

## FORE WARD

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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አህዕሮት  
እ.ኤ.አ ዲሴምበር 2017

ባለፉት የዲሴምበር የመጀመሪያዎቹ አስር ቀናት የበጋው ደረቅ፣ ፀሐያማና ነፋሻማ የአየር ሁኔታ በአብዛኛው የሀገሪቱ ክፍሎች ላይ የተስተዋለ ሲሆን ይህም ሁኔታ የመኸር ወቅት ሰብል አብቃይ በሆኑት በአብዛኛው የሀገሪቱ ክፍሎች ለሰብል ስብሰባና ድህረ ሰብል ስብሰባ አመቺ ሁኔታን የፈጠረ ነበር። በሌላ በኩል በአንዳንድ ለውርጭ ተጋላጭ በሆኑ የሀገሪቱ ክፍተኛ ቦታዎች ላይ ከቀኑ ዝቅተኛ የሙቀት መጠን የተነሳ በሌሊትና በማለዳ የተስተዋለው ቅዝቃዜ በእንሰሳት ስምሪትም ሆነ በተለያዩ የእድገት ደረጃ ላይ ለሚገኙና ፍሬ የማፍራት ደረጃቸውን ላልጨረሱ የመኸር ሰብሎች በመጠኑም ቢሆን አሉታዊ ተጽዕኖ እንደነበረው ይታመናል። በሌላ በኩል በደቡብ ምዕራብ (በጋምቤላና በማሻ) የነበረው ዝቅተኛ የእርጥበት ሁኔታ ዘግይተው ለተዘፋና የእድገት ደረጃቸውን ላልጨረሱ ሰብሎችና ቋሚ ተክሎች የውኃ ፍላጎት መሟላት በጎ ጎን ነበረው።

እንዲሁም ባሳለፍነው የዲሴምበር ሁለተኛ አስር ቀናት የበጋው ደረቅ፣ ፀሐያማና ነፋሻማ የአየር ሁኔታ በሁሉም የሀገሪቱ ክፍሎች ላይ የተስተዋለ ሲሆን ይህም ሁኔታ መኸር አብቃይ በሆኑት በአብዛኛው የሀገሪቱ ክፍሎች ለሰብል ስብሰባና ድህረ ሰብል ስብሰባ አመቺ ሁኔታን የፈጠረ ነበር። በሌላ በኩል በአንዳንድ ለውርጭ ተጋላጭ በሆኑ የሀገሪቱ ክፍተኛ ቦታዎች ላይ ከቀኑ ዝቅተኛ የሙቀት መጠን የተነሳ በሌሊትና በማለዳ የተስተዋለው ቅዝቃዜ በእንሰሳትም ሆነ በጓሮ አትክልትና በፍራፍሬ ተክሎች ላይ አሉታዊ ተጽዕኖ እንደነበረው ይገመታል። በሌላ በኩል በደቡብና በደቡብ ምስራቅ የሀገሪቱ ክፍሎች በጋ ሁለተኛ የዝናብ ወቅታቸው በመሆኑ የነበረው በጣም ደረቃም የእርጥበት ሁኔታ በአርብቶ አደሮች፣ ከፊል አርብቶ አደሮች እና በተለያዩ የእድገት ደረጃ ላይ ለሚገኙ ሰብሎች የውሃ ፍላጎታቸውን ከማሟላት አኳያም ሆነ በመጠጥ ውሃና በግጦሽ ሳር አቅርቦት ላይ አሉታዊ ተጽእኖ እንደነበረው ይገመታል።

