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TABLE OF CONIENTS

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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አህፅሮት
እ.ኤ.አ ማርች 2024

ባሳለፍነዉ የማርች ወር የመጀመሪዉ አስር ቀናት ከተለያዩ የሀገሪቱ አካባቢዎች ላይ የተጠናቀሩ የግብርና ሚቲዎሮሎጂ መረጃዎች እንደሚያመለክቱት በአብዛኛዎቹ የበልግ አብቃይና እርጥበት ተጠቃሚ በሆኑት የሀገሪቱ ክፍሎች ላይ በመጠንም ሆነ በስርጭት የተስፋፋ እርጥበት ነበራቸው በተለይም በመካከለኛው፣ በምስራቅ፤ በሰሜን ምስራቅ፣ በደቡብ እና በደቡብ ምዕራብ የአገሪቱ ክፍሎች ላይ ከቀላል እስከ ከባድ መጠን ያለዉ የእርጥበት ሁኔታ እንደነበራቸው የተተነተኑ የግብርና ሚቲዎሮልጂ አመላካቾች ያሳያሉ፡፡ ይህም ሁኔታ ለቋሚ ተክሎች የውሃ ፍላጎት መሟላት ለአርብቶ አደርና ከፊል አርብቶ አደር አካባቢዎች የግጦሽ ሳርና የመጠጥ ውሃ አቅርቦትን ከማሻሻል አንፃር አዎንታዊ ሚና የነበረው ሲሆን በተለይም በሀገሪቱ በልግ አብቃይ አካባቢዎች የነበረው እርጥበት ቀደም ብለው ተዘርተው በቡቃያ ደረጃ ለሚገኙትም ሆነ በመዘራት ላይ ላሉ ሰብሎች የጎላ ጠቀሜታ ነበረው፡፡

ባሳለፍነው የማርች ሁለተኛዉ አስር ቀናት በአብዛኛዎቹ የበልግ አብቃይና እርጥበት ተጠቃሚ በሆኑት የሀገሪቱ ክፍሎች ላይ በመጠንም ሆነ በስርጭት የተስፋፋ እርጥበት ነበራቸው በተለይም በመካከለኛው፣ በምስራቅ፤ በሰሜን ምስራቅ፣ በደቡብ እና በደቡብ ምዕራብ የአገሪቱ ክፍሎች ላይ ከቀላል እስከ ከባድ መጠን ያለዉ የእርጥበት ሁኔታ እንደነበራቸው የተተነተኑ የግብርና ሚቲዎሮልጂ አመላካቾች ያሳያሉ፡፡ ይህም ሁኔታ ለቋሚ ተክሎች የውሃ ፍላጎት መሟላት ለአርብቶ አደርና ከፊል አርብቶ አደር አካባቢዎች የግጦሽ ሳርና የመጠጥ ውሃ አቅርቦትን ከማሻሻል አንፃር አዎንታዊ ሚና የነበረው ሲሆን በተለይም በሀገሪቱ በልግ አብቃይ አካባቢዎች የነበረው እርጥበት ቀደም ብለው ተዘርተው በቡቃያ ደረጃ ለሚገኙትም ሆነ በመዘራት ላይ ላሉ ሰብሎች የጎላ ጠቀሜታ ነበረው፡፡

ባሳለፍነዉ የማርች ወር ሶስተኛው አስራ አንድ ቀናት በአብዛኛው የበልግ ወቅት ዝናብ ተጠቃሚ በሆኑት አካባቢዎች እርጥበታማ ሁኔታ እንደነበራቸው የተተነተኑ የግብርና ሚቲዎሮሎጂ መረጃዎች ያመላክታሉ፡፡ ይህም ሁኔታ አስቀድመው ለተዘሩ የበልግ ሰብሎች፣ ለቋሚ ተክሎች፣ የረጅም ጊዜ ሰብሎችን አስቀድመው ለሚዘሩ አካባቢዎች የማሳ ዝግጅት ለማካሄድ አዎንታዊ ሚና ነበረው በተጨማሪም የተገኘው እርጥበት በአርብቶ አደርና ከፊል አርብቶ አደር አካባቢዎች ለመጠጥ ውሃና ለግጦሽ

ሣር አቅርቦት መሻሻል የጎላ ጠቀሜታ ነበረዉ፡፡ በሌላም በኩል በአንዳንድ ሥፍራዎች ላይ የተገኘው ከፍተኛ መጠን ያለው እርጥበት ቅጽበታዊ ጎርፍና የወንዞች መሙላት ሊያስከትል በመቻሉ በእንሰሳት፣ በሰዎችና በንብረት ላይ እንዲሁም ቀደም ብለው በተዘሩትና በተለያየ የእድገት ደረጃ ላይ በሚገኙት ሰብሎች ላይ በተወሰነ መልኩ አሉታዊ ተፅዕኖ የነበረው ቢሆንም ዝናብ አጠር ለሆኑት አካባቢዎች የዝናብ ውሃን ለማሰባሰብና ለማከማቸት መልካም አጋጣሚን የፈጠረ ነበር፡፡

