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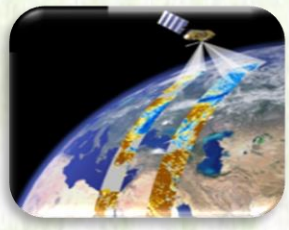

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FORE WARD

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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አህፅሮት

እ.ኤ.አ ኦገስት 2023

የኦገስት ወር የመጀመሪያዎቹ አስር ቀናት ለክረምት ዝናብ መኖር አመቺ ሁኔታን የሚፈጥሩ የሚቲዎሮሎጂ ገጽታዎች የተሻለ ጥንካሬ የነበራቸው በመሆኑ በአብዛኛው የክረምት ዝናብ ተጠቃሚና የመኸር ሰብል አብቃይ አካባቢዎች ላይ ብዙ ቦታዎችን የሸፈነ እርጥበት እንደነበራቸው ከተለያዩ የሀገሪቱ ክፍሎች የተሰበሰቡና የተተነተኑ የግብርና ሚቲዎሮሎጂ መረጃዎች አመልክተዋል፡፡ ይህም የተገኘው እርጥበት ለመኸር የእርሻ ስራ እንቅስቃሴ አዎንታዊ ሚና የነበረው ሲሆን አስቀድመው ለተዘሩም ሆነ ዘግይተው በመዘራት ላይ ለሚገኙ እንዲሁም ቀደም ብለው ለተዘሩ ለረጅም ጊዜ ሰብሎች የየቀኑን የውሃ ፍላጎታቸውን ከማሟላት አንጻር ከፍተኛ አዎንታዊ ሚና ነበረው:: በተጨማሪም በሰሜን ምስራቅ እና በምስራቅ የአርብቶ አደሮችና የከፊል አርብቶ አደር አካባቢዎች ላይ የተገኘዉ እርጥበት የተፈጥሮም ሆነ የሰው ሰራሽ ምንጮችን ከማጎለበቱም በላይ የተሻለ የመጠጥ ውሃና የግጦሽ ሳር አቅርቦት እንዲኖር በጎ ጎን ነበረው፡፡ በአንጻሩ በአንዳንድ አካባቢዎች ላይ ለመጥቀስም ያህል በባሌ ሮቤ የነበረው ከባድ ዝናብ የጎርፍ ክስተት እንዲኖር ያደረገ በመሆኑ በንብረት ላይ መጠነኛ ጉዳት እንዳደረሰ የተቀበልናቸው መረጃዎች ያመለክታሉ። በተጨማሪም ከነበረው ተከታታይ ዝናባማ ቀናት ጋር ተያይዞ በአንዳንድ አካባቢዎች ላይ የእርጥበት መብዛት የነበረ ሲሆን ይህም በሰብሎች አጠቃላይ እድገት ላይ በተወሰነ መልኩ አሉታዊ ጎን ነበረዉ:: በሌላ መልኩ በተወሰኑ የምስራቅ የመካከለኛውና የደቡብ ኦሮሚያ አካባቢዎች ላይ የተገኘው ዝናብ ከነበረው የትነት መጠን ጋር ሲነጻጸር ዝቅተኛ ስለነበረ በማበብ እና ፍሬ በማፍራት የእድገት ደረጃ ላይ ለነበሩ ሰብሎች የሚያስፈልጋቸውን እርጥበት ከማሟላት አንጻር አሉታዊ ተጽዕኖ ነበረው።

የኦገስት ወር ሁለተኛዉ አስር ቀናት በአብዛኛው የክረምት ዝናብ ተጠቃሚ አካባቢዎች ላይ ከመጀመሪያዎቹ አስር ቀናት በስርጭትም ሆነ በመጠን የመቀነስ አዝማሚያ የታየበት ቢሆንም በመጠን ይቀንስ እንጂ በስርጭት ረገድ የመኸር ሰብል አብቃይ በሆኑት አካባቢዎችን ያዳረሰ የእርጥበት ሁኔታ እንደነበራቸው ከተለያዩ የሀገሪቱ ክፍሎች የተሰበሰቡ የግብርና ሚቲዎሮሎጂ መረጃዎች ያመለክታሉ፡፡ ይህም የተገኘው እርጥበት ለመኸር የእርሻ ስራ እንቅስቃሴ አዎንታዊ ሚና የነበረው ሲሆን፤ በተለይም

በተለያየ የእድገት ደረጃ እና ፍሬ በማፍራት ላይ ለሚገኙ ሰብሎች የውሃ ፍላጎት መሟላት ጥሩ አስተዋጽኦ ነበረው፡፡ ከዚህ በተጨማሪም ለጓሮ አትክልት፣ ለዕፅዋት ልምላሜ፣ ለአርብቶ አደሩና ከፊል አርብቶ አደሩ አካባቢዎች ለመጠጥ ውሃና ለግጦሽ ሳር አቅርቦት ከማሟላት አንፃር አዎንታዊ ሚና ነበረው፡፡ በሌላም በኩል በተለይም በአንዳንድ የመካከለኛዉ፣ የምዕራብና የሰሜን-ምስራቅ የሀገሪቱ አካባቢዎች ላይ አልፎ አልፎ በአንዳንድ ስፍራዎች ላይ ከባድ መጠን ያለዉ ዝናብ ከመዝነቡ ጋር በተወሰኑ ስፍራዎች ላይ ለወንዞች መሙላትና ለጎርፍ ተጋላጭ በሆኑ አካባቢዎች ላይ ለጎርፍ መከሰት መንስኤ መሆኑንና እንዲሁም የተሰበሰቡ መረጃዎች እነደሚያመለክቱት ባሳለፍናቸው ቀናት በተከታታይ ዝናብ በማግኘት ላይ በነበሩ የተወሰኑ ቦታዎች ላይ በተለያየ የእድገት ደረጃ ላይ ባሉ ሰብሎች የአፈር ውስጥ እርጥበት ከመብዛት ጋር በተወሰኑ ማሳዎች ላይ የውሃ መተኛትን አስከትሏል ።

