



Highlights:

- **Cumulative rainfall** for the 2nd dekad of October 2016 was **below normal** in all parts of the country;
- **A decrease of soil moisture content** was observed in all parts of the country.
- An extended dry spell from dekad1 to dekad2 is expected in this October 2016

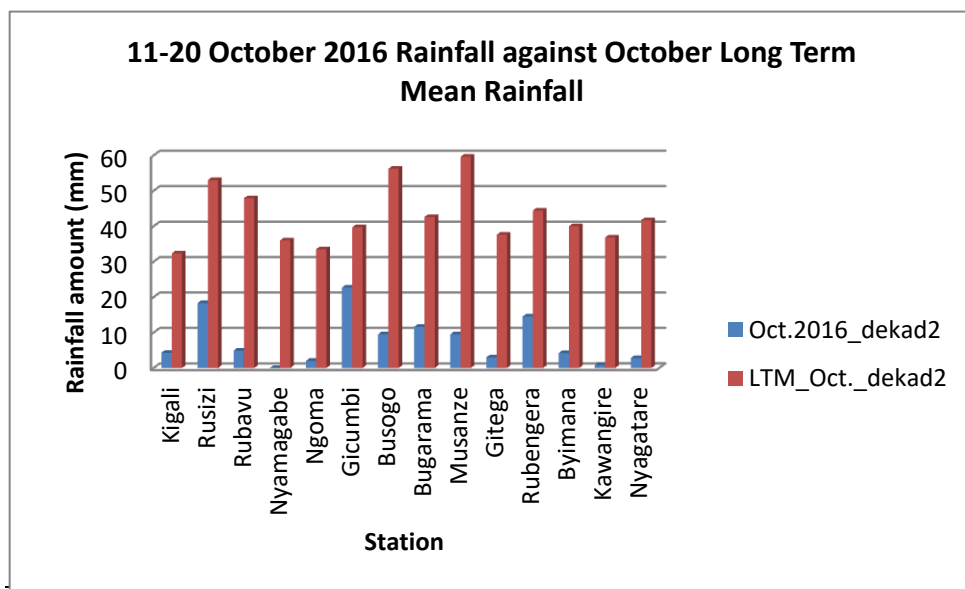
I. Introduction

- a) The comparison between rainfall recorded in “October_2016_dekad2” 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_dekad2	LTM_Oct._dekad2
Kigali	4.3	32.3
Rusizi (Kamembe)	18.3	53
Rubavu (Gisenyi)	4.9	47.9
Nyamagabe (Gikongoro)	0	36
Ngoma (Kibungo)	2	33.5
Gicumbi (Byumba)	22.7	39.7
Busogo	9.5	56.2
Bugarama	11.6	42.6
Musanze (Ruhengeri)	9.5	59.6
Gitega	3	37.6
Rubengera	14.5	44.4
Byimana	4.2	40
Kawangire	0.8	36.8
Nyagatare	2.8	41.7