በተመሳሳይ ሁኔታ ባሳለፍነው የዲሴምበር የመጨረሻ አስር ቀናት በሁሉም የሀገሪቱ አካባቢዎች ላይ የበጋው ደረቃማ፣ ነፋሻማና ፀሃያማ የአየር ሁኔታ ከሌሊቱና ከማለዳው ጠንከር ያለ ቅዝቃዜ ጋር ተዳምሮ ተስተውሏል። የነበረው ደረቃማው የአየር ሁኔታ የሰብል ስብሰባና የድህረ ሰብል ስብሰባ እንቅስቃሴ ለማከናወን በጎ ጎን እንደነበረው ይታመናል። በአንፃሩ በአንዳንድ ደጋማ አካባቢዎች ላይ የተስተዋለው ጠንከር ያለ ቅዝቃዜ ለፍራፍሬ ተክሎችም ሆነ ለጓሮ አትክልቶች ሁለንተናዊ እድገት ምቹ እንዳልነበረ ይገመታል።

በአጠቃላይ ባሳለፍነው የዲሴምበር ወር የበጋው ደረቃማ፣ ፀሃያማና ነፋሻማ የአየር ሁኔታ

ከሌሊቱና ከማለዳው ቅዝቃዜ ጋር ተዳምሮ በአብዛኛው የሀገሪቱ ስፍራዎች ላይ ተስተውሏል፡፡ ይህም ሁኔታ በወቅቱ እየተከናወነ ካለው የግብርና እንቅስቃሴ አንፃር በጎ ጎን እንደነበረው ግምት መውሰድ ይቻላል፡፡ በመሆኑም በወሩ ውስጥ የተስተዋለው የአየር ሁኔታ የደረሱ ሰብሎች እንዲደርቁ፤ በጊዜ እንዲሰበሰቡና የድህረ ሰብል ስብሰባ ተግባራትን ለማከናወን ምቹ ጊዜ እንደነበረ ይታመናል፡፡ በሌላ መልኩ በአንዳንድ ደጋማ በሆኑ የሀገሪቱ ከፍተኛ ቦታዎች ላይ ከቀኑ ዝቅተኛ የሙቀት መጠን የተነሳ በሌሊትና በማለዳ የተስተዋለው ቅዝቃዜ በእንሰሳትም ሆነ በጓሮ አትክልትና ፍራፍሬ ተክሎች ላይ አሉታዊ ተጽዕኖ እንደነበረው ይገመታል፡፡ እንዲሁም የበጋን ወቅት እንደሁለተኛ የዝናብ ወቅታቸው ለሚጠቀሙና የጥምር ግብርናን በሚያከናውኑ የደቡብና የደቡብ ምስራቅ አካባቢዎች የተስተዋለው በጣም ደረቃም የእርጥበት ሁኔታ በተለያዩ የእድገት ደረጃ ላይ ለሚገኙ ሰብሎችም ሆነ ለእንሰሳት የግጦሽ ሳርና የመጠጥ ውኃ አቅርቦት አሉታዊ ጎን እንደነበረው ይገመታል፡፡

## SUMMARY

**December 2017**

During the first dekad of December 2017, the Bega season dry, sunny and windy weather conditions have prevailed in most part of the country. This condition might play positive role to carry out harvest and post harvest activities in areas where crops were fully matured. On the other hand, the observed cold weather situations at night and early morning time over some high land areas could be negative on livestock production as well as on various fruits and vegetables. However, moderately dry to humid moisture condition was observed over some areas of Gambela and Masha. This might favors perennial plants to fulfill their water need and to improve the availability of pasture as well as drinking water for pastoral and agro pastoral areas.

Likewise, during the second dekad of December 2017, the Bega season dry, sunny and windy weather condition have been observed over all parts of the country. This dry weather condition was believed to be favorable for harvesting fully matured crops and to conduct post harvest activities in most meher growing areas of the country. On the other hand, the observed cold weather situations at night and early morning time over some high land areas might have detrimental effect on livestock production as well as on various fruits and vegetables. Similarly, the prevailing very dry moisture condition due to the fail of dekadal rainfall over the southern and southeastern parts of the country have a negative impact on the supply of pasture and drinking water for pastoralists and agro pastoralists.

