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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 በጋ 2020/21

በብሔራዊ የሚቲዎሮሎጂ ኤጀንሲ የወቅቶች አከፋፈል መሰረት የበጋ ወቅት ከጥቅምት እስከ ጥር ያለውን ጊዜ የሚያጠቃልል ሲሆን፤ በመደበኛ ሁኔታ ፀሐያማ፣ ደረቅ እና ነፋሻማ የአየር ፀባይ በአብዛኛዎቹ የሀገሪቱ አካባቢዎች ላይ የሚያመዝንበት እና አልፎ አልፎ ወቅቱን ያልጠበቀ ዝናብ የሚታይበት ጊዜ ነው። እንዲሁም በሰሜን ምስራቅ፣ በምስራቅ፣ በመካከለኛው እና በደቡብ ደጋማ አካባቢዎች ላይ ከፍተኛ ቅዝቃዜና የውርጭ ክስተት የሚስተዋልበት ወቅት ሲሆን በሌላ በኩል ይህ ወቅት ለደቡብ እና ደቡብ ምሥራቅ ቆላማ የሀገሪቱ አካባቢዎች ሁለተኛና አጭሩ የዝናብ ወቅታቸው ጭምር ነው። ከዚህ ምቹ የአየር ፀባይ ጋር ተያይዞ በአብዛኛው የመክር አብቃይ በሆኑ አካባቢዎች የተለያዩ ሰብሎች እድገታቸውን የሚጨርሱበት ከመሆኑ ጋር ተያይዞ የሰብል ስብሰባና ድህረ ሰብል ስብሰባ ተግባራት በስፋት የሚካሄድበት ጊዜ ሲሆን በደቡብና በደቡብ ምሥራቅ የአርብቶ አደሩና ከፊል አረብቶ አደር አካባቢዎች ለግጦሽና ለመጠጥ ውሀ እንዲሁም መጠነኛ የሆነ እርሻ እንቅስቃሴ የሚካሄድበት ጊዜ ነው። በመጀመሪያው የበጋ ወር ከሚኖረው የምዘን እርጥብ አየር መጨመር ሞቃታማ ሁኔታ ጋር ተያይዞ እንደዋግ የመሳሰሉ የሰብል በሽታዎች እና የተለያዩ ተባዮች ለመፈጠርና ለመስፋፋት ተስማሚ ሁኔታዎችን የሚያገኙበትም ወቅት ነው።

እ.ኤ.አ 2020 የኦክቶበር ወር በተለይም እስከ ወሩ አጋማሽ ድረስ በምዕራብ፣ በመካከለኛው፣ በሰሜን ምስራቅ፣ በደቡብ፣ በምስራቅና በደቡብ ደጋማ ስፍራዎች ላይ የተሻለ እርጥበት ነበራቸው። ሆኖም ግን ከወሩ አጋማሽ በኋላ በአብዛኛዎቹ አካባቢዎች ላይ የእርጥበት ሁኔታው ከጊዜ ወደ ጊዜ እየቀነሰ እንደመጣ የግብርና ሚትዎሮሎጂ መረጃዎች የሚያመለክቱ ሲሆን በተለይም በመጨረሻዎቹ አስር ቀናት ወደ ሀገራችን ይገባ የነበረው ዕርጥበት እየቀነሰ በመምጣቱ በአብዛኛዎቹ የሀገሪቱ አካባቢዎች ላይ ደረቃማ ሁኔታ አመዝኖ ነበር። ሆኖም የእርጥበት ሁኔታው ይበልጥ ወደ ደቡብና ደቡብ ምዕራብ የሀገሪቱ አካባቢዎች ላይ የተሻለ ገፅታ የነበረው ሲሆን ከቀን ወደ ቀን እየተጠናከረ ከመጣው ደረቅ የአየር ጠባይ ጋር ተያይዞ የሌሊትና የማለዳው ቅዝቃዜ በደጋማው የሀገሪቱ አካባቢዎች ላይ እየተጠናከረና እየተስፋፋ በመምጣቱ አንዳንድ አካባቢዎች ከአምሳት ድግሪ ሴልሽዩስ በታች የሆነ ዝቅተኛ ሙቀት ተመዝግቧል። በተለይም እስከ ወሩ አጋማሽ ድረስ የታየው እርጥበታማ ሁኔታ በወቅቱ በተለያዩ እድገት ደረጃ ላይ ለሚገኙ ሰብሎችና ቋሚ ተክሎች የውሃ ፍላጎታቸውን ለማሟላት አዎንታዊ ሚና የነበረው ሲሆን በሌላም በኩል ለአርብቶ አደርና ከፊል አርብቶ አደር

አካባቢዎች የመጠጥ ውሃና የግጦሽ ሳር አቅርቦትን ከማሻሻል አንጻር ሚናው ከፍተኛ ነበር። በአንጻሩ በአንዳንድ አካባቢዎች ላይ የታየው ደረቃማው የእርጥበት ሁኔታ ለደረሱና በመሰብሰብም ሆነ በመድረቅ ሂደት ውስጥ ለሚገኙ ሰብሎች አዎንታዊ ሚና ነበረው። በሌላ መልኩ በተለያዩ ምክንያት ዘግይተው ለተዘሩና እድገታቸውን ላልጨረሱና ተጨማሪ እርጥበት ለሚያስፈልጋቸው የመኸር ጊዜ ሰብሎችም ሆነ ለቋሚ ተክሎች በመጠኑ አሉታዊ ጎን ነበረው። ከቀኑ ዝቅተኛ ሙቀት ጋር ተያይዞ በደጋማ አካባቢዎች ላይ የታየው የሌሊትና የማለዳ ቅዝቃዜ በተለያዩ የእድገት ደረጃ ላይ ለሚገኙ ሰብሎች በጥቂቱ አሉታዊ ተጽእኖ ነበረው።

እ.ኤ.አ ባሳለፍነው የኖቨምበር 2020 ወር በተለይም በሁለተኛው አስር ቀናት በአብዛኛው የሀገሪቱ ክፍሎች ላይ ደረቃማው እርጥበት ከፀሃያማነትና ከነፋሻማነት ጋር እንዲሁም ከማለዳና ከሌሊቱ ቅዝቃዜ ጋር ተዳምሮ በአመዛኙ ተስተዋወቀ። ፡ ከሚጠበቀው ወቅታዊ የግብርና እንቅስቃሴ አንጻር ሰብል ለመሰብሰብና የድህረ ሰብል ስብሰባ ተግባራትን ለማከናወን አመቺ ሁኔታን የፈጠረ ነበር። ይሁን እንጂ በመጀመሪያውና ከሶስተኛው አስር ቀናት አጋማሽ ጀምሮ የደቡብ፣ የደቡብ ምዕራብና የምዕራብ ኢትዮጵያ እንዲሁም የቦጋ ወቅት ዝናብ ተጠቃሚ ባልሆኑት የሰሜን ምስራቅ፣ የመካከለኛውና የምስራቅ የሀገሪቱ አካባቢዎች ላይ አልፎ አልፎ ባሉት ቀናት የእርጥበታማ ሁኔታው በአመዛኙ ነበራቸው። ይህም ሁኔታ ሙሉ ለሙሉ እድገታቸውን ላልጨረሱ ሰብሎች፣ ለቋሚ ተክሎች እንዲሁም በመኸር ወቅት መጨረሻ ላይ በአፈር ውስጥ በተከማቸው እርጥበት በመታገዝ ለሚዘሩ እንደ የጥራጥሬ ሰብሎች ጠቀሜታ ነበረው። እንዲሁም ቦጋ ሁለተኛ የዝናብ ወቅታቸው በሆኑት የደቡብና የደቡብ ምስራቅ የሀገሪቱ ክፍሎች ላይ የተሻለ የእርጥበት ሁኔታ የተስተዋለባቸው በመሆኑ የተገኘው እርጥበት በደጋማው አካባቢ ለተዘሩ ሰብሎች የውሃ ፍላጎት መሟላት እንዲሁም በቆላማው አካባቢ ለሚኖሩት አርብቶ አደሮችና ከፊል አርብቶ አደሮች ለግጦሽ ሣርና ለመጠጥ ውሃ አቅርቦት አዎንታዊ አስተዋጽኦ ነበረው። በሌላም በኩል ከደረቃማው የአየር ሁኔታና ከደመና ሽፋን መሳሳት ጋር ተዳምሮ የማለዳውና የሌሊቱ ቅዝቃዜ በአንዳንድ ደጋማ የሀገሪቱ ክፍሎች በተወሰኑ አካባቢዎች ላይ የቀኑ ዝቅተኛ የሙቀት መጠን ከ5 ዲግሪ ሴልሽየስ በታች ሆኖ ተመዝግቧል። ይህም ሁኔታ ሙሉ ለሙሉ ባልደረሱና በተለያዩ የእድገት ደረጃ ላይ በሚገኙ ሰብሎች ላይ በመጠኑም ቢሆን የራሱን አሉታዊ ተጽዕኖ አሳድሯል።

