ETHIOPIA METEOROLOGY INSTITUTE Agrometeorological Bulletin

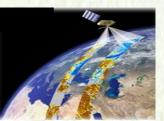
MONTHLY AGROMETEOROLOGICAL BULLETIN

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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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አህፅሮት እ.ኤ.አ ኦክቶበር 2022

ባሳለፍነው የኦክቶበር 2022 የመጀመሪያዎቹ አስር ቀናት የአየር ሁኔታ <u>ገጽታዎች ከሰሜን ምሥራቅ - የሀገሪቱ ክፍሎች ላይ በአንጻራዊ መልኩ የመዳከም</u> ሁኔታ በመኖሩ የበጋው ፀሐያማና ነፋሻማ የአየር ሁኔታ አይሎ ተስተውሏ ይህም በመሆኑ በተለይም ደረቅ ሆነው በሰነበቱት አካባቢዎች ላይ ለደረሱና በመድረቅ ሂደት ውስዋ ለሚገኙ ሰብሎች አዎንታዊ ሚና ነበረው ፡፡ ይሁን እንጂ በደቡብ ደጋማ ቦታዎች አብዛኛዉ አማራ፣ ቤኒሻንጉል ጉሙዝ፣ ጋምቤላ፣ ምዕራብና ማካከለኛዉ ኦሮሚያ፣ ሲዳማ፣ የደቡብ ብሄር ብሄረሰቦችና ህዝቦች ክልል፣ የአፋር ደቡባዊ ክፍል፣ የደቡብ ደጋማ ስፍራዎዥና የምስራቅ ኢትዮጵያ ሰሜን ሱማሌ፣ ሐረሪና ድሬዳዋ በብዙ በቦታዎች ላይ ከቀላል እስከ መካከለኛ መጠን ያለዉ ዝናብ ነበራቸዉ፡፡ የሀም እርዋበታማ ሁኔታ ቀደም ብለው ለተዘሩና እድገታቸውን ላልጨረሱ፣ አልፎ አልፎ ፍሬ በመሙሳት ላይ ለሚገኙ፤ ዘግይተው ለተዘሩና በተለያየ እድገት ደረጃ ላይ ለሚገኙ የመኸር ሰብሎችም ሆነ ለቋሚ ተክሎች ገንቢ ሚና የነበረው ሲሆን፤ በተለይም ቢጋ ሁለተኛ የዝናብ ወቅታቸው በሆኑት በደቡብ የሀገሪቱ ክፍሎች ላይ የተወሰነ የእርዋበት ሁኔታ የተስተዋለባቸው በመሆኑ የተገኘዉ እርዋበት ዋምር ግብርና ለሚካሄድባቸው በደቡብ የአገሪቱ ክፍሎች ላይ ዘር ለመዝራትና እንዲሁም በቆሳማው አካባቢ ለሚኖሩት አርብቶ አደሮችና ከፊል አርብቶ አደርች ለግጦሽ ሣርና ለመጠዋ ውሀ አቅርቦት በት ትን ነበረው ። በሌላም መልኩ በፀሃይ ኃይል እየታገዘ ከተፈጠረው <u> ጠንካራ የደመና ክምችት በአንዳንድ በአማራ፣ በምዕራብና በመካከለኛው ኦሮሚያ፣</u> በጋምቤሳ፣ በደቡብ ብሄር ብሄረሰቦችና ሀዝቦች ክልል ላይ ከባድ መጠን ያለዉ ዝናብ ተመዝግቧል፡፡ ከዚህም ጋር ተያይዞ በመደበኛ ባህሪያቸው በእርሞበት መብዛት በሚዘወትርባቸው ስፍራዎች ላይ ተከታታይነት የነበረው እርጥበታማ ሁኔታ የእድንት ጊዜያአቸውን በጨረሱ ሰብሎች ላይ በተወሰኑ መልኩ አሉታዊ ጎን ነበረው፡፡