Similarly, during the third dekad of December 2017, the dry, sunny and windy Bega weather condition in combination with chilly weather at night and early morning have prevailed almost in all parts of the country. This situation could favor to conduct harvest and post-harvest activities in the areas where crops are readily matured. On the other hand, the observed cold weather situations at night and early morning time over some high land areas might have detrimental effect on livestock production as well as on various fruits and vegetables. Similarly, the prevailing very dry moisture condition due to the fail of dekad rainfall over the southern and southeastern parts of the country have a negative impact on the Bega season growing crops particularly those which are found at different growing stages. In addition the situation could have negative impact for pastoralists and agro pastoralists with respect to providing pasture and drinking water.

In general, during the previous month of December 2017, the Bega season dry, sunny and windy weather in combination with night and morning time chilly condition was prevailed in most parts of the country. The situation could be taken as positive to carry out the expected agricultural activities in the current season. Therefore, the observed weather during the month under review was favorable to ensure the maturity of crops as well as to conduct harvest and post harvest practices. On the other hand, the observed cold weather situations at night and early morning time over some high land areas might have detrimental effect on livestock production as well as on various fruits and vegetables. Similarly, the prevailing very dry moisture condition due to the fail of dekad rainfall over the southern and southeastern parts of the country have a negative impact on the Bega season growing crops particularly those which are found at different growing stages. In addition the situation could increase the water stress for both pastoralists and agro pastoralists toward the availability of pasture and drinking water.

