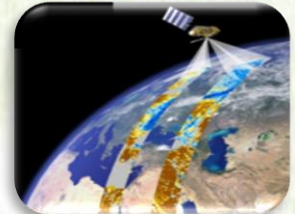


# NATIONAL METEOROLOGY AGENCY

## Agrometeorological Bulletin

### TEN DAY AGROMETEOROLOGICAL BULLETIN

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## FORE WARD

This Agro met Bulletin is prepared and disseminated by the Ethiopia Meteorology Institute (EMI). 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.

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## SUMMARY

During the first dekad of March, due to the relative strengthening of rain bearing weather systems better moisture has been steadily improving day by day, particularly north eastern, central and eastern parts of the country experienced light to medium moisture. Heavy rainfall was also recorded in some places including Addis Ababa Bole 51.0mm, Addis Ababa head office 37.0mm, Dire dawa 47.0mm, Methara 39.1mm, Addele 33.6, Ambo 49.0, Bati 34.5, Bedele 43.2, Dembi delo 38.6, and Mehal meda 35.8mm. This condition might have positive impact to perform land preparation and planting for Belg season crops in areas where the rain onset was a bit delayed from its normal time of sowing as well as for perennial plants and early sowed crops. In addition, the condition had been favorable toward improving the availability of pasture and drinking water over the pastorals and agro-pastoral communities. Moreover, the obtained heavy rainfall could be favorable, for farmers who are in moisture stress areas, to collect and store rainwater where that can be used in time of deficit. On the other hand, daily extreme maximum temperature has shown a relative increase over northeast, southeast, southern margin areas recorded Temperatures above 35°C and some places experienced above 40°C. This, coupled with the lack of moisture in the sunny and hot weather, had a negative impact on the general agricultural activity as well as the provision of animal feed and drinking water for over most of the rang land.

During the second dekad of March, the amount and distribution of moisture over Belg growing areas was better compared to the previous dekad. Due to the relative strengthening of weather systems that bring rain particularly in the northeast, east, central, southern and south eastern regions of the country's had moderate to high moisture condition. This situation had positive role for land preparation, sowing of Belg crops as well as satisfy the water need of perianal plants and for availability of pastors and drinking water across the pastoral and agro-pastoral areas. Heavy rainfall was also recorded in 24 hours in most part of the country including chifera 104.0, 51.0, 42.0mm and 30.4mm, Addis Ababa 41.4mm, 31.0, 51, Dalifagi 88.0mm, Burji 34.8mm, Aman 62.6mm, Mega 35mm, Wolita Sodo 40.3, 45.5 and 49.3mm, Woliso 35.6mm, Semera 46.0mm, Dubti 71mm, Shambu 35.5mm, Sawela 71.1mm, Nekemt 56.2mm, Milli 50.0mm, Moyale 43.5 and 32.8mm, Meisso 50.0mm, Metehara, 33.0, 37.6mm, Mirab Abaya 44.0mm, Kebridehar 30.0 and 44.8mm, Gewane 30.4and 30.4mm, Fik 94.3mm, Gelemso 36.2mm, Elidar 30.7mm, Enewary 36.0mm, Dilla 30.8mm, Dolomena 30.5mm, Diredawa 33.4mm, Bore 82.0,32.1 and 33.0mm, Bilate 45.1mm, Bui 45.5mm, Bati

32.0 and 35.0mm, Awash Arba 55.0mm, Adele 39.2mm, Hromaya 36.6mm, Abomsa 48.4mm and Yabello 66.5mm rain fall. This situation also created a good opportunity to collect and store rainwater, especially for the areas that have shortage of water. However the recorded heavy fall might have a negative impact on animals, people and property, as well as on the crops that were sown earlier and at different stages of development. On the other hand, in the low-land areas of the north-west, west and south-west of the country, the highest temperature of the day was recorded above 40 degrees Celsius. It had negative impact on the overall agricultural activity and the supply of animal fodder and water in the pastoral area.

# 1. WEATHER ASSESSMENT

## 1.1. Rainfall amount (11 – 20 March 2023)

During the first decade of march 2023, North and South Gonder, Waghimera, North and South Wello, Oromi Zone, Bahir Dar, West and East Gojjam , North, West and Sout west Shewa, West and East Wellega, Tango,pocket areas of Assosa, Gambella Zone1,2&3,Godere, Keffa, Illibaur, Jimma, Guragi, Siliti, Alaba, Hadiya, Wolita, pocket areas of Arsi and West Hararghe, Afar Zone 1&5 Zones was experienced Normal to Above Normal Rain fall condition.

