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FOREWARD

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
December 2024

During the first dekade of November 2023, the moisture condition was enhanced over the southern and south-eastern Bega rain benefiting. The observed moisture might have positive implication for fulfilling the water need of various Meher crops and

perennial plants. Similarly, since Bega is the second rainy season for the southern and south-eastern parts of the country, the received good moisture during the dekad could play very crucial role to improving the availability of pasture and drinking water and significantly important to regenerate natural and artificial ponds over both the pastoral and agro pastoral community. On the other hand the observed heavy fall over southern and south-western parts of the country had a good opportunity to collect rain water harvesting. On the other hand the observed heavy fall over southern, south-eastern and eastern parts of the country might experience water logging, runoff, soil erosion and landslide due to continuous and heavy fall. Moreover the receiving unseasonal moisture over some areas negatively affected harvest and post-harvest activities of matured crops and the observed enhanced moisture might have positive implication for fulfilling the water need of various Meher crops, perennial plants.

During the second dekade of December 2023, Bega season dry moisture condition was experienced across the Meher season producing parts of the country. The dry and sunny condition was taken as good opportunity to perform harvest and post-harvest activities over the place where Meher season crops are fully matured. On the other hand, the moisture condition was enhanced over the southern and south-western Bega rain benefiting areas. The observed moisture might have positive implication for fulfilling the water need of various Meher crops and perennial plants. Similarly, since Bega is the second rainy season for the southern parts of the country, the received moisture during the dekad could play very crucial role to improving the availability of pasture and drinking over both the pastoral and agro pastoral community.

During the third dekad of December 2021, according to the agro meteorological analysis, during the last dekad of December, the Bega season dry, sunny and windy weather condition prevailed across most part of the country. This condition had a positive impact for the Meher crop growing areas toward assisting the ongoing post-harvest activities. Following on the prevailed dry condition some high land areas of north eastern, central and southeast part of the country was somehow experiencing low night and morning temperatures. Accordingly, some areas, including Haromaya 1.8, Debre Berhan 2.0, Arsi Robe 3.5, Bishoftu 3.3, Adele 4.0 and Melemeda 4.2, recorded temperatures below 5^0C. This low temperature might have negative impact on irrigated crops as well as horticulture plants. On the other hand, parts of western and central Amhara, western Oromia, Gambella, SNNPR and South western of the country received light to moderate moisture. This situation in turn might

favor toward satisfying the daily water need of perennial crops and the provision of pasture and drinking water in some extent for pastoral and agro-pastoral communities.

Generally, during the last month of December, the Bega season dry, sunny and windy climate condition prevailed across the country and this situation was more pronounced during the first and second dekad of the month. Given the current state of agricultural activities, the dry condition was favourable for the timely dry out of matured crops and to conduct harvest and post-harvest activities. On the other hand, in line with the dry condition some of the northern, central and south-eastern parts of the country recorded minimum temperatures below 5^0C while some few places remained below zero degree Celsius. This cold and chill condition might have some negative impact on livestock health, irrigated Bega season crops and over various horticulture plants. However during the last dekad of December light to moderate moisture was recorded over western and central Amhara, Central Oromia, Gambella, SNNPR and south-western of the country. This condition favours toward the water satisfaction of not fully matured crops, perennial plants, for various horticulture crops and for some of legumes which often planted after harvest of Meher crops. In addition, it might have positive impact on ensuring the availability of pasture and drinking water over pastoral and agro pastoral areas.