ባሳለፍነው የኦክቶበር ሁለተኛ አስር ቀናት የሰሜን ምሥራቅ፣ የመካከለኛውና የምሥራቅ የሀገሪቱ ክፍሎች ደረቅ፣ ፀሐያማና ነፋሻማ የአየር ሁኔታ ተዘወትሮባቸዋል፡፡ ይህም ሁኔታ ለደረሱና በመድረቅ ሂደት ውስጥ ለሚገኙ ሰብሎች አዎንታዊ ሚና የነበረው ሲሆን፤ በሌላ መልኩ በሰሜን ምዕራብ፣ በምዕራብ፣ በደቡብ ምዕራብና በደቡብ የሀገሪቱ ክፍሎች በአንዳንድ ቦታዎቻቸው ላይ ዋሩ የእርተበት ሁኔታ የተስተዋለባቸው በመሆኑ የተገኘዉ እርተበት ቀደም ብለው ለተዘሩና እድገታቸውን ላልጨረሱ ፣አልፎ አልፎ ፍሬ በመሙላት ላይ ለሚገኙ፤ ዘግይተው ለተዘሩና በተለደየ እድገት ደረጃ ላይ ለሚገኙ የሙኸር ሰብሎችም ሆነ ለቋሚ ተክሎች የውሃ ፍላጎት ከማሟላት አንፃር ገንቢ ሚና ነበረው ፡፡በተጨማሪም በደቡብ የሀገራቱ ደጋማ ክፍሎች ላይ ዘር ለመዝራትና እንዲሁም በቆላማው አካባቢ ለሚኖሩት አርብቶ አደሮችና ከፊል አርብቶ አደርች ለግጦሽ ግርና ለመጠጥ ውሃ አቅርቦት ጥሩ አስተዋዖ የነበረዉ ሲሆን በተለይም በጋ ሁለተኛ የዝናብ ወቅታቸው የሆኑት የደቡብ ኦሮሚያና የደቡብ ሶማሌ አካባቢዎች በአንዳንድ ሥፍራዎቻቸው ላይ ከቀላል እስከ ከባድ መጠን ያለው ዝናብ ከመኖሩ ጋር ተያይዞ የእርሞበት መጠኑም እየተሰፋፋ እንደሂደ የተሰበሰቡ የግብርና ሚቲዎሮሎጂ መረጃዎች ያመላክታሉ። ይህም ሁኔታ ምንም እንኳን የደረሰን ሪፖሪት ባይኖርም አልፎ ለልፎ ባሉት ቀናት በጥቂት የደቡባዊው የሀገሪቱ ክፍሎች ላይ የነበረው ከባድ ዝናብ በተለያየ የእድገት ደረጃ ላይ ባሉ ሰብሎች ላይ በተወሰነ መልኩ አሉታው ተøእኖ ቢኖረውም ውሃ አጠር ለሆኑ አካባቢዎች ውሃን ለመሰብሰብና ለማከማቸት ጥሩ አጋጣሚን የፈጠረ ነበር፡፡