እ.ኤ.አ 2020 የዲሴምበር ወር የበጋው ደረቃማ፣ ፀሃያማና ነፋሻማ የአየር ሁኔታ በአብዛኛው የሀገሪቱ ስፍራዎች ላይ ተስተውሏል። ይህም ሁኔታ በወቅቱ እየተከናወነ ካለው የግብርና እንቅስቃሴ አንፃር በጎ ጎን ነበረው። በመሆኑም በወሩ ውስጥ የተስተዋለው ደረቅ የእርጥበት ሁኔታ የደረሱ ሰብሎች እንዲደርቁ፣ በጊዜ እንዲሰበሰቡና የድህረ ሰብል ስብሰባ ተግባራትን ለማከናወን ምቹ ሁኔታ ነበረው። በሌላ መልኩ በአንዳንድ የሰሜን፣ የመካከለኛው እና የምስራቅ የሀገሪቱ ደጋማ ስፍራዎች ላይ ከቀኑ ዝቅተኛ የሙቀት መጠን የተነሳ የለሊትና የማለዳው ቅዝቃዜ ከ ዜሮ ዲግሪ ሴልሻየስ በታች ሆኖ ተመዝግቧል። ይህም የተስተዋለው ቅዝቃዜ በእንስሳት ጤናና፣ በመስኖ በመታገዝ በሚለሙ የፍራፍሬ ተክሎችና በጓሮ አትክልቶች ላይ በጥቂት ቦታዎች ላይ በተወሰነ መጠን አሉታዊ ጎን ነበረው። ይሁንና አልፎ አልፎ ባሉት ቀናት ከነበረው የደመና ሽፋን በምዕራብ አማራ፣ በደቡብ ብሄር ብሄረሰቦችና ህዝቦች ክልል፣ በምዕራብና በደቡብ ኦሮሚያ፣ በጋምቤላና በደቡብ ደጋማ ስፍራዎች በአንዳንድ ቦታዎች ላይ ከቀላል እስከ መካከለኛ መጠን ያለው ዝናብ ተመዝግቧል። ይህም ሁኔታ በተለይም ለደረሱና በመሰብሰብ ሂደት ውስጥ ለነበሩ ሰብሎች በጥቂት ቦታዎች አሉታዊ ጎን የነበረው ቢሆንም በጋ ሁለተኛ የዝናብ ወቅታቸው ለሆኑትም ሆነ በደጋማ አካባቢ ለሚገኙ እና ሙሉ ለሙሉ እድገታቸውን ላልጨረሱ አንዳንድ ሰብሎች፣ ለቋሚ ተክሎች፣ ለአትክልቶችና እንዲሁም ከሰብል ስብሰባ በኋላ ለሚዘሩ እንደ ጓያ እና ሽንብራ ለመሳሰሉ የጥራጥሬ ሰብሎችም ሆነ ለእንስሳት የግጦሽ ሳርና የመጠጥ ውኃ አቅርቦት ላይ የተገኘው እርጥበት ጠቀሜታ ነበረው።

እ.ኤ.አ 2021 የጃንዋሪ ወር በአብዛኛው የሀገሪቱ ክፍሎች ላይ የበጋው ደረቅ፣ ፀሓያማና ነፋሻማ የአየር ሁኔታ አመዝናባቸው የቆየ ከመሆኑ ጋር ተያይዞ የክረምት ተጠቃሚ የሆኑት የሀገሪቱ ክፍል የበጋ ወቅታቸው መገባደጃ ስለሆነና በዚህ ጊዜ የሰብል ስብሰባቸውን ያላጠናቀቁ አካባቢዎች በተለይም ዘግይተው ለተዘሩ ሰብሎችና የሰብል ስብሰባ በደረሰባቸው አካባቢዎች የነበረው ደረቅ የአየር ሁኔታ ለሰብል ስብሰባና ድህረ ሰብል ስብሰባው አመቺ ሁኔታ የፈጠረ ነበር። በአንዳንድ ለውርጭ ተጋላጭ በሆኑ የአገሪቱ ሥፍራዎች ላይ ማለትም በሰሜን ምስራቅ፣ በመካከለኛውና በአንዳንድ የሀገሪቱ ደጋማ ስፍራዎች ላይ የሌሊቱና የማለዳው ቅዝቃዜ በተወሰነ መልኩ የተስተዋለ ሲሆን በቋሚ ተክሎች እና በእንስሳት ላይ በጥቂቱ አሉታዊ ጎን ነበረው። በሌላ በኩል በወሩ ውስጥ አልፎ አልፎ ባሉት ቀናት ወደ ሀገራችን ከገባው ዕርጥበት አዘል አየር ጋር ተያይዞ በአንዳንድ ቦታዎች ላይ የደመና ሽፋን የነበረ ሲሆን በተለይም በደቡብ ብሄር ብሄረሰቦችና ህዝቦች ክልል፣ በጋምቤላ እና በምዕራብ ኦሮሚያ በጥቂት ቦታዎች ላይ ከቀላል እስከ መካከለኛ መጠን ያለው ዝናብ ነበራቸው፤ ይህም የተገኘው

እርጥበት በተለይ የበልግ እርሻ ተጠቃሚዎች በመጠኑም ቢሆን ለማሳ ዝግጅትና ለቋሚ ተክሎች የውሃ ፍላጎት መሟላት አወንታዊ ጎን ነበረው። በአንጻሩ ደግሞ በጋ ሁለተኛ የዝናብ ወቅታቸው በሆኑት የደቡብ ምእራብ የሀገሪቱ ክፍሎች ላይ ጥቂት የእርጥበት ሁኔታ የተስተዋለባቸው በመሆኑ የተገኘው እርጥበት በደቡብ ምእራብ የአገሪቱ ክፍሎች ላይ ለሚኖሩት አርብቶ አደሮችና ከፊል አርብቶ አደሮች ለግጦሽ ሣር አቅርቦት ጥሩ አስተዋጽኦ ነበረው።

በአጠቃላይ የበጋ ወራት 2020/21 የክረምቱ ዝናብ በመደበኛ ሁኔታ ከመውጣቱ ጋር ተያይዞ በአንጻንድ የክረምት ተጠቃሚ አካባቢዎች ላይ የደረሱ ሰብሎችን ለመሰብሰብ አወንታዊ ጎን ቢኖረውም በአብዛኛው በምዕራባዊ የሀገሪቱ ክፍሎች ላይ የዝናቡ ሁኔታ እሰከ ኦክቶበር መዘግየት እድገታቸውን ባልጨረሱ ሰብሎች፤ ዘግይተው በተዘሩ እንዲሁም ቋሚ ተክሎች የውሃ ፍላጎት መሟላት በተጨማሪም ለውሀና ለግጦሽ ሳር አቅርቦት የነበረው አወንታዊ አስተዋጽኦ ከፍተኛ ነበር። የበጋው ወቅት በደንብ ከመግባቱ ጋር ተያይዞ የተለመደው ደረቅ "ፀሃያማና ነፋሻማ የአየር ሁኔታ አመዝኖ ከመቆየቱ ጋር ተያይዞ የክረምት ተጠቃሚ አካባቢዎች ላይ የሰብል ስብሰባ ለሚደረገው እንቅስቃሴ አወንታዊ ጠቀሜታው የጎላ ነበር። ይሁን እንጂ በተለይም በወቅቱ መገባደጃ በነበሩት ሁለት ወራት የነበረው ቅዝቃዜ ለውርጭ ተጋላጭ በሆኑ በሰሜን፤ በሰሜን ምስራቅ፤ በምስራቅ፤ በመካከለኛውና በደቡብ ክፍተኛ ቦታዎች ላይ የነበረው ቅዝቃዜ በግብርና እንቅስቃሴው ላይ በተለይም በመስኖ በሚለሙ የጉዋሮ አትክለቶችና ፍራፊፊ ተክሎች እንደሁም በእንሰሳት ተዋጽኦ ላይ በመጠኑም ቢሆን አሉታዊ ጎን እንደነበረው ለመገንዘብ ችለናል። በተጨማሪም የበጋ ዝናብ ተጠቃሚ ወደ ሆኑት ደቡብና ደቡብ ምስራቅ የሀገሪቱ አካባቢዎች የነበረው የዝናብ ሁኔታ በአካባቢው ለሚከናወነው የጥምር ግብርና እንቅስቃሴ እንዲሁም በነዚህ ቦታዎች ላይ ለሚኖሩት አርብቶና ከፊል አርብቶ አደሮች ለግጦሽ ሳርና ለመጠጥ ውሃ አቅርቦት ጥሩ አስተዋፅኦ ነበረው።

SUMMARY

Bega 2020/21

During Bega based on NMA's seasonal classification, Bega is consisting of four months starting from October and ending with the month of January. In normal conditions, Bega is mainly characterized by dry, sunny and windy weather condition over most of the northern half parts of the country and in some extent some places may exhibit unseasonal rainfall during this season. In addition, there is high possibility of frost occurrence across much of north eastern, eastern, and central and the southern high land areas. In line with the dry and windy weather condition, much of Meher season crops reach to maturity and hence harvest and post-harvest activities are practice widely. On the other hand, it is the second and the shortest rainy season for southern and south-eastern lowlands of the country and this in turn may have significant implication for planting of short cycle crops and for the provision of pasture and drinking water. Bega is also characterized with pest outbreaks, such as rust and insects, if there is a favourable weather condition of high relative humidity in combination with hottest day condition.

