



Highlights:

- **The cumulative rainfall** for December decade one 2016 was relatively low compared to long term mean rainfall during the first decade of December.
- **Decreased soil moisture** was observed over localized parts of the country especially eastern, western provinces and small portion along Lake Kivu.
- The rainfall during second decade is expected to **decrease** since we are approaching the seasonal rainfall cessation.

I. Introduction

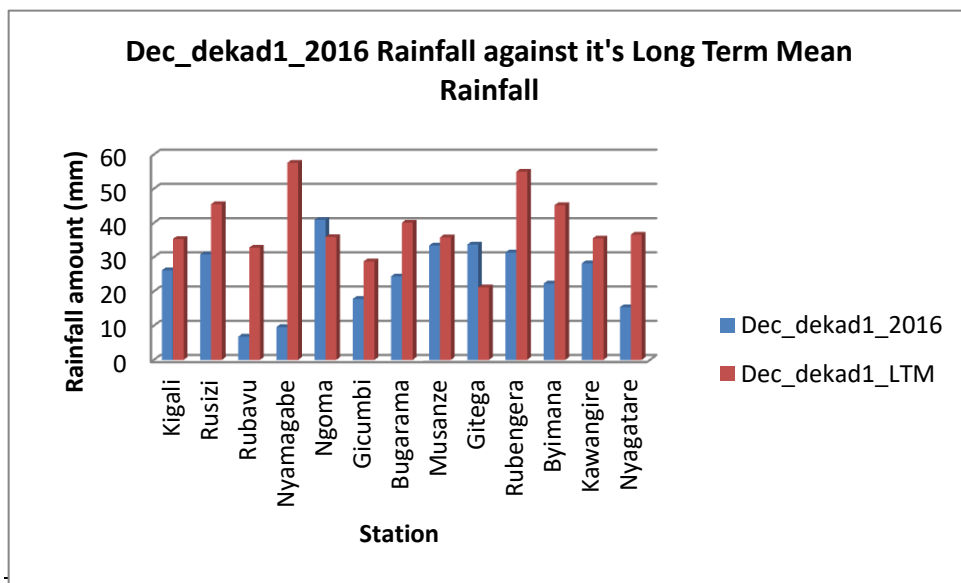
Most parts of the country during the first dekad of December 2016 recorded rainfall which was generally below long term mean for most stations across the country except of Ngoma and Gitega which recorded slightly above average. The rainfall pattern was generally moderate within central and south western parts of the country. The third dekad of November 2016 was generally wetter compared to the first dekad of December 2016 this was attributed to enhanced south-westerlies and south-easterlies which were converging and bringing influx of moisture within the region.

a) The table and histogram below indicates the rainfall recorded during the first dekad of December 2016:

Cumulative rainfall (in mm) recorded at different stations

Station	Dec_d ekad1_2016	Dec_de kad1_L TM
Kigali	26.2	35.3
Rusizi (Kamembe)	30.8	45.5
Rubavu (Gisenyi)	6.8	32.8
Nyamagabe (Gikongoro)	9.6	57.6
Ngoma (Kibungo)	40.9	35.9
Gicumbi (Byumba)	17.8	28.8
Bugarama	24.4	40.1
Musanze (Ruhengeri)	33.4	35.8
Gitega	33.7	21.2
Rubengera	31.4	55
Byimana	22.3	45.2
Kawangire	28.2	35.5
Nyagatare	15.4	36.6