ባሳለፍነው የማርች ወር የበልግ ወቅት ዝናብ ተጠቃሚ በሆኑት አካባቢዎች እርጥበታማ ሁኔታ እንደነበራቸው የተተነተኑ የግብርና ሚቲዎሮሎጂ መረጃዎች ያመላክታሉ፡፡ ይህም ሁኔታ አስቀድመው ለተዘሩ የበልግ ሰብሎች፣ ለቋሚ ተክሎች፣ የረጅም ጊዜ ሰብሎችን አስቀድመው ለሚዘሩ አካባቢዎች የማሳ ዝግጅት ለማካሄድ አዎንታዊ ሚና የነበረው ሲሆን በተጨማሪም የተገኘው እርጥበት በአርብቶ አደርና ከፊል አርብቶ አደር አካባቢዎች ለመጠጥ ውሃና ለግጦሽ ሣር አቅርቦት መሻሻል የጎላ ጠቀሜታ ነበረዉ፡፡ በሌላም በኩል በአንዳንድ ሥፍራዎች ላይ በ24 ሰዓት ውስጥ መጠኑ ከ30 ሚ.ሜ የበለጠ ከባድ ዝናብ ነበራቸው። ከዚሁም ጋር ተያይዞ የተገኘው ከፍተኛ መጠን ያለው እርጥበት በተለይም ውሃ አጠር ለሆኑት አካባቢዎች የዝናብ ውሃን ለማሰባሰብና ለማከማቸት መልካም አጋጣሚን የፈጠረ ቢሆንም በአንዳንድ ቦታዎቻቸው ላይ ቅጽበታዊ ጎርፍና የወንዞች መሙላት ሊያስከትል በመቻሉ በእንሰሳት፣ በሰዎችና በንብረት ላይ እንዲሁም ቀደም ብለው በተዘሩና በተለያየ የእድገት ደረጃ ላይ በሚገኙት ሰብሎች ላይ አሉታዊ ተፅዕኖ ነበረው፡፡

SUMMARY
MARCH 2024

During the first dekad of March, due to the relative strengthening of rain bearing weather systems better moisture has been relatively improving over Belg rain benefiting and growing areas of the country, particularly central, eastern, north eastern, southern and south western parts of the country experienced light to heavy moisture. Heavy rainfall was also recorded in some places including Bishoftu 30.2mm, Gore 39.8mm, Ambo 31.7mm, amdework 34.0mm, Bati 32.0mm, Bui 31.6, 33, Debre work 30.9, Dellomena 30.7, Fitch 32.4, Hseana 42.0mm, Limugenet 44.7, Masha 34.6, 30mm, Nazarit 54.1, Senkata, 31.9, Tercha 48.9mm and Werabe 70.0mm. This condition might have positive impact to perform water requirements of early planted and found in germination period 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. 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.

During the second dekade of March 2024, due to the relative strengthening of weather systems that bring moisture particularly in the south western, south western, north-eastern and central regions of the country's had moist to hyper moist moisture condition. This situation has positive role for land preparation and sowing activity of Belg crops as well as satisfy the water need of perianal plants and for availability of pastors and drinking water over pastoral and agro-pastoral areas especially over Belg growing and rainfall benefiting areas. Moreover some places recorded heavy fall >30 in one rainy day. In relation to this the moisture condition was enhanced and have positive role for early started land preparation over long cycle growing areas.

During the third dekad of March 2024, according to the data collected from various agro meteorological stations, good moisture was observed inmost Belg rain receiving areas of the country. In line with this, the received moisture combination with the moisture obtained in the previous dekads had positive impact to perform land preparation, planting of Belg season crops and crop that found in different growth stages. The observed moisture was also positive to sustain for the provision of pasture and drinking water as well. Occasional received Heavy rainfall was also recorded greater than 30mm in 24 hours in most part of the country. This situation has significant contribution to collect and store rainwater, especially

for moisture stress areas. However the observed heavy fall might have created flood and river flow which has negative impact on animals, people and property, as well as on the crops that were sown earlier and at different stages of development.

During the month of March 2024, most of Belg rain benefiting areas of the country experienced good moisture condition in amount and distribution. This situation had positive contribution for land preparation, sowing of Belg crops as well as satisfies the water need of perianal plants and availability of pastors and drinking water across the pastoral and agro-pastoral areas. Moreover especially, after the second dekad of the month relative increase in moisture was observed over southern, south-western, eastern, north-eastern and central parts of the country. The situations was sustain sowing of long cycle crops as well as satisfy the water need of perennial plants. Heavy rainfall was also recorded in 24 hours over most part of Belg rain benefiting areas of the country, the obtained heavy fall could be favourable for farmers who are in moisture stress areas, to collect and store rain water where that can be used in time of deficit. However the observed heavy fall might have created flood and river flow which has negative impact on animals, people and property, as well as on the crops that were sown earlier and at different stages of development.

