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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 ክረምት 2024

የክረምት ወቅት ለአብዛኛው የሀገራችን አካባቢዎች ከደቡብና ደቡብ ምስራቅ የሀገራችን ዝቅተኛ ቦታዎች በስተቀር ከፍተኛ እርጥበት የሚገኙበት እና የመኸር የእርሻ ስራ እንቅስቃሴ የሚከናወንበት ወቅት ነው፡፡ የክረምት ወራት የሚጀምረው ከሰኔ ወር ጀምሮ ቢሆንም ከግብርናው አንጻር ስንመለከተው ግን ቀደም ብሎ በሚያዚያ እና ግንቦት ወራት የሚዘሩ የረጅም ጊዜ የመኸር ሰብሎች እድገታቸውን የሚያከናውኑት በዚህ ወቅት ነው፡፡ በተጨማሪም የክረምት ወቅታቸውን ጠብቀው ለሚዘሩ እና በቀጣይ በጋ ወራት ለሚደርሱና ለሚሰበሰቡ የአጭርና የመካከለኛ ጊዜ የመኸር ሰብሎች፣ ለቋሚ ተክሎችና፣ ለጓሮ አትክልቶች እንዲሁም ለፍራፍሬዎችና ለቅባት እህሎች የውሃ ፍላጎትን ከማሟላት አንጻር ጉልህ ሚና አለው፡፡

እ.ኤ.አ በጁን ወር 2024 የክረምቱ ወቅት የሚጀምርበትና የመኸር የግብርናና የእርሻ ስራ እንቅስቃሴ የሚከናወንበት ወቅት ነው፡፡ በዚህ ወቅት በአብዛኛው በምዕራብ እና በደቡብ ምዕራብ የነበረው የእርጥበት ሁኔታ ቀስ በቀስም ወደ ሰሜን፣ መካከለኛውና ምስራቅ የክረምት እርጥበት ተጠቃሚ እና የመኸር ሰብል አብቃይ ወደሆኑት የሀገራችን አካባቢዎች በመጠንም ሆነ በስርጭት የተስፋፋበትና ብዙ ቦታዎችን ያዳረሰ የእርጥበት ሁኔታ ተስተውሏል፡፡ በዚህ ወር የነበረው ዝናብ የአፈር ውስጥ እርጥበትን በማሻሻል በተለይም የማሳ ዝግጅት ለማድረግና የዘር ጊዜ በሚካሄድባቸው አካባቢዎች በወቅቱ ለመዝራት አመቺ ሁኔታ ከመፍጠሩም በተጨማሪም ቀደም ብለው ከኤፕሪል ወር ጀምሮ ለተዘሩ እንደ በቆሎና ማሽላ ለመሳሰሉት የረጅም ጊዜ የመኸር ሰብሎች የውኃ ፍላጎታቸውን ከማሟላት አንጻር ከፍተኛ ጠቀሜታ ነበረው፡፡ በሌላ በኩል የእርጥበት ሁኔታው ቀስ በቀስ እየተስፋፋና ብዙ ቦታዎች እያዳረሰ ከመሄዱ ጋር ተያይዞ ለአርብቶ አደርና ከፊል አርብቶ አደር አካባቢዎች የግጦሽ ሳርና የመጠጥ ውኃ አቅርቦት ከማሻሻል አንጻር አዎንታዊ ሚና ነበረው፡፡

ባሳለፍነው የጁላይ ወር 2024 ሁሉም የክረምት እርጥበት ተጠቃሚ እና የመኸር ሰብል አብቃይ በሆኑት የሀገሪቱ አካባቢዎች በመጠንም ሆነ በስርጭት የተስፋፋና ብዙ ቦታዎችን ያዳረሰ ከፍተኛ እርጥበት የተስተዋለበት ወቅት ነበር፡፡ ይህም የነበረው ዝናብ የአፈር ውስጥ እርጥበትን ከማሻሻልም አልፎ የመኸር ወቅታቸውን ጠብቀው ለሚዘሩ የተለያዩ የአጭርና የመካከለኛ ጊዜ ሰብሎችን ለመዝራትና አስቀድመው ተዘርተው በተለያየ የእድገት ደረጃ ላይ ለሚገኙ የመኸር ሰብሎች፣ ለተለያዩ ቋሚ ተክሎች፣ ለጓሮ አትክልቶችና ለፍራፍሬዎች የውሃ ፍላጎታቸውን ከሚሟላት አንፃር የጎላ ጠቀሜታ ነበረው፡፡ ከዚህም በተጨማሪ በየ ጣልቃው