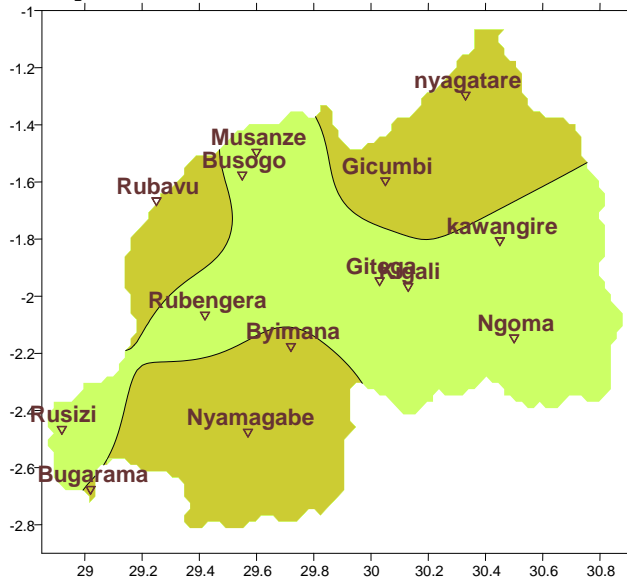
Table1



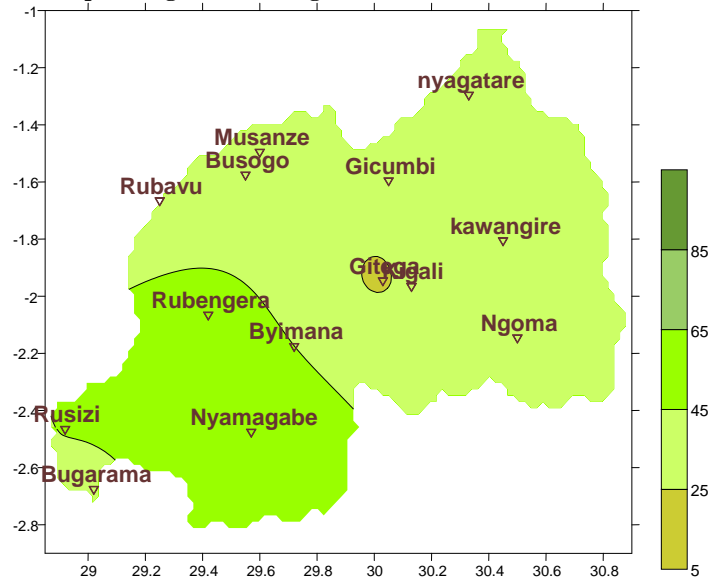
Plot1

- b) Rainfall analysis:** The maps (**Map 1 and 2**) below shows the cumulative rainfall recorded during the first dekad of December 2016 and long term mean of cumulative rainfall during the same dekad. The maps (**map 3 and 4**) for the third dekad of November 2016 was generally wet (**map3**) compared to long term mean (map 4). The wetness was generally concentrated in the southern and south western parts of the country.

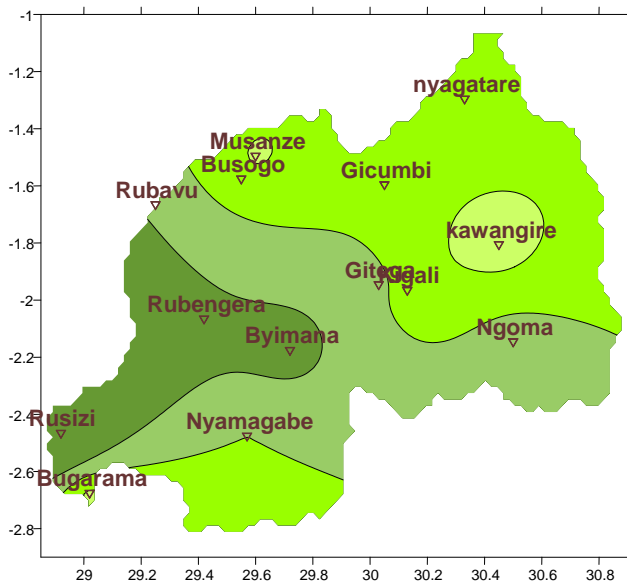
Map1: Total Rainfall (mm): Dec_dekad1_2016



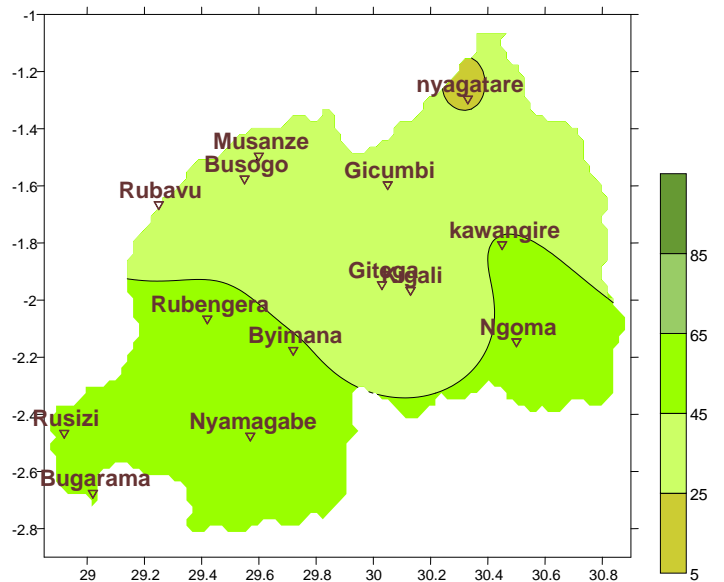
Map2: Long Term Average Rainfall (mm): Dec_dekad1_LTM