1. WEATHER ASSESSMENT

1.1. Rainfall amount (21 – 31) March 2024

During the Third dekad of March 2024, pocket areas of West Hararghe and Arsi, South west Shewa, Some parts of Guraghe, Burji Special Woreda and tip of Oromia special Zone were dominated above 100 mm of rainfall. In addition to this Some parts of Borena, Guji, Bale, Gedeo, Sidama, West and East Hararghe, Hadya, Siltie, keffa, Alaba, West and east Shewa, Borena Amaro Derashe Konso, Bench Maji, Basketo, Jimma, Keffa and Afar zone 5 and Oromia Special Zones were received 50-100mm of rainfall. On the other hand most parts of Afar Zone 4, 3, and 5, Most parts East Amhara, North and west and east Shewa, Godere, Illubabur, bench Maji, DAwuro, Gamogofa, South ommo, Fik and east Hararghe zones were exhibited 25-50 mm of rainfall. The rest parts of the country especially Southeastern, Eastern tip Northern and North western parts were received 5-25 mm of Rainfall.

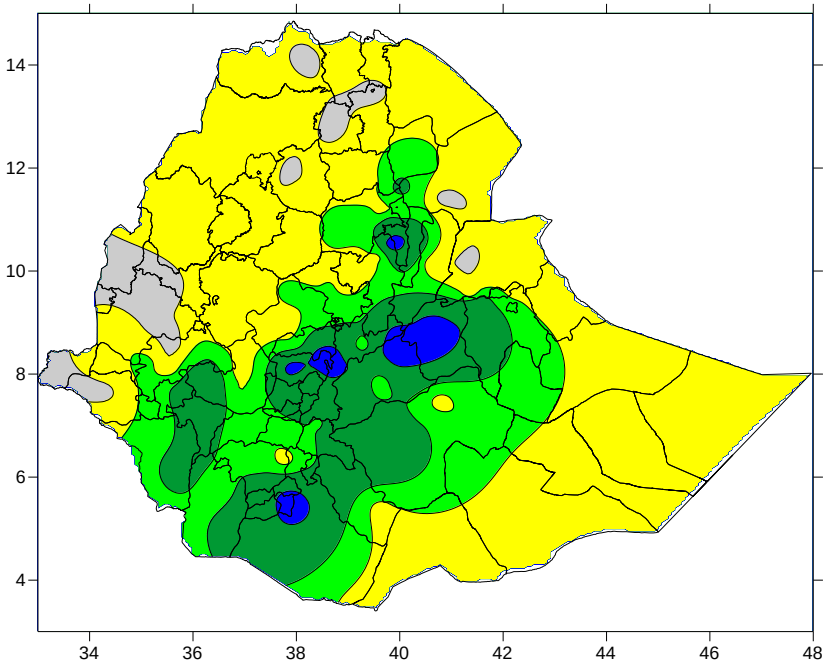

Fig 1. Rainfall distribution in mm (21 – 31) March 2024

1.2. Rainfall Anomaly (21 – 31 March 2024)

When we look at to the rainfall anomaly map below, during the third dekade of march 2023, Nort Eastern, Eastern, Central Southern, South Western and South Eastern part of the country are Exhibited Normal to Above Normal Rain fall condition. On the other hand, Western North Western, Northern and half of North Eastern part of the country are exhibited Much Below Normal to Below Normal rain fall condition.

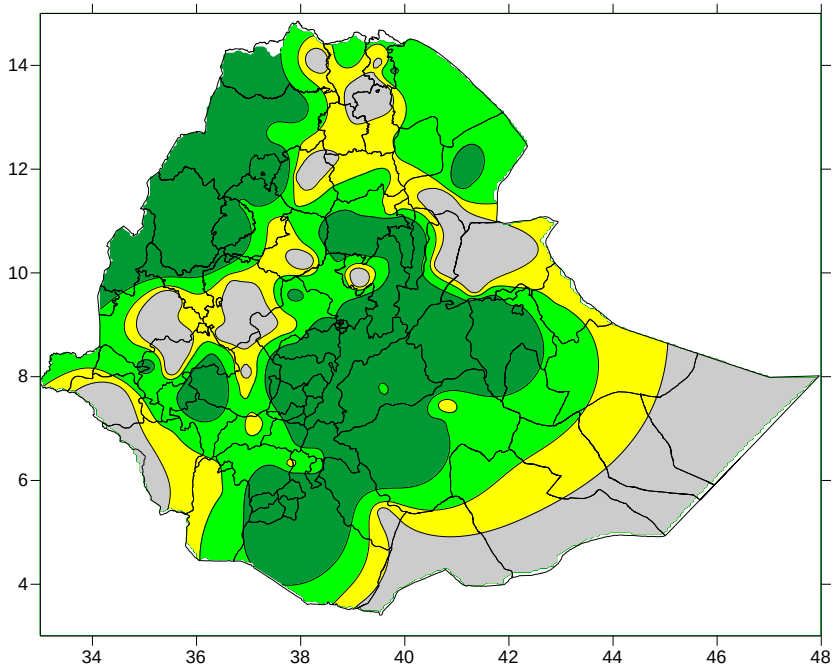

Fig. 2 Percent of normal rainfall distribution (21 – 31 March 2024)

Explanatory notes for the Legend

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

1.3. . Moisture status (21 – 31 March 2024)

During the third dekad of 2024 in most of Belg rain benefiting including southern, south-western central eastern and north-eastern parts of the country experienced Moist to Hyper Moist moisture condition. The rest parts of the countries exhibited moderately Dry too Very Dry.