የኦገስት ወር ሶስተኛው አስራ አንድ ቀናት ለወቅቱ ዝናብ መኖር አመቺ የሆኑት የአየር ሁኔታ ክስተቶች ከመጠናከራቸው ጋር ተያይዞ የመኸር ሰብል አብቃይና የክረምት ዝናብ ተጠቃሚ በሆኑ የሀገሪቱ አካባቢዎች ላይ ከመጀመሪያዎቹ ሁለት አስር ቀናት በመጠንም ሆነ በሥርጭት ረገድ የተጠናከረ የእርጥበት ሁኔታ ነበራቸው፡፡ ይህም ሁኔታ በተለያየ የእድገት ደረጃ እና ፍሬ በማፍራት ላይ ለሚገኙ ሰብሎች የውሃ ፍላጎት መሟላት ጥሩ አስተዋጽኦ ነበረው፡፡ ከዚህ በተጨማሪ ለጓሮ አትክልት፣ ለዕፅዋት ልምላሜ፣ ለአርብቶ አደሩና ከፊል አርብቶ አደሩ አካባቢዎች ለመጠጥ ውሃና ለግጦሽ ሳር አቅርቦት መሟላት የጎላ አስተዋፅኦ ነበረው፡፡ በሌላ በኩል በመካከለኛዉ፣ በምስራቅ እና ምዕራብ ኦሮሚያ፣ በአማራ በአንዳንድ የሀገሪቱ አካባቢዎች ላይ ከባድ ዝናብ የነበረ ሲሆን፤ በከባድ ዝናብ ምክንያት ቅጽበታዊ ጎርፍ በተወሰኑ ቦታዎች በመከሰቱ በተለያየ የእድገት ደረጃ ላይ ባሉ ሰብሎች፣ በአፈር ጥበቃ ሥራ እንዲሁም በሰው እና በንብረት ላይ መጠነኛ ጉዳት ነበረው፡፡ በአንጻሩ ባለፉት አስራ አንድ ቀናት የተገኘው እርጥበት ቀደም ባሉት ቀናት እርጥበት ባልተዳረሰባቸው እና እጥረት ለነበረባቸው ቆላማ አካባቢዎች ለሚኖሩት አርብቶ አደርና ከፊል አርብቶ አደር አካባቢዎች ለግጦሽ ሳርና ለመጠጥ ውሃ አቅርቦት ጥሩ አስተዋፅኦ ነበረው።

በአጠቃላይ ባለፈው የኦገስት ወር ለወቅቱ ዝናብ መኖር አመቺ የሆኑት የአየር ሁኔታ ክስተቶች ከመኖራቸው ጋር ተያይዞ በመጀመሪያው እና ሦስተኛው አስራ አንድ ቀናት የዝናቡ ስርጭት በምዕራብ፣ በደቡብ ምዕራብ እና መካከለኛዉ እንዲሁም ደቡብ ብሔር ብሄረሰቦች እና ህዝቦች ክልል የሀገሪቱ አከባቢዎች ላይ የተሻለ የዝናብ ስርጭት ነበራቸው፡፡ በሁለተኛው አስር ቀናት ግን በምስራቅ እንዲሁም መካከለኛው የሀገሪቱ አከባቢዎች ላይ የመቀነስ አዝማሚያ የታየበት ቢሆንም በምዕራብ የሀገሪቱ አከባቢዎች ላይ የተስፋፋ የዝናብ ስርጭት ነበራቸዉ፡፡ ይህም ሁኔታ የአፈርን እርጥበት ከማሻሻል እንዲሁም ተክሎች የሚያስፈልጋቸውን ውሃ ከማቅረብ አንጻር ገንቢ ሚና ነበረው፡፡ በተጨማሪም ከሰብል ልማት አንጻርም ቀደም ሲል በሚያዝያና ግንቦት ተዘርተው በተለያየ የእድገት ደረጃ ላይ ለሚኙት የረጅም ጊዜ ሰብሎች እንደ ማሽላና በቆሎ ለመሳሰሉት እንዲሁም ዘግይተዉ ተዘርተው በቡቃያና በተለያየ የእድገት ደረጃ ላይ ላሉት እንደ ስንዴ፣ ገብስ፣ አጃ እና ጤፍ ለመሳሰሉት የብርዕ ሰብሎች፣ የጥራጥሬ እህሎችና የቅባት እህሎች እንዲሁም ለቋሚ ተክሎች የዉሃ ፍላጎት መሟላት ምቹ ሁኔታን ከመፍጠሩም በተጨማሪም ለአርብቶ አደሩና ከፊል አርብቶ አደሩ አካባቢዎች በመጠን ረገድ አነስተኛም ቢሆን ለመጠጥ ውሃና ለግጦሽ ሳር አቅርቦት መሟላት በጎ ጎን ነበረው፡፡ በተጨማሪም በአንዳንድ የአገሪቱ አካባቢዎች ላይ ከባድ ዝናብ የነበረ ሲሆን፤ በዚህም ምክንያት ማሳ ላይ ዉሃ መተኛትና ቅጽበታዊ ጎርፍ በተወሰኑ ቦታዎች በመከሰቱ በተለያየ የእድገት ደረጃዎች ላይ ባሉ ሰብሎች፣ በአፈር ጥበቃ ሥራ እንዲሁም በሰው እና በንብረት ላይ መጠነኛ ጉዳት ነበረው፡፡