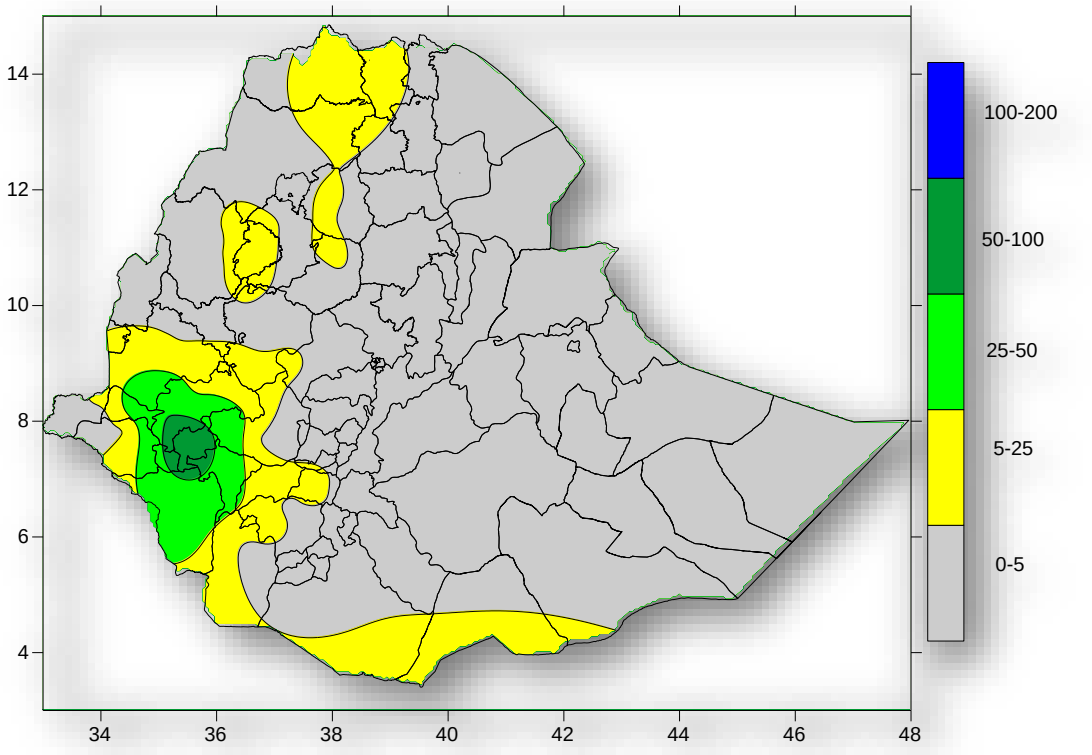


Fig 1. Rainfall distribution in mm (21 – 31) December 2024

1. WEATHER ASSESSMENT

1.1. Rainfall amount (21 – 31) December 2024

During third dekad of December 2021 pocket area of Sheka, Godere, Bench Maji and Keffa exhibited 50-100mm Rainfall. West Wellega, Illubabur, Gambela zone 1 & 2, Jimma, Godere, Keffa, Dawuro, Basketo and Bench Maji exhibited 25-50mm Rainfall. west, central, east and south Tigray, Wag Himera, south Gonder, west and east Gojam, Bahir Dar, Agew-Awi, Tongo, west and east Wellega, Gambela zone 1, 2 & 3, Illubabur, Jimma, Keffa, Dawuro, KT, Welayita, Hadiya, Basketo, Gamo gofa, South Omo, Borena, Liben and Afder exhibited 5-25mm Rainfall. The rest parts of the country exhibited 0-5mm Rainfall.

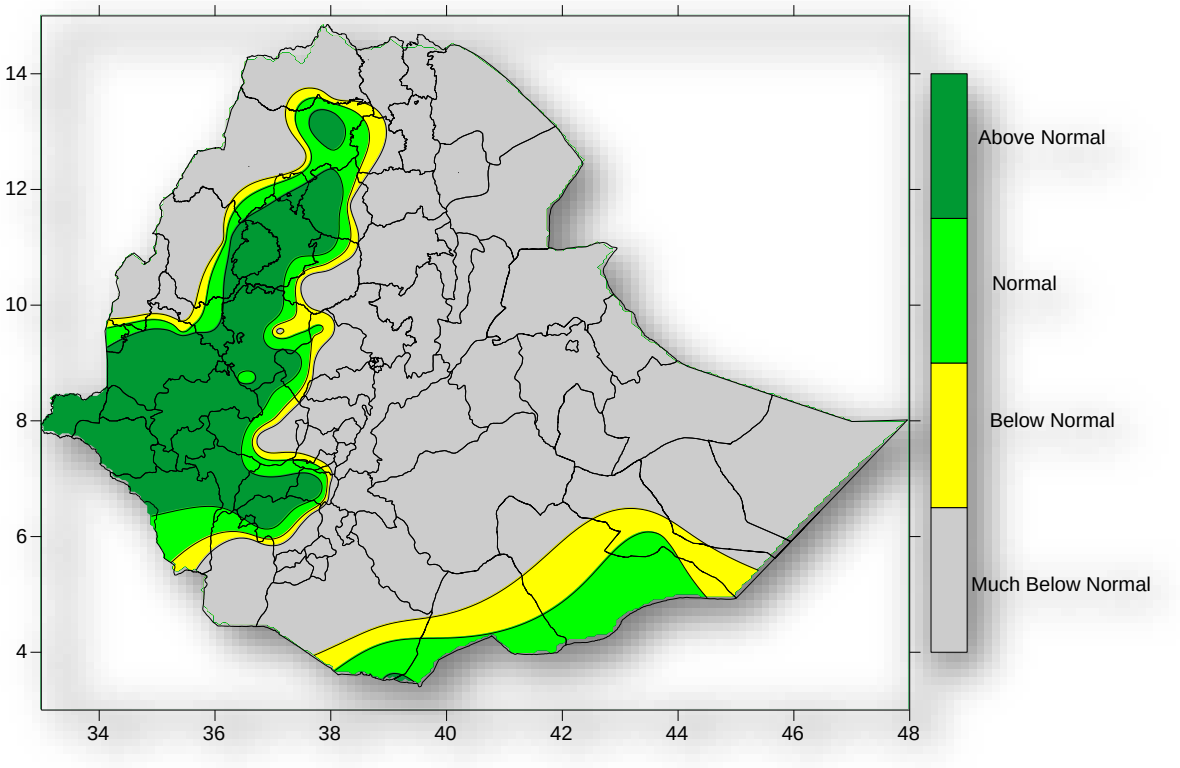


Fig. 2 Percent of normal rainfall distribution (21 – 31 December 2024)

