



Highlights:

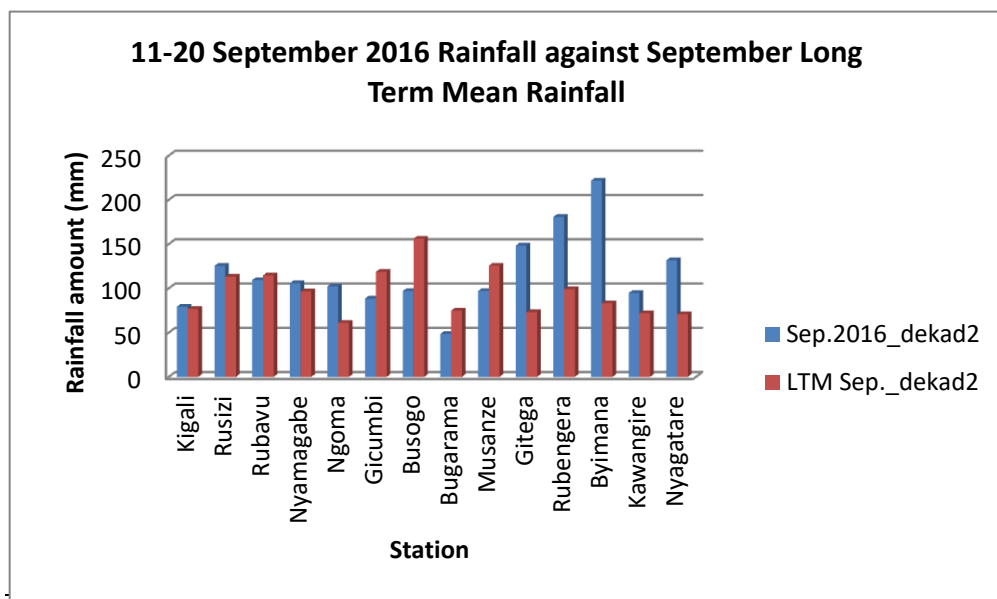
- **Cumulative rainfall** for September 2016 was **normal** in many parts of the country. Rain associated with thunderstorms was distributed across the country, therefore, **increase of soil moisture** was observed in many parts of the country.
- Almost **Daily rainfall activity** is expected during October 2016 country wide.

I. Introduction

- a) The comparison between rainfall recorded in “September 2016” and it’s long-term mean (LTM) value at each station, is shown below

Cumulative rainfall (in mm) recorded at different stations

Station	Sep.2016	LTM Sep.
Kigali	79.2	76.8
Rusizi (Kamembe)	125.4	113.2
Rubavu (Gisenyi)	109.3	114.6
Nyamagabe (Gikongoro)	105.8	96.6
Ngoma (Kibungo)	102.2	61.1
Gicumbi (Byumba)	88.5	118.7
Busogo	97.0	156.1
Bugarama	48.6	74.8
Musanze	97.0	125.6
Gitega	148.3	73.2
Rubengera	180.7	99.0
Byimana	221.7	83.1
Kawangire	94.8	71.9
Nyagatare	131.8	70.7