During the month of October 2020, according to the analyzed agro meteorological information, during the first and second dekad enhanced moisture condition prevail over western half, central, north eastern, southern, eastern and southern highlands of the country received. In line with this, over Tigray, Amhara, Benshangul Gumiz, western, Central & southern Oromia, Gambela, SNNPR, Sidama, southern highland, pocket areas of Afar and eastern part of the country experienced little to medium rainfall. This situation was believed to be more favourable 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 Debrebirhan, Bati, Wegel tena, Haromaya and Mehalmeda. In addition, the third dekad of October except in some pocket areas, some of the northern half, central, eastern and north western part of the country was also 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. However, this condition might be slightly negative for crops which were lately planted and currently found at various growing stages and requiring additional moisture for their further development. On the other hand heavy falls are recorded over some places like Chagni 45.0 mm, Bedele 34.3 mm, Giner 30.0 mm, Welayita sodo 57.9 mm, Algie 35.8 mm, Arbaminch 42.8 mm, Hawasa 41.0 mm, Delomena 43.5 mm, Dilla 33.7 mm, Gambela 34.6 mm, Bulehora 43.5 mm, Hosanna 31.7 mm, Jinka 31.7 mm, Adola 35.0 mm, Konso 37.7 mm, Kulumsa 36.9 mm, Masha 40.0 mm, Nekemt 52.5 mm, Sawula 76.3 mm, Maji 66.0 mm, and Fugndo 63.6 mm rainfall.

During the month of November according to the analyzed agro meteorological information, particularly during the second dekad of the month the Bega season dry, sunny and windy weather accompanied with night and early morning cooling condition prevailed over most parts of Kiremt rain benefiting area of the country. Besides, the observed 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. However, in the first and the third half of the dekad of the month the enhanced moisture condition prevail over most of the country. This condition was more exhibited over the southern, south-western, western and north-eastern, central and eastern parts where a time in normally dry areas exhibited slight to moderate moisture condition. the observed enhanced moisture might have positive implication for fulfilling the water need of various Meher crops, perennial plants and Similarly, since Bega is the second rainy season for the southern and south-eastern parts of the country, the enhancing rain could play positive impact for improving the availability of pasture and drinking water over both the pastoral and agro pastoral community. On the other hand, the decrease in extreme minimum temperature over the highlands of central, eastern and north-eastern high lands recorded below 5⁰ C. According to the reporting meteorological station, Bati -0.8, -0.5, -1.0, -1.5, and -2.5, Debre Markos 3.7, Bisheftu 3.0 and 3.3, Haromaya 2.0, 3.2, 2.2 and 4.0, Amba mariam 4.0, 2.8 and 1.4, Arsi robe 4.0, Bui 3.6, Cheffa 3.6, Debre berhan -0.2, 0.4, 1.0, 0.6, 1.8, 1.2, -3.2, and -0.5, Enwari 4.2, Fitcha 5.0, Jijiga 4.0 and Wegel tena 2.2, -1.0, and 3.0⁰ C recorded extreme minimum temperature. This condition could have slightly negative impact on fully matured and harvesting crop, Fruits and vegetables grown under irrigation.

During the month of December 2020, according to the analyzed agro meteorological information, dry, sunny and windy weather condition prevail over most of the country. This condition was favourable for the on-going Bega season agricultural activities and the prevailed dry condition on the month positive impact for harvest and post-harvest activities in Meher growing areas, where crops were fully matured. On the other hand, the decrease in extreme minimum temperature over the northern, central and eastern frost prone highland areas of the country recorded below $^{\circ}\text{C}$ in some days. During the month under review the meteorological station report, regarding minimum air temperature, Debrebirhan - 3.4, -2.2, -1.4, -3.9, -0.2, -0.4, -1.4 and 0.6, Wegel tena -0.4, -1.5 and -2.6 Bati -2.5, -3.6, -3.5, -3.0, -0.5, 0.4, -0.4 and -0.1 Jijiga -1.0, Hagere mariam -0.8 and -2.0, Mehal meda -1.0 and 0.6 and Haromaya -2.0 and -1.0 $^{\circ}\text{C}$. These conditions could have slightly negative impact on Fruits and vegetables grown under irrigation and animal's health. On the other hand the observed slight to moderate rainfall over some parts of western Amhara, SNNPR, western and southern Oromia, Gambela and southern high lands could have a significant contribution for perennial plants and the availability of pasture and drinking water. 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 over pastoral and agro pastoral areas.

During the month of January 2020, dry, sunny and windy condition prevailed across most parts of the country and since January is the ending of the Bega season most Meher growing areas came up to finalize their harvest and post-harvest activities. In this regard, the condition was very promising to perform and finalize post-harvest practices particularly at those places where crops had been harvested very lately. On the other hand, the decrease in extreme minimum temperature over the northern, central and eastern frost prone highland areas of the country, there was no significant impact on various perennial as well as horticulture crops. On the other hand, sometimes the observed wettest condition particularly during the month over the SNNPR, Gambela and western Oromia might be favourable toward satisfying the daily water need of perennial plants as well as to ensure the availability of pasture and drinking water for pastoral and agro pastoral communities. In addition, the received moisture could enhance the amount of moisture in the soil and which in turn may create a good ground for early land preparation for the coming Belg season agricultural practices

In general during the last Bega 2020/21, especially on the month of October and November the moisture obtained during Bega season was favorable for the performances of Meher crops that are not yet fully matured. On the other hand, rainfall over southern and southeastern parts performed availability of pasture and drinking water over pastoral area of the country. The wettest condition at early of the season (October) might be positive for unripe crops at time crops planted with residual moisture as well as for perennial plants. The range land index based on WRSI and NDVI computed for Bega 2020/21 shows good improvement. The situation highly favorable for availability of pasture and water over pastoral and agro-pastoral areas. On the other hand on the month of December & January, due to midnight and morning cold weather condition observed over frost prone high land areas, this condition could have slightly negative impact on Fruits and vegetables grown under irrigation and animals body conditions and its product. In general the observed dry and sunny Bega season likely to occur after October will have a positive impact for Meher harvest and post harvest activities.

The moisture statues of Bega 2020/21 describes figure below:

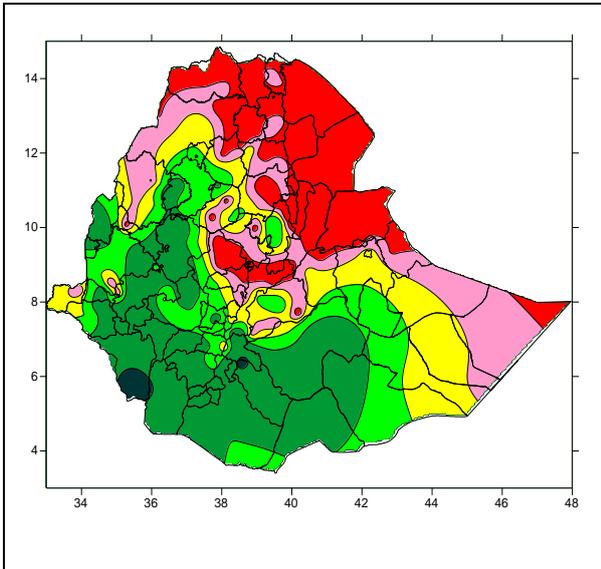


Figure 1. Moisture status for the month of October 2020

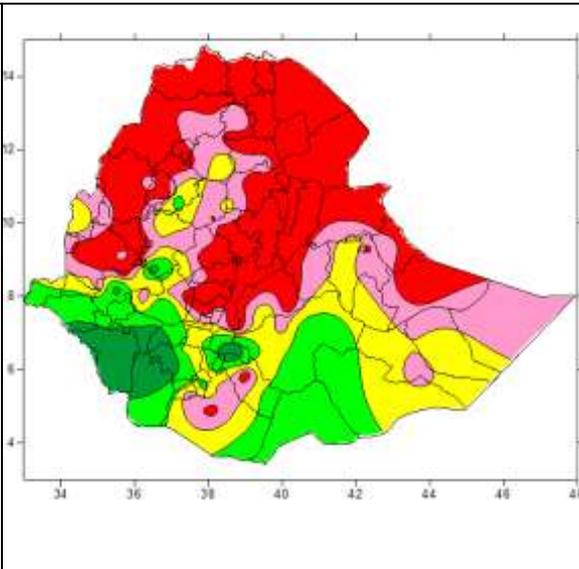


Figure 2. Moisture status for the month of November 2020

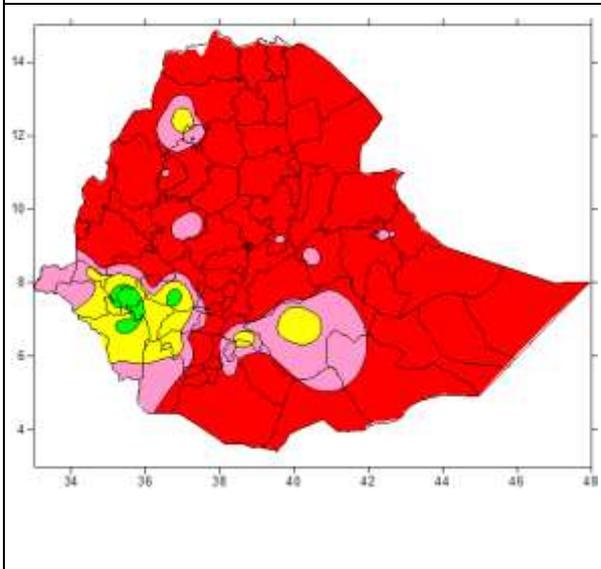
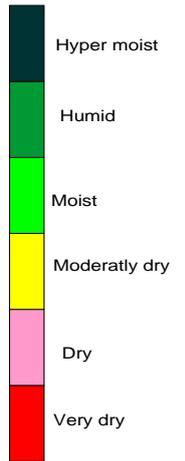


Figure 3. Moisture status for the month of December 2020

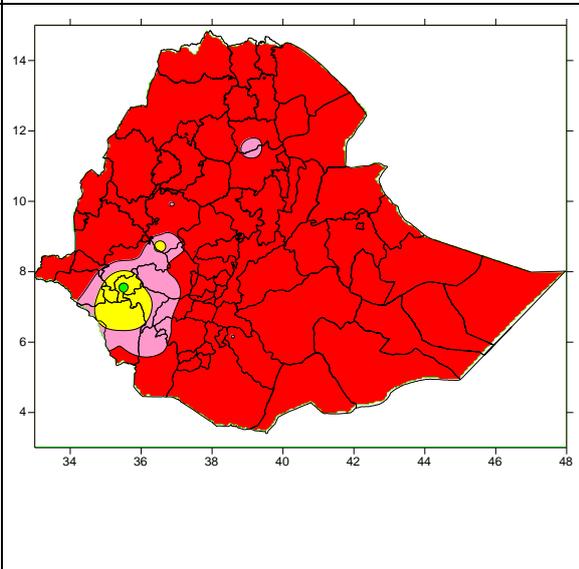
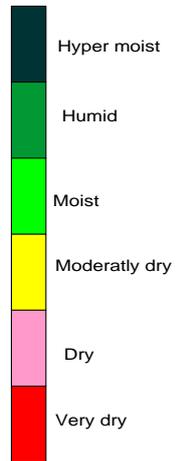


Figure 4. Moisture status for the month of January 2021



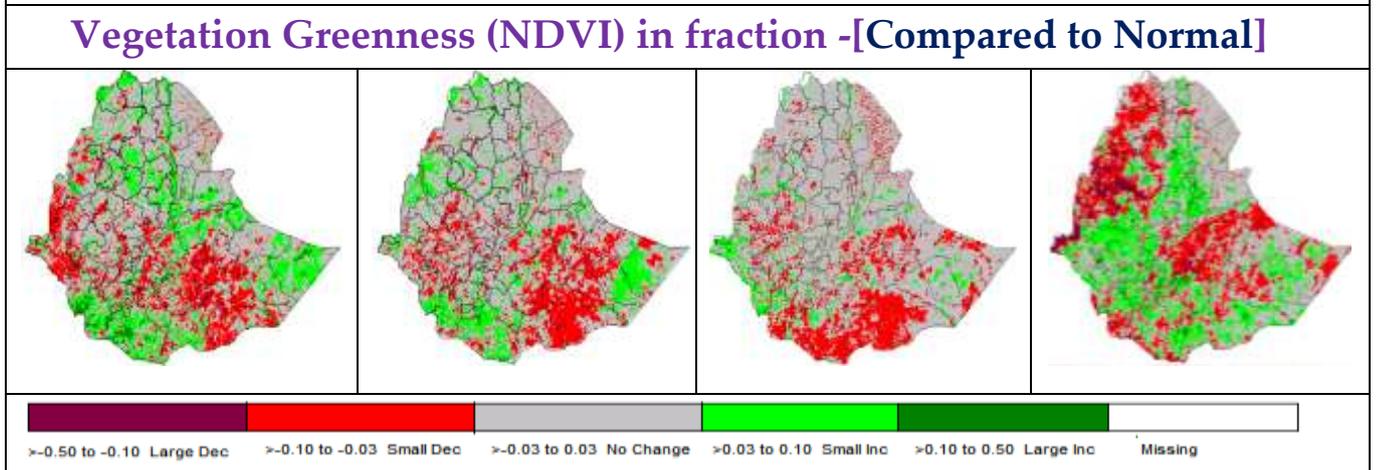
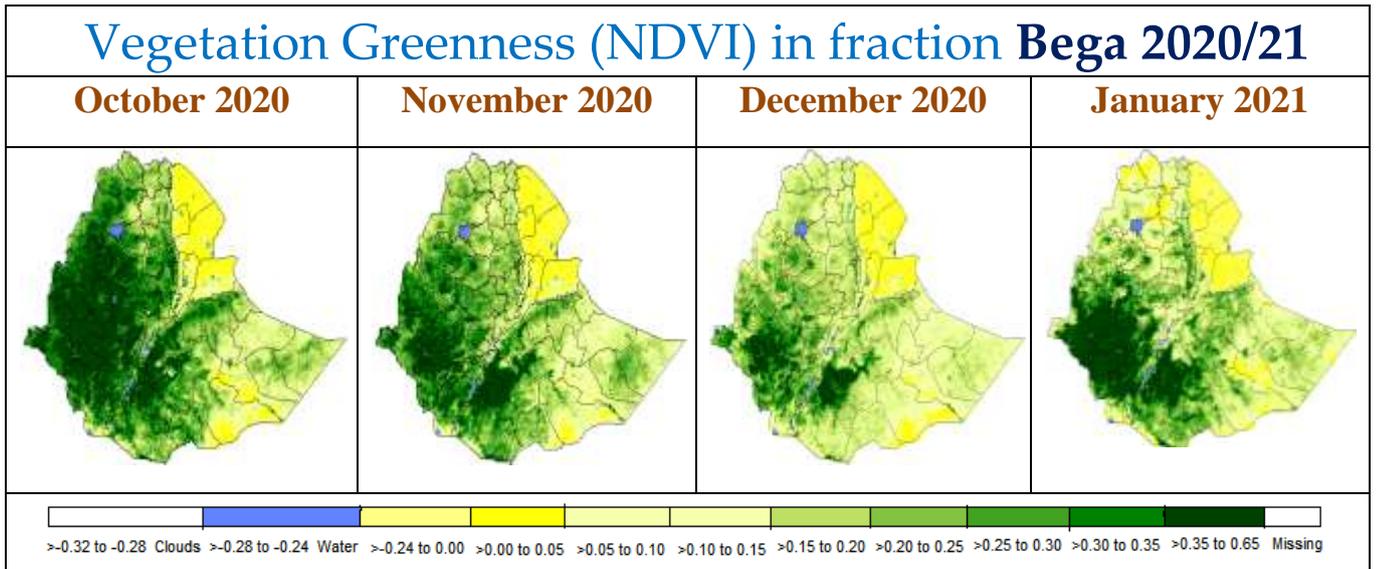