ባሳለፍናቸው የኦክቶበር 2022 የመጨረኛዎቹ አስራ አንድ ቀናት ደረቅ፣ ፅሃያማ እና ነፋሻማ የአየር ሁኔታ በአብዛኛዎቹ የሰሜን አጋማሽ፣ የመካከለኛዉ እና የምስራቅ የሀገሪቱ አካባቢዎች ላይ አመዝኖ እንደነበረ ከተለያዩ የሀገሪቱ ክፍሎች የተሰበሰቡ የግብርና ሚቲዎሮሎጂ መረጃዎች ያመለክታሉ፡፡ ይህም በመሆኑም በተለይም በመደበኛ ሁኔታ ከሰሜንና ከሰሜን ምሥራቅ የሀገሪቱ ክፍል ዝናብ መውጫው ስለሆነና በዚህ ጊዜ የሰብል ስብሰባቸውን በሚያካሂዱ በአንዳንድ ሰብል በደረሰባቸው አካባቢዎች የነበረው ደረቅ የአየር ሁኔታ ለሰብል ስብሰባና ድህረ ሰብል ስብሰባው አመቺ ሁኔታን የፌጠረ ቢሆንም በአንዳንድ ለውርዌ ተጋሳዌ በሆኑ ሥፍራዎች ላይ የሌሊቱና የማለዳው ቅዝቃዜ እየጨመረ በመምጣቱ እድገታቸውን ባልጨረሱ ሰብሎች እና በመስኖ በሚለሙ አትክልቶች ላይ በተወሰነ መልኩ አሉታዊ ተፅእኖ ነበረው፡፡ በሌላ በኩል በምዕራብ፣ በደቡብ ምዕራብ፣ በደቡብ እና በደቡብ ምስራቅ የሀገሪቱ አካባቢዎች በተለይም በመጀመሪያዎቹ አምሰት ቀናት ከቀላል እስከ መካከለኛ መጠን ያለዉ ዝናብ በመኖሩ ምክንያት የተገኘው እርጥበት ቀደም ብለው ለተዘሩና አልፎ አልፎ ፍሬ በመሙላት ላይ ለነበሩ የመኸር ሰብሎችና - ለቋሚ ተክሎች የውሃ ፍላንት መሟላት ገንቢ ሚና የነበረው ሲሆን በአንጻሩም ቢጋ ሁለተኛ የዝናብ ወቅታቸው በሆኑት የደቡብና የደቡብ ምስራቅ የሀገሪቱ ክፍሎች ላይ የተሻለ የእርጥበት ሁኔታ የተስተዋለባቸው በመሆኑ የተገኘዉ እርሞበት ዋምር ግብርና ለሚካሄድባቸው በደቡብ ደ*ጋማ* የአገሪቱ ክፍሎች ላይ ለተዘሩ ሰብሎች የውሃ ፍላጎት መሟላት እንዲሁም

በቆሳማው አካባቢ ለሚኖሩት አርብቶ አደሮችና ከፊል አርብቶ አደሮች ለማጦሽ ሣርና ለመጠዋ ውሃ አቅርቦት እንዲሁም የዝናብ ውሃን ለመሰብሰብና ለማከማቸት ሞሩ አጋጣሚን የፌጠረ ነበር፡፡

ባጠቃሳይ ባሳለፍነው የኦክቶበር ወር 2022 በአብዛኛው የሀገሪቱ ክፍሎች ላይ የበጋው ደረቅ ፀሐያማና ነፋሻማ የአየር ሁኔታ አመዝኖ እንደነበረ የተሰበሰቡ የግብርና ሚቲዎሮሎጂ መረጃዎች ያመለክታሉ፡፡ ይህም ሁኔታ በመድረቅ ሂደትና በመሰብሰብ ሳይ ለሚገኙ ሰብሎች አዎንታዊ ሚና ነበረው። ሆኖም ግን ለእርሞበት መጨመር ምቹ ከነበረው የሚቲዎሮሎጂ ክስተት መጠናከር ጋር ተያይዞ በጋ ሁለተኛ የዝናብ ወቅታቸው የሆኑት የደቡብ ኦሮሚያና የደቡብ ሶማሌ በተጨማሪም የመካከለኛው ኦሮሚያ፣ በአንዳንድ የሰሜን ምዕራብ፣ የምዕራብና የደቡብ ምዕራብ የሀገሪቱ ክፍሎች ላይ ከቀላል እስከ ከባድ መጠን የሚደርስ የእርጥበት ይዘት እንደነበራቸው የተተነተኑ የግብርና ሚቲዎሮሎጂ መረጃዎች ያመለክታሉ። ይህም ተጠናክሮ የታየው እርሞበታማ ሁኔታ እድገታቸውን ሳልጨረሱና በተለያየ የእድገት ደረጃ ላይ ለሚገኙ የመኸር ሰብሎችም ሆነ ለቋሚ ተክሎች እድገት የሚያስፈል,ጋቸውን እርጥበት ከማስገኘት አንጻር አዎንታዊ ሚና ነበርው። በተጨማሪም በጋ ሁለተኛ የዝናብ ወቅታቸው ለሆኑት የአርብቶ አደርና የከፊል አርብቶ አደር አካባቢዎች የተለያዩ የግብርና አዎንታዊ ሚና የነበረው ሲሆን ለግጦሽ ሳርና እንቅስቃሴዎችን እንዲያከናውኑ ለመጠዋ ውሃ አቅርቦት መሻሻልም ገንቢ ሚና ነበረው። ሆኖም ግን በአንዳንድ ሥፍራዎቻቸው ላይ ከባድ መጠን ያለው ዝናብ ከመኖሩ ጋር ተያይዞ የእርጥበት መጠኑም እየተሰፋፋ እንደሄደ የተሰበሰቡ የግብርና ሚቲዎሮሎጂ መረጀዎች ያመላክታሉ። ይህም ሁኔታ ምንም እንኳን የደረሰን ሪፖሪት ባይኖርም አልፎ አልፎ ባሉት ቀናት በተወሰኑ የሀገሪቱ ክፍሎች ላይ የነበረው ከባድ ዝናብ በተለያየ የእድገት ደረጃ ላይ ባሉ ሰብሎች ላይ አሉታው ተፅእኖ ቢኖረውም ውሃ አጠር ለሆኑ አካባቢዎች ውሃን ለመስብሰብና ለማከማቾት ጥሩ አጋጣሚን የፌጠረ ነበር፡፡

