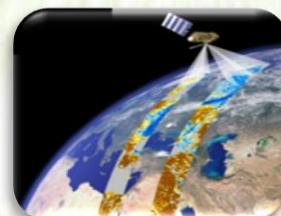


ETHIOPIA METEOROLOGY INSTITUTE

Agrometeorological Bulletin

TEN DAY AGROMETEOROLOGICAL BULLETIN

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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.

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SUMMARY

During the first decade of December, the dry, sunny and windy weather conditions was observed in most parts of the country. This situation was supposed to be more favourable to conduct harvest and post-harvest activities of fully matured crops. However, the dry and windy weather conditions increased during night and morning time was observed, especially in some parts of the northeast, central, eastern and southern highlands of the country. Along with the increase in cold temperatures were recorded below 5 degrees Celsius in some areas. In line with Debre Brehan 0.8, 1.4, 4.2, 3.6, 3.2, 4.8, Haromaya 0.6, 0.2, 2.0, 1.8, 2.4, 1.0, 1.8, 1.8, and 2.4, Bui 4.0, 3.0, 4.0, 4.5, 4.0, 4.6, and 4.0, Chefa 2.4, 2.8, 3.0, 2.4, 3.2, 2.4, 3.4, 3.6, 4.8, and 4.2, Adelle 4.0, 2.5, 2.2, 4 and 4.5, Mehal Meda 2.2, 2.8, 3.2, 4.5, 4.2, 4.8, and 2.2, Arsi Robe 4.5, 4.5, 4, 4, and 3.0, Dangela 4.6, Debark 4.5, 4.5 and 4.4, Debre Work 4.8, and 4.8, Jimma 4.5, Robe 3.4, 3.6, 4.2 and 4.4, Nekemt 1.0, Yetnora 4.1 Wegel Tena 4.5, 4.0, 4.0, 2, -0.2, 1.4, 2.6, 3.2, 2.6, and 3.2 degree Celsius. This condition had a negative side to some extent on the productivity of animals and the growth of irrigated vegetables and fruit plants. On the other hand the moisture condition was enhanced over most parts of Bega season rain benefiting areas particularly western and southwestern parts of the country. Moreover heavy fall was reported from some parts of the country. In line with this, the recorded agrometeorological stations indicated that Gambela 40.9, Jinka 33.5, Masha 36.8, Sawela 51.0, and Gore 35.0mm rain fall were received in one rainy day. The observed moisture might have positive implication for fulfilling the water need of various Bega crops and perennial plants as well as the availability pasture and drinking water. Similarly, since Bega is the second rainy season for the southern Oromia and Southern Somali s parts of the country, the received rain during the dekad could play very crucial role to satisfying the water needs of perennial plants and positive effect on the availability of pasture and drinking water in pastoral and agro-pastoral areas.

During the second dekad of December 2022, according to meteorological information collected from all over the country the particularly the first half of the dekad it was observed that the Bega season dry, sunny and windy conditions have prevailed in most part of the country. This condition might have a positive impact for post-harvest activities in Meher growing areas, where crops were fully matured. However, in relation to the prevailing dry weather condition, some high land areas like western, northern, central and eastern parts of the country experienced low minimum temperature below 5⁰C. This condition might have negative

implication on the development of Bega season irrigated crops as well as on fruit, vegetables and perennial plants. On the other hand, particularly the first half of the dekad it was observed that slight to moderate rain in some parts of north-western, south-western and central parts of the country could have a positive implication to satisfy the water need of perennial plants and the supply of pasture and the availability of drinking water over the southern half of the country as well. Whereas, since Bega is the second rainy season for the southern and south-eastern low land parts of the country, the dry condition during the dekad could exacerbate to the previous decade's deficit moisture condition for different agricultural activities over pastoral and agro pastoral areas.