የነበሩት ደረቅ ቀናቶችና የእርጥበት ሁኔታው የሰብሎች እድገትን የሚያፋጥኑና ምርትና ምርታማነትን የሚጨምሩ ግብዓቶችን እንዲሁም የጸረ አረምና ጸረ ተባይ መድሀኒቶችን ለመርጨትም ከፍተኛ ጠቀሜታም ነበረው፡፡ ከዚህም በተጨማሪ በአርብቶ አደርና ከፊል አርብቶ አደር አካባቢዎች የነበረው የእርጥበት ሁኔታ ለግጦሽ ሳርና ለመጠጥ ውሃ አቅርቦት አዎንታዊ አስተዋፅየ ከማበርከቱም በላይ ሰው ሰራሽም ሆነ የተፈጥሮ ምንጮችን ከማጎልበት አንፃር በጎ ጎን ነበረው፡፡ ይሁን እንጅ በአንዳንድ አካባቢዎች ላይ ከነበረው ከፍተኛና ተከታታይነት ካለው እርጥበት ጋር ተያይዞ የአፈር ወስጥ እርጥበት መብዛት፣ የአፈር መሸርሸር፣ የተዘሩ ሰብሎች በጎርፍ መጠረግ፣ በሰብል ማሳዎች ላይ የውሃ መተኛትና መጥለቅለቅ እንዲሁም የመሬት አቀማመጣቸው ተዳፋታማ ለመሬት መንሸራተት ተጋላጭ በሆኑ አካባቢዎች የመሬት መንሸራተት፣ መሰንጠቅና ናዳን ያስከተለ ነበር፡፡ እነዚህም ክስተቶች ከተስተዋሉባቸው አካባቢዎች ጥቂቶቹን ለመጥቀስ ያህል በጎፋ ዞን ገዜ ጎፋ ወረዳ፣ በደቡብ ወሎ ዞን ደሴ ከተማ፣ በደቡብና ምስራቅ ትግራይ ዞን፣ በሲቲ ዞን፣ በማዕከላዊ ሲዳማ ዞን፣ በጅማ ዞን እና በምዕራብ አርሲ ዞኖች የመሬት መንሸራተት የተከሰተ ሲሆን፤ በሰብሎች፣ በእንስሳትና በንብረት እንዲሁም በሰው ህይወት ላይ ጉዳት አድርሷል፡፡

ባሳለፍነው የኦገስት ወር 2024 በአብዛኛው የክረምት እርጥበት ተጠቃሚና የመኸር ሰብል አብቃይ በሆኑት የሀገሪቱ ክፍሎች ላይ የነበረው የእርጥበት ሁኔታ ለግብርናው የስራ እንቅስቃሴ ከፍተኛ ጠቀሜታ ነበረው፡፡ ይህም ሁኔታ በተለያየ ጊዜ ተዘርተው በማደግ፣ በማበብና ፍሬ በመሙላት ላይ ባሉ የረጅም፣ የመካከለኛ እና የአጭር ጊዜ ሰብሎችም ሆነ ለቋሚ ተክሎች፣ ለጓሮ አትክልቶችና ለፍራፍሬዎች የውሃ ፍላጎታቸውን ከማሟላት አንጻር በጎ ጎን ነበረው፡፡ ከዚህም በተጨማሪ በተለይም በምስራቅና በሰሜን ምስራቅ አካባቢዎች ለሚገኙት አርብቶ አደርና ከፊል አርብቶ አደር አካባቢዎች የመጠጥ ውኃ እና የግጦሽ ሳር አቅርቦት እንዲኖራቸው ያስቻለ ነበር፡፡ በአንፃሩ ከነበረው ከባድና ተከታታይነት ያለው እርጥበት ጋር ተያይዞ በአንዳንድ ለጎርፍ ተጋላጭ በሆኑ የሀገሪቱ አካባቢዎች የጎርፍ ክስተቶች፣ የመሬት አቀማመጣቸው ከፍተኛና ተዳፋታማ በሆኑ አካባቢዎች የመሬት መንሸራተት፣ መሰንጠቅና ናዳ እንዲሁም በሰብሎች ላይ የውሃ መተኛትና መጥለቅለቅ ሁኔታዎች ተከስተዋል፡፡ ከነዚህም ጉዳት ከደረሰባቸው አካባቢዎች ለመጥቀስ ያህል በወላይታ ዞን ኪንዶ ኮይሻ ወረዳ፣ በሰሜን ጎንደር ዞን ጠለምት፣ ጃናሞራ፣ አዲአርቃይ እና የዳ ወረዳዎች፣ በትግራይ ደቡባዊና ምስራቃዊ ዞን ጉሎ መህዳ ወረዳ፣ በሰሜን ሸዋ ዞን ኤፍራታና ግድም እንዲሁም ደብረሲና ወረዳዎች እና በተለያዩ የሀገራችን አካባቢዎች ላይ የደረሰው የመሬት መንሸራተት ተጠቃሽ ናቸው፡፡ በተጨማሪም ከነበረው ከባድና በረዶ የቀላቀለ ዝናብ ጋር ተያይዞ በሥልጤ ዞን ምስራቅ ስልጢ እና ስልጢ ወረዳዎች፣ በምዕራብ አርሲ ዞን ዶዶላ ወረዳ፣ በጋምቤላ ክልል በጎግ፣ በላሬ፣ በጆርና እና በዋንተዋ ወረዳዎች እንዲሁም በደቡብ ወሎ ዞን ወረባቦ ወረዳ በሰብሎች፣ በእንስሳት፣ በንብረትና በሰው ህይወት ላይ ጉዳት አድርሷል፡፡