Map3: Total Rainfall (mm): Nov_dekad3_2016



Map4: Long Term Average Rainfall (mm): Nov_dekad3_LTM



II. Detailed observed rainfall during December dekad1 2016

Cumulative rainfall for December dekad1_2016 was moderate over most stations (see **Map1&2**) and the cumulative rainfall for the November_dekad3_2016 was wet over most parts of the country (see **Map3&4**)

a) Eastern Province

Except the north-eastern part at Nyagatare station which recorded 15.4mm of rainfall; the rest of the stations within the area received moderate rainfall within this period (see **Table1** and **Map1&2**)

b) Northern Province

Except the northern parts of Musanze and Busogo stations, 33.4mm of rainfall were recorded; the other stations received rainfall that was within the below moderate (see **Table1** and **Map1&2**)

c) Southern Province

The stations within the province recorded slightly below moderate rainfall (see **Table1** and **Map1&2**)

d) Western Province

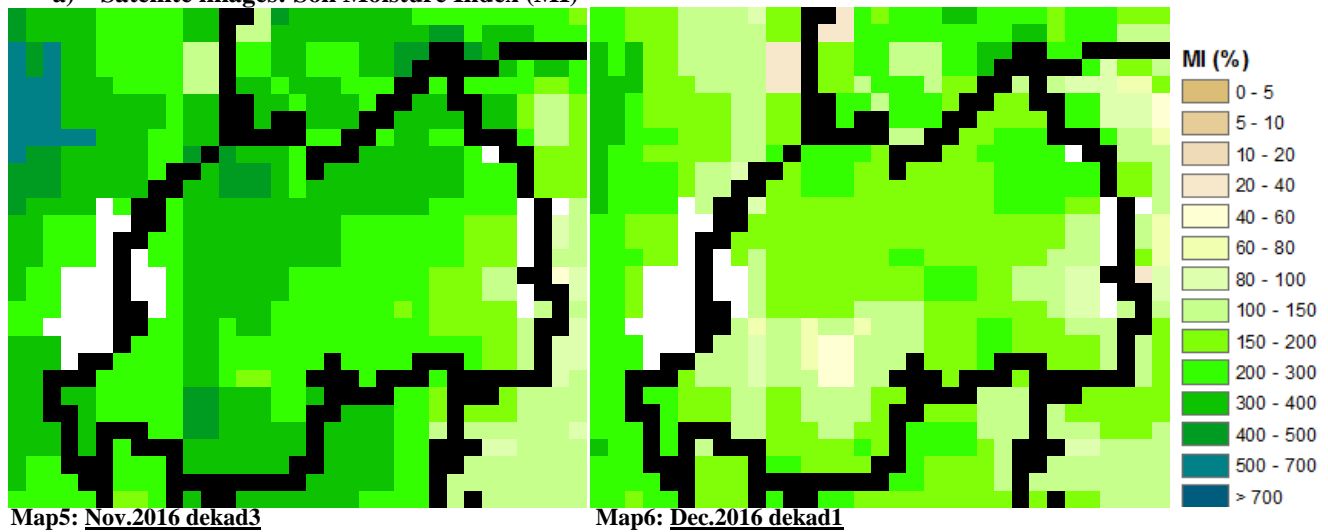
Gisenyi station recorded 6.8mm of rainfall while the rest of the stations recorded slightly moderate rainfall (see **Table1** and **Map1&2**)

e) **Kigali City**

The central parts of the country which are represented by Kigali and Gitega stations recorded slightly wet conditions (see **Table1** and **Map1&2**)

III. Agricultural impact.

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



During the first dekad of December 2016 the moisture reduced as a result of reduction in rainfall over most parts of the country which is evident in **Map 6**. The third dekad of November 2016 indicated by **Map 5** was wet compared to the following dekad of the first December 2016

The distribution of rains during the second dekad is expected to be moderate in the southern and western as opposed to other parts of the country where rains expected will be below moderate rains. Most parts of the country will start experiencing slight cessation of rains.

Farmers are advised to put in place supplementary measures which will support their farming practices.

Rainfall forecast for December_dekad2_2016

We expect rain cessation in all parts of the country hence evaporation is expected to increase.

Kigali City; Will experience cloudy conditions with light rains over localized area.

Eastern Region; Will experience decreased rainfall activities across the whole region especially the north parts.

Western Region; Will experience moderate rainfall conditions over most parts of the region.

Northern region; The area is expected to have moderate to wet rainfall conditions.

Southern Region; The region is expected to experience depressed rainfall activities throughout the period with slightly enhanced moderate conditions over south western parts of the region.

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)