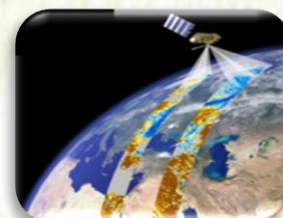


# ETHIOPIA METEOROLOGY INSTITUTE

## Agrometeorological Bulletin

### DEKADAL AGROMETEOROLOGICAL BULLETIN

11-20 JANUARY 2023 VOLUME: - 40 No. 2 DATE OF ISSUE: - JANUARY 23, 2023



Ethiopia Meteorology Institute P.O.BOX 1090, ADDIS ABABA, ETHIOPIA

Website: [http:// www.ethiomet.gov.et](http://www.ethiomet.gov.et)E-mail [nmsa@ethionet.et](mailto:nmsa@ethionet.et)Fax 251-1-517066, Tel. 251-1-512299

## TABLE OF CONTENTS

<b>FOREWARD</b> .....	<b>2</b>
<b>SUMMARY</b> .....	<b>3</b>
<b>1. WEATHER ASSESSMENT</b> .....	<b>4</b>
<b>1.1. Rainfall amount (11 – 20 January, 2023)</b> .....	<b>4</b>
<b>1.2. Rainfall Anomaly (11-20 January 2023)</b> .....	<b>5</b>
<b>1.1. Moisture Condition (11-20 January 2023)</b> .....	<b>6</b>
<b>2. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE</b> .....	<b>8</b>
<b>2.1. VEGETATION CONDITION AND IMPACT ON AGRICULTURE</b> .....	<b>8</b>
<b>2.2. EXPECTED WEATHER IMPACT ON AGRICULTURE DURING THIRD DEKAD OF JANUARY</b> .....	<b>9</b>
<b>3. DEFINITION OF TERMS</b> .....	<b>10</b>

## FOREWARD

This Agro met Bulletin is prepared and disseminated by the National Meteorological Agency (NMA). The aim is to provide those sectors of the community involved in Agriculture and related disciplines with the current weather situation in relation to known agricultural practices.

The information contained in the bulletin, if judiciously utilized, are believed to assist planners, decision makers and the farmers at large, through an appropriate media, in minimizing risks, increase efficiency, maximize yield. On the other hand, it is vital tool in monitoring crop/ weather conditions during the growing seasons, to be able to make more realistic assessment of the annual crop production before harvest.

The Agency disseminates ten daily, monthly and seasonal weather reports in which all the necessary current information's relevant to agriculture are compiled.

We are of the opinion that careful and continuous use of this bulletin can benefit to raise ones agro climate consciousness for improving agriculture-oriented practices. Meanwhile, your comments and constructive suggestions are highly appreciated to make the objective of this bulletin a success.

Director General  
NMA  
P.O.Box 1090  
Tel: 011661-57-79  
FAX 00251-11-6625292  
E-mail [nmsa@ethionet.et](mailto:nmsa@ethionet.et)  
Addis Ababa

## SUMMARY

During the first dekad of January 2023, according to the analysed agro meteorological information, dry moisture conditions prevail over most of the country. The prevailed dry condition on the dekad had positive impact for harvest and post-harvest activities in Meher growing areas, where crops were fully matured. On the other hand, in related with dry condition decrease in extreme minimum temperature over the frost prone highland areas of the country recorded below 5<sup>0</sup> C in some days. During the dekad under review the meteorological station reported, regarding minimum air temperature, Debre berhan -1.2, -0.8, 3.2 and 1.2, Haromaya 1.8, -0.2, 1.6, 2.2, 2.4 and 3.2, Bui 3.0, 3.6 and 4.6, Arsirobe 1.5 2.5, 3.5 and 3.0, Bore 4.8, Jimma 4.0, 4.0, Chefa 3.6, 3.4 and 3.8, Fitch 3.2 and 4.3, Imndibir 4.8 and 4.6, Bale robe 2.4, 3.2, 4.7, Debwork 4.0 and 4.0, Enewary 3.8 and 4.8, Adele 3.0, 4.5, 4.0, 2.4 and 4.0, Adet 0.3, 2.6, 2.8, 3.0 and 3.4, Mehal meda 4.5, 4.6, -1.5 and 0.0 and Wegel tena 3.5, 1.0, 1.6, 2.4 and 2.5<sup>0</sup>C. This situation could have slightly negative impact on fruits and vegetables grown under irrigation as well as animals and their products. On the other hand the observed slight rainfall at the first two days of the dekad over different parts of the country could have a significant contribution for perennial plants and the availability of drinking water and pasture for pastoral and agro pastoral communities. In addition to that the condition could be favorable toward replenishing the soil moisture that in turn positive for early time land preparation for Belg season planting.

