



Highlights:

- **Cumulative rainfall** for the 1st dekad of October 2016 **was above normal** in all parts of the country except the southern part of the Eastern Province. Rain associated with thunderstorms was distributed across the country; therefore;
- **Increase of soil moisture** was observed in many parts of the country especially the northern part and the most southern part.
- A **reduction of rainfall activity** is expected during 2nd dekad of October 2016.

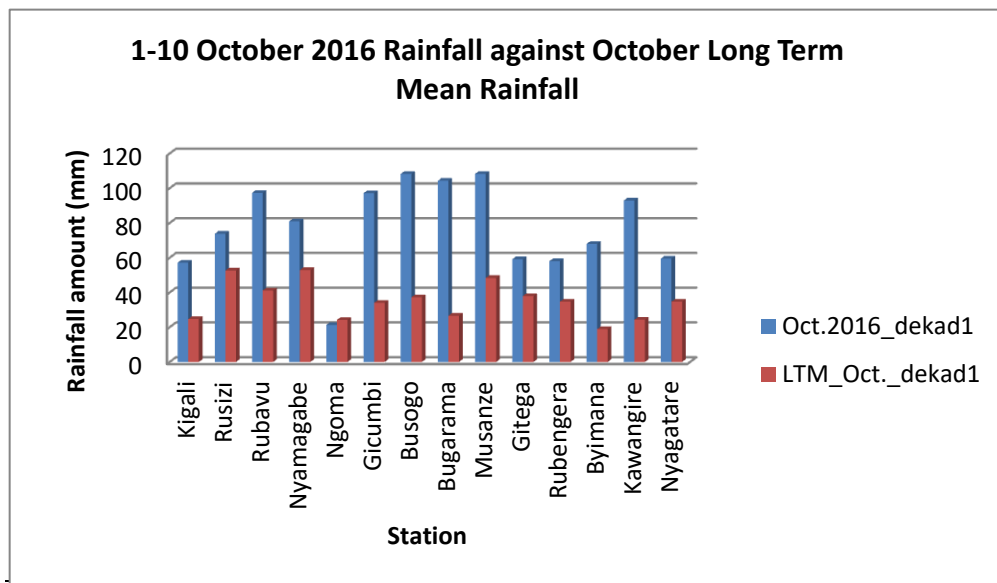
I. Introduction

- a) The comparison between rainfall recorded in “October_2016_dekad1” and it’s long-term mean (LTM) value at each station, is shown below:

Cumulative rainfall (in mm) recorded at different stations

Station	Oct.2016_dekad1	LTM_Oct._dekad1
Kigali	57.1	24.7
Rusizi (Kamembe)	73.8	52.6
Rubavu (Gisenyi)	97.3	41.1
Nyamagabe (Gikongoro)	80.9	52.9
Ngoma (Kibungo)	21.3	24.2
Gicumbi (Byumba)	97.1	34
Busogo	108.2	37.2
Bugarama	104.3	26.6
Musanze (Ruhengeri)	108.2	48.3
Gitega	59.1	37.9
Rubengera	58	34.7
Byimana	67.9	18.9
Kawangire	92.9	24.3
Nyagatare	59.5	34.7