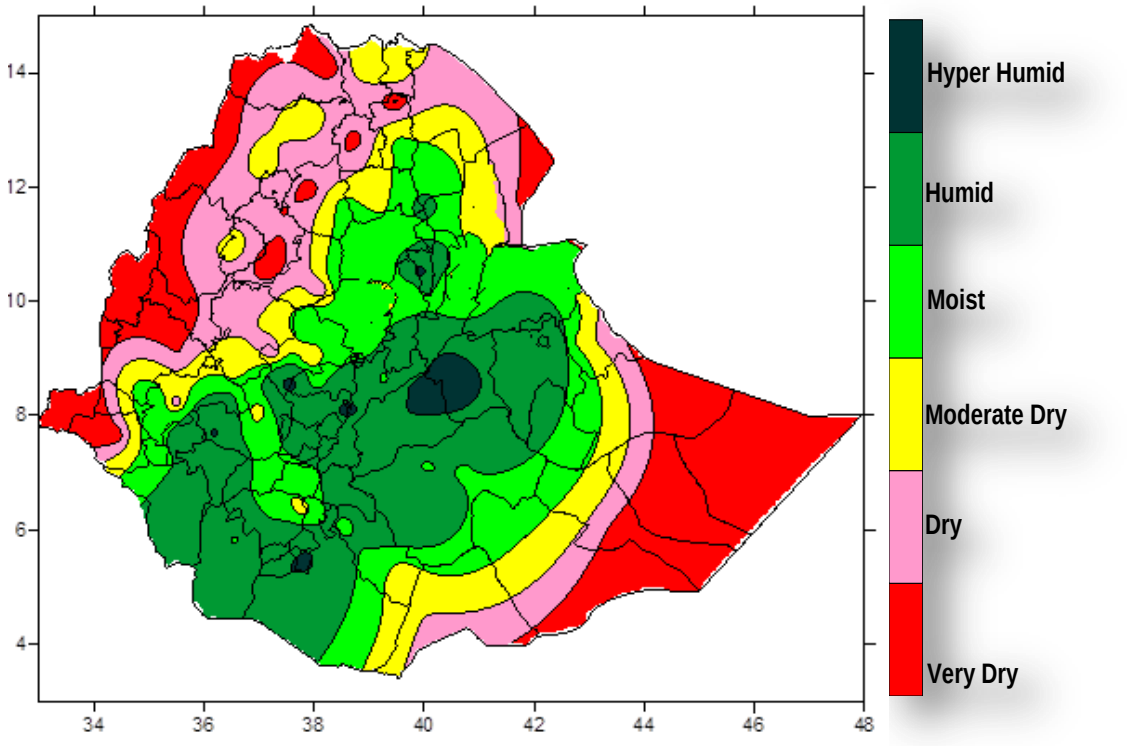

Fig. 3 Moisture Status (21-31 March 2024)

1.4. Rainfall amount on the month of March 2024

During the Third dekad of March 2024, most parts of Sheka, Keffa, Dawuro, Jimma, Guraghe, Silte, Hadya, alaba, parts of Bench Maji and Illuababora Zones were dominated above 100-200mm of rainfall. In addition to this Some parts North and South Wollo, South and Central Tigray, East and West Shewa, South West Shewa, East Gojam, Awi, East Wollega, tip of East and West hararghe, Bale, Borena, Amaro, South Ommo, Basketo, Gedeo, Arsi, Hadya, Sidama and Gamogofa Siltie, Keffa, Alaba, Derashe, Konso, Bench Maji, Basketo Zones were received 50-100 mm of rainfall. On the other hand most parts of Afar Zone 4, 3, and 5, some parts East and West Hararghe, Fik, Afder, Liben, Guji, Central Tigray, West Wllega and Parts of Shinle zones were exhibited 25-50 mm of rainfall. The rest parts of the country especially tip of Southeastern, Eastern, tip Northern and Northwestern and Eastern parts were received 5-25 mm of Rainfall.