Explanatory notes for the Legend

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

1.2. Rainfall Anomaly (21 – 31 December 2024)

During December third dekad 2021,pocket area of north and south Gonder, Wag Himera, Bahir Dar, west and east Gojam, Agew-Awi, Metekel, Kamashi, Tongo, west and east Wellega, north, west and south west Shewa, Illubabur, Gambela zone 1, 2 &3, Sheka, Godere, Keffa, Dawuro, Bench Maji, KT, Welayita, Basketo, Gamo gofa, Borena, Liben, Gode and Afder receive Normal to Above Normal. The rest parts of the countries receive Below Normal too Much Below Normal.

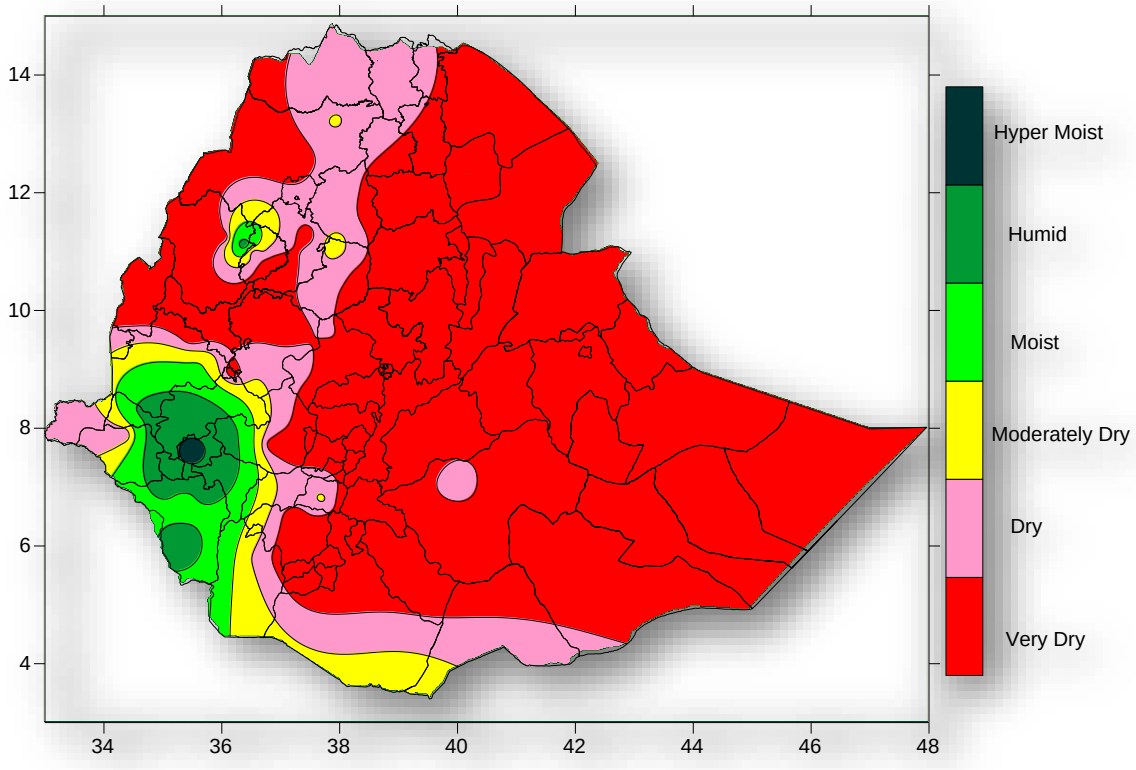


Fig. 3 Moisture Status (21-31 December 2024)

1.3. Moisture status (21 – 31 December 2024)

During December third dekad 2021, pocket area of Bahir Dar, Metekel, Agew Awi, west Gojam, west Wellega, Illubabur, Gambela zone 1 &2, Jimma, Godere, Keffa, Sheka, Bench Maji, Basketo, Dawuro and South Omo exhibited Hyper Moist to Moist. The rest parts of the countries exhibited moderately Dry too Very Dry.