### 1.2.1 Rainfall distribution

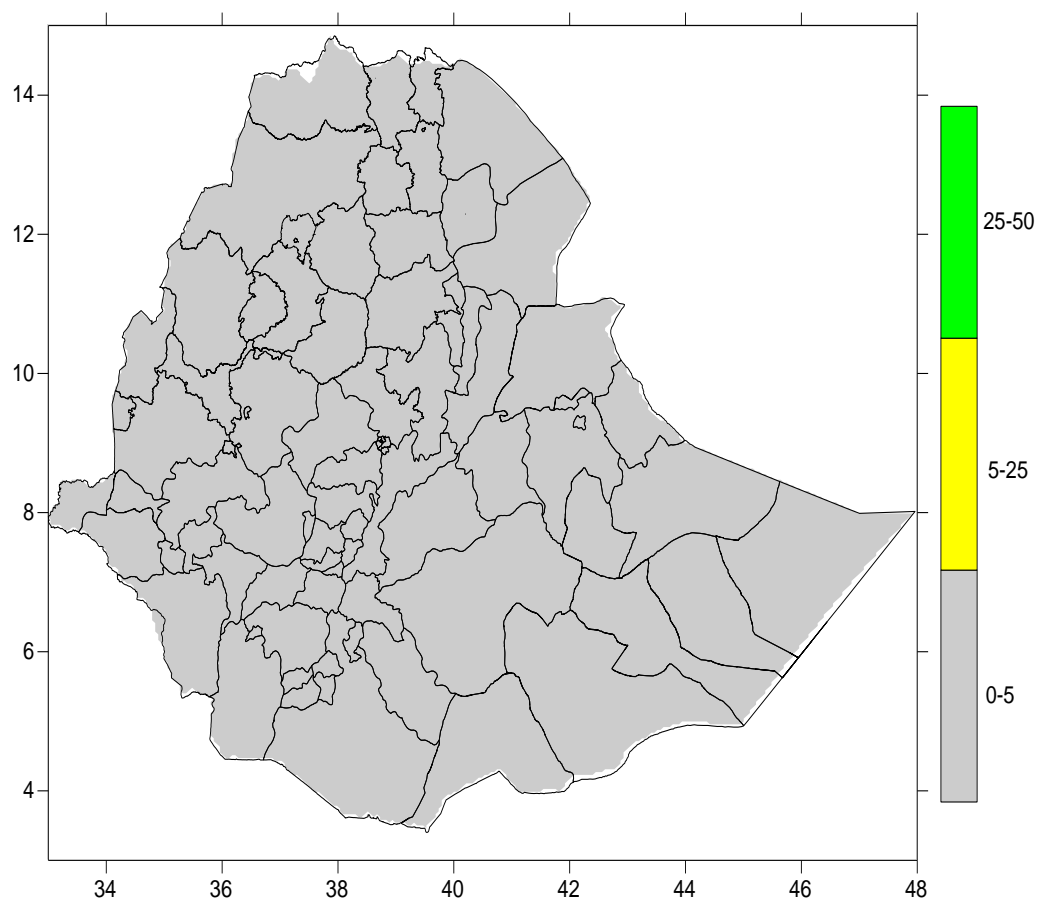


Fig 1: Rainfall distribution in mm (21-31 Dec 2017)

As it is showed on the above map, during the last