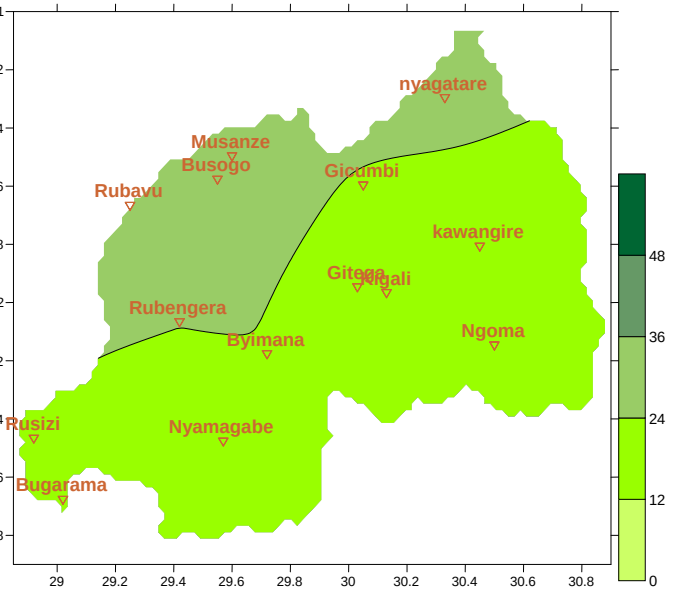
Map2: Long Term Average Rainfall (mm): (1st–10th Sep.)



Map3: Total Rainfall (mm): (21st –31st Aug.2016)



Map4: Long Term Average Rainfall (mm): (21st –31st Aug.)



II. Detailed observed Rainfall during the first dekad of September 2016

a) Eastern Province

Except Nyagatare Station which recorded a below rainfall amount, other stations used in Eastern Province recorded normal rainfall for the same period (see **Map.1&2**); comparing dekad1 of September to its previous (see **Map.1&3**), analysis shows that there was an increase of rainfall for all stations.

b) Northern Province

The northern part had a reduced rainfall amount for all representative stations (rainfall amount below 10mm while climatology shows that all these stations usually receive above 40mm within the same period, see **Map1, 2&3**).

c) Southern Province

Though the representing stations of the southern region recorded an increase in rainfall amount, this was not enough to be recognised as in normal range value, this reduction from what was expected is more pronounced in the south-western part at Nyamagabe station where recorded 1.1mm only with 36.8mm of the mean rainfall value (see **Map1, 3&2**).

d) Western Province

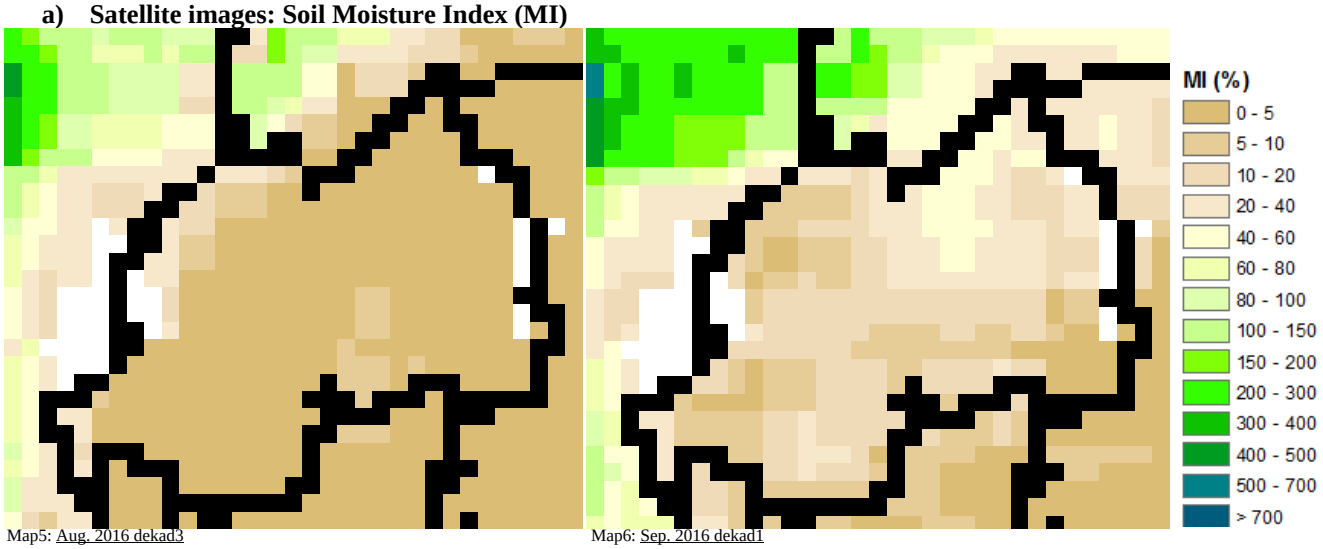
The western part rainfall was normally distributed and all station received rain almost every day, though all the three stations are among those that receive a higher amount of rainfall, the value didn't reach the normal range (see **Map1, 3&2**).

e) Kigali Region

The central parts of the country received below rainfall amount compared to climatology and also a decrease compare to its previous dekad (see see **Map1, 3&2**).

III. Agricultural impact.

a) Satellite images: Soil Moisture Index (MI)



Map5: Aug. 2016 dekad3 Map6: Sep. 2016 dekad1

During dekad2 of September 2016, the above satellite images show that there is a slight 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.

In most parts of the country, the moisture index is below 60% (see **Map5&6**); this is not sufficient for crops development requirements (especially those with high amount of water requirement). This coming next ten days (dekad2 of September 2016), we are expecting an increase in cloud cover with rain to moisten the soil especially in the northern part of Rwanda. Farmers are also advised to continue to prepare their fields for this A-Season to maintain their agriculture activities to support the rainfall onset that is expected to delay towards the month of October.

b) Rainfall Outlook for the 2nd dekad of September 2016

During this 2nd Dekad (11th-20th of September 2016) it is expected to have an increase in cloud amounts (from being scattered to cover most parts of the dome), the increase in activity will be remarkable in the northern parts of the country in all provinces. Rainfall amount is expected to be below to normal mean range.

Below there are specific regions details:

Kigali City; the sky clouds are expected to be scattered with low probability of light shower in the late hours.

Eastern Region; is expecting to experience more activities in the north and less in the south of the Eastern Province.

Western Region; is expecting to experience mostly cloudy for the whole period of the dekad with a chance of light convective rain throughout the period especially the most northern part of this western region.

Northern region; is expecting to experience predominantly cloudy mornings with a little chance of having 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 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)