During the second dekad of January 2023, according to the agro meteorological analysis, during the second dekad of January, the Bega season dry weather condition prevailed across most part of the country. This condition had a positive impact for the Meher crop growing areas toward assisting the on-going post-harvest activities. Following on the prevailed dry condition some high land areas of northern, north eastern, central and southeast part of the country was somehow experiencing low night and morning temperatures. Accordingly, some areas, including Debre berhan 1.0, 1.6, 2.0, 2.2, 2.8 and 3.2, Haromaya -0.6, 2.0, 2.4 and 2.8, Bui 3.0, 3.4 3.6 and 4.6, Arsi robe 2.0, 2.5, 2.8, 3.0 and 4.0 Jimma 4.4, Cheffa 2.4, 3.6, 3.8 and 4.8, Imideber 4.7 and 4.9, Bale robe 3.0, 3.6, 4.0, 4.6 and 4.8, Enewari 4.5, Adelle 2.5, 4.0 and 4.2, Adet 2.8, Mehal meda 2.5, 4.5 and 4.6, Amba mariam 4.4 እና 4.8 and Wegel tena 3.8 and 4.4 recorded temperatures below 5<sup>0</sup>C. This low temperature might have negative impact on irrigated fruits, vegetables and horticulture plants as well as negatively affected animals and their products.