SUMMARY OCTOBER 2022

During the first dekade of October 2022, the moisture condition was enhanced over most parts of Kiremt rain benefiting areas particularly southern highlands, most of Amara, Benishangul Gumuz, Gambella, western and central Oromia, Sidama, southern ethnic groups and peoples' region, southern part of Afar, northern Somalia, Harare and Dere dawa. The recorded agrometeorological stations indicate heavy fall was reported from some parts of the country. In line with, Gore 34.0, Nekemt 39.8 and 32.5, Amen 66.1, Bedelle 34, Bure 64, Bore 34, Chagni 42.4, Cheffa 42.4, Dangila 51.5, Ghione 32.2, Gidayana 36.2, 46.1 and 64, Gundo meskel 34, Immdiber 36, Konso 34.8, Lare 45, Limugenet 46.7 and 38.8, Masha 36.4, Nedjo 38, Sherkole 36.2, Sekoru, 50.5, Tepi 31.3 and Tercha 54 mm rainfall was received. 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 rain during the dekad could play very crucial role to perform land preparation and to plant pulse and other short cycle crops. Moreover, the condition had positive impact for improving the availability of pasture and drinking water over both the pastoral and agro pastoral community. On the other hand, dry moisture condition was prevailing over some areas of the north-eastern and eastern portion of the country. This situation was supposed to be more favourable to conduct harvest and postharvest activities of matured crops for areas of northern and north-eastern parts where the Kiremt season was getting off.

During the second dekad of October 2022, the analysed agro meteorological information's indicated that the dry moisture condition prevailed over north-eastern, central and eastern parts of the country. This condition is believed to be favourable for harvest and post-harvest activities of fully matured Meher season crops. On the other hand, enhanced moisture condition was observed over north-western, western, south-western and southern parts of the country experienced good rainfall in amount and distribution. The observed enhanced moisture had positive implication for various Meher season crops which were under different phenological phases which is found in flowering and grain filling stage and also the observed improved moisture might be positive impacts for the availability of pastor and drinking water over pastoral and agro pastoral communities. Moreover, the extended moisture over the southern and south-eastern pastorals and agro-pastorals areas where Bega is the second rain season could play very crucial role to perform different agricultural

activities and for improving the availability of pasture and drinking water over both the pastoral and agro pastoral community. However, the observed heavy fall over southern half of the country had good opportunity to collect rain water harvesting. On the other hand, the observed heavy fall over some areas which are characterized as moisture excess areas, particularly the western and south western parts of the country might experience water logging, runoff and soil erosion due to continuous rainfall and heavy fall.