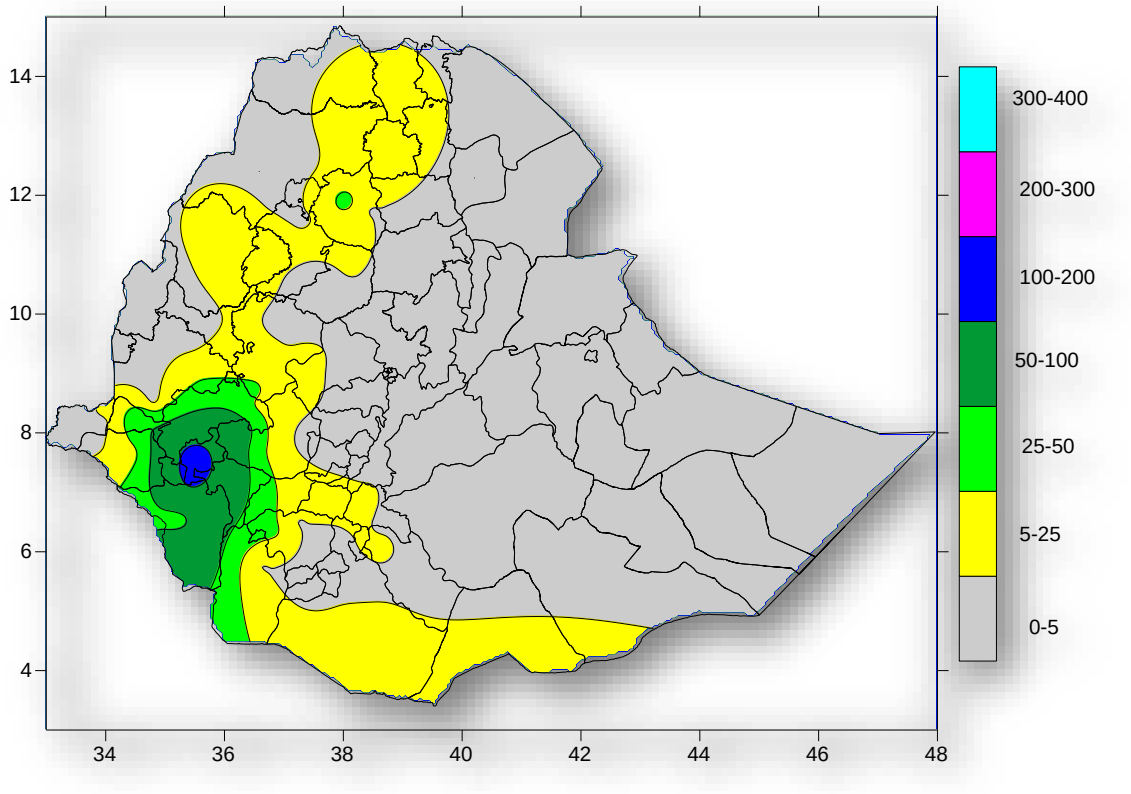


Fig. 3 Rainfall amount in mm for the month of December 2024

1.4. Rainfall amount on the month of December 2024

During the month of December 2021, pocket area of Sheka, Godere, Bench Maji and Keffa exhibited 100-200mm Rainfall. Illubabur, Jimma, Sheka, Godere, Keffa, Bench Maji, Dawuro, Basketo and South Omo exhibited 50-100mm Rainfall. South Gonder, Gambela zone 1 & 2, Illubabur, Jimma, Dawuro, Basketo, Gamo gofa and South Omo exhibited 25-50mm Rainfall. north and south Gonder, Wag Himera, Bahir Dar, west and east Gojam, Agew-Awi, Metekel, Kamashi, Tongo, west and east Wellega, north, west and south west Shewa, Illubabur, Gambela zone 1, 2 &3, Sheka, Godere, Keffa, Dawuro, Bench Maji, KT, Welayita, Basketo, Gamo gofa, Borena, Liben, Gode and Afder exhibited 5-25mm Rainfall. The rest parts of the country exhibited 0-5mm Rainfall.