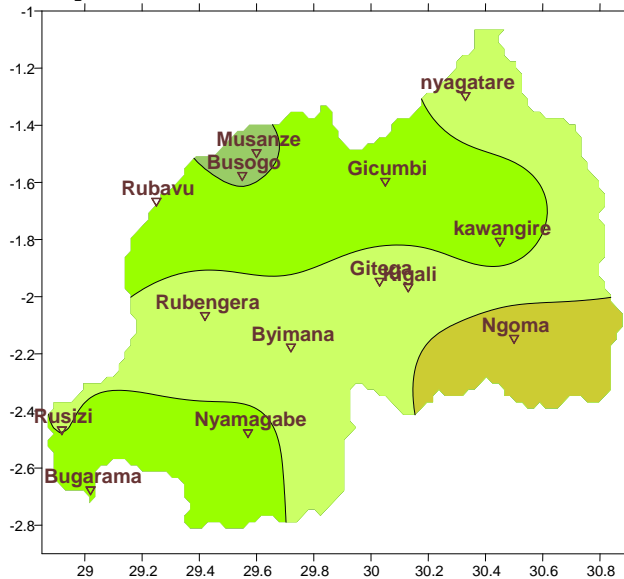
Table1



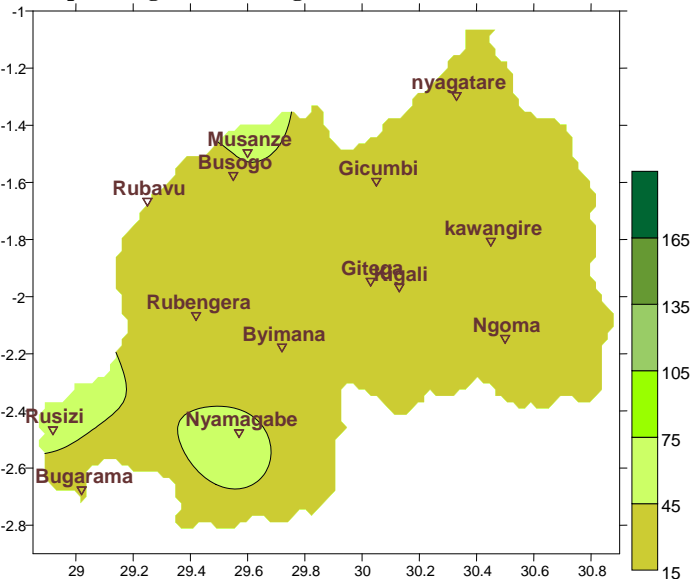
Plot1

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

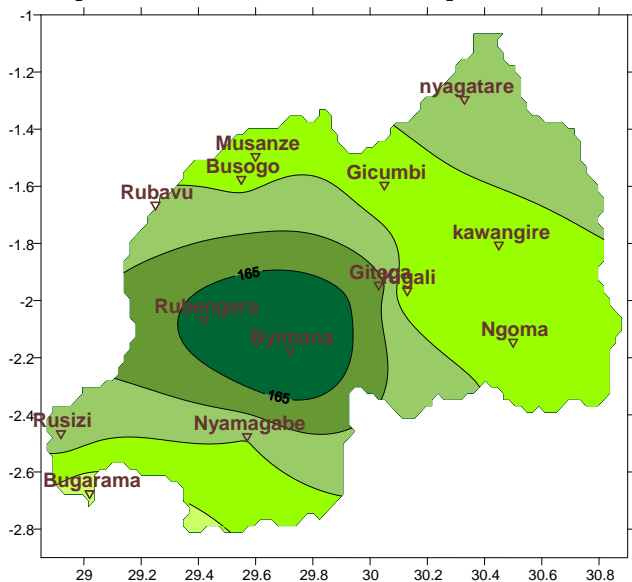
Map1: Total Rainfall (mm): (1st–10th Oct.2016)



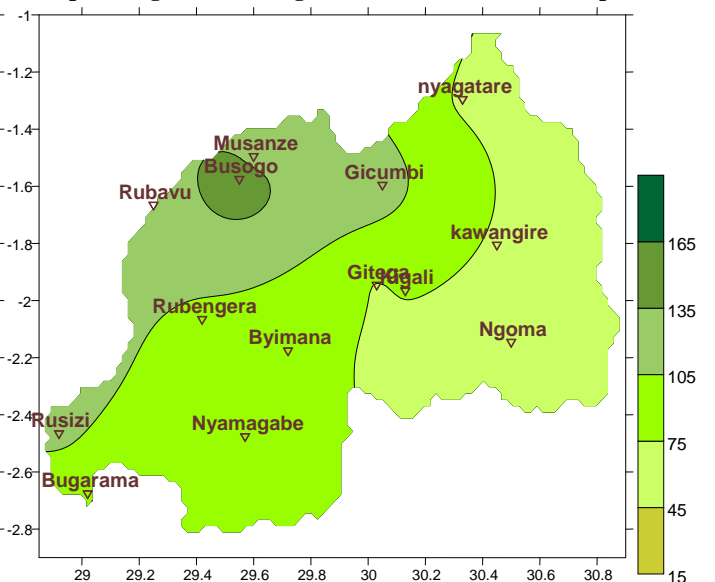
Map2: Long Term Average Rainfall (mm): (1st–10th Oct.)



Map3: Total Rainfall (mm): (1st–30th Sep.2016)



Map4: Long Term Average Rainfall (mm): (1st–30th Sep.)