SUMMARY

AUGUST 2023

During the first dekad of August, the meteorological aspects that create favorable conditions for kirmt rains were stronger, so the agricultural meteorological data collected and analyzed from different parts of the country indicated that the moisture was covering most of the areas that benefit from kirmt. The obtained moisture had a positive role for both early sown and late sown as well as early sown long-term crops in terms of satisfying their daily water needs. In addition, the moisture found in the pastoral and Agro -pastoral areas in the northeast and east areas was good foe natural and man-made springs and positive side of providing better drinking water and grazing grass. On the other hand, the information we received indicates that the heavy rains in Bale Robe, caused a flood event and caused some damage to property. In addition, there was an excess of moisture in some areas in connection with the consecutive rainy days, which had a negative impact on the overall growth of crops. On the other hand, the rainfall received in certain areas of Eastern, Central and Southern Oromia was low compared to the amount of evaporation, so it had a negative impact in terms of satisfying the moisture requirements of the crops that were in the stage of flowering and fruiting.

Agricultural meteorology data collected from different parts of the country indicate that during the second dekad of August, most of the kirmt rain benefiting areas had a tendency to decrease in distribution and quantity from the first dekad. The resulting moisture had a positive role meher crop activity. In particular, satisfying the water needs of crops at different stages of growth and fruiting had a good contribution. In addition to this, it had a positive role in terms of supplying drinking water and grazing grass for gardens, plant growth, pastoral and agro-pastoral areas. On the other hand, especially in some central, western and north-eastern areas of the country, occasional heavy rains in some places have led to the filling of rivers in certain places and flooding in flood-prone areas. Crops at different stages of development in places have caused water logging in some fields along with excess soil moisture.

During the last third dekad of August, due to the strengthening of weather system comparing with the first two dekads the rainfall in amount and coverage over Kiremt rain benefiting and Meher season crop growing areas received various amount of moisture during the

dekad under review. The situation had a good contribution to satisfy the water needs of crops at different stages of growth and seedling stage. In addition to this, there was a significant contribution to fruits, vegetables, perennial plants and to ensure the availability of pasture and drinking water over pastoral and agro-pastoral areas. On the other hand, there was heavy rain in some parts of the country in central, eastern and western Oromia, Amhara. Due to the heavy rains, flash floods occurred in certain areas, causing minor damage of crops at different stages of development, soil conservation work, and to people and property. Moreover, the moisture obtained in the last eleven days had a good contribution to the supply of feed and fodder and drinking water over low land pastoral and agro-pastoral areas where there was moisture stress in the previous days.

Generally, in the first and third dekad of the month, related with the occurrence of favorable weather events, the distribution of rain was better in the western, southwestern, central and southern parts of the country. Whereas i*n* the second dekad, there was a decreasing trend in the eastern and central parts, however there was widespread moisture experienced in the western half of the country. This condition had been good enough to satisfy daily crop water requirement for various early planted Meher season crops including the long cycle crops such as maize and Sorghums. In general the wide distribution of rainfall across Kiremt rain benefiting areas could have a positive contribution toward enhancing the growth of late planted various crops such as such as Wheat, Barley, Oats, and Teff, oilseeds, pulse crops and perennial plants. The enhanced moisture over the north eastern and the eastern pastoral and agro pastoral community might play crucial role toward improving the availability of pasture and drinking water as well as to regenerate natural and artificial ponds. On the other hand, areas which have been receiving rainfall in continuous manner might experience excess soil moisture which might lead to water logging and runoff. Further, the reported locally heavy falls might enhance the occurrence of flash flood and soil erosion.

1. WEATHER ASSESSMENT

1.1. Rainfall amount (21 – 31 August, 2023)

During Third Dekad of August 2023, West, Central, East and South Tigray, Waghimera, North and South Gonder, Bahir Dar, West and East Gojjam, Agew Awi, Metkel, Assosa, Kamashi, Tango, West and East Wellega,North West Shewa, Addis Ababa Zone, Illibabur, Jimma, Gambela, Zone1&2, Godere, Sheka, Gurage, Alaba and pocket areas of Shinile Zones are recived 25-100mm rain fall. Afar Zone 2, 3,4 & 5, Shinile, Jijiga, West and East Hararghe, Arsi, Bale, Hadiya, Wolita. Kefa, Bench Maji, Basketo, South Omo and Gambela Zone 3 Zones are received 5-25mm rain fall. The rest part of the country was exhibited 0-5mm rain fall.