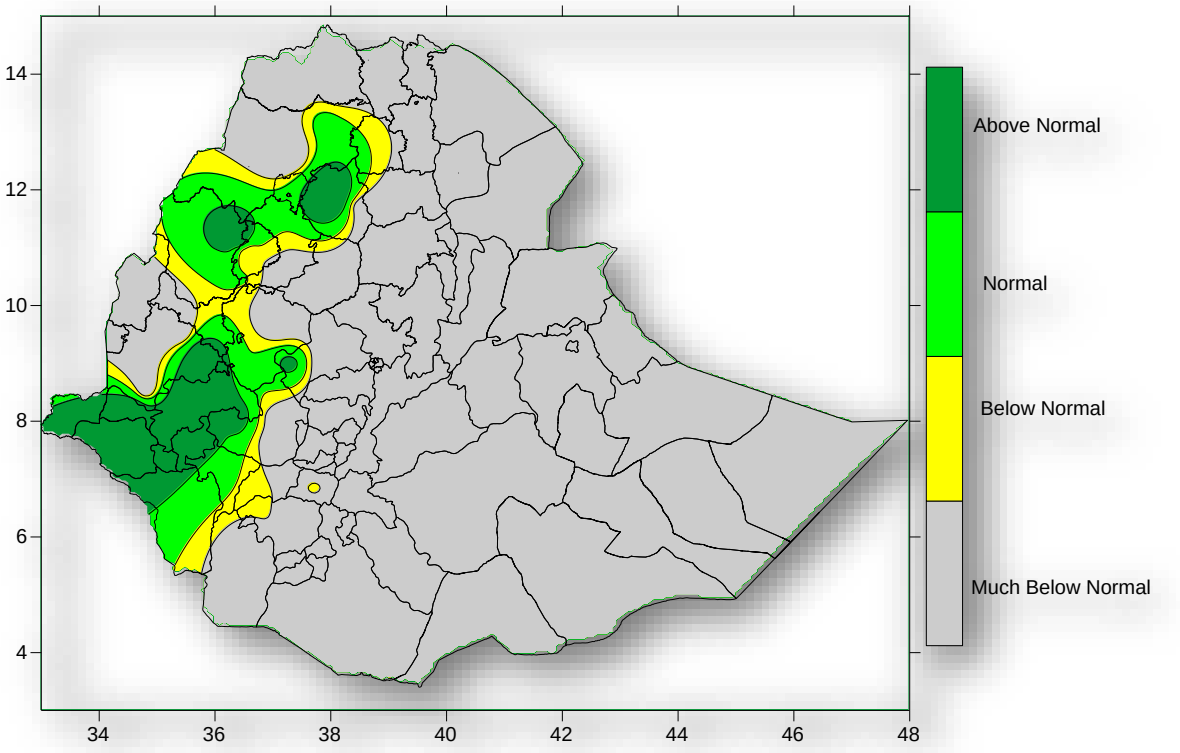


Fig. 4 Percent of Normal Rainfall for the month of December 2024

Explanatory notes for the Legend

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

1.5. Rainfall Anomaly on the month of December 2024

During the month of December 2021, pocket area of north and south Gonder, Wag Himera, Bahir Dar, west Gojam, Metekel, Agew-Awi, Kamashi, west and east Wellega, west Shewa, Gambela zone 1, 2 & 3, Godere, Sheka, Illubabur, Jimma, Keffa and Bench Maji receive Normal to Above Normal. The rest parts of the countries receive Below Normal too Much Below Normal.

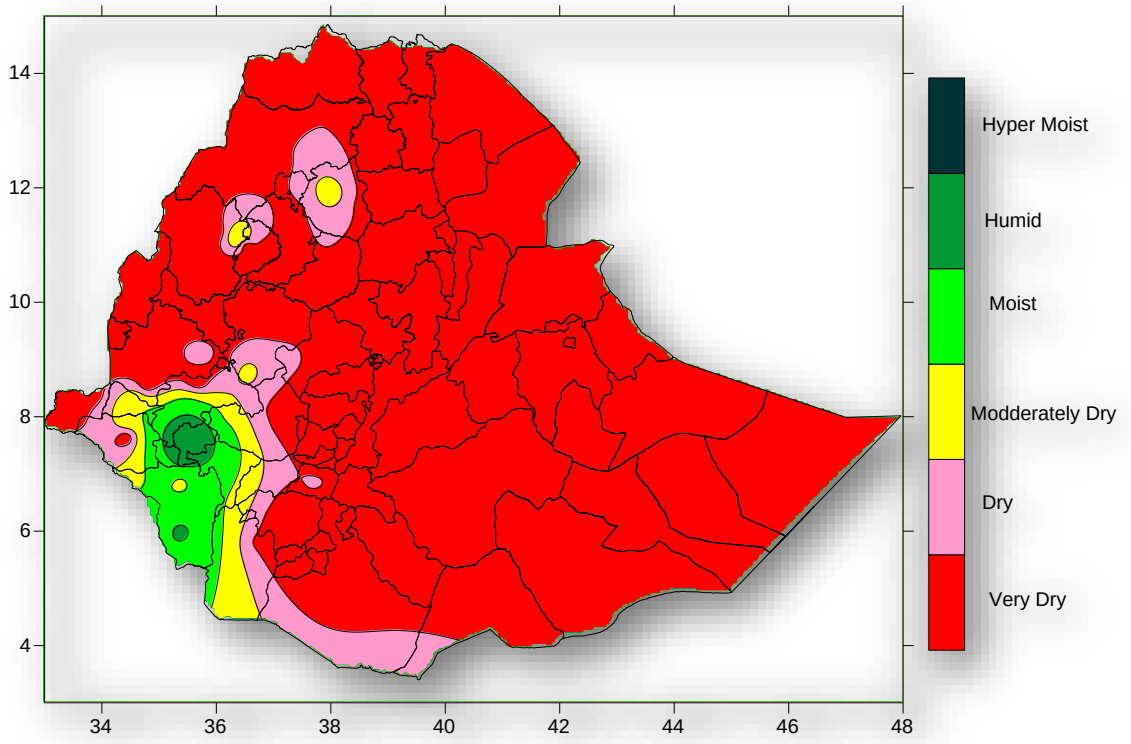


Fig. 5 moisture status for the month of December 2024

1.6. Moisture status on the month of December 2024

As indicated on the month of December 2021 moisture status map above, pocket area of Sheka, Godere, Keffa, Bench Maji, Basketo, Jimma and South Omo exhibited Hyper Moist to Moist. The rest parts of the countries exhibited moderately Dry too Very Dry.