Fig. 5. NDVI in fraction and Compared to Normal Bega (October- January) 2020/21

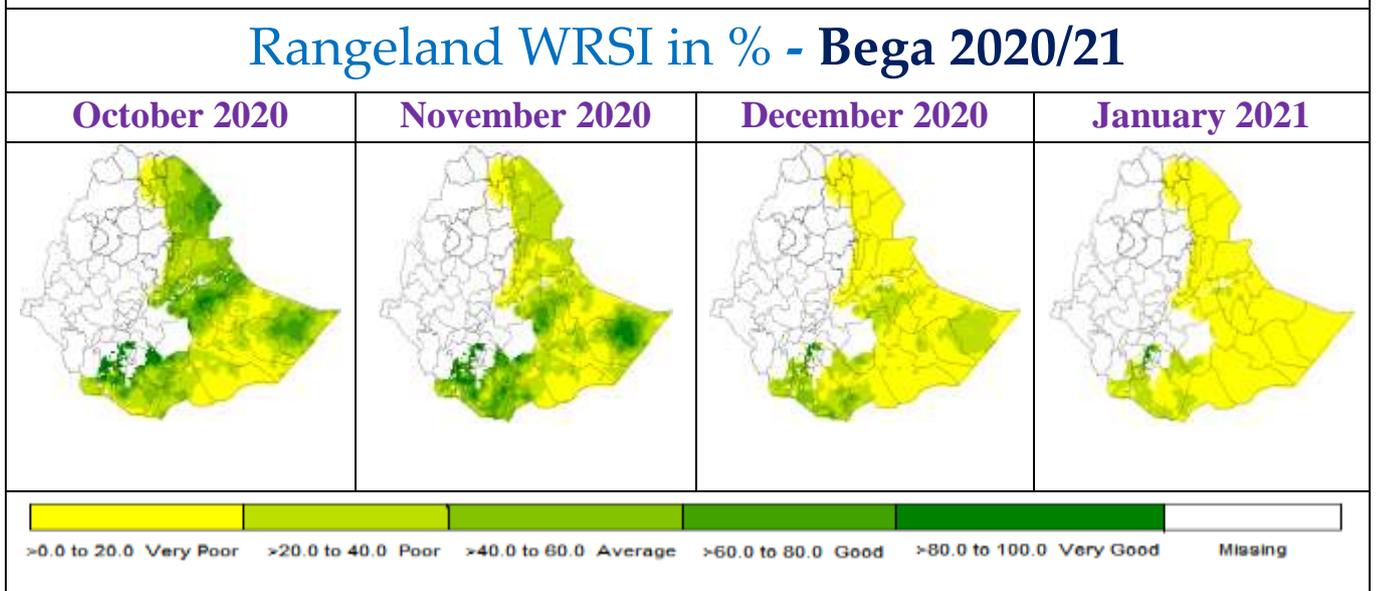


Fig.6. Rangeland WRSI in % Bega (October- January) 2020/21

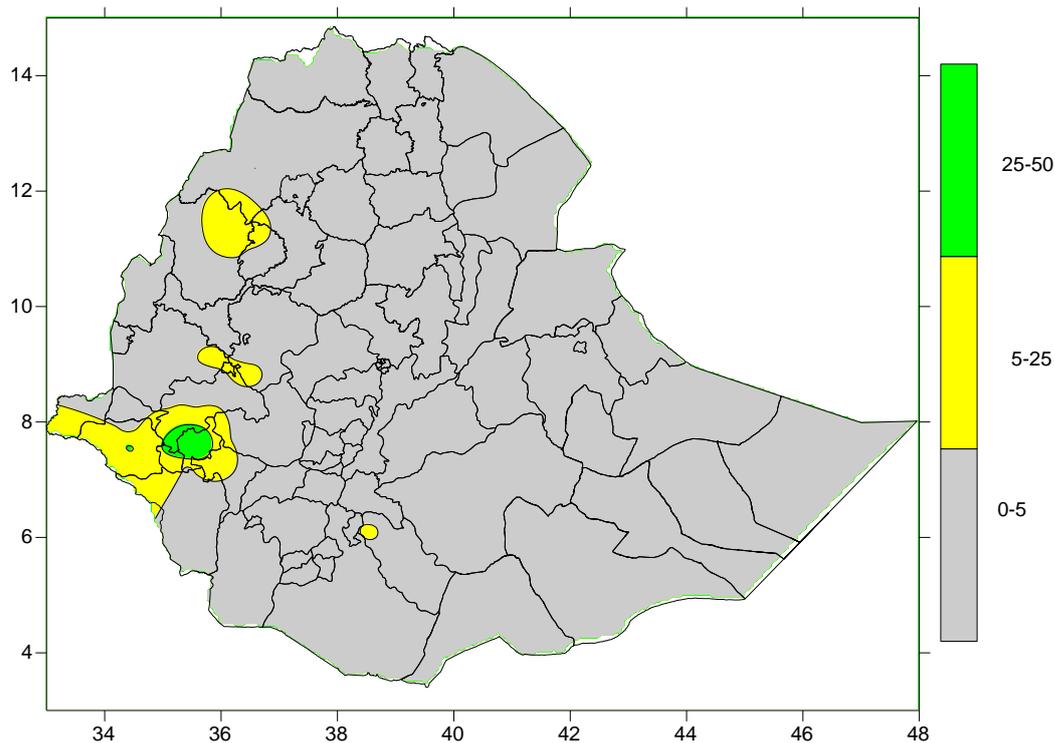


Fig 7. Rainfall distribution in mm (21 – 31) January 2021

1. WEATHER ASSESSMENT

1.1. Rainfall amount (21 – 31) January 2021

During the third dekad of January 2021, over Gode Sheka and Keffa received 25-50 mm rainfall. Metekel, Agew- Awi, Bahir Dar, west Gojam, west Wellega, Gambela zone 2 & 3, Godere, Bench Maji, Keffa and Gedeo received 5-25 mm rainfall. The rest parts of the country exhibited little or no rainfall.

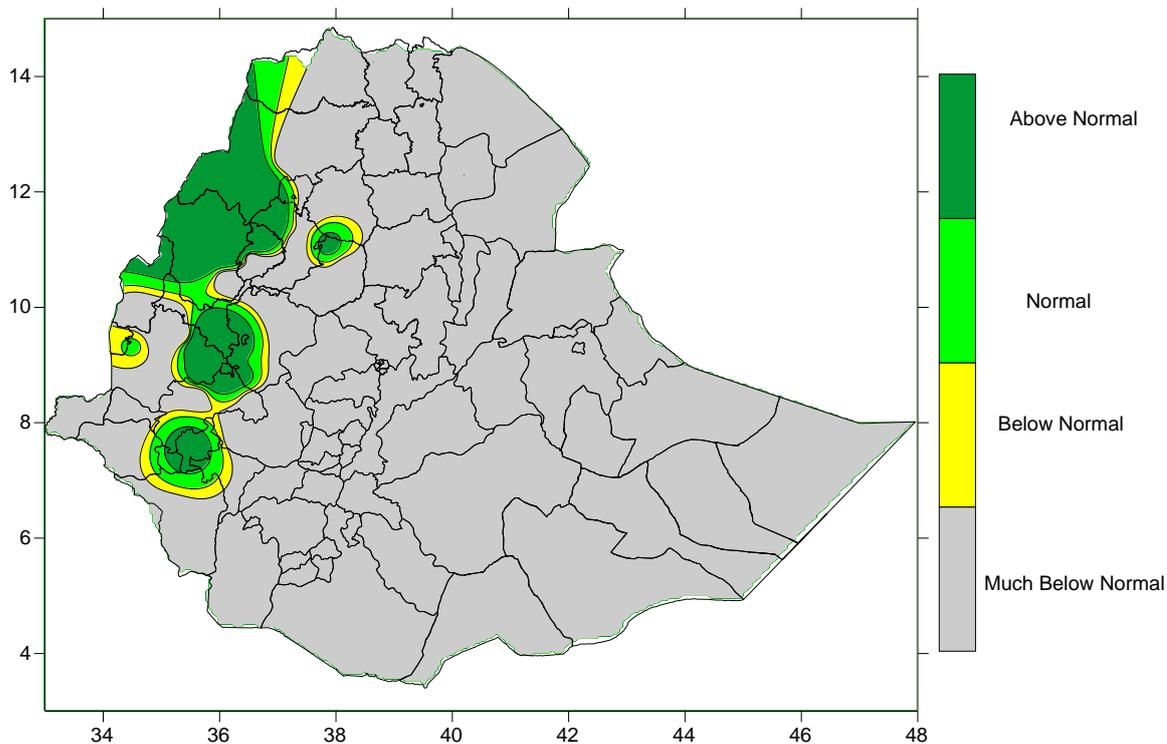


Fig. 8. Percent of normal rainfall distribution (21 – 31 January 2021)

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) January 2021

Over pocket area of west Tigray, north Gonder, Metekel, Agew Awi, Bahir Dar, west and east Gojam, Assosa, Kamashi, west and east Wellega, Illubabur, Sheka, Godere and Keffa experienced normal to above normal rainfall. The rest parts of country exhibited below normal to much below normal rainfall.