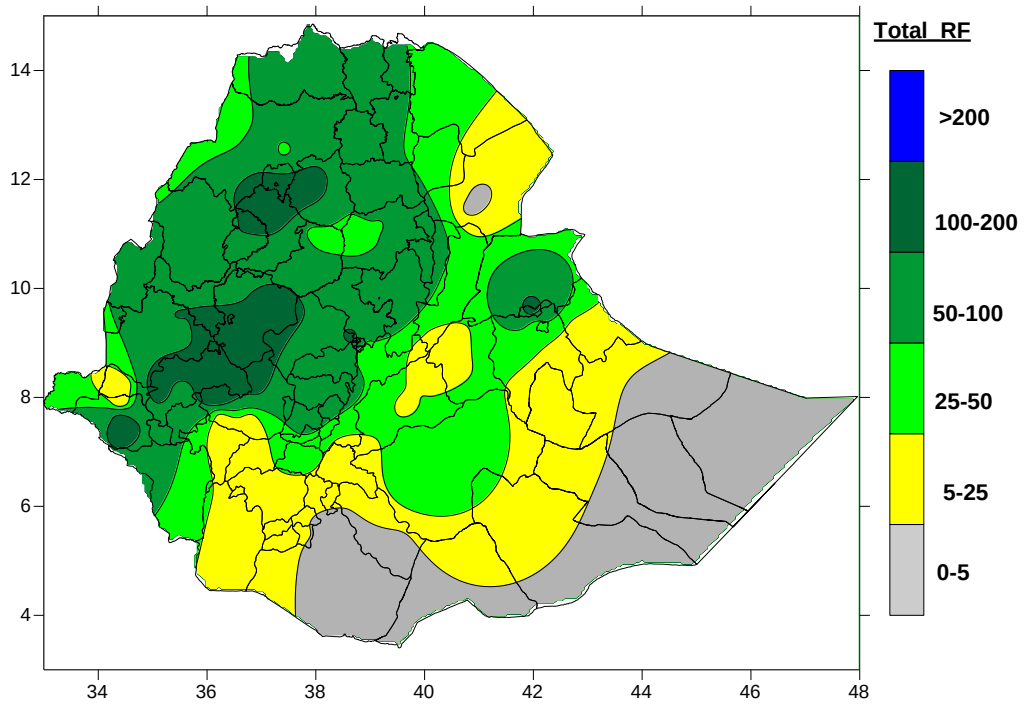


Figure 1. Rainfall distribution in mm (21 – 31) August 2023

1.2. Rainfall Anomaly (21 – 31 August, 2023)

During the Third Dekad of August 2023, the rain fall anomaly was some rain benefiting areas of Western North Western, Centeral and south Westerna areas of the country was exhibited Normal to Above Normal rain fall condition. On the other hand, the rest part of the country was exhibited Much Below Normal rain fall condition

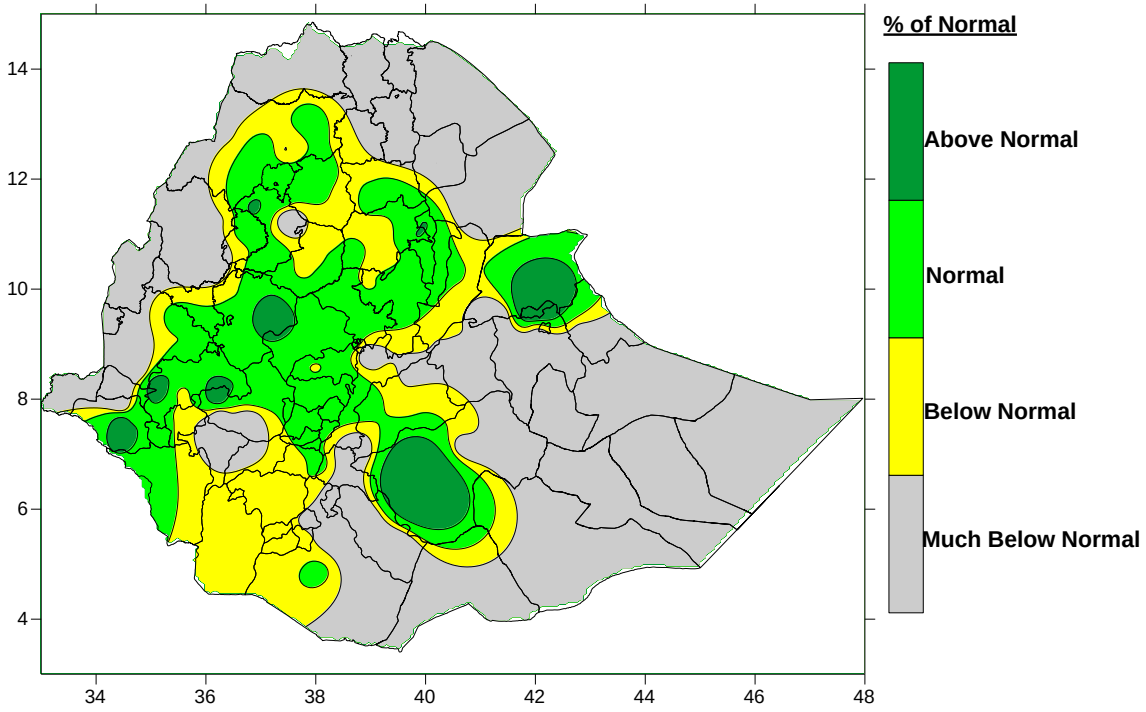


Figure 2: Percent of normal rainfall distribution (21-31 August 2023)

Explanatory notes for the Legend

< 50-Much below normal
50-75%-Below normal
75-2125%- Normal
> 2125% - Above normal

1.3. Moisture Condition (21 – 31 August 2023)

During Third Dekad of August 2023, most part of kirmt rain benefiting areas particularly North Western, Western, some part of South Eastern and North Eastern part of the country the moisture condition was moist to hyper humid. On the other hand, the rest part of the country was Dry to Very Dry moisture condition.