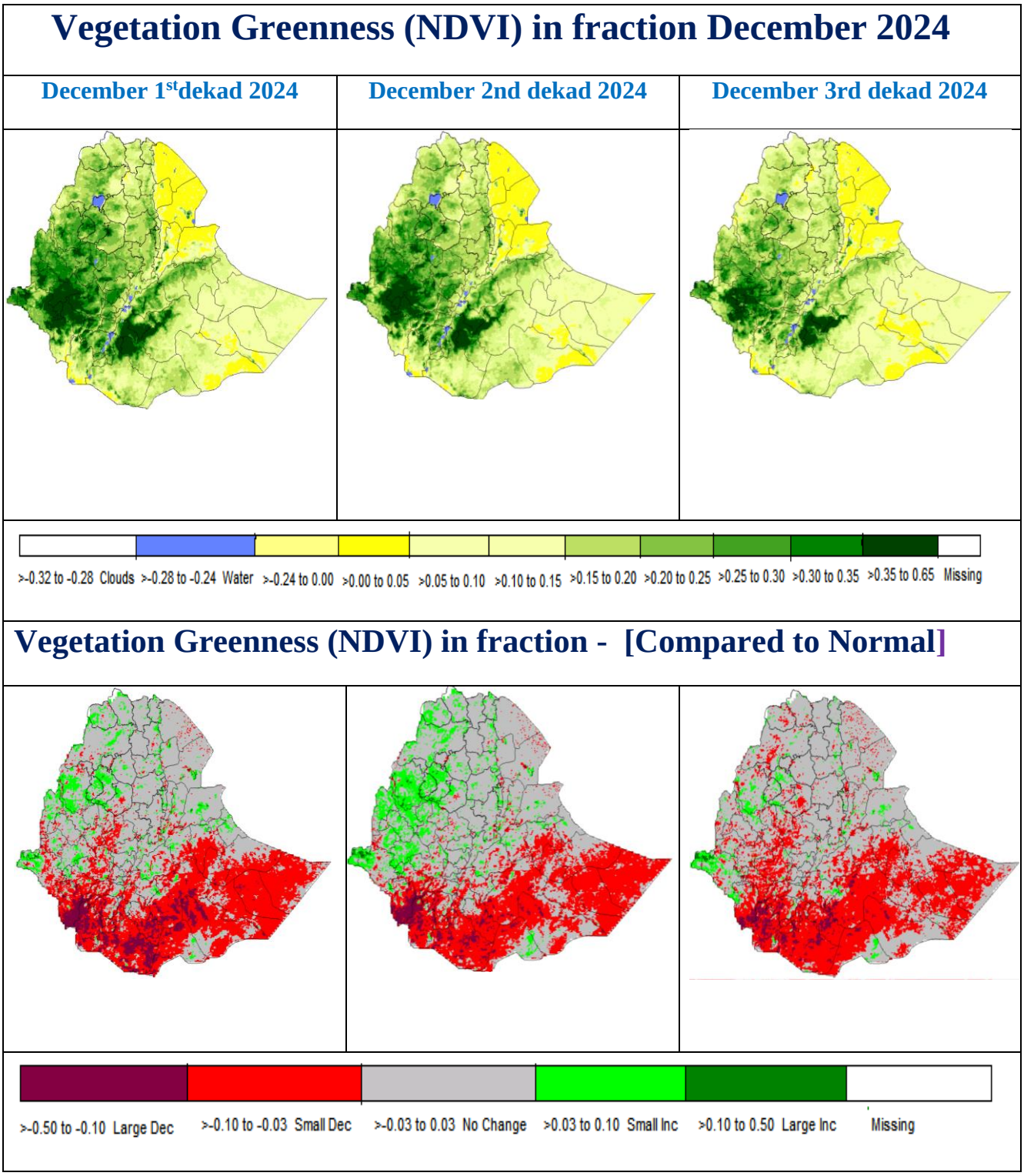


Fig. 6 Vegetation Greenness (NDVI) in fraction and Compared to Normal December 2024