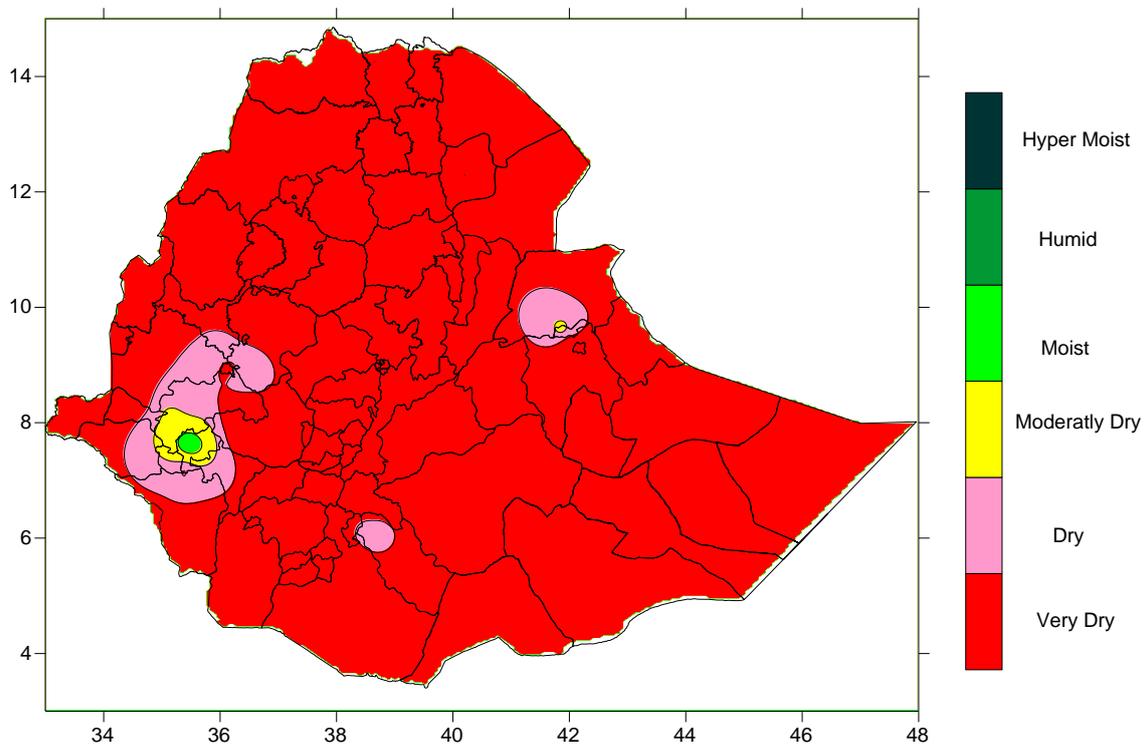


Fig.9. Moisture Status (21-31 January 2021)

1.3. Moisture status (21 – 31) January, 2021

During the third dekad of January 2021 over tip area of Sheka received moist to humid moisture conditions. The rest parts of the country moderately dry to very dry moisture conditions.

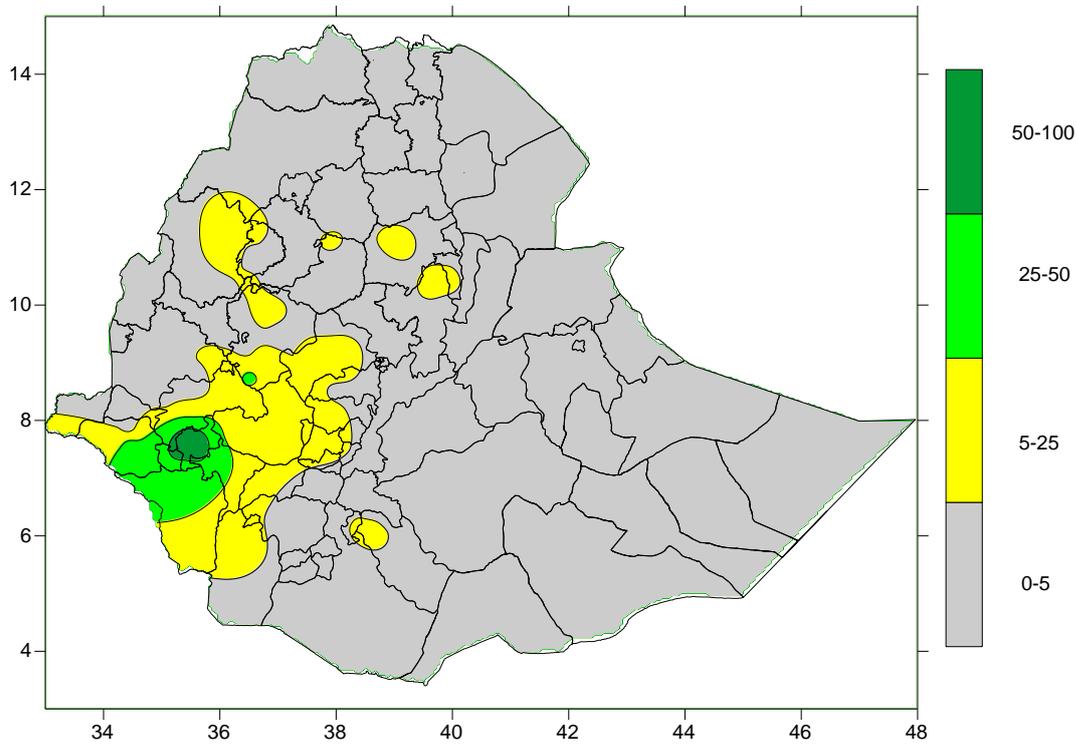


Fig. 10. Rainfall amount in mm for the month of January 2021

1.4. Rainfall amount on the month of January 2021

Over pocket area of Sheka, Gode and Keffa exhibited 50-100 mm of rainfall. Godere, Sheka, Keffa, Gambela zone 2 & 3 and Bench Maji exhibited 25-50 mm of rainfall. Metekel, Agew Awi, south Wollo, Afar zone 5, Illubabur, west and south west Shewa, Addis Ababa zone, Gurage, Jimma, KT, Alaba, Hadiya, Dawuro, Gamo gofa, Gedeo and Gambela zone 2 exhibited 5-25 mm of rainfall. The rest part of the country Exhibited 0-5 mm of rainfall.

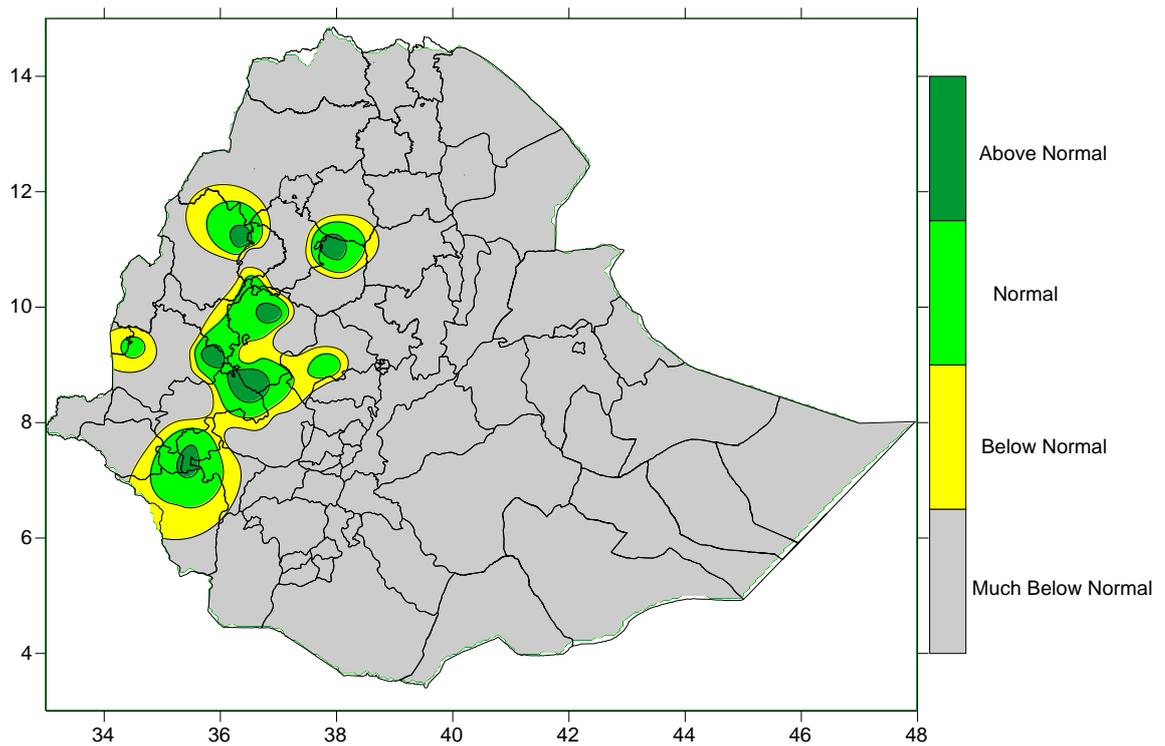


Fig. 11. Percent of Normal Rainfall for the month of January 2021

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 January 2021

Over tip Area of west and east Gojam, Agew Awi, Metekel, east and west Wellega, Illubabur, Addis Ababa zone, Godere, Sheka, Keffa and Bench Maji exhibited normal to above normal rainfall. The rest part of the country has received from below normal to much below normal rainfall.