dekad of December all places over the country has subjected to experience little or no rainfall.

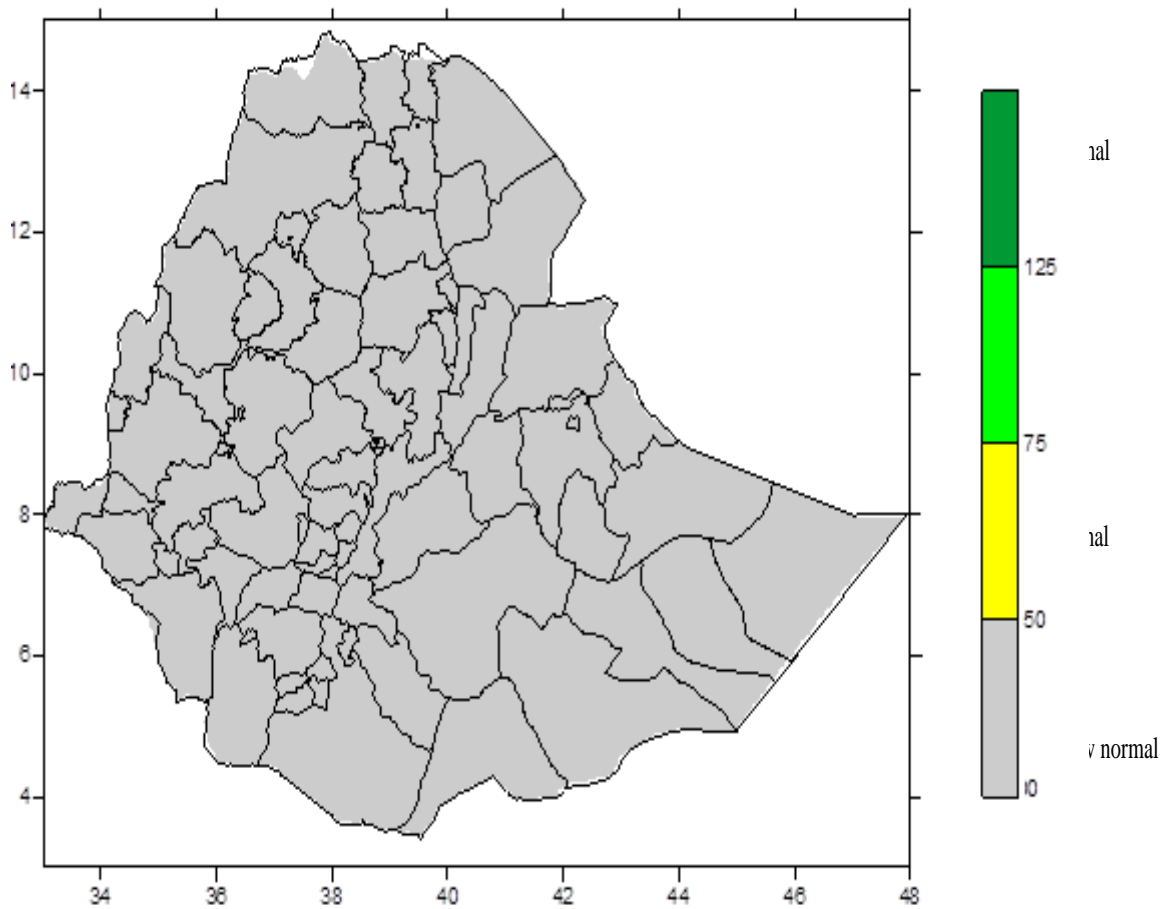
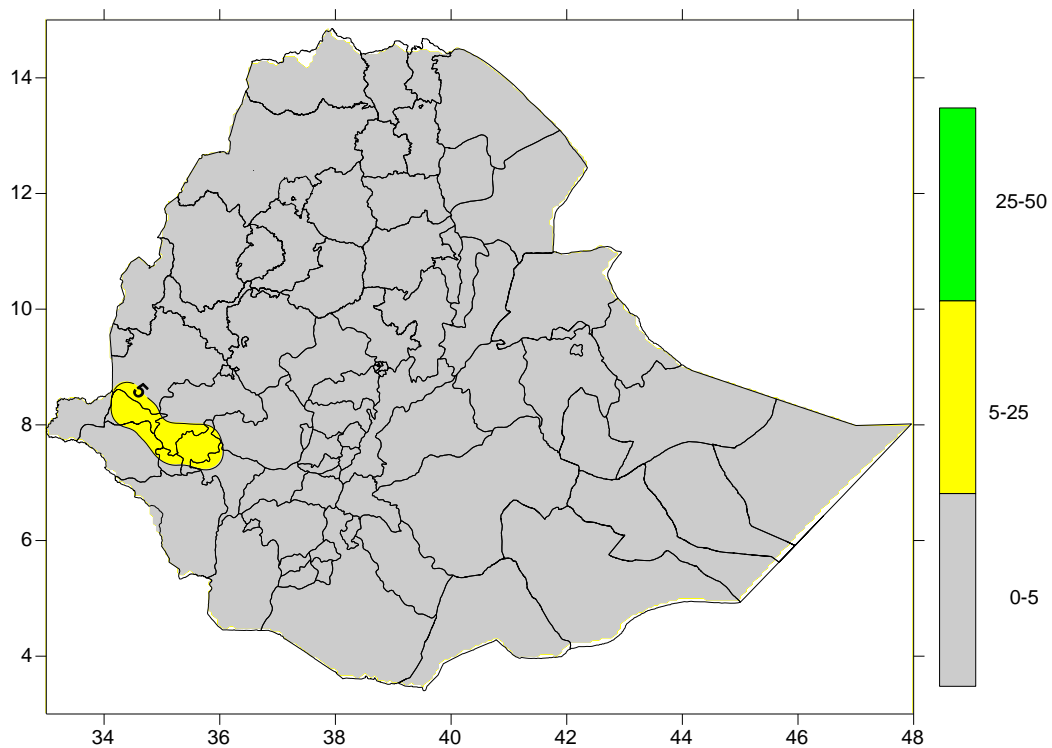