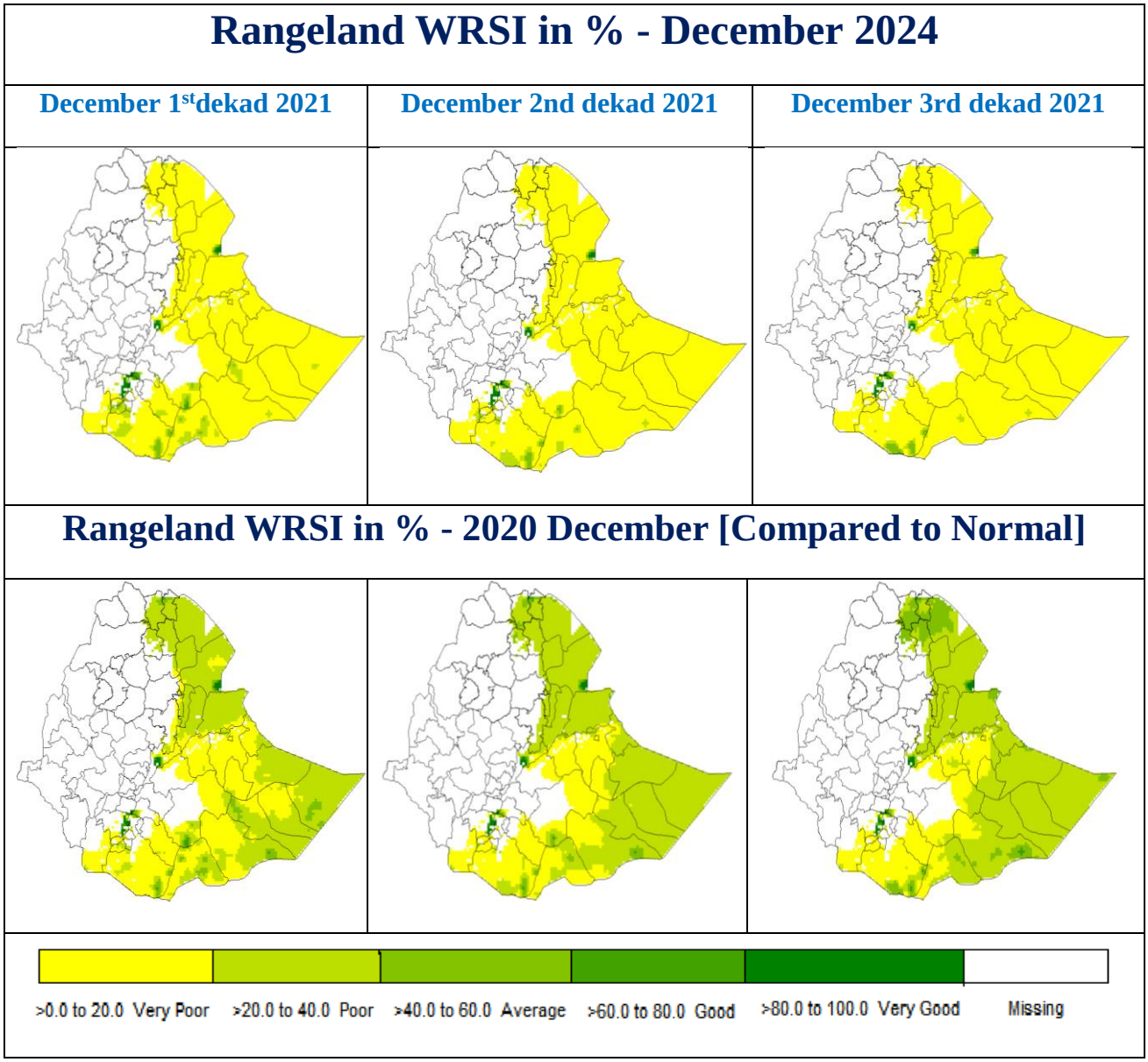


Fig.7. Rangeland WRSI in % and Compared to Normal - December 2024

2. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE

2.1. Vegetation Condition and Impact on Agriculture

Generally, during the last month of December, the Bega season dry, sunny and windy climate condition prevailed across the country and this situation was more pronounced during the first and second dekad of the month. Given the current state of agricultural activities, the dry condition was favourable for the timely dry out of matured crops and to conduct harvest and post-harvest activities. On the other hand, in line with the dry condition some of the northern, central and south-eastern parts of the country recorded minimum temperatures below 5^0C while some few places remained below zero degree Celsius. This cold and chill condition might have some negative impact on livestock health, irrigated Bega season crops and over various horticulture plants. However during the last dekad of December light to moderate moisture was recorded over western and central Amhara, Central Oromia, Gambella, SNNPR and south-western of the country. This condition favours toward the water satisfaction of not fully matured crops, perennial plants, for various horticulture crops and for some of legumes which often planted after harvest of Meher crops. In addition, it might have positive impact on ensuring the availability of pasture and drinking water over pastoral and agro pastoral areas.