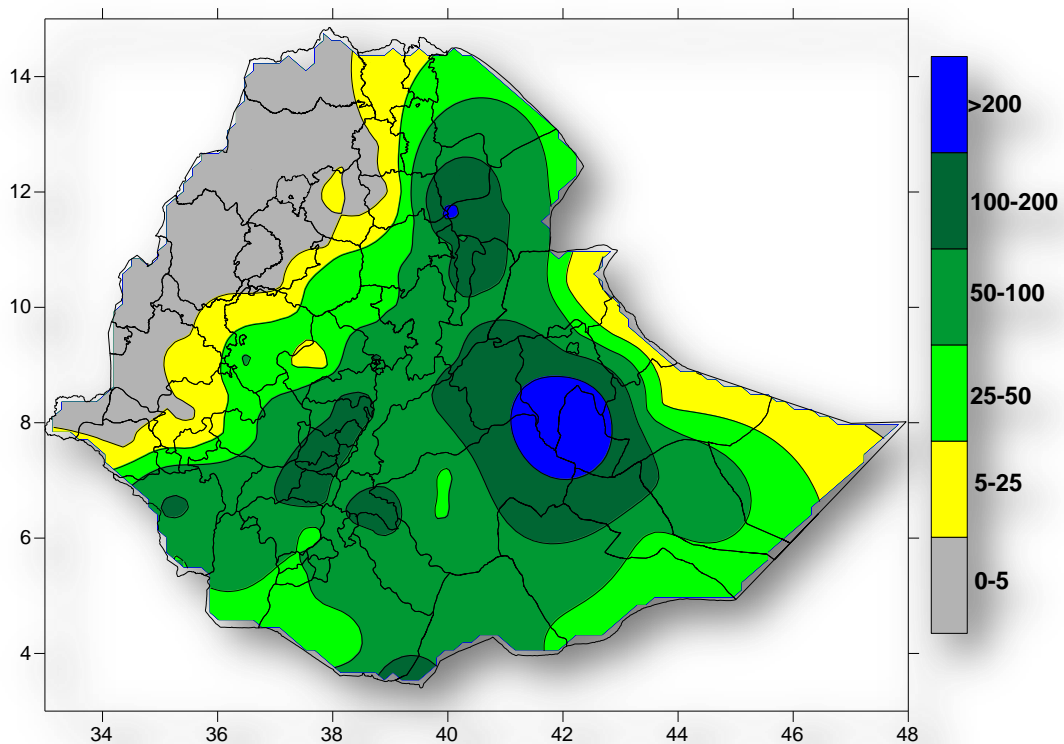


Fig 1. Rainfall distribution in mm (11 – 20) March 2023

## 1.2. Rainfall Anomaly (11 – 20 march, 2023)

During the first decade of march 2023, North and South Gonder, Waghimera, North and South Wello, Oromi Zone, Bahir Dar, West and East Gojjam , North, West and Sout west Shewa, West and East Wellega, Tango,pocket areas of Assosa, Gambella Zone1,2&3,Godere, Keffa, Illibaur, Jimma, Guragi, Siliti, Alaba, Hadiya, Wolita, pocket areas of Arsi and West Hararghe, Afar Zone 1&5 Zones was experienced Normal to Above Normal Rain fall conditio