Figure 2: Percent of normal rainfall distribution (21-31 Dec 2017)

Explanatory notes for the legend:

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

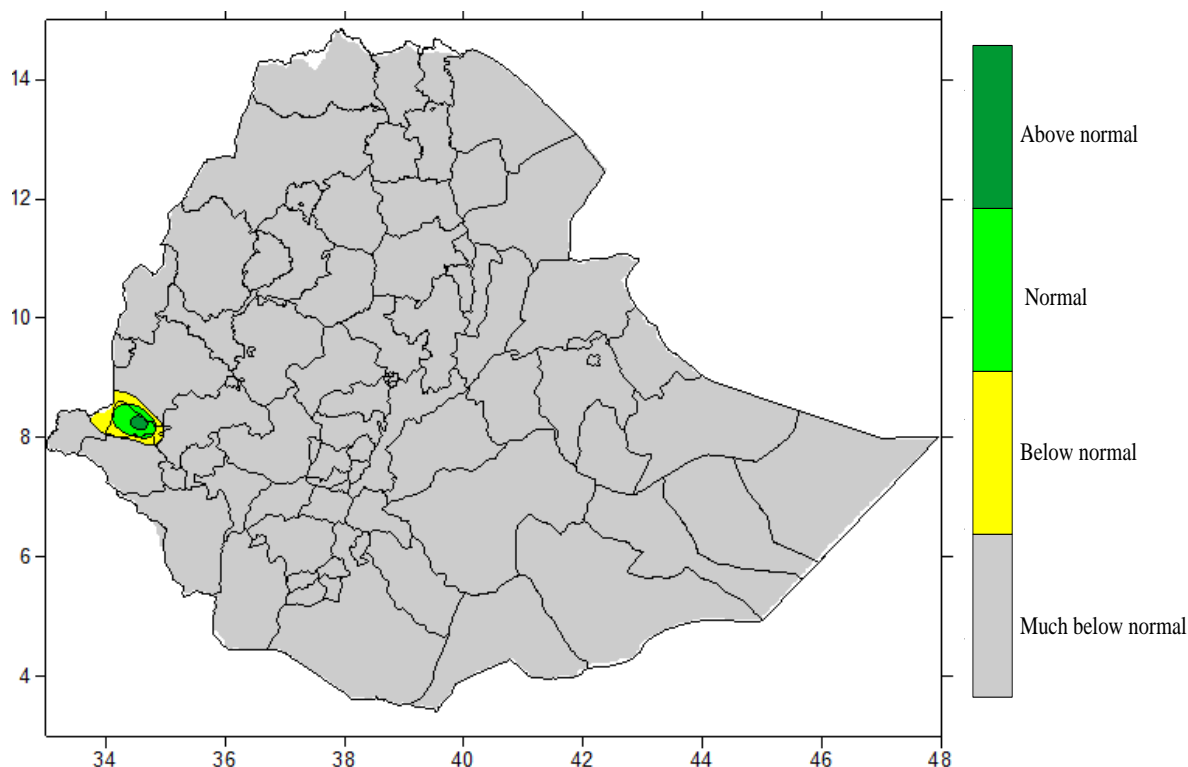
During the dekad under review, all places over the country have experienced normal to below normal rainfall.



**Fig. 1 Rainfall distribution in mm for the month of December, 2017**

Zone 1 of Gambela region, southern tip of Ilubabur, zone of Oromia and Sheka zone of SNNPR received 5-25mm of rainfall. The rest parts of the country experienced little or no rainfall

### 1.2.2 Rainfall Anomaly



**Fig. 2 Percent of Normal Rainfall distribution for the month of December, 2017**

#### **Explanatory notes for the Legend:**

**< 50 -Much below normal**

**50-75%- Below normal**

**75-125%- Normal**

**> 125% - Above normal**

Only Gambella region of zone1 exhibited normal to above normal rainfall. The rest of the country experienced much below normal to below normal rainfall