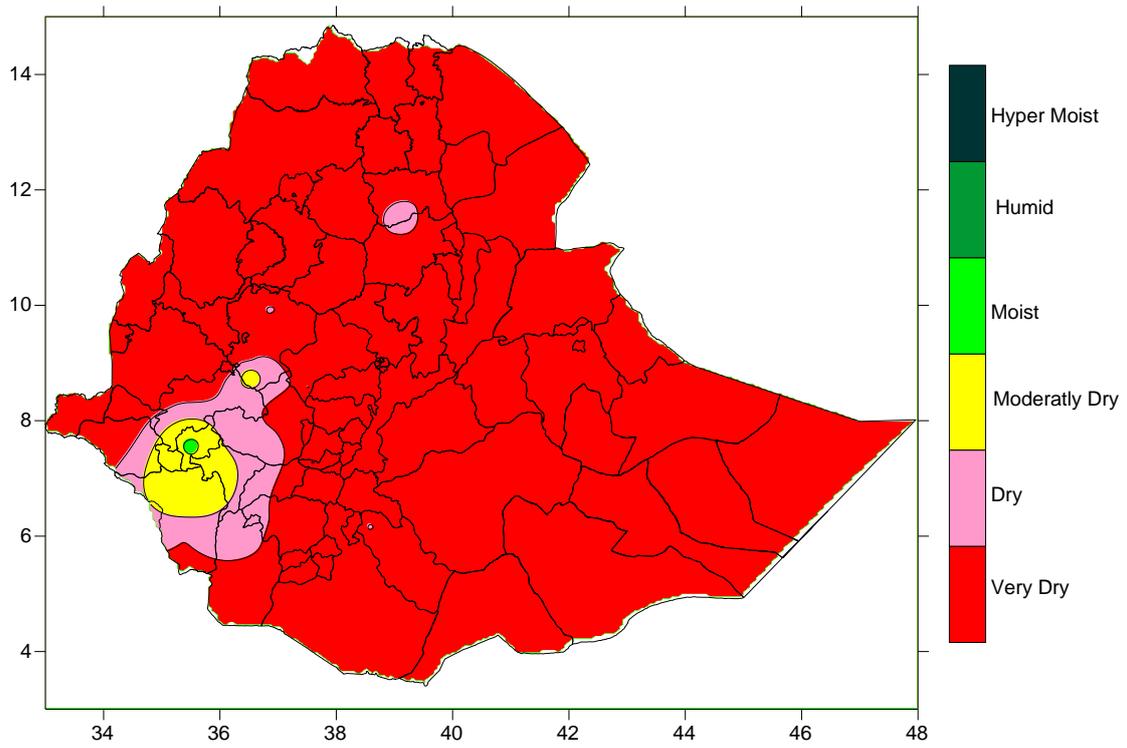


Fig. 12. Moisture status for the month of January 2021

1.6. Moisture status on the month of January 2021

During the month of January 2021, all prates of the country exhibited moderately dry to Very dry moisture conditions.

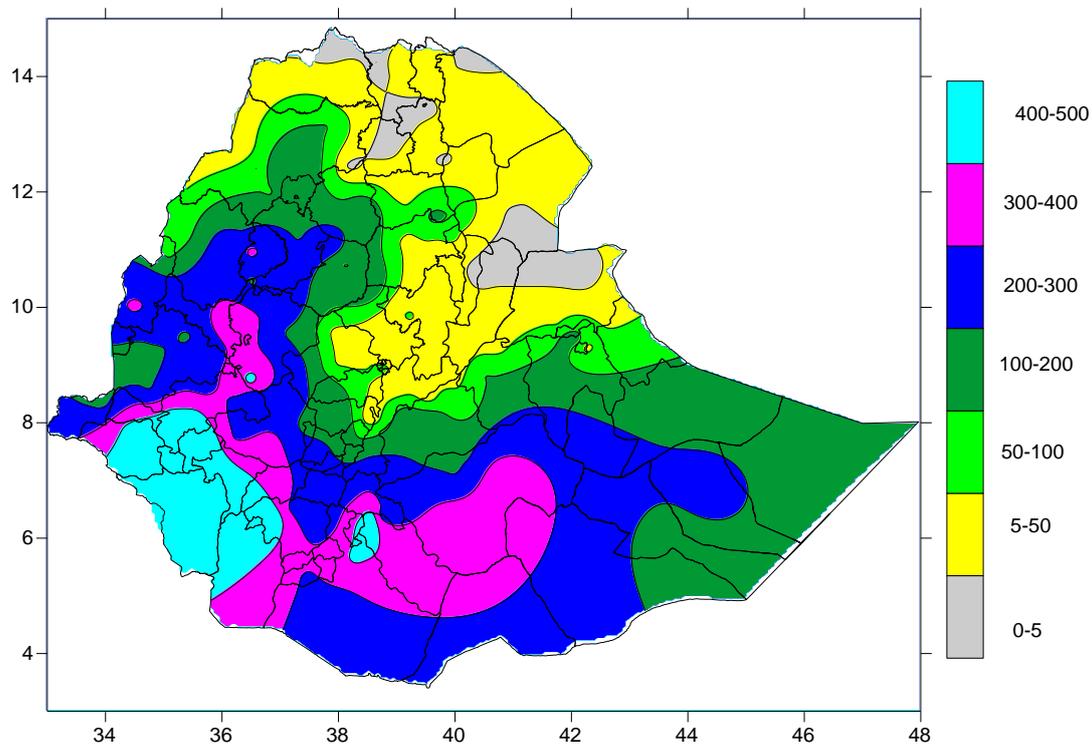


Fig.13. Rainfall amount in mm for Bega 2020/21

1.7. Rainfall Amount on Bega season 2020/21

During Bega 2020/21 over Gambela zone 1 & 2, Sheka, Keffa, Godere, Bench Maji, Basketo, Gamo gofa, South Omo, Derashe, Gedeo and Guji received 400 – 500 mm of rainfall. Over Assosa, Agew-Awi, Kamashi, east Wellega, Illubabur, Dawuro, Gamo gofa, Gambela zone 1 & 2, Keffa, Derashe, South Omo, Konso, Burji, Gedeo, Sidama, Guji, Bale, Liben, Amaro, Borena and Afder received 300 – 400 mm of rainfall. Bahir Dar, west and east Gojam, Assosa, Tongo, Kamashi, east and west Wellega, Gambela zone 3, Jimma, YEM, KT, Hadiya, Sidama, Gamo gofa, Amaro, Borena, Bale, Liben, Fik, Gode, Afder and Korahe received 200 – 300 mm of rainfall. north and south Gonder, Bahir Dar, Metekel, east Gojam, east and west Wellega, north, west and south west Shewa, Gurage, Selti, Alaba, Arsi, west and east Harergie, Harer, Deghabur, Korahe and Warder exhibited 100-200 mm of rainfall. north Gonder, south and north Wollo, Oromia especial zone, north and south west Shewa, Addis Ababa zone, Arsi, west and east Harergie, Harer and Jigjiga received 50-100 mm of rainfall. West & southern Tigray, south & north Wollo, Afar zone 1, 2, 3, 4 & 5, Addis Ababa; north Shewa, and Shinille exhibited 5-50 mm of rainfall. The rest part of the country exhibited 0-5 mm of rainfall.