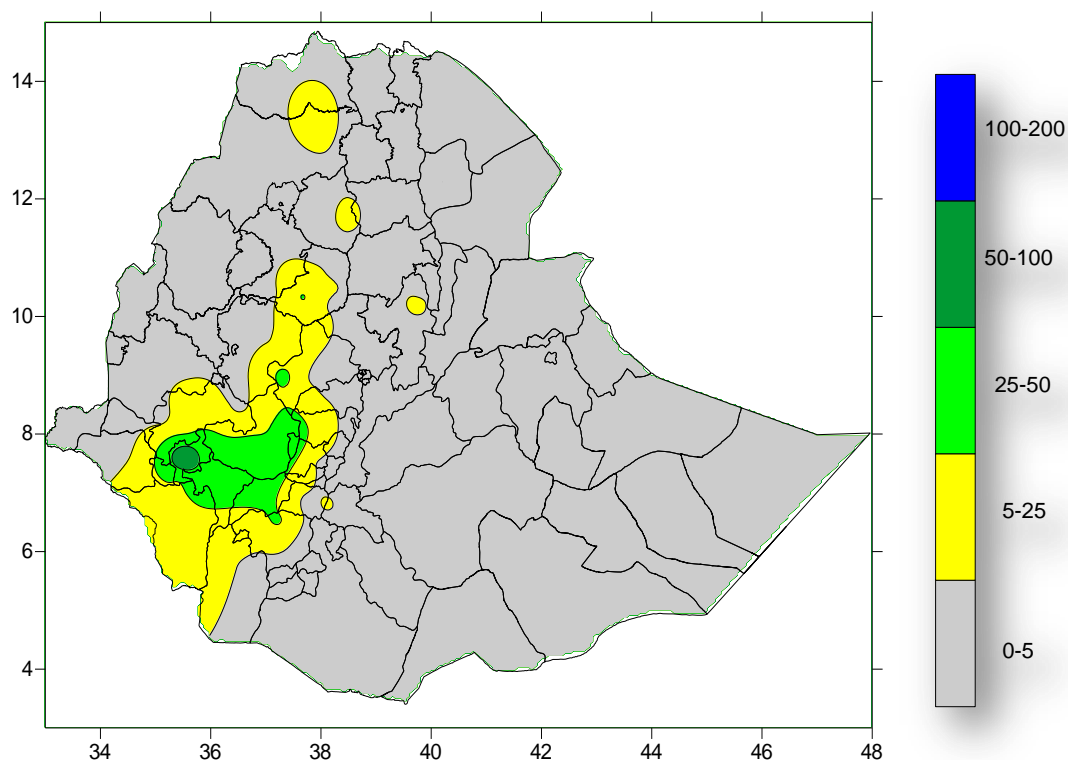


Figure 1. Rainfall distribution in mm (11 – 20) December 2022

1. WEATHER ASSESSMENT

1.1. Rainfall amount (11 – 20 December, 2022)

During the second of December 202, most parts of Sheka zone experifnced 50-100mm of rainfall. Pocket area of East Wellega, most parts of Kefa, Bench Maji Baseketo and mezenger zone received 25-50mm of rainfall. Pocket area of north and south Gonder, Parts of East and West Wellega, Ilubabur, Jimma, Keffa, Basketo, Bench- maji and South omo received 5-25mm of rainfall. The rest parts of the country exhibited little or no rainfall.