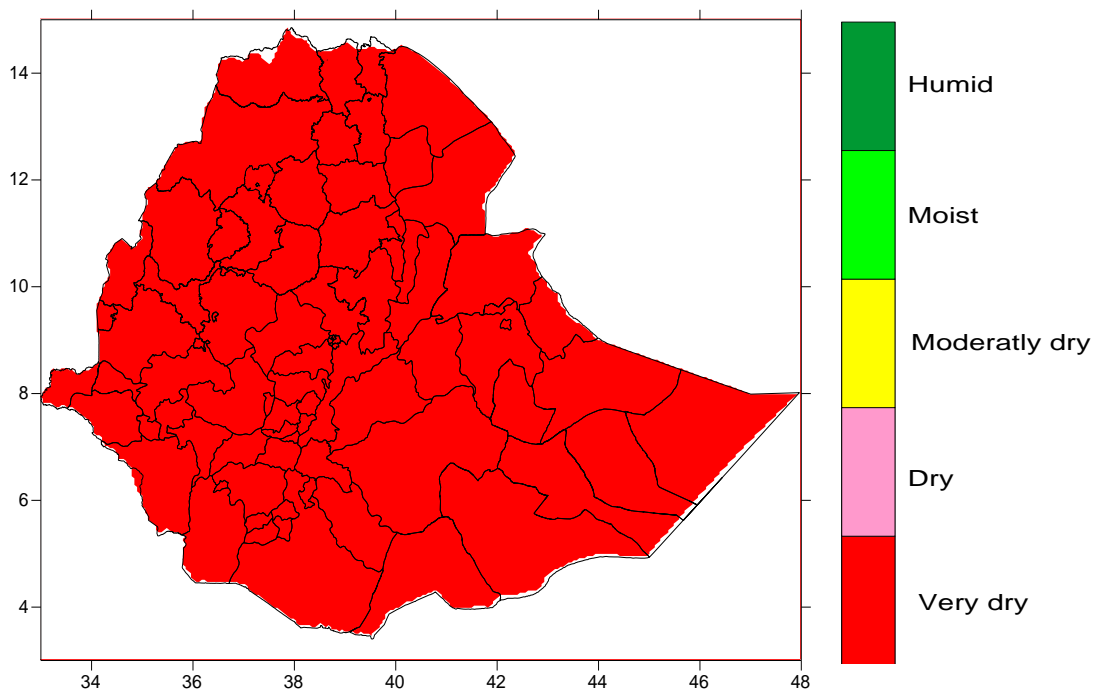
### 1.3 TEMPERATURE ANOMALY

During the month under review, stations from the high lands of the country reported extreme minimum temperature below 0°C over Adigrat (-1.0), Haromaya (-0.2, -3.2, -2.4, -1.6, -0.6, and -0.4), Debre Berhan ( -4.0, -1.4, -1.2, -1.4, and -0.4), Mehal Meda ( -2.8, and -2.0) Wegel Tena ( -3.0, -2.4, and -0.5), Debre Zeyt ( -7.6, -5.0, -3.0 and -0.8) Arsi Robe (-1.5), Mehal Meda ( -1.5 and -2.0), Batty (-2.6 and -2.4) and Bore (-3.0). Thus, the cold and chilly conditions over those areas might have a negative impact on the normal growth and development of perennial crops as well as on the overall livestock efficiency and productivity.



## 2.1 VEGETATION CONDITION AND IMPACT ON AGRICULTURE

According to the moisture index map (fig 3), most parts of the country were subjected to be under the influence of very dry moisture status throughout the month. Thus, the observed weather during the month under review was favorable to ensure the maturity of crops as well as to conduct harvest and post harvest practices. The prevailing very dry moisture condition due to the poor performance of monthly rainfall over the southern and southeastern parts of the country have a negative impact on the Bega season growing crops particularly those which are found at different growing stages. In addition the situation could be negative particularly for pastoralists and agro pastoralists toward accessing pasture and drinking water.



**Fig. 3 moisture status for the month of December, 2017**

As moisture status map shown above, all parts of the country experienced very dry moisture condition.

## **2.2. Expected Weather Impact on Agriculture during the Coming Month of January 2018**

In normal condition, most Meher growing areas are widely engaged in harvest and post harvest activities due to the favorable dry, sunny and windy weather situations during the month. It is also the time that most crop fields, which have been covered with various crops for the last few months, are made free of plants and usually after the mid of the month farmers are starting preparation for the next Belg season agricultural practices. In addition, the month can also be characterized by uncomfortable cool and chilly weather condition during night and morning time.