ባሳለፍነው የሴፕቴምበር ወር 2024 በአብዛኛው የክረምት እርጥበት ተጠቃሚና የመኸር ሰብል አብቃይ በሆኑት አካባቢዎች ከቦታ ቦታ በመጠን ይለያይ እንጂ በስርጭት ረገድ ብዙ ቦታዎችን ያደረሰ የእርጥበት ሁኔታ ነበራቸዉ፡፡ የተተነተኑ ወርኃዊ የአፈር ውስጥ እርጥበት እንደሚያመክተለው በተለይም በምዕራብ፣ በመካከለኛዉ፣ በደቡብ ምዕራብና የሰሜን ምዕራብ የሀገሪቱ አካባቢዎች ላይ ብዙ ቦታዎችን ያዳረሰ የእርጥበት ሁኔታ ነበራቸው፡፡ ይህም ሁኔታ እድገታቸውን ላልጨረሱና በተለያየ እድገት ደረጃ ላይ ለሚገኙ የመኸር ሰብሎች እንዲሁም በመስከረም የመጀመሪዎቹ አስር ቀናቶች ለሚዘሩ እንደ ጓያና ሽንብራ ለመሳሰሉት የጥራጥሬ እህሎችም ሆነ ለቋሚ ተክሎች የሚያስፈልጋቸውን ውሃ ከማገኘት አንጻር ገንቢ ሚና ነበረው፡፡ በተጨማሪም ቀስ በቀስ በተለይም ሁለተኛ የዝናብ ወቅታቸው ወደሆኑት ወደ ደቡብ የሀገሪቱ አካባቢዎች የተስፋፋዉ እርጥበት በደጋማው አካባቢዎች የማሳ ዝግጅት ለማድረግና ዘር ለመዝራት አመች ሁኔታን ከመፍጠሩም በተጨማሪ ለአርብቶ አደርና ከፊል አርብቶ አደር አካባቢዎች ለግጦሽ ሳርና ለመጠጥ ውሃ አቅርቦት መሟላት አዎንታዊ አስተዋፅዖ ነበረው፡፡ ይሁን እንጂ ከነበረው ከፍተኛና ተከታታይነት ያለው እርጥበት ጋር ተያይዞ የመሬት አቀማመጣቸው ተዳፋታማና ለመሬት መንሸራተት ተጋላጭ በሆኑ በአንዳንድ አካባቢዎች በተለይም በሰሜን ሸዋ ዞን አሳግርት ወረዳ ላይ የመሬት መንሸራተትና መሰንጠቅ እንዲሁም በረባዳማና ውሀ ገብ በሆኑ አካባቢዎች በተለይም በደቡብ ምዕራብ ኢትዮጵያ ክልል ዳውሮ ዞን ተርጫ ከተማ ላይ የእርጥበት መብዛት፣ በሰብል ማሳዎች ላይ የውሃ መተኛት የጎርፍ ክስተቶች ተስተውለዋል፡፡