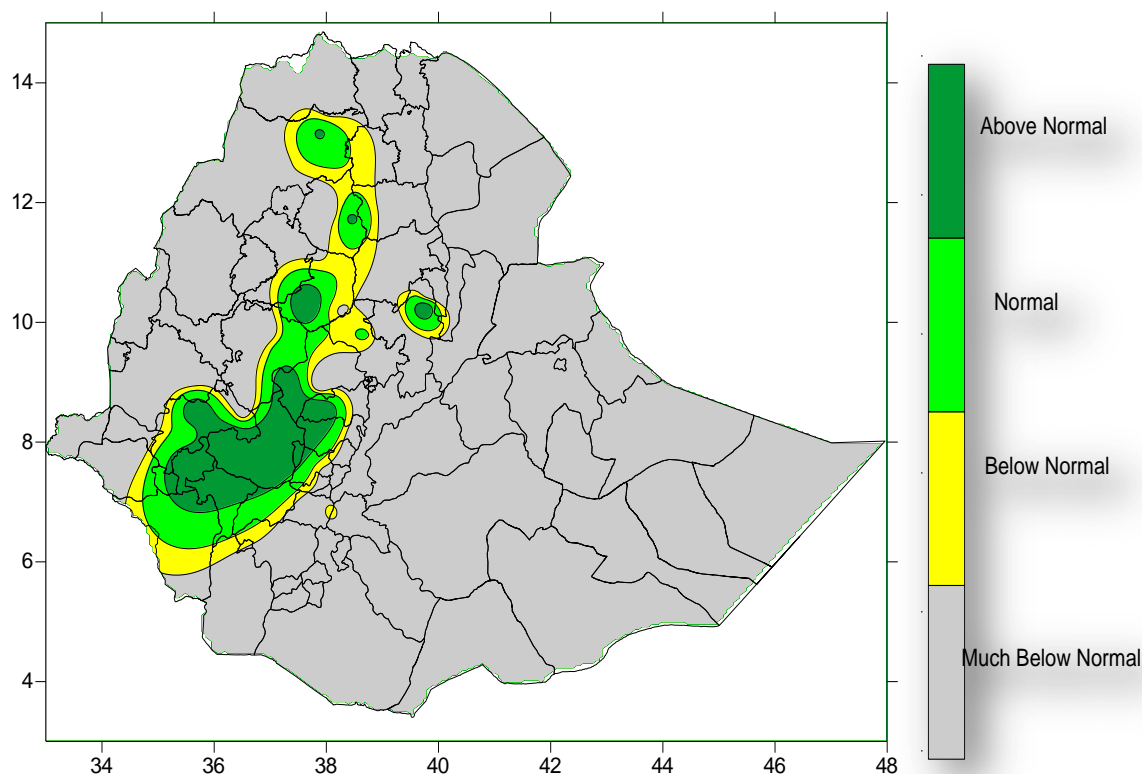


Figure 2: Percent of normal rainfall distribution (11-20 December 2022)

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 December, 2022)

During the first dekad of December 2021, pocket area of north and south Gonder, south Wollo, north Shewa, Kamashi, east and west Wellega, west and south west Shewa, Gambela zone 3, Sheka, Godere, Keffa, Jimma, Bench Maji, Basketo and South Omo receive Normal to Above Normal. The rest parts of the countries receive Below Normal too Much Below Normal.