During the third dekad of October 2022, the analyzed agro meteorological information's indicated that the dry, Sunny and windy weather condition prevailed over most of northern half, central and eastern Meher growing areas of the country. This condition is believed to be favorable for harvest and post-harvest activities of fully matured Meher season crops. However, over some high land areas recorded minimum temperature below 5 °c among the observed station like Debrebirhan 1.8, 2.2 and 1.2 °c. Bui 3.8 °c, Wegel tena 1.8 and 3.0 °c, Chefa 4.0 °c, Enewary 4.6 and 4.5 °c, Fitche 4.2 °c, and Mehalmeda 1.8 and 3.0 °c. This condition might be slightly negative impact for crops which were lately planted, currently found at various growing stages and irrigated fruits and vegetables. On the other hand, enhanced moisture condition was observed over the western, south-western, southern and south-eastern parts of the country experienced light to moderate amount of rainfall. This condition might be favourable to satisfy daily crop water requirement for various early planted Meher season crops which found different phonological stages as well as perennial plants. Moreover Bega is the second rainy season for the southern and south-eastern parts of the country, the received rain during the dekad could play very crucial role to perform different agricultural activities. Additionally, the condition had positive impact for 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.

During the month of October 2022, according to the analyzed agro meteorological information some of the northern half, central and eastern part of the country was under the influence of dry moisture condition. This situation is believed to be favorable for harvest and post-harvest activities of fully matured Meher season crops. On the other hand, the observed enhanced moisture over enhanced moisture condition prevail over southern and central Oromia, southern Somali and some parts of western, south-western and north-western parts of the country received slight to heavy rainfall. This situation was believed to be more favorable for perennials plants and various crops which are found from vegetative to grain filling stages toward attaining their water need for further growth and development. Similarly, since Bega is the second rainy season for the southern and south-eastern parts of

the country, the received rain during the month could play very crucial role to perform different agricultural activities. Additionally, the condition had positive impact for improving the availability of pasture and drinking water over both the pastoral and agro pastoral community. In relation to the dry condition, the night and morning time coldness was observed below 5 degree centigrade over some high lands. This condition might be slightly negative impact for crops which were lately planted and currently found at various growing stages and requiring additional moisture for their further development. However the observed heavy fall over southern half of the country had good opportunity to collect rain water harvesting. On the other hand the observed heavy fall over some areas which are characterized as moisture excess areas, particularly the western and south western parts of the country might experience slight water logging, runoff and soil erosion due to continuous rainfall and heavy fall.

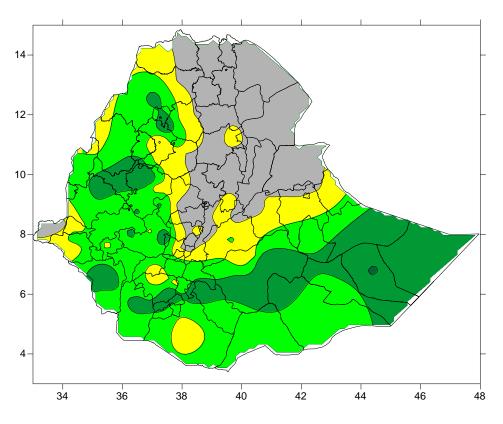


Fig 1. Rainfall distribution in mm (21 - 31) October 2022

1. WEATHER ASSESSMENT

1.1. Rainfall amount (21 – 31) October 2022

During third dekad of October Wardar, Korahe, Degahabur, Pocket areas of Fik and Afder, Ble, Kamashi, West and East Wellega, pocket areas of Guji, Dirsha, Bench Maji, Tip areas of Jimma, North and South GonderZones are received 50-100mm of rainfall. Assosa Tango, Metkel, Agew Awi, Bhir Dar, North and South Gonder Pocket areas of Bale, Degahabur, Gode, Afder, Liben, Guji, Amaro, Pocket areas o Borena, South Omo, Konso Basketo, Sidama, Dawero, Keffa, Gonder, Sheka, Illibabur, West Wellega, 25-50mm of rainfall. Jijiga West and East HrargheArsi, Weast Shewa, Pocket areas of Borena and Dawero, Alaba, Gurji, South and West Shewa, East Gojjam, pocket areas of North and South Gonder, West Tigray 5-25mm of rainfall. The rest parts of the country exhibited 0-5 amount of rainfall.