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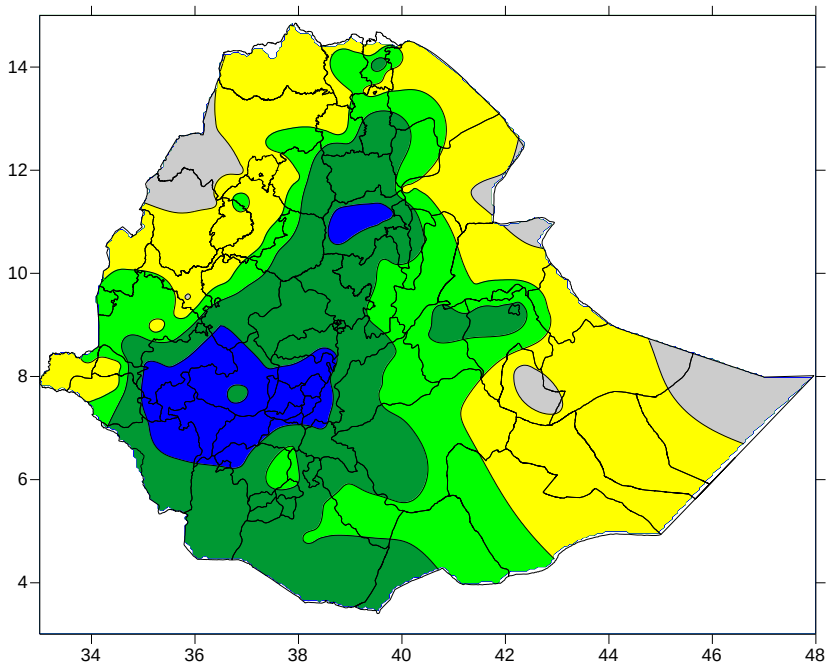

Fig. 4 Rainfall amount in mm for the month of March 2024

1.5. Rainfall Anomaly on the month of March 2024

During the third dekad of March 2024, most parts of the country exhibited normal to above normal rainfall. The rest parts South-eastern and Eastern half of the country have experienced Below Normal too Much below Normal rain fall.

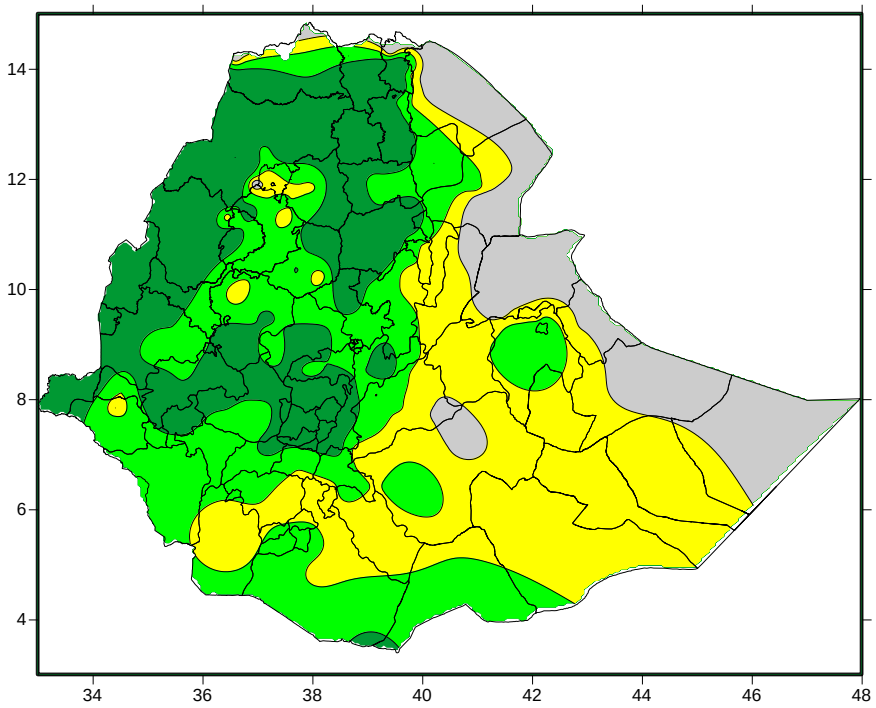

Fig. 5 Percent of Normal Rainfall for the month of March 2024

Explanatory notes for the Legend

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

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1.6. Moisture status on the month of March 2024

In accordance with the moisture status map indicated below, during the month of March 2024 in most parts of Belg rain benefiting areas experienced Moist to Hyper Moist moisture condition. The rest parts of the countries exhibited moderately Dry too Very Dry