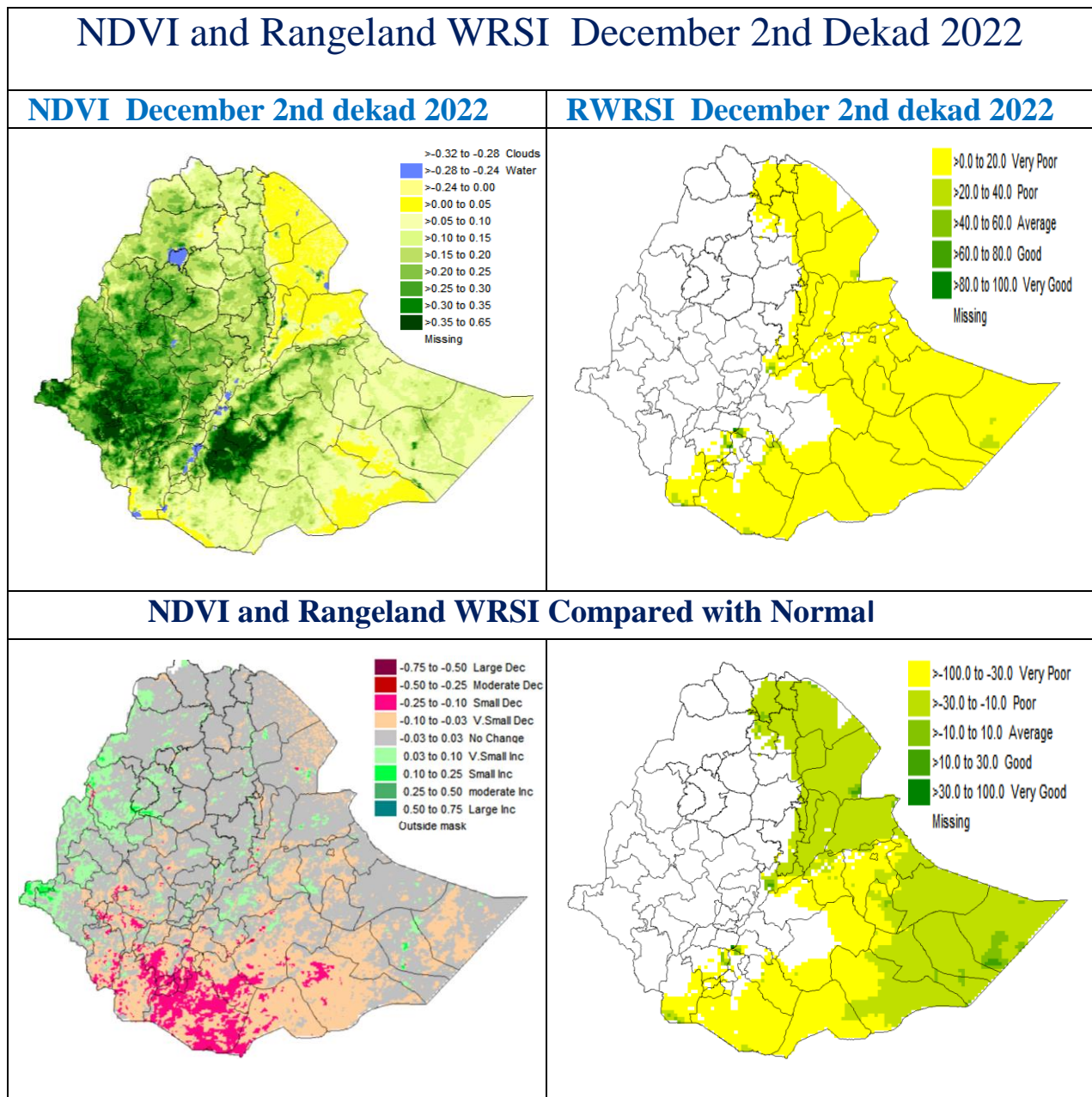


Fig.4. NDVI and Rangeland WRSI in % and Compared to Normal December 11-20, 2022

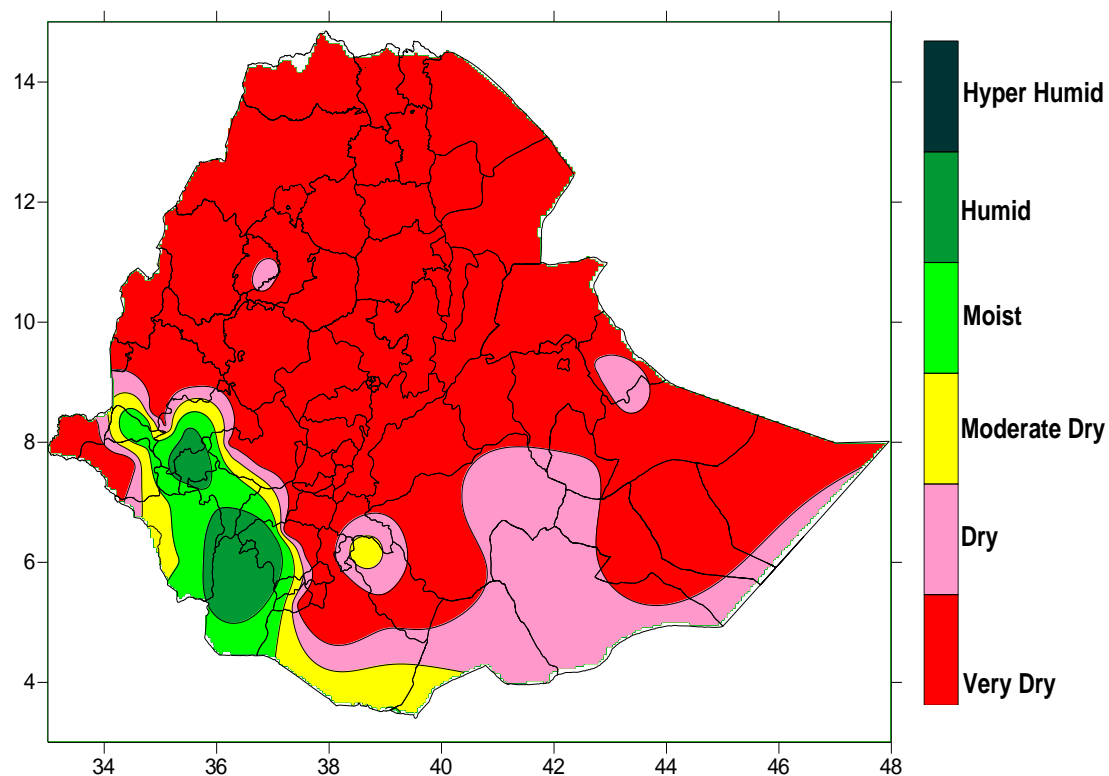


Figure.3. Moisture Status (11-20 December 2022)

1.3. Moisture Condition (11 – 20 December, 2022)

During the second dekad of Decemberber 202, South Omo, Bench Maji, Mezhenger, Sheka, southern parts of Ilubabur, Gamebela region of Agnuak, some parts of Derash, Konso and Borena exhibited Hyper Moist to Moist. The rest parts of the countries exhibited moderately Dry too Very Dry soil moisture.

2. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE

2.1. Vegetation Condition and Impact on Agriculture

Generally during the dekad under review, according to meteorological information collected from all over the country the particularly the first half of the dekad it was observed that the Bega season dry, sunny and windy conditions have prevailed in most part of the country. This condition might have a positive impact for post-harvest activities in Meher growing areas, where crops were fully matured. However, in relation to the prevailing dry weather condition, some high land areas like western, northern, central and eastern parts of the country experienced low minimum temperature below 5⁰C. This condition might have negative implication on the development of Bega season irrigated crops as well as on fruit, vegetables and perennial plants. On the other hand, particularly the first half of the dekad it was observed that slight to moderate rain in some parts of north-western, south-western and central parts of the country (Fig.4. NDVI and Rangeland WRSI in %) could have a positive implication to satisfy the water need of perennial plants and the supply of pasture and the availability of drinking water over the southern half of the country as well. Whereas, since Bega is the second rainy season for the southern and south-eastern low land parts of the country, the dry condition during the dekad could exacerbate to the previous dekad's deficit moisture condition for different agricultural activities over pastoral and agro pastoral areas.

2.2. Expected weather impact on agriculture during the coming third dekad of December 2022

In Normal condition, during the last dekad of December are the time when most of the crop harvesting and post-harvest activities widely take place in most of Meher crop growing areas, while mostly cold condition prevails at night and morning parts of the day.