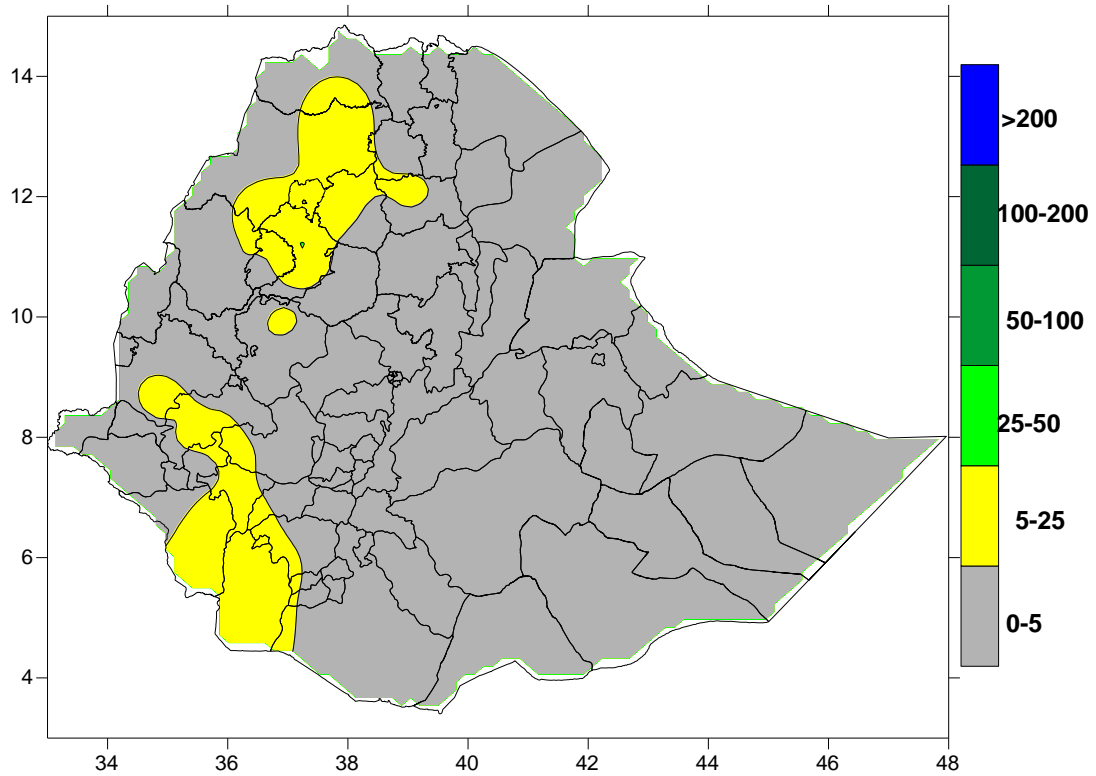


Figure1. Rainfall distribution in mm (11 – 20) January 2023

## 1. WEATHER ASSESSMENT

### 1.1. Rainfall amount (11 – 20 January, 2023)

During Seconde dekad of January 2023 pocket area of North Gonder, Tip areas of Bahir Dar and Agew Awi, Metkel, West Wellega, Illibabur, Jimma, Keffa, Benchmaji ,Basketo, South omo and Konso Zones are received 5-25mm of rainfall. The rest parts of the country exhibited 0-5 amount of rainfall.

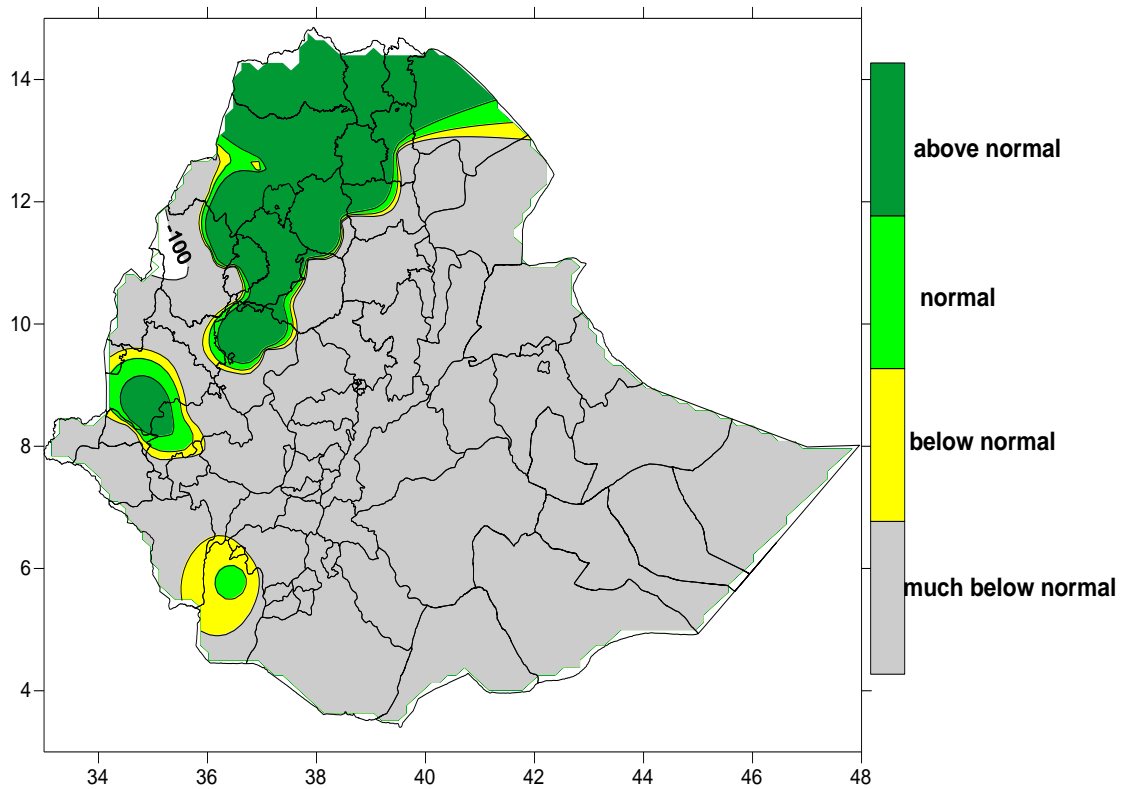


Figure 2: Percent of normal rainfall distribution (11-20 January 2023)