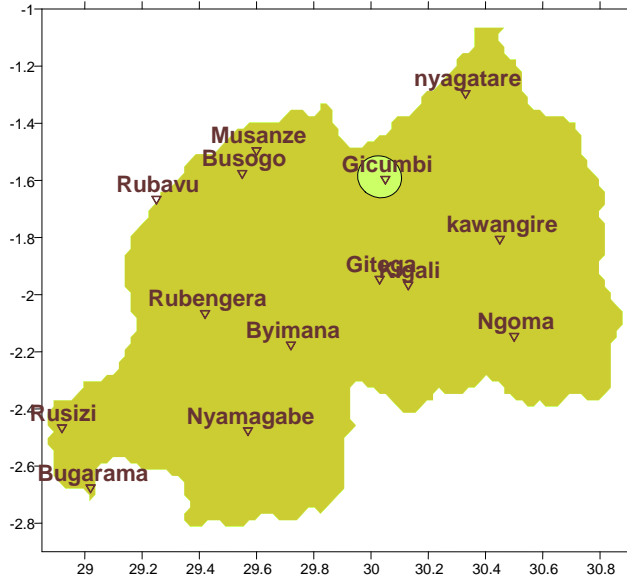
Table1



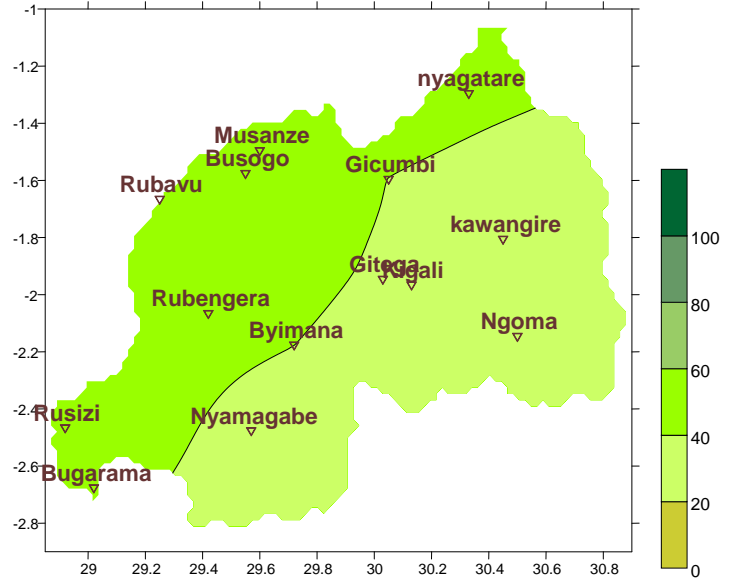
Plot1

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

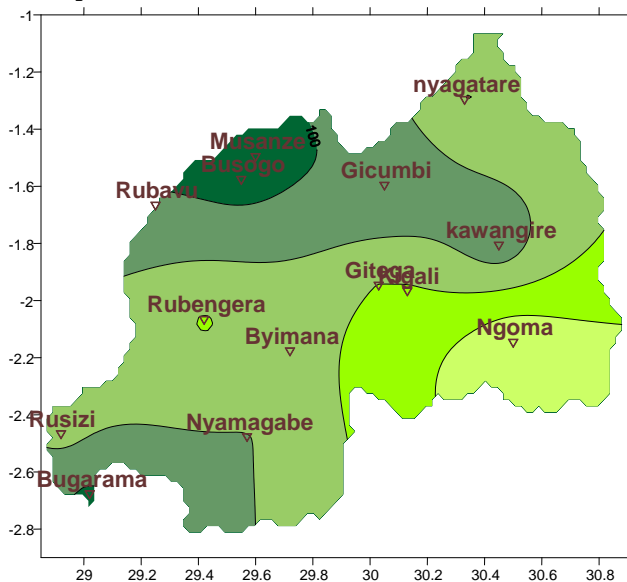
Map1: Total Rainfall (mm): (11th–20th Oct.2016)



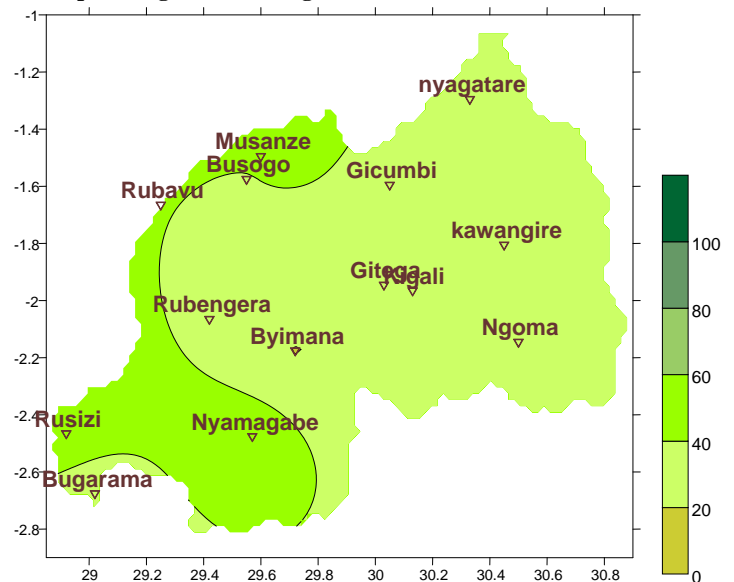
Map2: Long Term Average Rainfall (mm): (11th–20th Oct.)



Map3: Total Rainfall (mm): (1st–10th Oct.2016)



Map4: Long Term Average Rainfall (mm): (1st–10th Oct.)