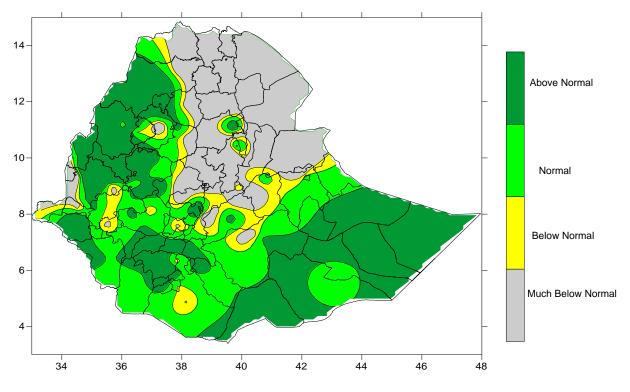


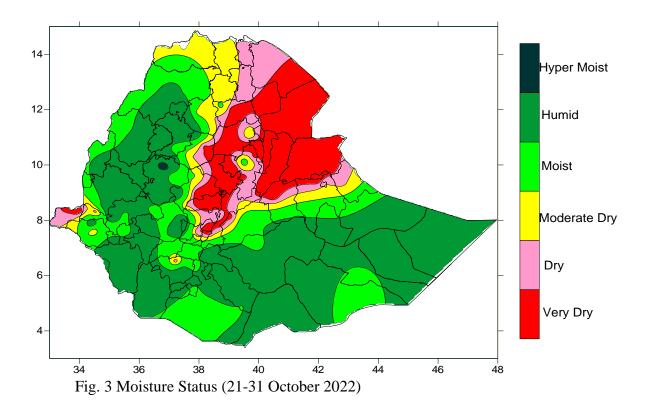
Fig. 2 Percent of normal rainfall distribution (21-31 October 2022)

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 October 2022)

During third dekad of October the rain fall anomaly, North Gonder, Metkel, Assosa, Kamashi, West and East Wellega, Gambela Zone1&2, Gonder Jimma, [ocket araeas of Illibabur, Gurji, Bench Maji, Keffa, Dawero , Wolita, Sidama, Basketo, Goffa, South Omo, Konso, Dirsha, Gedo, Guji, Amaro, Borena, Liben , pocket araeas of Bale East Hararaghe, Afder, Gode, Korahi, Wardar, Degahabur, Fik Zones are Exhibited normal to above normal rainfall. The rest parts of country experienced below to much below normal rainfall.



1.3. Moisture status (21 – 31 October 2022)

Western and southern half of the country including parts of Arsi and eastern part of the country exhibited Moist to Humid moisture condition. The rest parts of the country experienced moderately dry to very dry.

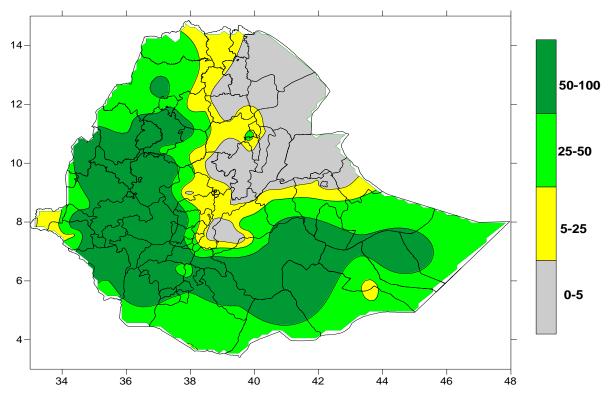


Fig. 4 Rainfall amount in mm for the month of October 2022

1.4. Rainfall amount on the month of October 2022

During the month of October 2022, Bale, Fik, Gode, Korahe, Afder, Liben, Wareder, Guji, South Ommo, Konso, Derashe, Basketo, Gode, Goffa, Sidama, Hadya, Dawuro, Benchi Maji, Godere, Sheka, Keffa, Jima, Illibabur, East and West Wollega, Kamashe, Assossa, Metekel, Agew Awi, Bahirdar, West Gojam, and North Gonder Zones were received from 50-100 mm of rainfall. In addition to this Derashe, Warder, Korahe, Gode, Afder, liben, Borena, poket areas of East and West Harrarghe, pocket areas of North Shewa, East Gojam, North Gonder, West Tigray, pocket areas of Gambella, Zone 1 and 2 and Jango Zones were received 25-50 mm of rain fall. However, Central and Eastern Tigray, pocket areas of Waghimira, pocket areas of North Shewa Zone received 5-25 mm of Rainfall. The remaining parts of the North Eastern and Eastern parts of the country were persisting on dry conditions.