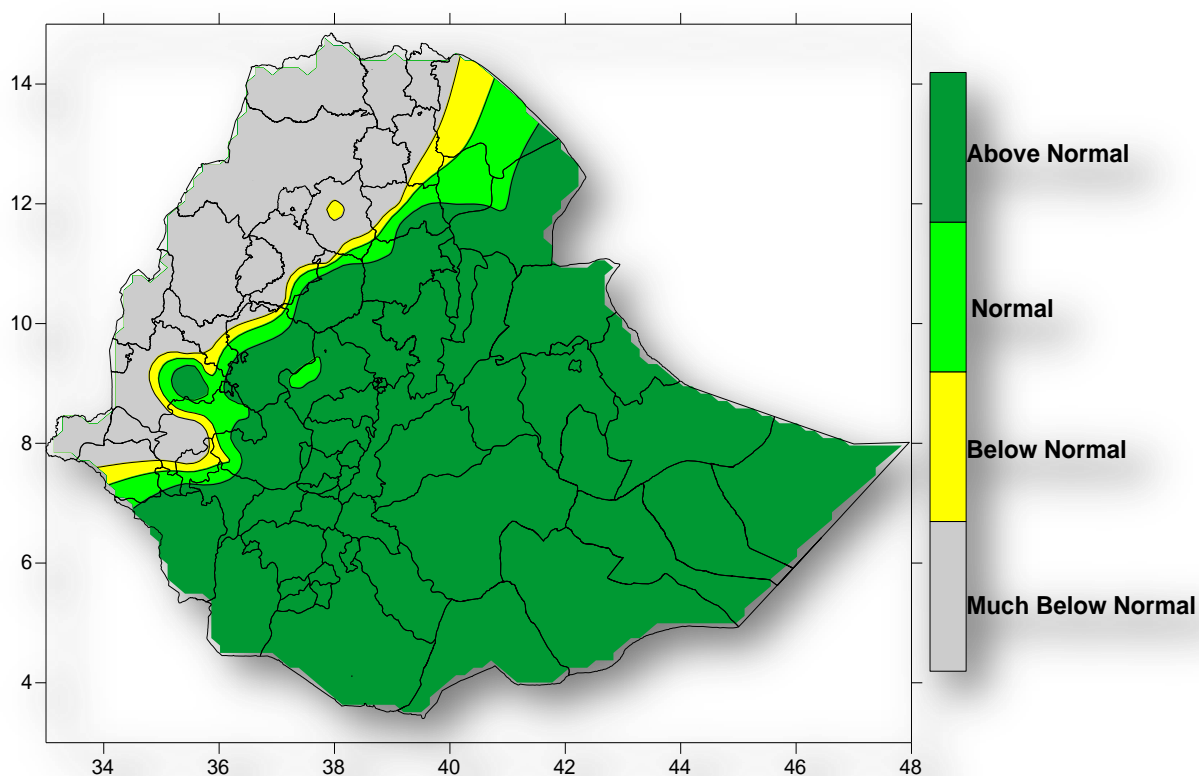


Fig.2 Percent of normal rainfall distribution (11 – 20 March, 2023)

### Explanatory notes for the Legend

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

### 1.3. Moisture Condition (11 – 20 March 2023)

As indicated on the moisture status map below during third dekad of March 2023 most parts of Belg growing and rain benefiting areas of the country exhibited Moist to Hyper Moist moisture condition. The rest parts of the countries exhibited moderately Dry too Very Dry.