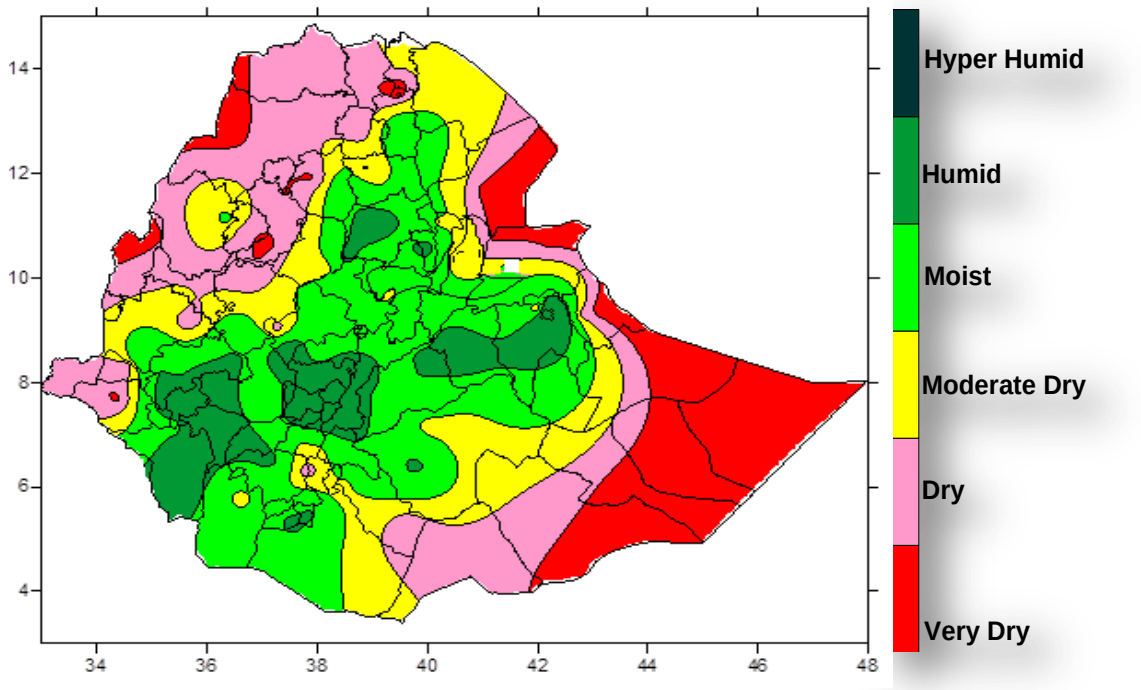


Fig. 6 moisture status for the month of March 2024

2. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE

2.1. VEGETATION CONDITION AND IMPACT ON AGRICULTURE ON THE MONTH OF MARCH 2024

During the month of March, due to better moisture improvement dekad by dekad over south western, north eastern, central and eastern parts of the country the vegetation condition indicated average and above average (Fig.7. NDVI and Fig.8.Rangeland WRSI in %) which condition was satisfy the water need of perennial plants and highly favourable the generation of pasture and the availability of drinking water as well as replenishes the water points over pastoral and agro pastoral areas.