According to the weather forecast, in the upcoming last dekad of December 2022, the Bega season dry, sunny and wind weather condition with cold night and morning is likely to be continued in the coming dekad over the highland areas of the country. The expected dry, Sunny and windy condition should be favourable perform harvest and post-harvest activities over the place where Meher season crops are fully matured. Thus, farmers are strongly advised to use this opportunity to collect fully matured crops in the meanwhile. However, in line with the expected dry weather condition, along with the night and early morning cold weather may gradually increases over the highland land parts of the country and it may lead to the formation of frost that in turn may have slight negative impact on irrigated crops, fruit, vegetables and other horticulture plants as well as animal's health condition. Therefore, farmers need to be assisted by agricultural professional for effective management of cold conditions. On the other hand, Small amount of moisture is expected in some parts of the central, western, southwestern and southern half of the country. The expected moisture had been significant important improvement of Bega season crops and perennial plants as well as to ensure the availability of pasture and drinking water for the pastoral and agro pastoral community. On the other hand, the expected slight moisture in areas that have not yet completed their crop harvest and are in the process of post-harvest activities is not expected to have a significant negative impact on crop gathering practices, however, caution is in order for it may have a slight negative impact in some areas.

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.

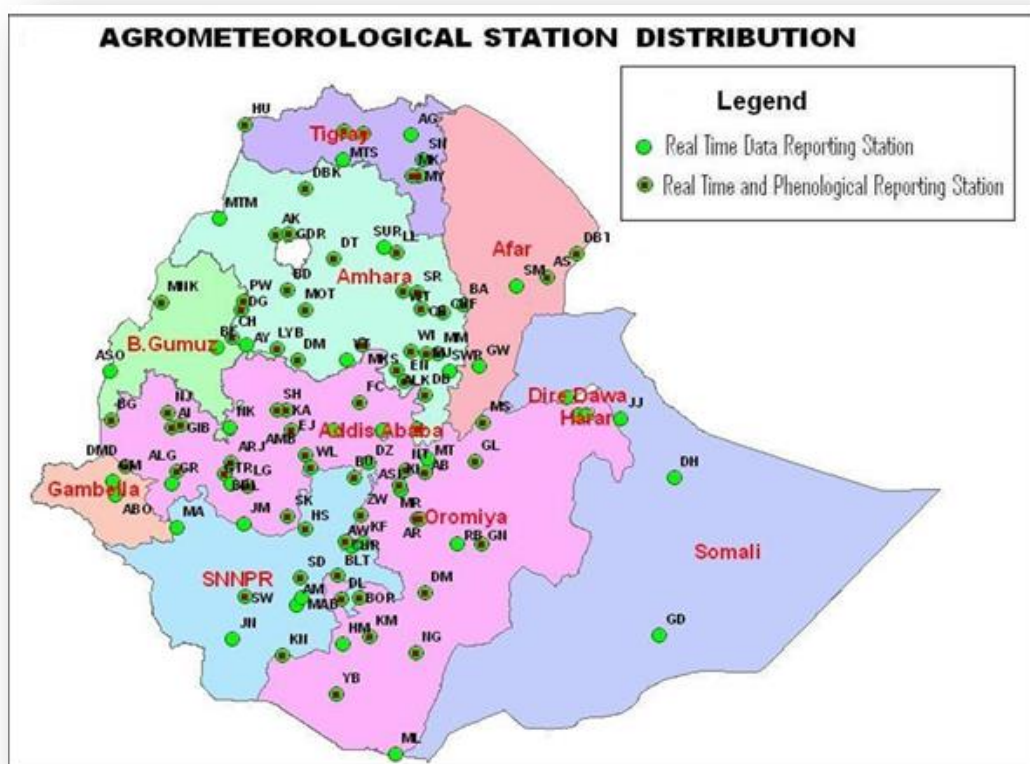
DEKAD: - First or second ten days or the remaining days of a month.

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	SR
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	H/Hariam	HM	Metema	MTM		
D. Habour	DH	Harer	HR	Mieso	MS		
D. Markos	DM	Holleta	HL	Moyale	ML		
		Hossaina	HS	M/Selam	MSL		