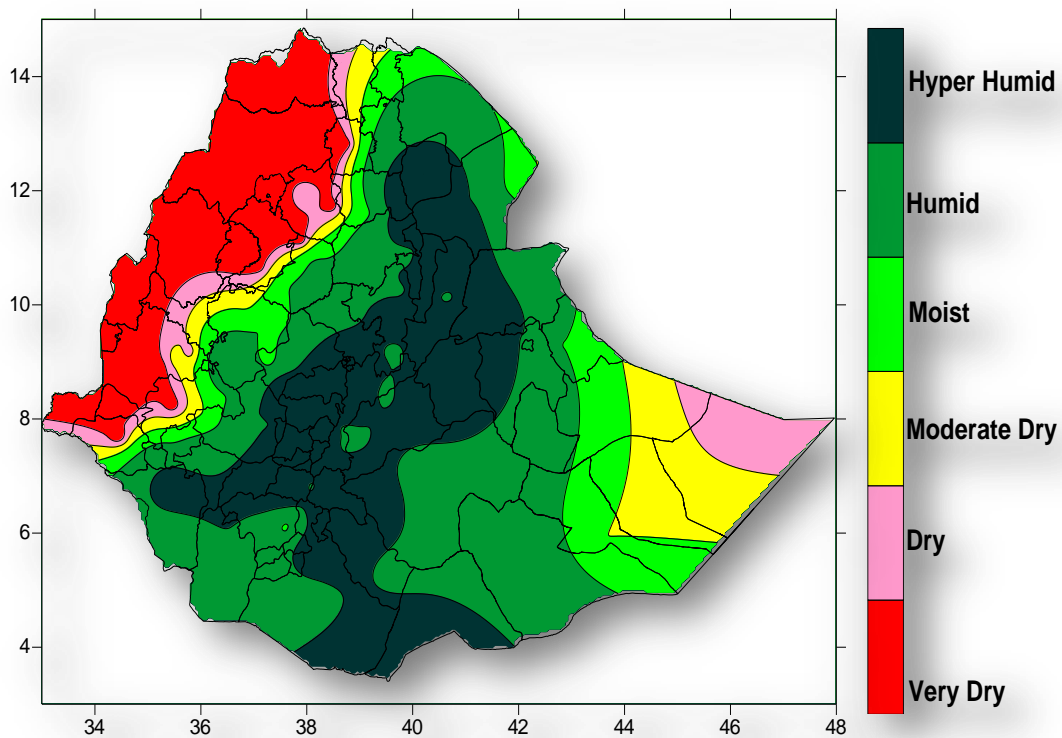


Fig. 3 moisture status for (11 – 20 March, 2023)



## 2. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE

### 2.1. VEGETATION CONDITION AND IMPACT ON AGRICULTURE

During the second dekad of March, due to the relative strengthening of rain bearing weather systems better moisture has been experienced over Belg producing and rain benefiting areas of the country, according to this increment the vegetation condition across the country particularly western and north-eastern, central and some of southern parts exhibited good vegetation condition (Fig.4. NDVI and Rangeland WRSI in %) while most of the southern and south-eastern part experienced large to small deterioration of greenness. This condition might have positive impact to perform land preparation and planting for Belg season crops in areas where the rain onset was a bit delayed from its normal time of sowing as well as for perennial plants, early sowed crops and availability of pastors and drinking water over pastoral and agro-pastoral areas.