2.2. Expected Weather Impact on Agriculture during the Coming Month of January 2024

In normal condition, most Meher growing areas are widely engaged in harvest and post-harvest activities due to the favourable dry, sunny and windy weather situations during the coming month January. 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 appeared with cool and chilly weather condition during night and morning time.

According to the weather forecast for the coming January 2024, 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 over the highland areas of the country. The probable dry weather condition up to the mid of the month is likely to favour for completing the on-going 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 negative effect 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, after the mid of the month sometimes some parts of north-eastern, eastern, central and south-western parts of the country are likely to start getting little amount of rainfall due to the approach of certain rain bearing Belg season weather systems. The situation may be favourable for 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. 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.

3. DEFNITION OF TERMS

ABOVE NORMAL RAINFALL: - Rainfall in excess of 125% of the long termmean

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 cover s 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.

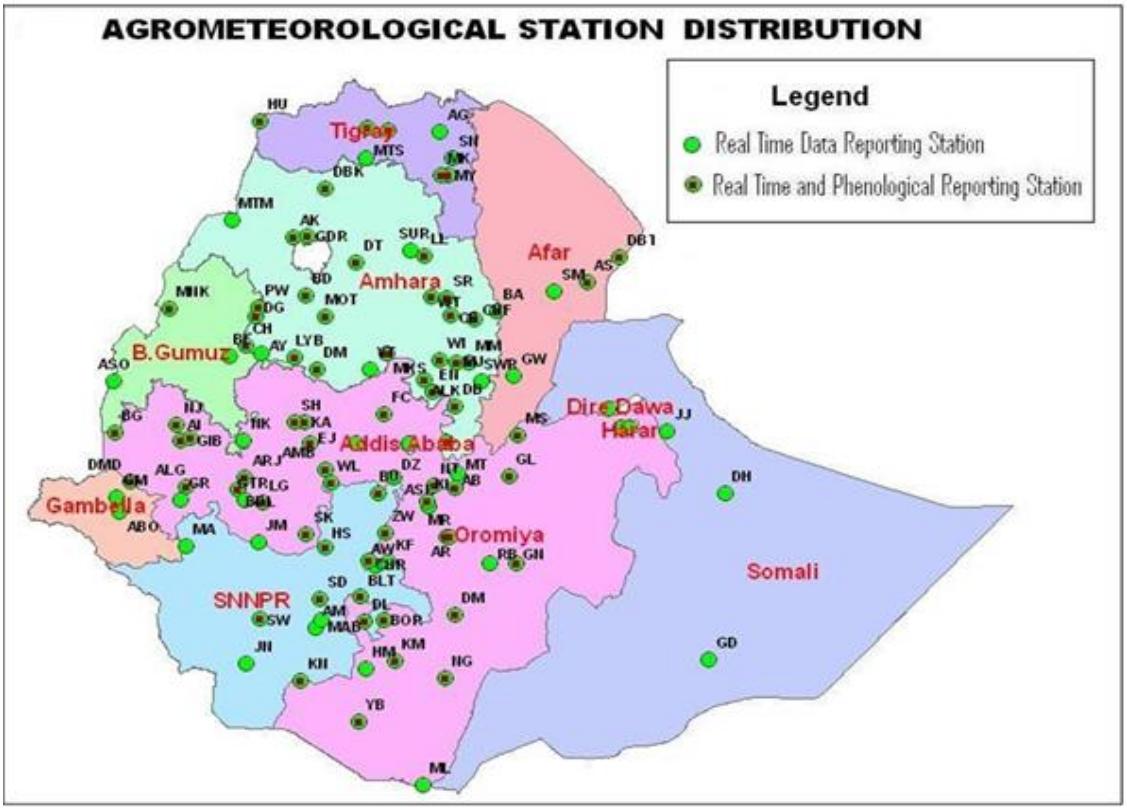
DEKAD: - First or second ten days or the remaining days of a month.

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 Gebeya	SG
Assosa	ASO	Filtu	FL	M/Abaya	MAB	Sirinka	SR
Awassa	AW	Gambela	GM	Maichew	MY	Sodo	SD
Aykel	AK	Gelemso	GL	Majete	MJ	WegelTena	WT
B. Dar	BD	Ginir	GN	Masha	MA	Woliso	WL
Bati	BA	Gode	GD	Mekele	MK	Woreilu	WI
Bedelle	BDL	Gonder	GDR	Merraro	MR	Yabello	YB
BUI	BU	Gore	GR	Metehara	MT	Ziway	ZW
Combolcha	CB	H/Mariam	HM	Metema	MTM		
D. Berehan	DB	Harer	HR	Mieso	MS		
D. Habour	DH	Holleta	HL	Moyale	ML		
D. Markos	DM	Hossaina	HS	M/Selam	MSL		