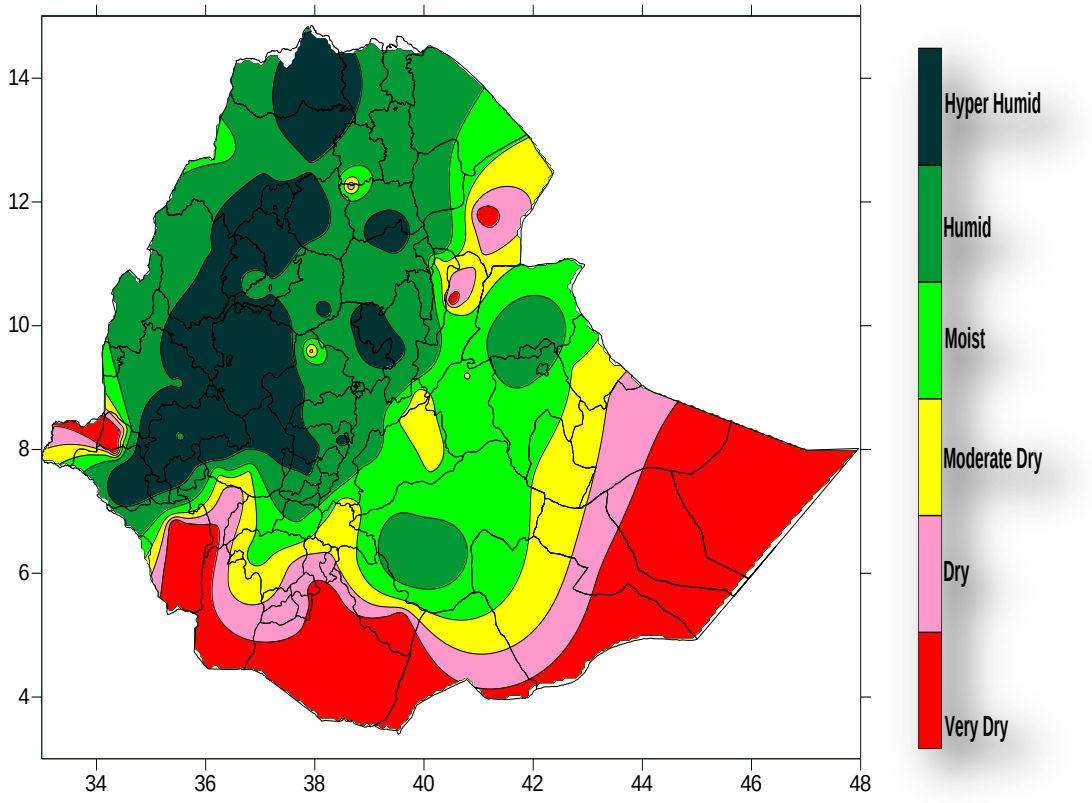


Figure.3. Moisture Status (21-31 August 2023)

1.4. Rainfall amount on the month of August 2023

During the month of Augest 2023, the rain fall distribution was some areas of North and South Gonder, Bahir Dar, West Gojjam, Agew Awi, Pocket areas of North and South Wello, Oromia Zone, Kamashi,, North and West Shewa, Addis Ababa Zone, West and East Wellega, Illibabur, Jimma,Gurage, Sheka and Godere Zones are received >200mm rain fall. North and South Gonder, waghimera, North and South Wello, Bahir Dar, West Gojjam, Agew Awi, Metkel, Oromia Zone, Afar Zone1,3&5, Tango, Kamashi, North and West Shewa, West and East Wellega, Illibabur, Jimma, Gambela Zone1,2&3, Bench maji, Keffa, Basketo, pocket areas of Siliti, Dawero, Arsi, West and East Hararghe Zones are received 100-200mm rain fall. Pocket areas of West, Centeral and South Tigray, Afar Zone 1,3,4&5, Shinili, West and East Harrghe, Jijiga, Arsi, Wolita, Sidama, Hadiya, Basketo and South Omo Zones are received 25-50mm rain fall. The rest part of the country was received 0-25mm rain fall.