II. Detailed observed rainfall during the 1st dekad of October 2016

The well pronounced increase of rainfall that occurred in September 2016 (see **Map.3&4**) prolonged to the 1st dekad of October (see **Map.1&2**) put the whole country on normal to above range comparing to climatology:

a) Eastern Province

All representing stations recorded a rainfall amount at normal range to above (see **Map.1&2**). Even though Ngoma Station located in the southern part of this Province was rated to be below normal with 21.3mm but from **Table1** we can see that this value is not way too different from the mean value (i.e. 24.2mm)

b) Northern Province

The Northern Province which is known to be the wettest region recorded rainfall at above range; with the highest recorded at Musanze and Busogo Stations with each 108.2mm of rain.

c) Southern Province

All stations recorded above range rainfall compared to climatology. For this past period of the A-Season (September-to-December 2016); Byimana Station showed records of rainfall value that exceed the mean value (see **Table1**) but the south-western part at Nyamagabe Station; the records show a high value which is not far from climatology (with 80.9mm)

d) Western Province

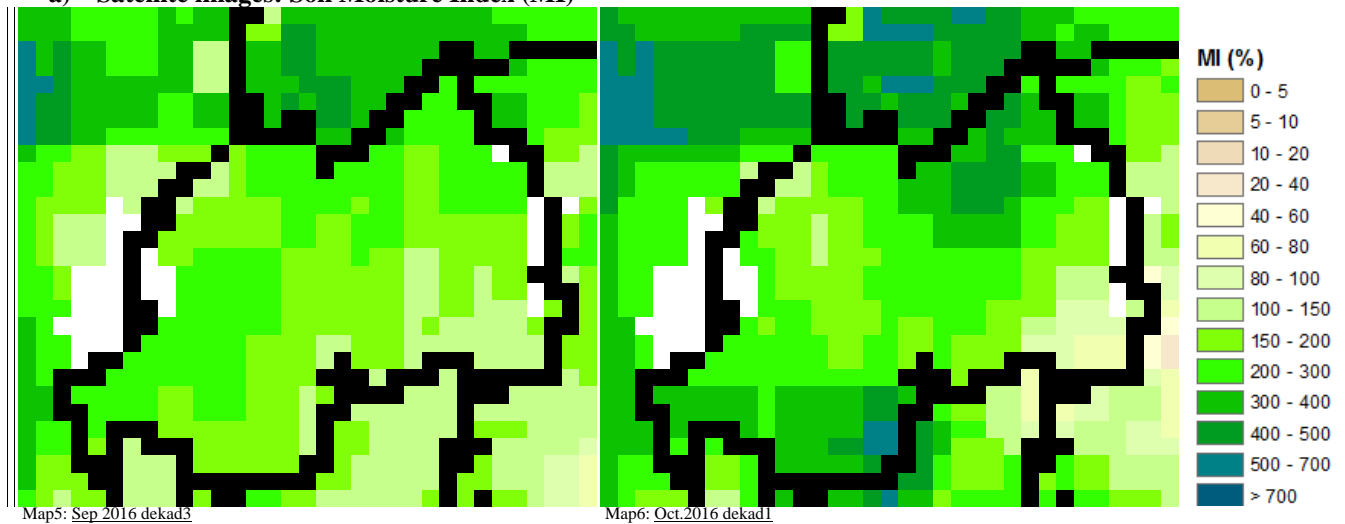
The Western Province had increase in rainfall that reached the normal range to above at all stations (see **Map1&2**); especially Bugarama Station located in the southwest with 104.3mm (five times the mean value).

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** and **Map.3&4**); especially in the 1st dekad of this October

III. Agricultural impact.

a) Satellite images: Soil Moisture Index (MI)



During dekad1 of October 2016, there was consistency of moistening the soil especially the most south and most north; and this is confirmed by the above satellite images (see **Map5&6**)

In most parts of the country, the moisture index $MI > 100$ (see **Map5&6**); which is favorable for development of different varieties of crops.

The second dekad of October 2016, we expect rain to reduce but will continue moistening the soil, especially in the north and western parts of Rwanda. Farmers are advised to harvest rain-water during this rainy period.

b) Rainfall forecast for the second dekad of October 2016

The second dekad of October 2016, we expect rain to reduce but will continue to pour especially in the north and western parts of Rwanda:

Kigali City; is expecting to receive a reduction in rainfall amount.

Eastern Region; is expecting to experience more activities in the north (ranging to normal) and less activities in the south.

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

Northern region; is expecting to experience predominantly rain throughout the period with a reduction in rainfall amount.

Southern Region; is expecting to have a reduction of rainfall activities except the southwestern part which may receive a higher amount of rainfall.

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)