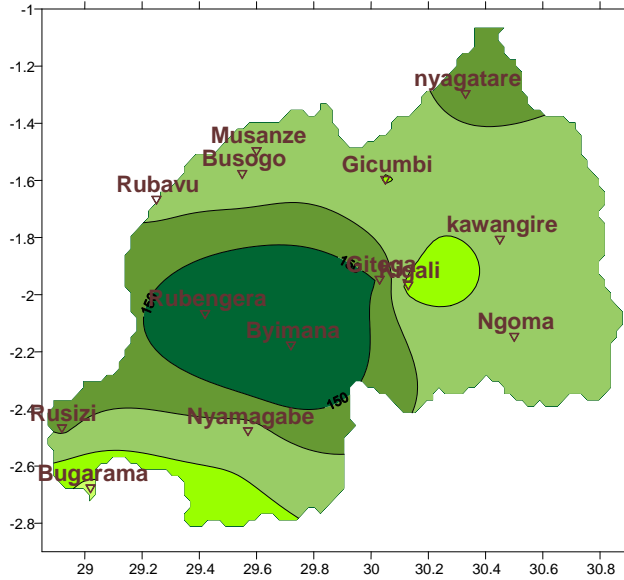


Plot1

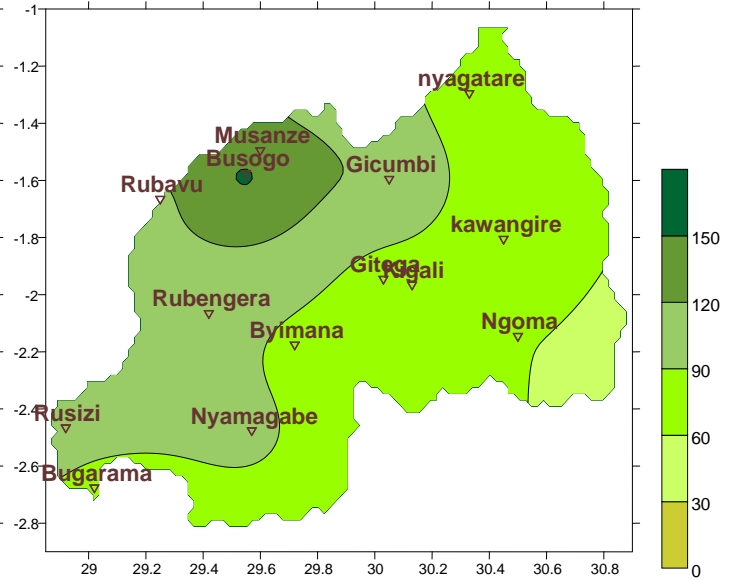
Table1

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

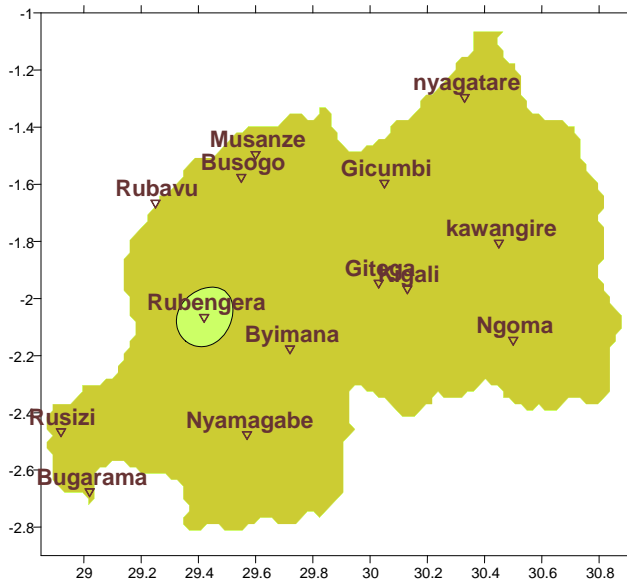
Map1: Total Rainfall (mm): (1st–30th Sep.2016)



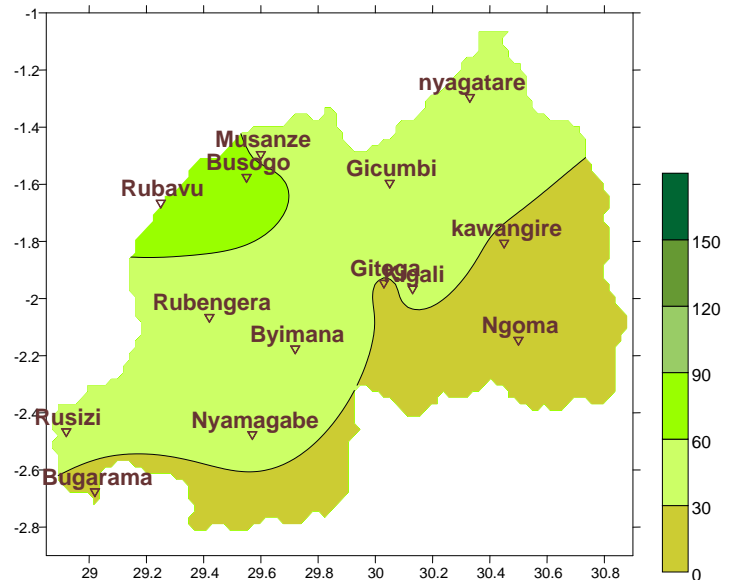
Map2: Long Term Average Rainfall (mm): (1st–30th Sep.)