በአጠቃላይ እ.ኤ.አ ክረምት 2024 በአብዛኛዎቹ የክረምት እርጥበት ተጠቃሚ የአገሪቱ አካባቢዎች ላይ ወቅቱን ጠብቆ በደቡብና ደቡብ ምዕራብ አካባቢዎች የጀመረና የእርጥበት መጠኑ ቀስ በቀስ እየተስፋፋ ሁሉንም የወቅቱ እርጥበት ተጠቃሚ የሀገሪቱ አካባቢዎችን ያዳረሰና በመጠንም ሆነ በስርጭት ረገድ እየተሻሻለ የመጣበት ሁኔታ ነበር፡፡ ይህም የተገኘው እርጥበት ቀደም ሲል በሚያዝያና በግንቦት ተዘርተው በተለያየ የእድገት ደረጃ ላይ ለነበሩ የረጅም ጊዜ ሰብሎችም ሆነ ከጁን ጀምሮ የዘር ጊዜና የማሳ ዝግጅት በሚካሄድባቸው አካባቢዎች እንደ ስንዴ፣ ገብስ፣ አጃ እና ጤፍ ለመሳሰሉት የብርዕ ሰብልች፣ የጥራጥሬና የቅባት እህልች በወቅቱ ለመዝራትና በተሟላ ሁኔታ እንዲያድጉ የጎላ አስተዋፅዖ ነበረው፡፡ በተጨማሪም ለቋሚ ተክልች የዉሃ ፍላጎት መሟላት ምቹ ሁኔታን ከመፍጠሩም ባሻገር የወቅቱ ዝናብ ተጠቃሚ በሆኑት በምስራቅና በሰሜን ምስራቅ አርብቶ አደርና ከፊል አርብቶ አደር አካባቢዎች ላይ የነበረው የእርጥበት ሁኔታ ለግጦሽ ሣርና ለመጠጥ ውሃ አቅርቦት ከማግኘት አንጻር ከፍተኛ ጠቀሜታ ነበረው፡፡ የእርጥበቱን አወጣጥ ስንመለከተውም ከመካከለኛው፣ ከምሥራቅና ከሰሜን ምሰራቅ የሀገሪቱ ክፍሎች ላይ ለተወሰኑ ቀናት በመዘግየቱ እድገታቸውን ላልጨረሱ እና ዘግይተው ለተዘሩ የመኸር ሰብሎች በጎ ጎን የነበረው ሲሆን፤ በአርብቶ አደርና

በከፊል አርብቶ አደር አካባቢዎች በቂ የግጦሽ ሳርና የመጠጥ ውሃ አቅርቦት ከማሟላት አንጻር ጠቀሜታው የጎላ ነበር፡፡ በአጠቃላይ የ2024 ክረምት ወቅት የነበረው የእርጥበት ሁኔታ ስንመለከተው ከነበረው ከፍተኛና ተከታታይነት ያለው እርጥበት ጋር ተያይዞ በአንዳንድ አካባቢዎች ላይ የአፈር መሸርሸር፣ የተዘሩ ሰብሎች በጎርፍ የመጠረግ፣ በሰብል ማሳዎች ላይ የውሃ መተኛትና መጥለቅለቅ እንዲሁም የመሬት አቀማመጣቸው ተዳፋታማና ለመሬት መንሸራተት ተጋላጭ በሆኑ አካባቢዎች የመሬት መንሸራተት፣ መሰንጠቅ እና ናዳ አስከትሏል እነዚህም ክስተቶች ከተስተዋሉባቸው አካባቢዎች ጥቂቶቹን ለመጥቀስ ያህል በጎፋ ዞን ገዜ ጎፋ ወረዳ፣ በደቡብ ወሎ ዞን ደሴ ከተማ፣ በደቡብና ምስራቅ ትግራይ ዞን፣ በሲቲ ዞን፣ በማዕከላዊ ሲዳማ ዞን፣ በጅማ ዞን፣ በሰሜን ሸዋ ዞን ኤፍራታና ግድም እና አሳግርት ወረዳዎች፣ በምዕራብ አርሲ ዞኖች በወላይታ ዞን ኪንዶ ኮይሻ ወረዳ፣ በሰሜን ጎንደር ዞን ጠለምት፣ ጃናሞራ፣ አዲአርቃይ እና የዳ ወረዳዎች፣ በትግራይ ደቡባዊና ምስራቃዊ ዞን ጉሎ መህዳ ወረዳ በሰሜን ሸዋ ዞን ኤፍራታና ግድም እንዲሁም ደብረሲና ወረዳዎች የመሬት መንሸራተት የተከሰተ ሲሆን በተጨማሪም ከነበረው ከባድና በረዶ የቀላቀለ ዝናብ ጋር ተያይዞ በሥልጤ ዞን ምስራቅ ስልጤ እና ስልጤ ወረዳዎች፣ በምዕራብ አርሲ ዞን ዶዶላ ወረዳ፣ በጋምቤላ ክልል በጎግ፣ በላሬ፣ በጆርና እና በዋንተዋ ወረዳዎች፣ በደቡብ ወሎ ዞን ወረባቦ ወረዳ እንዲሁም በደቡብ ምዕራብ ኢትዮጵያ ክልል ዳውሮ ዞን ተርጫ ወረዳ በሰብሎች፣ በእንስሳት፣ በንብረትና በሰው ህይወት ላይ ጉዳት ከማስከተሉ ውጭ የነበረው እርጥበት ለግብርና የስራ እንቅስቃሴ የነበረው ሚና ከፍተኛ እንደነበር የተተነተኑ የግብርና ሚቲዎሮሎጂ አመላካቾችና የመስክ መረጃዎች ያመላክታሉ፡፡