### Explanatory notes for the Legend

- < 50-Much below normal
- 50-75%-Below normal
- 75-125%- Normal
- > 125% - Above normal

### 1.2. Rainfall Anomaly (11-20 January 2023)

During First dekad of January 2023 the rain falls anomaly from Tigray Region East, West and South Tigray, from Amehara Region North and South Gonder, Bahir Dar and Agew Awi, pocket areas of Metkel and North Wello, Afar region Zone 2, from Oromia region West an East dekad of Wellega and pocket areas of Illibabur, from SNNRP region pocket areas of Dirashe zones areare Exhibited normal to above normal rainfall. The rest parts of country experienced below to much below normal rainfall.

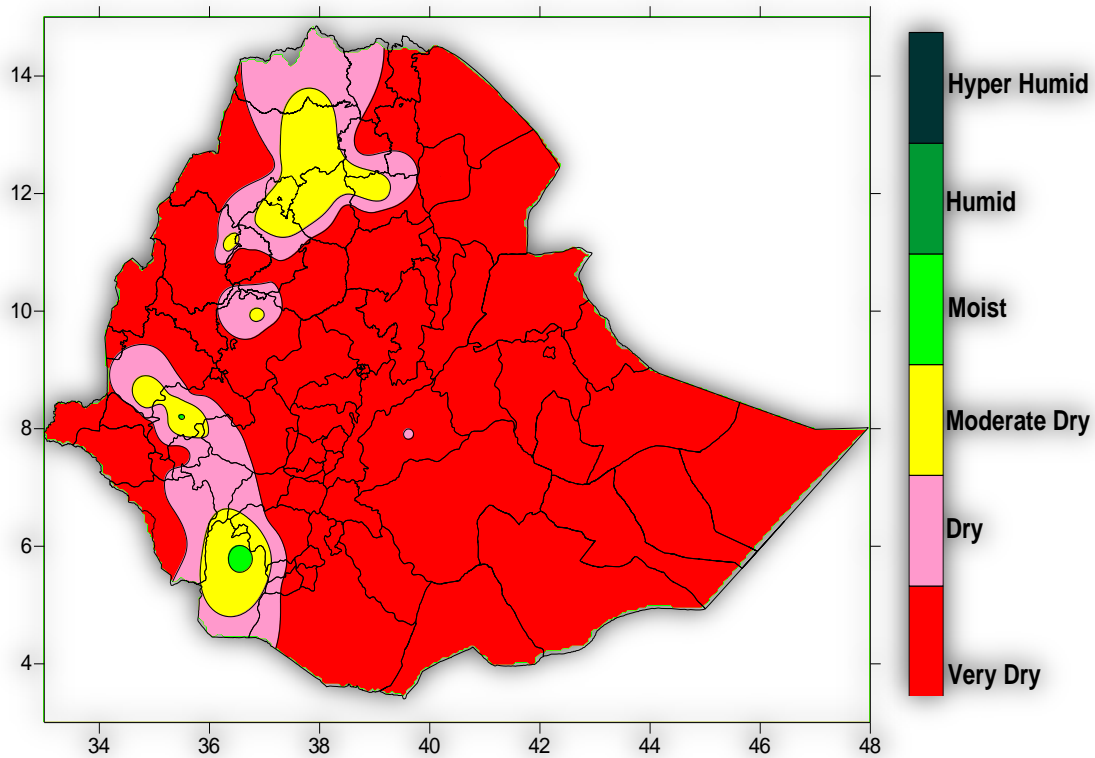


Figure.3. Moisture Status (11-20 January 2023)

### 1.1. Moisture Condition (11-20 January 2023)

During the 1st dekad of January 2023 Pocket Area of north and north Wello, west and east Harerge, Arsi, and Bale zone exhibited Hyper Moist too Moist. The rest parts of the countries exhibited Moderately Dry to Very Dry.