According to the weather forecast for the coming January 2018, the Bega season dry, sunny and wind weather condition couple with cold night and morning is likely to be continued up to the mid of the coming month. However, after the mid of the month some parts of west Oromia and east Amhara are likely to start getting small amount of rainfall due to the approach of certain rain bearing Bealg season weather systems. The probable dry weather condition up to the mid of the month is likely to favor for completing the ongoing harvest and post harvest activities and 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 and chilly weather at night and morning time particularly during the early dekads of the month over some high land areas of the country. This condition is likely to be detrimental on the overall performance of vegetables, fruits and perennial plants. Therefore, farmers are advised to be ready to take the necessary measures so as to maintain the plant environment as warm as possible. However, due to the improvement of moisture and cloud coverage after the mid of the month is expected to enhance the night and morning time temperature to some parts of the country. In addition, the predicted rain after the mid of the month is supposed to play a significant role toward the improvement of soil moisture and hence for land preparation for the Belg season.

## **DEFNITION 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 southeastern 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 northeastern 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.

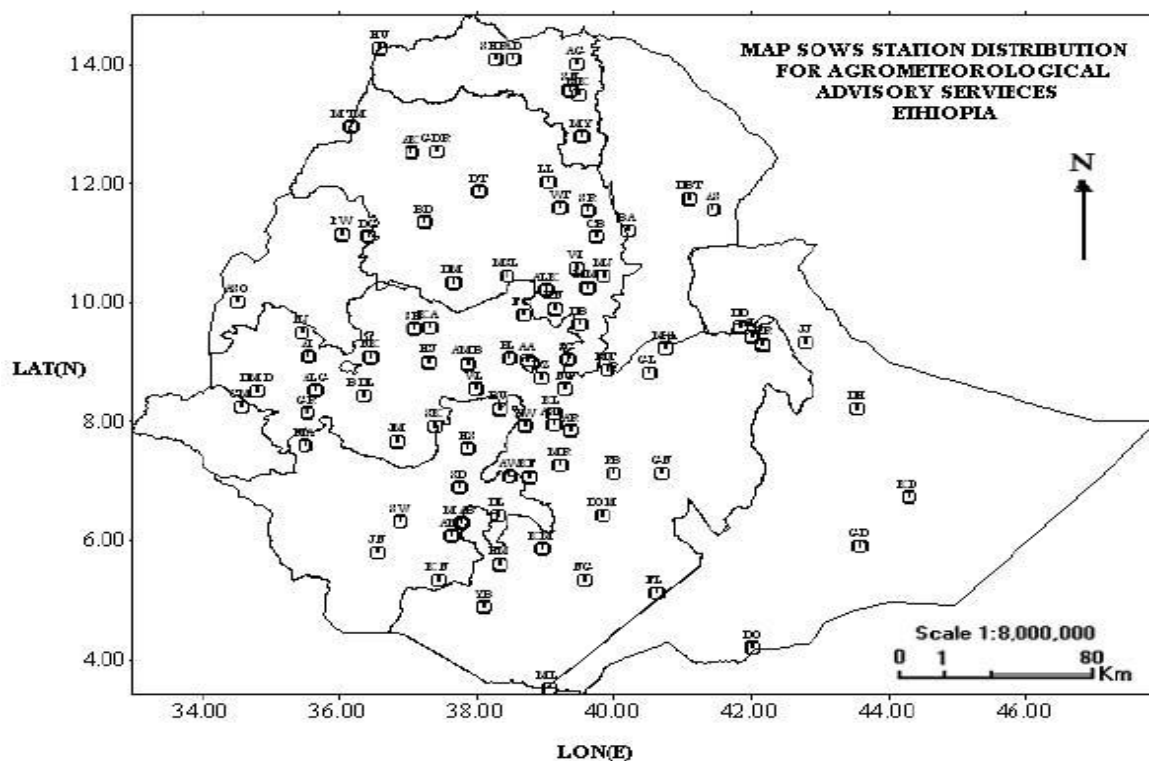
**DEKAD:** - First or second ten days or the remaining days of a month.

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

**ITCZ:** - Intertropical 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 southeastern lowlands of the country.

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



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