II. Detailed observed rainfall during the 2nd dekad of October 2016

Five (5) consecutive days with no rain was observed at almost all stations and that's what caused the period we consider as dry spell resulting to having little amount of rain (compared to climatology) at all representing stations of the country (see **Map1&2**):

a) Eastern Province

All stations are below normal; at Nyagatare Station, we observed the highest in this Province which is also very little since the value recorded is 20 times lower the value we usually get in this period of the 2nd dekad of October 2016

b) Northern Province

All stations are below normal; at Gicumbi Station, we observed the highest record for the whole country of 22.7mm (see **Table1**); which is also below the value we usually get in this period of the 2nd dekad of October 2016

c) Southern Province

All stations are below normal; and Nyamagabe Station which is known to receive a higher amount reported nothing within the 2nd dekad of October 2016 (see **Table1**)

We observed the highest in this Province at Byimana Station which is also very little since the value recorded is 10 times lower the value we usually get in this period of the 2nd dekad of October 2016

d) Western Province

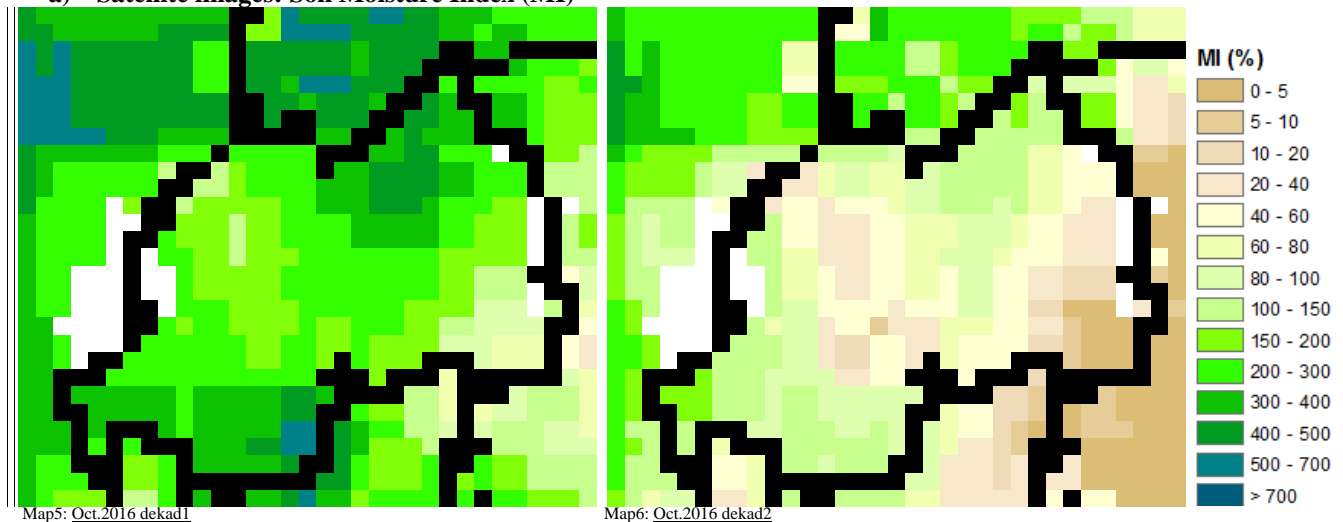
All stations are below normal. The southern part of this Province received the highest in this region (Rusizi with 18.3mm and Rubengera with 14.5mm); but these values are too little compared to climatology of this are of the Western province.

e) Kigali Region

The central part with 2 representatives stations Kigali and Gitega; received below normal rainfall amount compared to climatology (see **Map1&2**) with almost the same amount at a range of ten times lower the mean value (see **Table1**)

III. Agricultural impact.

a) Satellite images: Soil Moisture Index (MI)



During dekad2 of October 2016, there was not enough rain received to moisten the soil consistently; though the 1st dekad showed an above normal at all station within the country (see **Map3&4**), at almost all station, we observed little consecutive days with no rain that led to reduction of soil moisture; and this is confirmed by the above satellite images (see **Map5&6**) In most parts of the country, the moisture and vegetation cover is less and this can negatively affect the development of some crops; irrigation should support this season which presents to us as below normal in many parts of the country (reference is made to the released journal of the “2016_SOND Seasonal forecasting”) The third and last dekad of October 2016, we expect continuation of less rain across the country. Farmers are advised to keep on irrigating while we expect no water stress to the crops.

b) Rainfall forecast for the 3rd and last dekad of October 2016

The Third dekad of October 2016, we expect continuation of less rain across the country:

Kigali City; is expecting to experience light rain towards the end of this month of October.

Eastern Region; is expecting to experience activities in the north and to receive rain for the whole region as we approach the end of October.

Western Region; is light rain at normal range.

Northern region; is expecting to experience light rain with a reduction in rainfall amount comparing to the mean value.

Southern Region; is expecting to experience rain towards the end of this October except the southwestern part which may receive a higher amount of rainfall at normal range.

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)