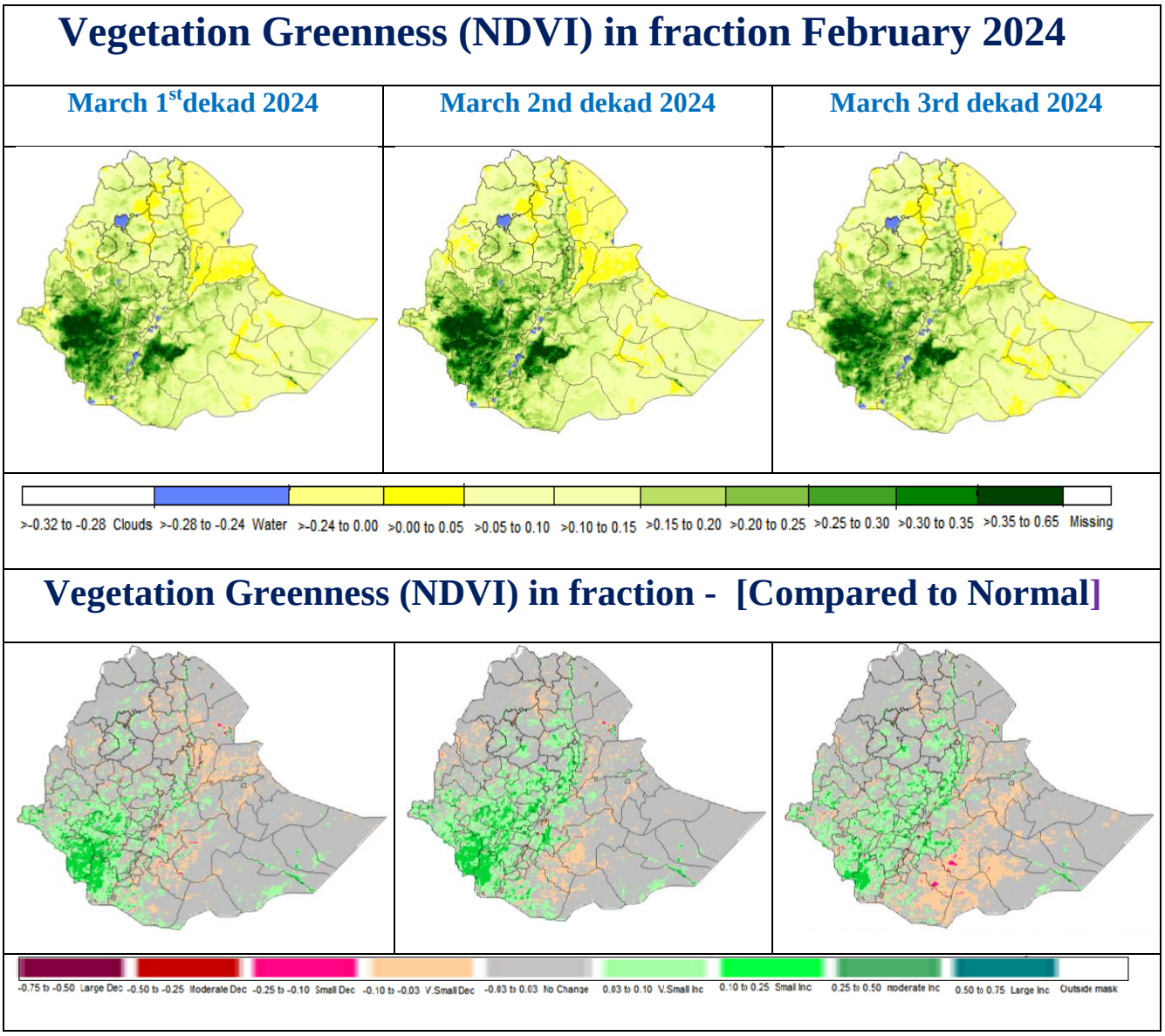


Fig. 7 Vegetation Greenness (NDVI) in fraction and Compared to Normal March 2024

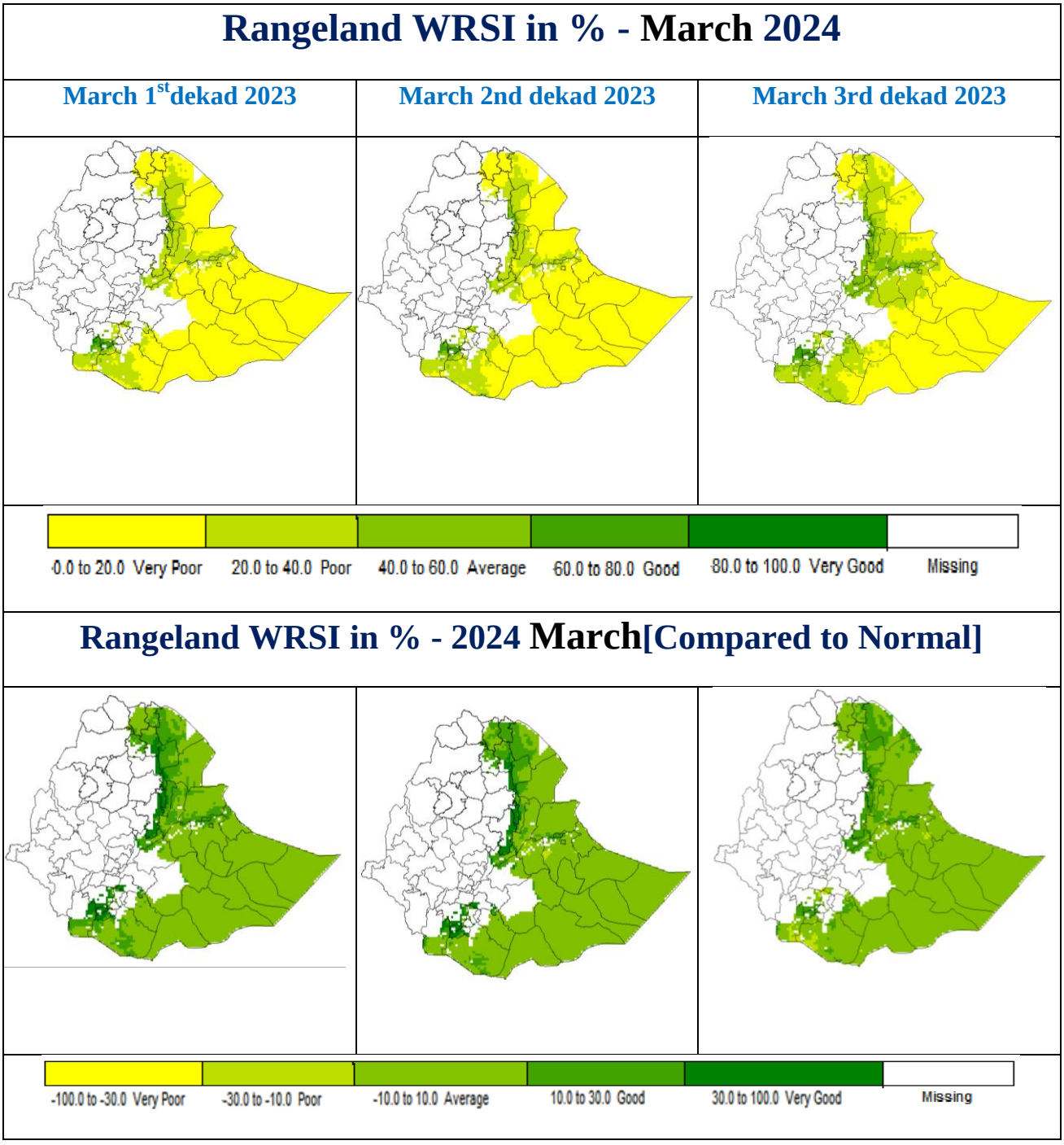


Fig.8. Rangeland WRSI in % and Compared to Normal - March 2024

2.2. EXPECTED WEATHER IMPACT ON AGRICULTURE DURING THE COMING MONTH OF APRIL 2024

In the normal situation, in the month of April rain producing systems are expected to be strength over Belg rain ucing and growing areas of the country. Hence, the situation are very important for moisture requirement of different Belg and sowing of long cycle Meher crops, perennial plants, improve pasture and drinking water availability over pastoral and agro pastoral areas. However, the expected heavy fall over some areas of the country cause flash flood on crops field in low lying areas and it affect Belg crops and washing away the newly sown seeds in the areas.

As of the monthly weather forecast, during the coming month of April, rain bearing meteorological systems is expected to be strength over most places of the country are likely to get better moisture comparing with the previous two Belg months. This situation will improve moisture