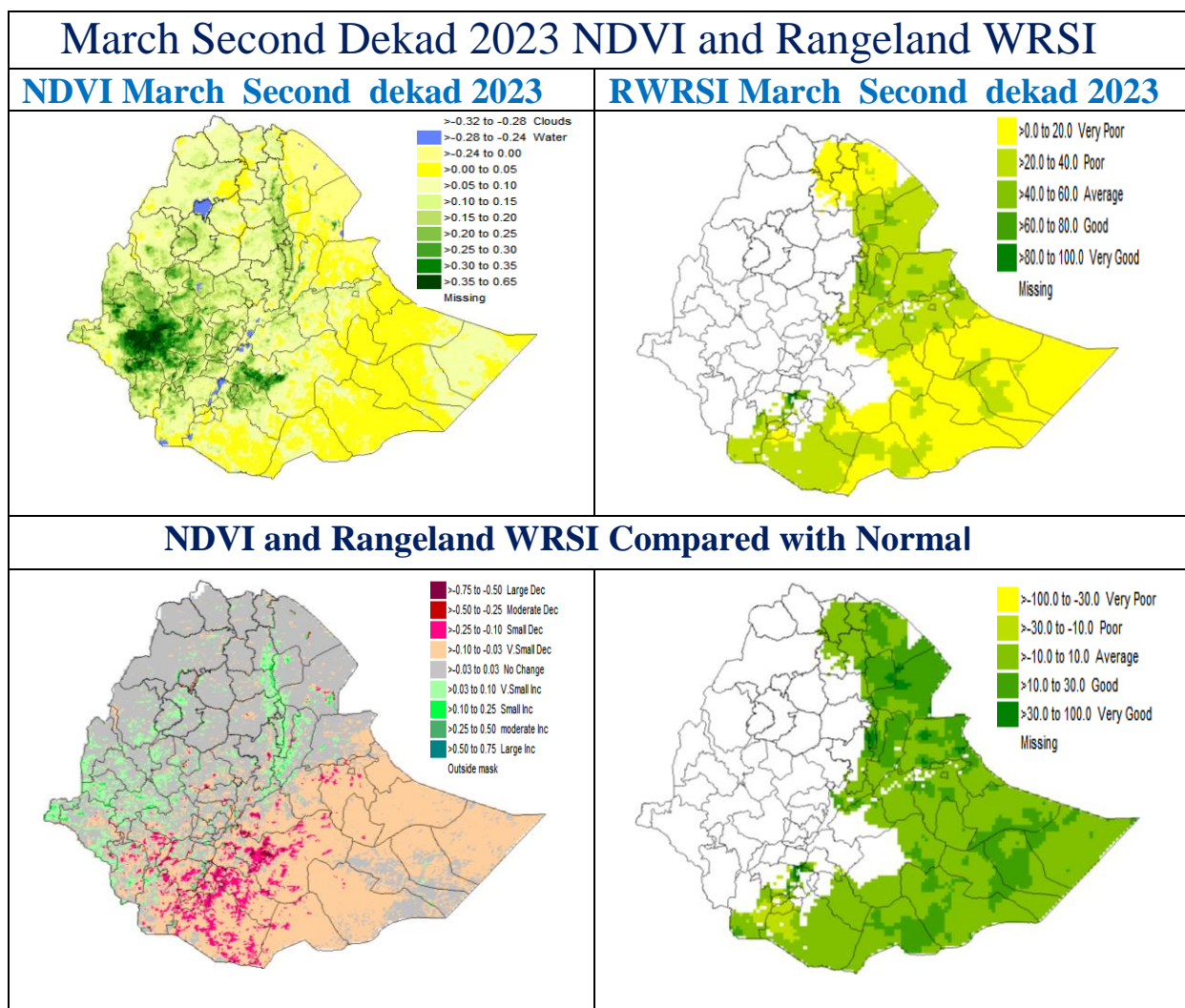


Fig.4. NDVI and Rangeland WRSI in % and Compared to Normal - March 11-20, 2023

## **2.2. EXPECTED WEATHER IMPACT ON AGRICULTURE DURING THE COMING THIRD DEKAD of MARCH 2023**

In normal condition, the last dekad of March is characterized by a gradual improvement in moisture both in time and space over the north east, east, south and south east of the country and this enables farmers to perform land preparation as well as sowing of Belg season crops.

According to the weather forecasts during the coming third dekad of March the moisture conditions are expected to enhance over Belg season crop growing and rain benefiting areas. In line with this, Oromia region of eastern wollega, Jimma, Ilubabur, Arsi and Bale, Borena and Guji, western and northern Shewa, eastern and western Harerge, Harari region Dire dewa, Addis Ababa, Gambele region of Mejenger zone, Amhara regions of north and south Wello, north shewa, Tigray regions of southern and eastern Tigray zones, Afar regions of Zone 3, 4 and 5, SNNPR region zones, South-western region zones, and Somali regions of most zones expected slight to moderate rainfall. This situation will improve moisture availability for seasonal agricultural activities, particularly water requirement of early sown Belg crops found at emergency stage, perennial plants, land preparation of long cycle crops which normally sown after the mid of March and pasture and drinking water availability over south and south eastern pastoral and agro pastoral areas of the country. Therefore, concerned bodies and farmers are advised to use the expected moisture wisely and efficiently. However, the expected heavy fall over some areas particularly, over eastern Amhara, northern and southern Afar, Negele, Bore, Dolomena, Mega, Yabelo, Moyale and some parts of Somali zones would have cause flash flood and water logging on crops field in low lying areas. Thus, proper attention should be undertaken to minimize the risk in areas where there is no proper drainage system and low-lying areas making channel in order to reduce the effect of excess water. On the contrary the expected improvement in moisture may also give good opportunity for collecting and storing of excessive rain water particularly for moisture stress areas and this may provide them a good chance to utilize it where that can be used in time of deficit. On the other hand, the expected daily maximum temperature above 35°C in low land parts of the country coupled with sunny and hot weather enhance evapotranspiration had a negative impact on the general agricultural activity as well as the provision of animal feed and drinking water. Thus, farmers and the concerned body's proper attention should be given proper moisture conservation and water harvesting.