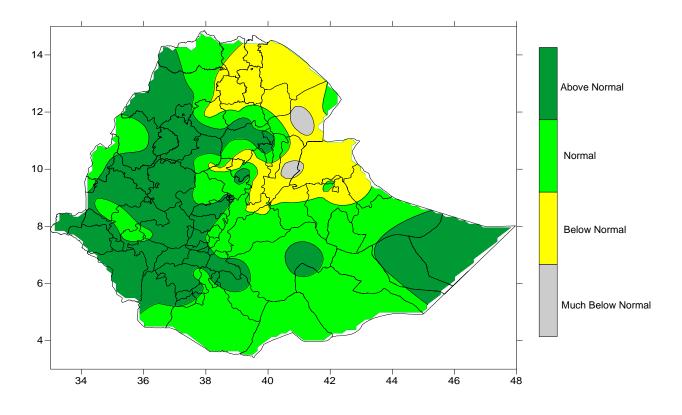


Fig. 5 Percent of Normal Rainfall for the month of October 2022

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 October 2022

During the month of October 2022 Rain Fall Anomaly East and South Tigray, Afar Zone 1,2,4,3, Waghimra, Shinilie, Jijiga, pocket areas of West and East Hararghe Zones exhibited much Below Normal to Below Normal rain fall. The rest part of the country especially western and south eastern part of the country experienced Normal to Above Normal rain fall conditions.

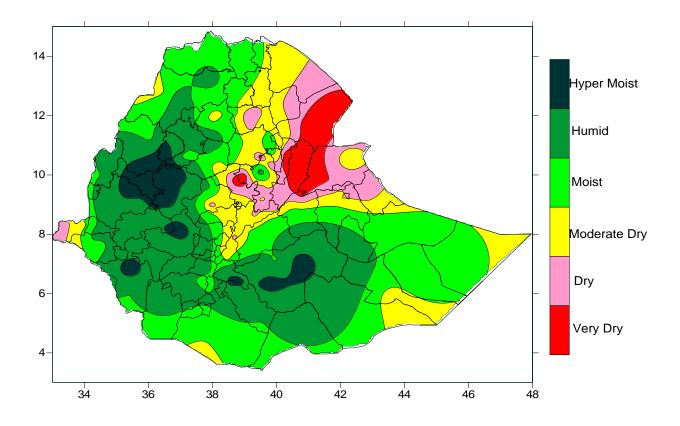


Fig. 6 moisture status for the month of October 2022

1.6. Moisture status on the month of October 2022

In accordance with the moisture status map above, western and southern half of the country including most parts of Arsi and eastern part of the country exhibited Moist to Humid moisture condition. The rest parts of the country experienced moderately dry to very dry.