availability for seasonal agricultural activities, particularly water requirement of early sown Belg crops found at emergency and different growing stages, perennial plants, and land preparation of long cycle crops which normally started sown activities at the month of April. Moreover the expected expanded moisture over south and south-eastern parts of the country favourable for land preparation and sowing of Belg crops and ensuring the availability of pasture and drinking water over pastoral and agro pastoral communities. Therefore, concerned bodies and farmers are advised to use the expected moisture wisely and efficiently. However, the expected heavy fall over some parts across the country 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 excess moisture might have positive impact on normally water deficit areas and water harvesting where that can be used in time of deficit.

3. 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 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.

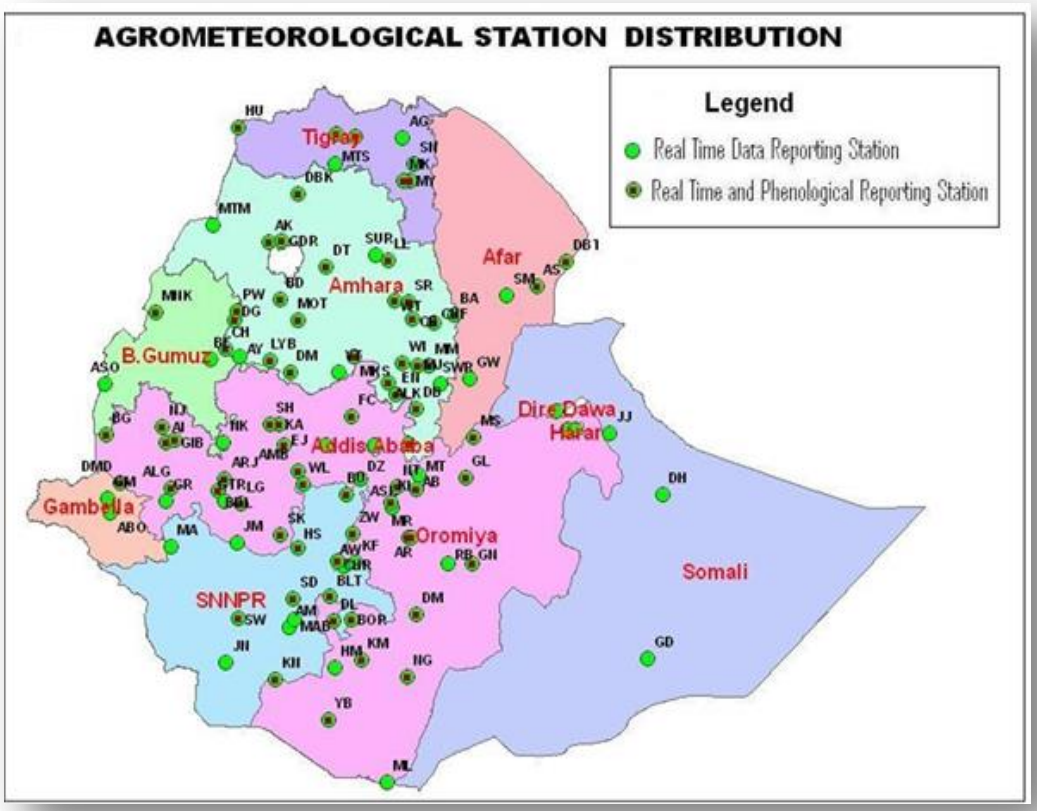
DEKAD: - First or second ten days or the remaining days of a month.

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		