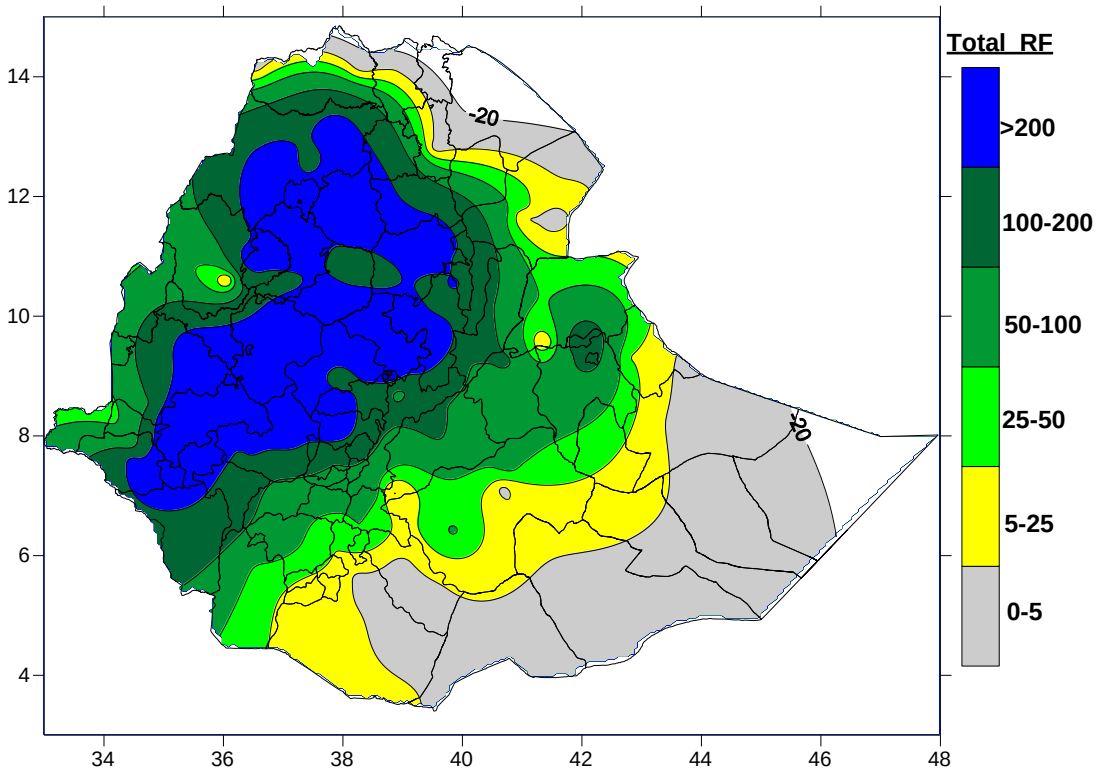


Fig. 4 Rainfall amount in mm for the month of August 2023

1.5. Rainfall Anomaly on the month of August 2023

During the month of August 2023, the rainfall anomaly was some part of the country, particularly, Western, North Western, Centeral and South Western part of the country was exhibited Normal to Above Normal Rain fall Condition. The rest part of the country was Much Below Normal to Below Normal rain fall condition.

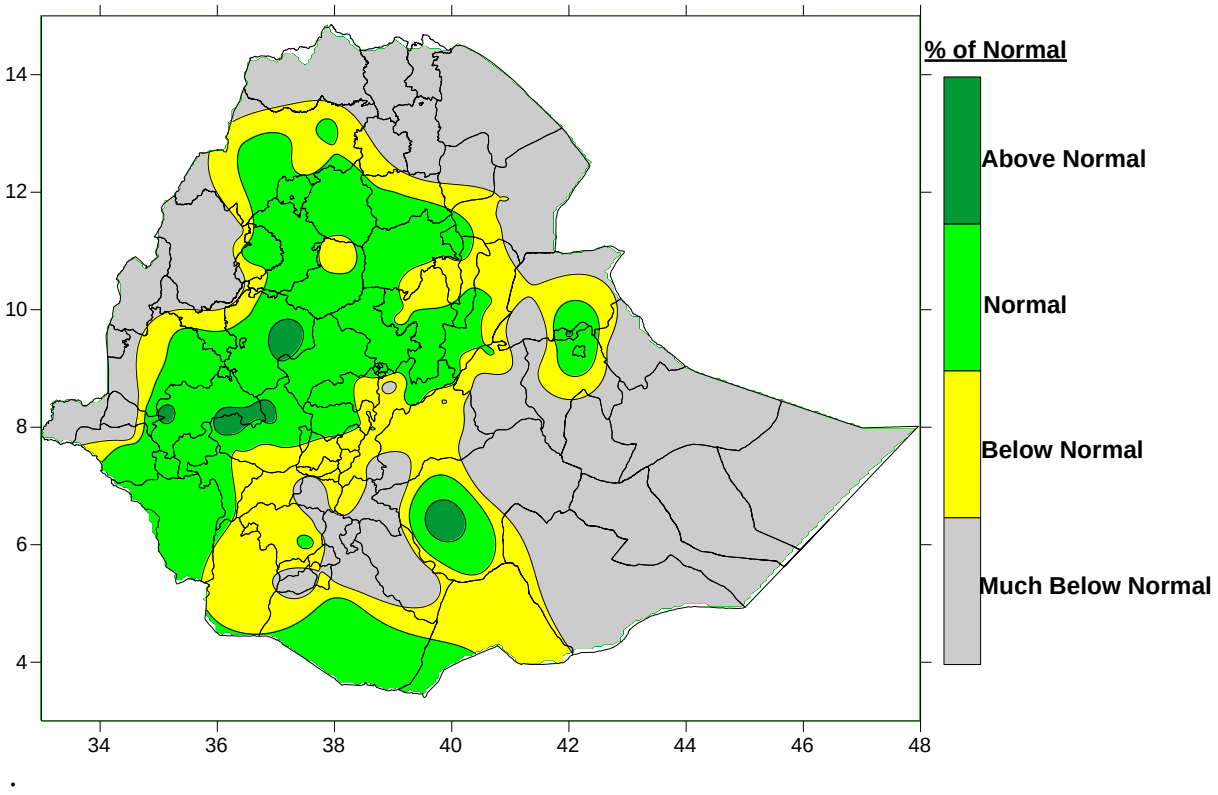


Fig. 5 Percent of Normal Rainfall for the month of August 2023

Explanatory notes for the Legend

< 50-Much below normal

50-75%-Below normal

75-125%- Normal

> 125% - Above normal

1.6. Moisture status on the month of August 2023

During the month of August 2023, most part of kirmt rain benefiting areas the moisture condition was moist to hyper humid particularly North Western, Western, some part of South Western and North Eastern part of the country. On the other hand, the rest part of Southern and South Eastern part of the country was Dry to Very Dry moisture condition.