# NDVI and Rangeland WRSI JANUARY 2nd Dekad 2023

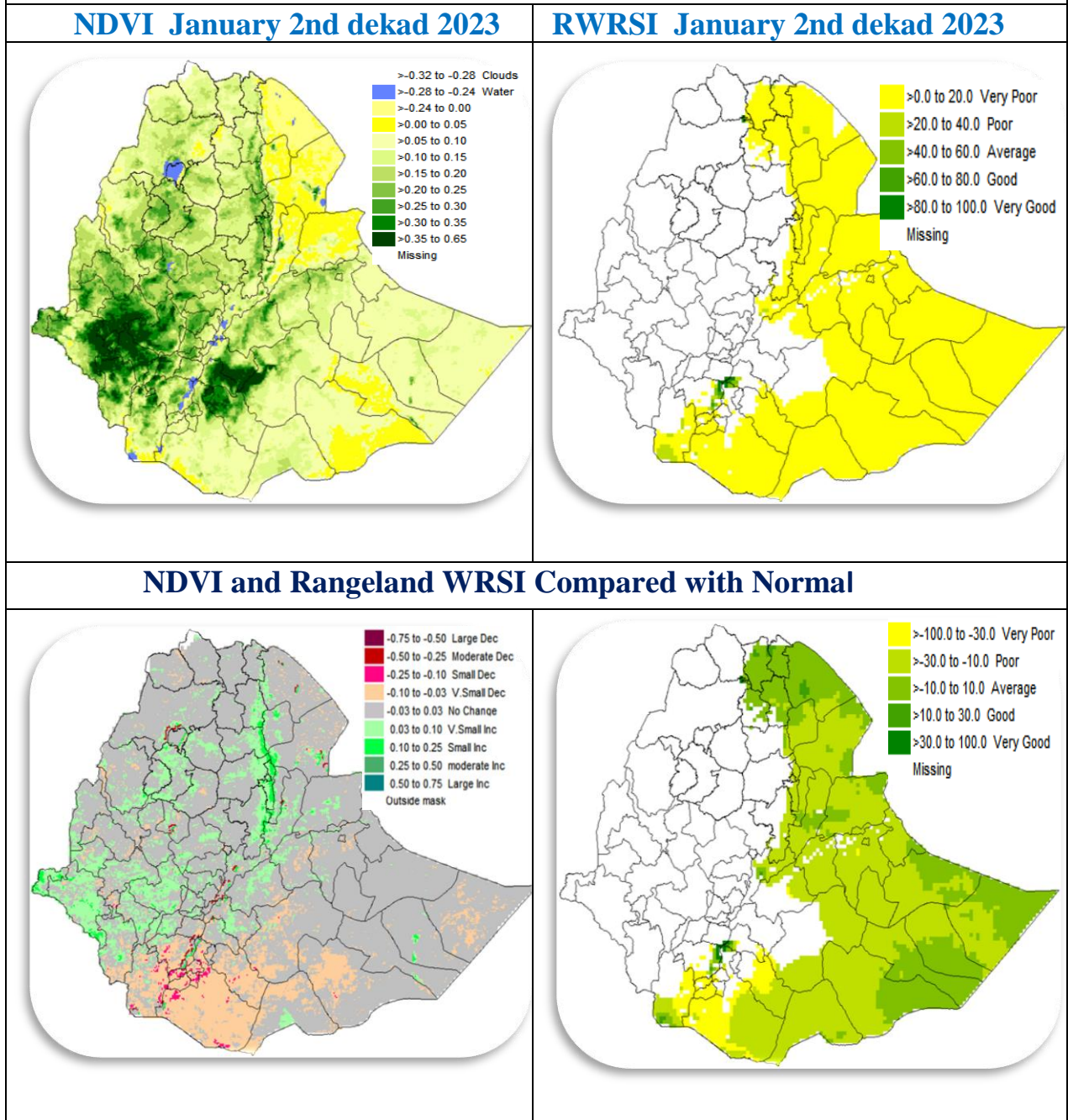


Fig.5. NDVI and Rangeland WRSI in % and Compared to Normal January 2nd dekad 2023