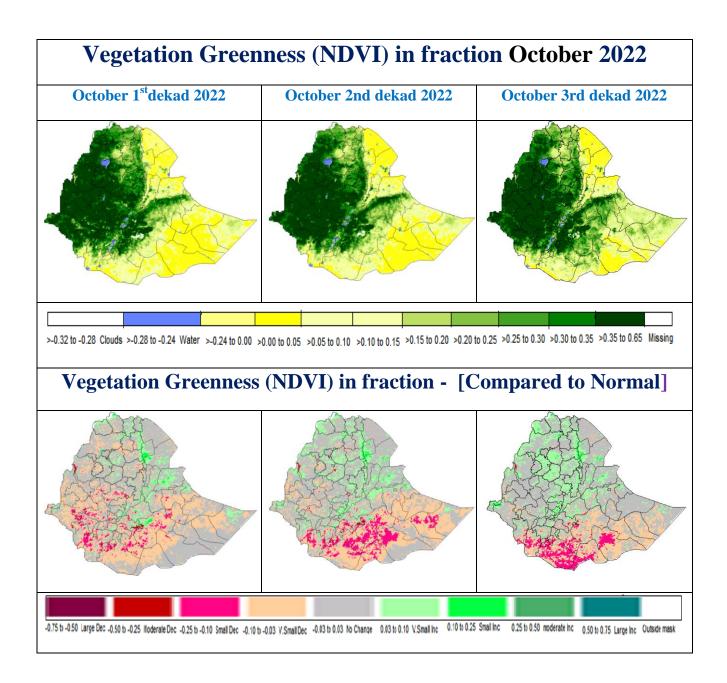


Fig.7 Vegetation Greenness (NDVI) in fraction and Compared to Normal October 2022.

2. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE

2.1. VEGETATION CONDITION AND IMPACT ON AGRICULTURE ON THE MONTH OF OCTOBER 2022

Generally during the month of October 2022, according to the analyzed agro meteorological information some of the northern half, central and eastern part of the country was under the influence of dry moisture condition. This situation is believed to be favourable for harvest and post-harvest activities of fully matured Meher season crops. On the other hand, the observed enhanced moisture over enhanced moisture condition prevail over southern and central Oromia, southern Somali and some parts of western, south-western and north-western parts of the country received slight to heavy rainfall. This situation was believed to be more favorable for perennials plants and various crops which are found from vegetative to grain filling stages toward attaining their water need for further growth and development. Similarly, since Bega is the second rainy season for the southern and south-eastern parts of the country. Due to the received rain during the month dekad to dekad increase NDVI Fig.7 (the green plant coverage) it could play very crucial role to perform different agricultural activities. Additionally, the condition had positive impact for improving the availability of pasture and drinking water over both the pastoral and agro pastoral community. Moreover the observed heavy fall over southern half of the country had good opportunity to collect rain water harvesting. On the other hand the observed heavy fall over some areas which are characterized as moisture excess areas, particularly the western and south western parts of the country might experience slight water logging, runoff and soil erosion due to continuous rainfall and heavy fall.

2.2. EXPECTED WEATHER IMPACT ON AGRICULTURE DURING THE COMING MONTH OF NOVEMBER 2022

In normal condition, during the month of November most part of the country is subjected for dry moisture condition and harvest and post-harvest activities of fully matured crops are widely performed in most Meher season growing areas, while some of the south-western, southern and south eastern part of the country receive different amount of rainfall.

According to the weather forecast, in the coming month of November 2022 the Bega season dry moisture condition is expected to prevail across the country and this may intensify night and morning time coldness over some parts of the high land areas and it may lead to the formation of frost. However the forecasted dry and sunny condition should be taken as good opportunity to 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. The night and morning time cold condition may have negative impact on fruit and other horticulture plants as well as crops which are found at flowering and grain filling stages. Therefore, farmers need to be assisted by agricultural professional for effective management of cold conditions. On the other hand, the expected slight to moderate rainfall up to the second half of the month over south-western, southern and south- eastern parts of the country 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.

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.

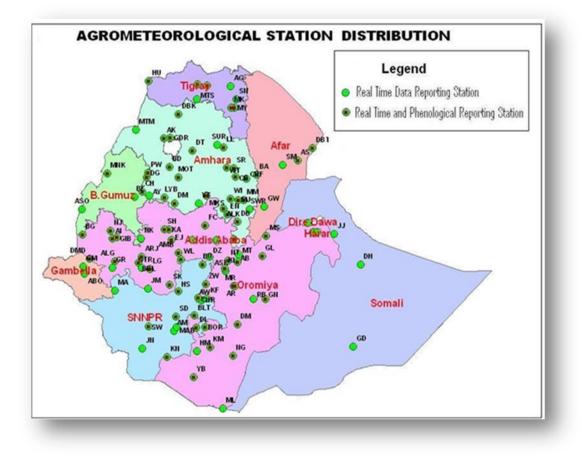
DEKAD: - First or second ten days or the remaining days of a month.

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		