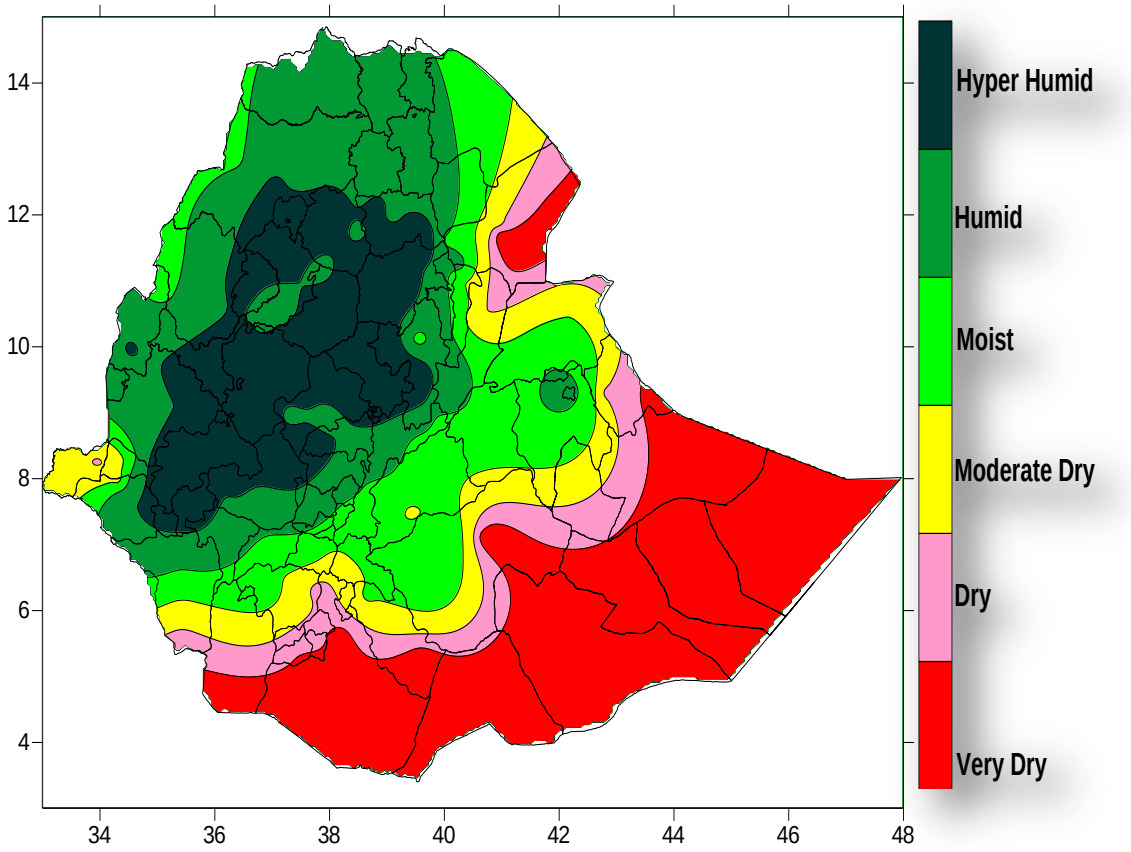


Fig. 6 moisture status for the month of August 2023

2. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE

2.1. Vegetation Condition and Impact on Agriculture on the Month of August 2023

During Month of August 2023, Vegetation condition are highly increasing from first dekade up to last Dekade of the month and most part of Western North and South Western, Central and some part of Eastern region of the country are better vegetation coverage compared to other part of the country whereas vegetation coverage highly decline in the first dekad of the month.