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



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



II. Detailed observed rainfall during the month of September 2016

August 2016 which was generally dry as shown at all stations (see **Map.3&4**), we observe a well pronounced increase of rainfall that occurred in September 2016 (see **Map.1&2**):

a) Eastern Province

All representing stations recorded a rainfall amount at normal range to above (see **Map.1&2**); analysis also shows the trend of persisted in the north and a decrease in the south.

b) Northern Province

Only Gicumbi Station marked an increase in rainfall which attained the normal range to climatology by the end of September (see **Map.1, 2, 3&4**), other stations had rainfall that was recognized to be in the below normal range (see **Map1&2**).

c) Southern Province

September 2016 showed an increase in rainfall amount within the last dekad to reach the mean range; however, the northern part of this region at Byimana Station, the records show rainfall value of 221.7mm (see **Table1**) which is almost equal to three-times the long term mean value. The trends show advection of rainfall activities to southwest within this region.

d) Western Province

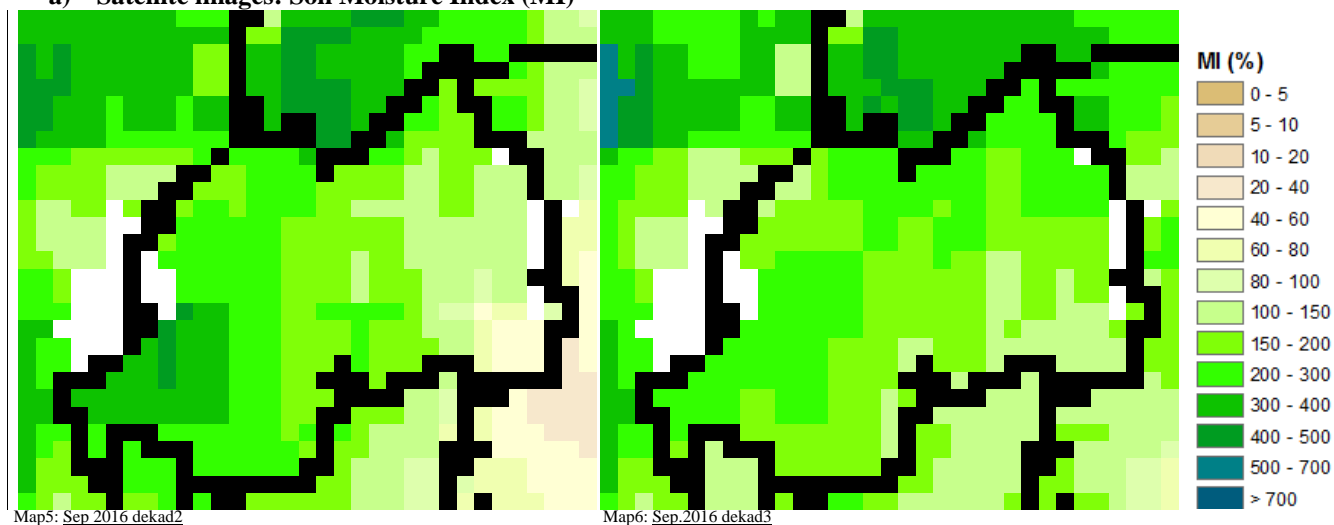
The western part received rainfall that reached the normal range at all stations (see **Map1&2**).

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 at Gitega station, which recorded 148.3mm

III. Agricultural impact.

a) Satellite images: Soil Moisture Index (MI)



During dekad2&3 of September 2016, there was consistency of moistening the soil and this is confirmed by the above satellite images (see **Map5&6**). This persistence rain occurrence and wet soil insures rainfall onset at almost all stations within the last dekad of September; and now the vegetation cover (which is at development stage) continues to increase (developing) In most parts of the country, the moisture index MI>100 (see **Map5&6**) for both dekad 2&3 (which is favorable for development of different varieties of crops).

This coming month (October 2016), we expect rain to continue moistening the soil, especially in the north and western parts of Rwanda. Farmers are advised to harvest rain-water in this month (expected to be the highest pick rainfall value and occurrences) which will be used to support farms during the dry spells of this SOND-Season (towards the end of the season).

b) Rainfall forecast for October 2016

October 2016, we expect rain to continue moistening the soil throughout the whole month of October, especially in the north and western parts of Rwanda:

Kigali City; is expecting to receive normal rain throughout this month.

Eastern Region; is expecting to experience more activities in the north (ranging from normal to above normal), normal in the central and near-normal to below normal for the southern part.

Western Region; is expecting to experience rain throughout the period at normal to above range.

Northern region; is expecting to experience predominantly rain throughout the period at normal range.

Southern Region; is expecting to have rainfall activities throughout the month that may be high in the southwestern part.

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)