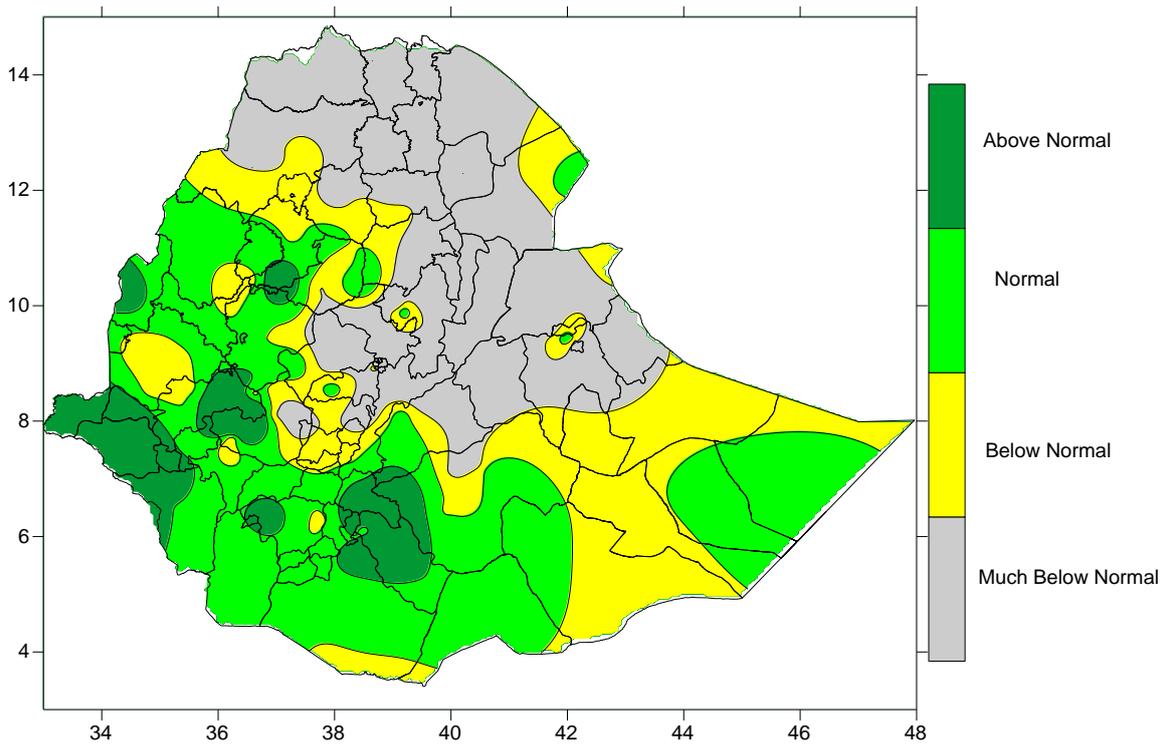


Fig.14. Percent of Normal Rainfall for Bega 2020/21

Explanatory notes for the Legend

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

1.8. Rainfall Anomaly on Bega Season 2020/21

Bega 2020/21 Over Assosa, Metekel, Agew-Awi, Bahir Dar, west and east Gojam, Kamashi, Tongo, Gambela zone 1, 2 & 3, Godere, Sheka, Bench Maji, Illubabur, Jimma, Keffa, Dawuro, Basketo, South Omo, Gamo gofa, Welayita, Jimma, Derashe, Konso, Amaro, Borena, Gedeo, Guji, Sidama, Bale, Liben, Afder, Korahe and Warder exhibited normal to above normal rainfall. The rest part of the country has received from below normal to much below normal rainfall.

2. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE

2.1. VEGETATION CONDITION AND IMPACT ON AGRICULTURE DURING BEGA 2020/21

In general during the last Bega 2020/21, especially on the month of October and November the moisture obtained during Bega season was favorable for the performances of Meher crops that are not yet fully matured. On the other hand, rainfall over southern and southeastern parts performed availability of pasture and drinking water over pastoral area of the country. The wettest condition at early of the season (October) might be positive for unripe crops at time crops planted with residual moisture as well as for perennial plants. The range land index based on WRSI and NDVI computed for Bega 2020/21 shows good improvement. The situation highly favorable for availability of pasture and water over pastoral and agro-pastoral areas. On the other hand on the month of December & January, due to midnight and morning cold weather condition observed over frost prone high land areas, this condition could have slightly negative impact on Fruits and vegetables grown under irrigation and animals body conditions and its product. In general the observed dry and sunny Bega season likely to occur after October will have a positive impact for Meher harvest and post harvest activities.

2.2. EXPECTED WEATHER IMPACT ON AGRICULTURE DURING THE COMING BELG, 2021 SEASON

Normally central parts of northern high lands, eastern highlands, part of central, south western and southern Ethiopia are known as Belg growing areas. The contribution of Belg rainfall is ranging from 5-30% over the north, north eastern and eastern highlands where as 30-60% over south and south western parts of the country from annual total crop production of the areas.

The analyzed Moisture Status, Standardized Precipitation Index (SPI) and most years of analogue years expected to favor Belg agricultural activities and Total crops water requirement (WRSI) in much of the analogue years shows average to good WRSI condition, However moderate to poor performance shows over northern half of Belg growing areas and southern parts. Thus, farmers and the concerned body need to give attention for those areas and utilize rain water harvesting, moisture conservation and adoption of suitable crops needing less water requirement.

The observed better NDVI and Range land WRSI after the month of March expected to favour Belg agricultural activities, planting of long cycle crops and availability of pasture and drinking water.

The expected to receive above normal to normal rainfall over Western, half of the country enable get good moisture which would have an advantage of Belg agricultural activities, planting of long cycle crops and availability of pasture and drinking water. Therefore, proper input should be utilized to take advantage of the relatively better condition.

The expected to likely to receive Below normal to near-normal moisture over much of North-eastern and Eastern parts of the country which will have expected probability of moisture stress and affect Belg Agricultural activities. Thus, proper moisture conservation and rain water harvesting can help in coping with expected occurrences of dry spells in the season. Whereas, the expected likely to receive normal tend to below normal rainfall over South and South-eastern parts of the country which will have expected probability of moisture stress and affect availability of pastor and water. Thus, proper moisture conservation and rain water harvesting can help in coping with expected occurrences of dry spells in the season.

The expected to enhance day time maximum temperature over much of the country, particularly over the low land areas would affect the water need of Belg crops and it would also enhance evapo-transpiration.

Generally, the expected near normal Belg season would favour Belg agricultural activities. However due to the intera-seasonal variability nature of the Belg season, the occurrence of dry spells may influence the season. Thus, farmers and the concerned bodies proper attention should be given in terms of selection crop which tolerant to moisture stress and soil water conservations.

3. DEFINITION 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 covers 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.

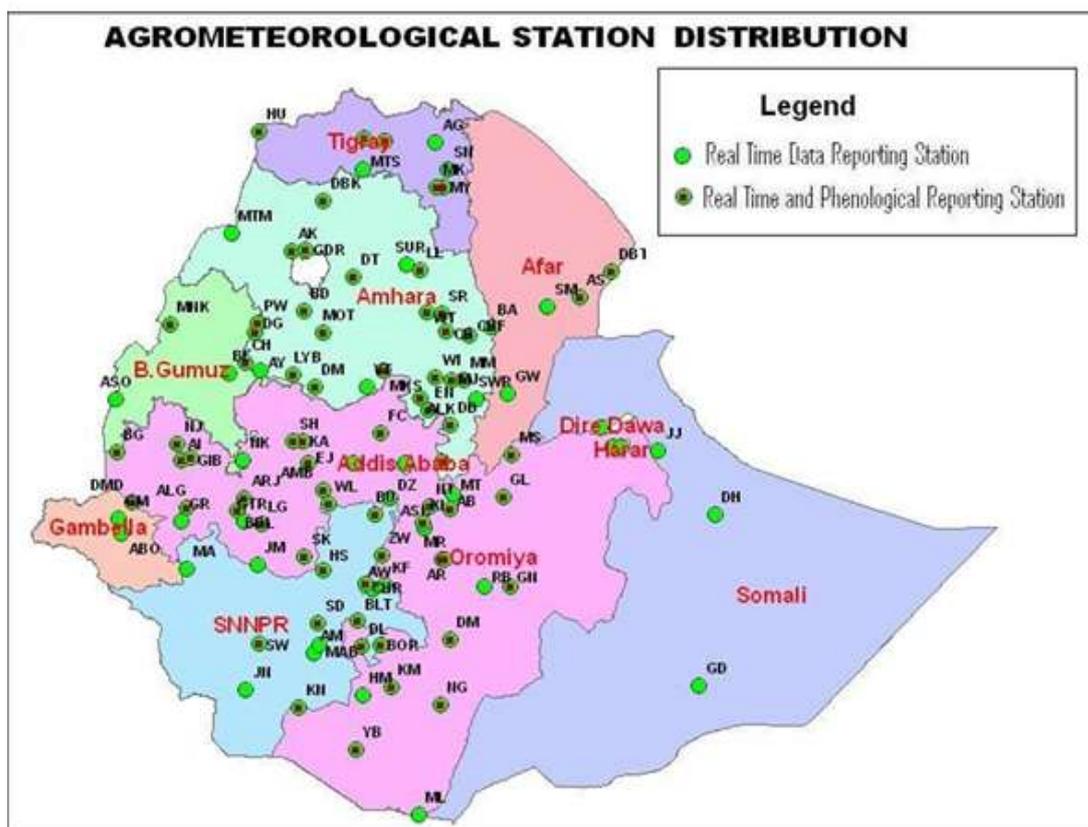
DEKAD: - First or second ten days or the remaining days of a month.

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	SG
Assosa	ASO	Filtu	FL	M/Abaya	MAB	Gebeya	SG
Awassa	AW	Gambela	GM	Maichew	MY	Sirinka	SR
Aykel	AK	Gelemso	GL	Majete	MJ	Sodo	SD
B. Dar	BD	Ginir	GN	Masha	MA	WegelTena	WT
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		