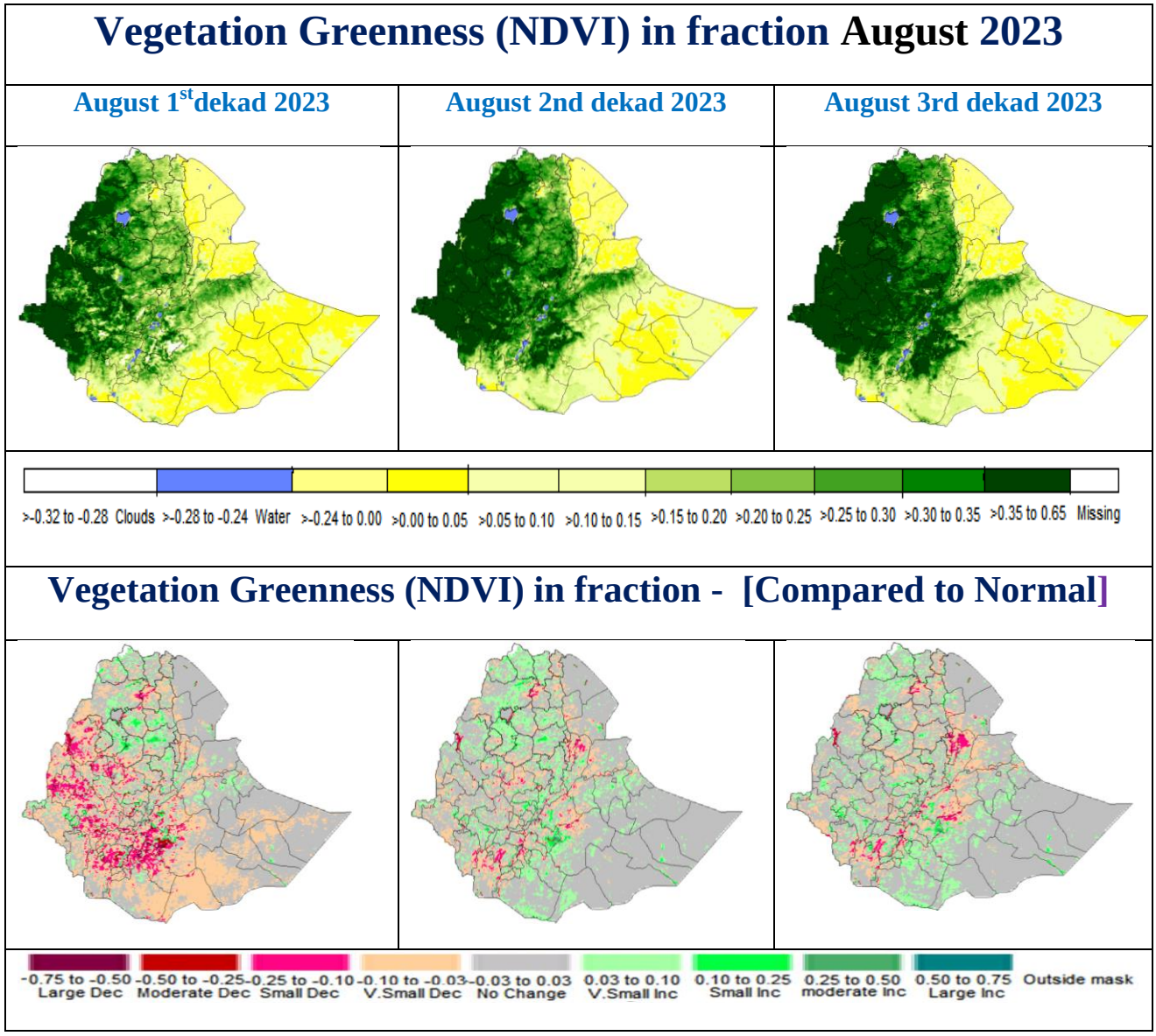


Fig. 6 Vegetation Greenness (NDVI) in fraction and Compared to Normal August 2023

3. Expected Weather impact on Agriculture during the Coming Month of September 2023

According to the weather forecast for the month of September, it is expected that the moisture condition will be good in the areas that Meher crops producing and Kiremt rain benefiting areas of the country. Along with this, it is expected that some parts of the northwest, west and central parts of the country will receive moderate to heavy rainfall. This situation will create favorable conditions for the ongoing agricultural activities, especially for late crops sown Meher crops that found in different growth stages and those that are in the process of grain filling stages, water supply for perennial plants, and late sown pulse crops planted in the highlands with the help of moisture stored in the soil at the end of the Kiremt season. In addition, the extended moisture after the mid of the month especially over Southern Oromia and Southeast parts, the area which have been dry during the Kiremt season and where Bega is their second rainy season highly favorable for the improvement of pasture and drinking water availability and the situation also could give an opportunity to collect and store rain water for areas often deal with moisture stress problem. However, the expected above normal rainfall over some places may result in heavy falls it might lead to water logging and crop damage on crop fields particularly over low-lying areas and anticipated to generate flash floods due to raise water levels across the river banks. Thus, proper attention should be undertaken to minimize the risk in areas where there is no proper drainage system and low-lying areas making furrow and channel in order to reduce the effect of excess moisture. Moreover, the continuous and widespread rainfall over some parts might create conducive condition for weed infestation which can be aggressive at the time of excess moisture condition and in areas where the deficient and erratic rainfall is anticipated there would be a possibility of pest and disease outbreak since the expected weather condition is favourable for the event. Therefore proper attention should be given for sensitive areas ahead of time to control the possible risk. In addition, Kiremt rain withdrawal on time in most of Kiremt benefiting areas however the forecast indicated that early cessation particularly from eastern and central parts of the country. Therefore it is necessary to make proper use of moisture conservation method to reduce the risk due to the lack of moisture.

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 August 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.

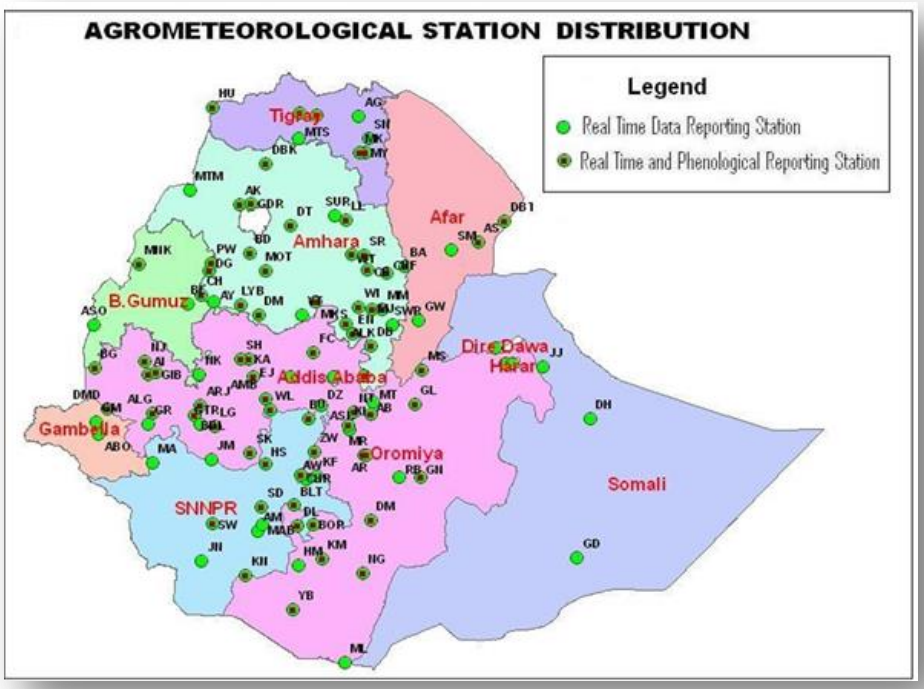
DEKAD: - First or second ten days or the remaining days of a month.

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 Auguste 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		