### **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.

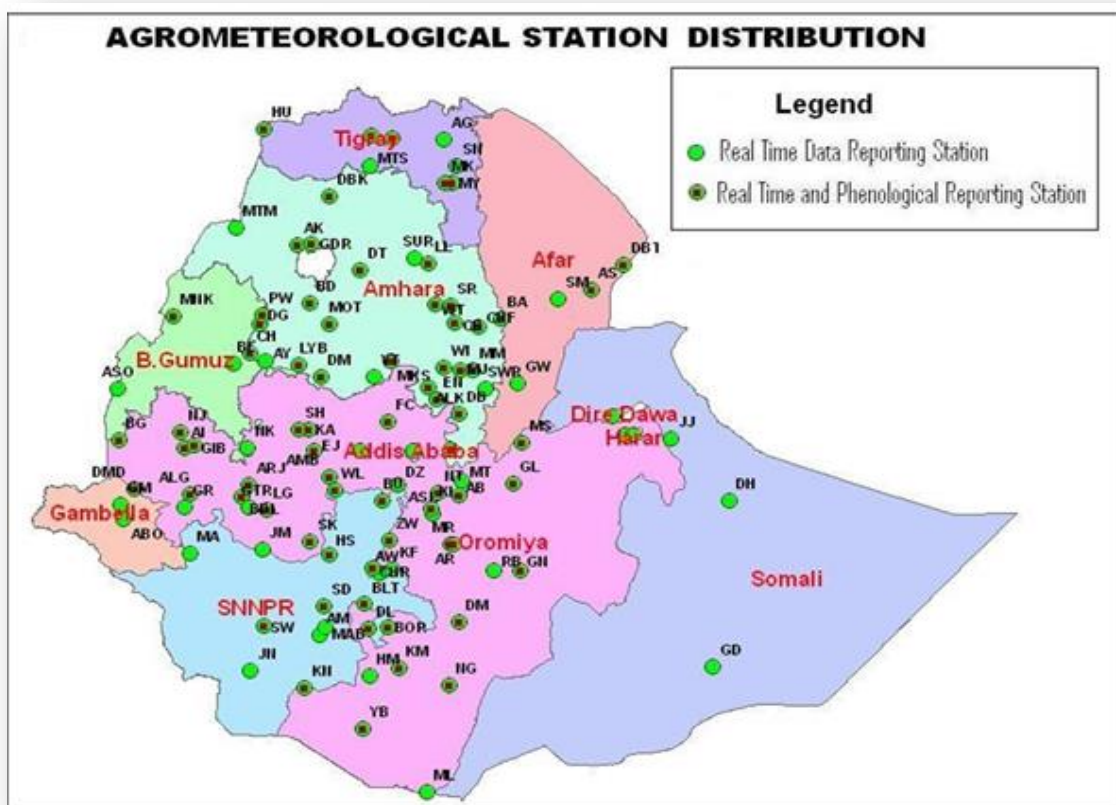
**DEKAD:** - First or second ten days or the remaining days of a month.

**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



Station	Code	Station	Code	Station	Code	Station	Code
A. Robe	AR	D. Zeit	DZ	Humera	HU	Nazereth	NT
A.A. Bole	AA	D/Dawa	DD	Jijiga	JJ	Nedjo	NJ
Adigrat	AG	D/Mena	DOM	Jimma	JM	Negelle	NG
Adwa	AD	D/Odo	DO	Jinka	JN	Nekemte	NK
Aira	AI	D/Tabor	DT	K.Dehar	KD	Pawe	PW
Alemaya	AL	Dangla	DG	K/Mingist	KM	Robe	RB
AlemKetema	ALK	Dilla	DL	Kachise	KA	Sawla	SW
Alge	ALG	Dm.Dolo	DMD	Koffele	KF	Sekoru	SK
Ambo	AMB	Dubti	DBT	Konso	KN	Senkata	SN
Arba Minch	AM	Ejaji	EJ	Kulumsa	KL	Shambu	SH
Asaita	AS	Enwary	EN	Lalibela	LL	Shire	SHR
Asela	ASL	Fiche	FC	M.Meda	MM	Shola	SG
Assosa	ASO	Filtu	FL	M/Abaya	MAB	Gebeya	SG
Awassa	AW	Gambela	GM	Maichew	MY	Sirinka	SR
Aykel	AK	Gelemso	GL	Majete	MJ	Sodo	SD
B. Dar	BD	Ginir	GN	Masha	MA	WegelTena	WT
Bati	BA	Gode	GD	Masha	MA	Woliso	WL
Bedelle	BDL	Gonder	GDR	Mekele	MK	Woreilu	WI
BUI	BU	Gore	GR	Merraro	MR	Yabello	YB
Combolcha	CB	H/Mariam	HM	Metehara	MT	Ziway	ZW
D. Berehan	DB	Harer	HR	Metema	MTM		
D. Habour	DH	Holleta	HL	Mieso	MS		
D. Markos	DM	Hossaina	HS	Moyale	ML		
				M/Selam	MSL		