## **2. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE**

### **2.1. VEGETATION CONDITION AND IMPACT ON AGRICULTURE**

During the second dekad of January 2023, the vegetation condition across the country indicated that western and northern half of the country exhibited average and above average vegetation condition (Fig.5. NDVI and Rangeland WRSI in %) while the most of the southern part experienced large to small deterioration of greenness. This condition could favour to carry out the on-going post-harvest activities over Meher crop growing areas. The decrease in vegetation during this period over Bega season rain benefit could associate with the suppressed rainfall during the previous dekads and that in turn shows depletion in soil moisture. Some of the most affected zones are those areas that are primarily grazing lands, as this implies a reduction in the green vegetation for pasture particularly low land parts of South Omo and Borena zone. Generally the decreasing in vegetation over the southern and south-eastern Bega rain benefiting areas might have a negative implication toward the availability of pasture and drinking water.

## **2.2. EXPECTED WEATHER IMPACT ON AGRICULTURE DURING THIRD DEKAD OF JANUARY**

In normal condition the second dekad of January is mostly characterized by dry, sunny and wind weather condition across the country and in line with that harvest and post-harvest of Mehere season crops are widely practice over most Meher crop growing areas. On the other instance, it is also a time of getting small amount of rainfall over some of the periphery of central Rift Valley, north-eastern and central parts of the country so that the early land preparation for the Belg season can often be conducted.

According to the weather forecast, the Bega season dry moisture condition is expected during the third dekad of January across much parts of the country. This condition likely to favour for complete the on-going harvest and post-harvest activities of Meher season crops enable farmers to clear crop fields for the next season agricultural practices. On the other hand, dry, windy and cloud free condition might encourage cool weather at night and morning time on the on-going dekad over some high land areas of the country. This condition is likely to be detrimental negative effect on the overall performance of low resistance to cold weather vegetables, fruits and perennial plants as well as Animals and their products. Therefore, farmers are advised to be ready to take the necessary measures so as to maintain the plant environment as warm as possible and prevent the animals exposed to cold weather condition particularly a recently born small animals. However, relative moisture improvement is anticipated over western and south-western some parts of eastern and north-eastern, parts of the country and that will enhance the soil moisture and can play a positive role for the areas early started Belg season land preparation. Therefore we advise farmer's uses this good opportunity to start prepare their lands.

### **3. DEFINITION OF TERMS**

**ABOVE NORMAL RAINFALL:** - Rainfall in excess of 125% of the long term mean

**BELOW NORMAL RAINFALL:** - Rainfall below 75 % of the long term mean.

**NORMAL RAINFALL:** - Rainfall amount between 75 % and 125 % of the long term mean.

**BEGA:** - It is characterized with sunny and dry weather situation with occasional falls. It extends from October to January. On the other hand, it is a small rainy season for the southern and south eastern lowlands under normal condition. During the season, morning and night times are colder and daytime is warmer.

**BELG:** - Small Rainy season that extends from February to May and covers southern, central, eastern and north-eastern parts of the country.

**CROP WATER REQUIREMENTS:** - the amount of water needed to meet the water loss through evapotranspiration of a disease free crop, growing under non-restricting soil conditions including soil water and fertility.

**DEKAD:** - First or second ten days or the remaining days of a month.

**EXTREME TEMPERATURE:-** The highest or the lowest temperature among the recorded maximum or minimum temperatures respectively.

**ITCZ:-** Inter-tropical convergence zone (narrow zone where trade winds of the two hemispheres meet.

**KIREMT:** - Main rainy season that extends from June to September for most parts of the country with the exception of the south-eastern lowlands of the country.

**RAINY DAY:** - A day with 1 or more mm of rainfall amount