SUMMARY
Kiremt 2024

Kiremt is the season that fulfills the water requirement of long cycle crops which are planted in the months of April-May and Meher crops that achieve maturity during the Bega season. In addition to the Kiremt rain, the Belg seasonal rainfall, the rainfall amount and distribution during the months of April and May has significant impact on the performance of long cycle crops (maize and sorghum).

During the month of June 2024, due to the intensification of weather events that create favourable conditions for the existence of Kiremt rains, especially in the southwest, west, and central areas of the country, the amount of moisture has been spreading across kiremt benefiting areas of the country. Agricultural meteorology data collected and analyzed from different parts of the country indicate that it spread from the southwest to various areas of the country that benefit from kiremt rains, improving in terms of quantity and distribution. This condition was favourable for timely sowing in the areas where seeding time and land preparation have been held since June. In addition to having a significant role in satisfying the water needs of Meher crops that are sown late and at different stages of development, it also had a significant contribution to long-term crops such as maize and sorghum that were sown early, from April to continue their growth under appropriate conditions as well as satisfy the water need of perianal plants and for availability of pastors and drinking water across the pastoral and agro-pastoral areas. On the other hand, the heavy rains, especially in the western parts of the country and in areas that have been receiving continuous rain for the month, increased the moisture in the soil and caused flooding. However, it did not cause significant damage to agricultural development.

During the month of July, the areas of the country where most of the meher crops were growing observed good moisture conditions. This situation improved the soil moisture and played an important role in meeting the water needs of various medium-term crops that are sown in July and meher crops that are already at different stages of growth. It significantly contributed to the growth of vegetables and fruits. Additionally, the moisture conditions in pastoral and semi-pastoral areas positively affected the supply of grazing grass and drinking water, enhancing both man-made and natural sources. However, the heavy and continuous rains in some areas led to flooding and inundation of crop fields, negatively

impacting ongoing agricultural activities. Landslides occurred in Gofa, Dessie, Central Sidama, Jimma, and Kofele woredas, causing significant damage to people, animals, crops, and property.

During the month of August 2024, large areas of Kiremt rain-benefiting and Meher crop- growing regions continuously received enhanced moisture, ranging from moist to hyper-humid conditions. In line with this, Eastern, Central, Northeastern, Western, Northwestern and Southwestern, parts of the country recorded light to heavy rainfall in many areas. According to the weather report, many places across the country experienced heavy rainfall ranging from 30.0 to 137.4 mm within a 24-hour period. This situation was of great importance for the water needs of long-cycle crops such as Sorghum and mMize, which were sown in late April and May and are now in the middle and fruiting stages, as well as for recently planted crops at different stages of growth, such as Wheat, Barley, Oat, Teff, Pulses, Oil seeds, and for Perennial plants. In addition to creating favorable conditions, it had a positive impact by improving the supply of drinking water and grazing grass for pastoralists and semi- pastoralists in the Eastern and Northeastern parts of the country. On the other hand, areas that had received heavy and continuous rainfall might experience floods, landslides, and excess moisture. In particular, field data indicates that there has been damage to crops and property due to heavy rain in Harar Gelemso woreda, Kindo Koisha in Walayta zone, Belemt, Janamora, Adiarkai and Yeda woreda in northern Gondar zone, Gulo Mehda woreda in southern and eastern Tigray zone, Efratana Gidam woreda in northern Showa zone, and Debresina woreda in northern Showa zone, Silte woreda, Dodola , Gog, Lare, Jorna and Wantewa woreda in Gambella Region, Werebabo woreda in South Wolo Zone.

During the month of September 2024, most of the areas that benefit from the kiremt rains and the meher growing areas had a humid moisture condition that reached many places in terms of distribution. In line with this, Western, Northwestern, Central and South West parts of the country recorded light to heavy rainfall in many areas. This situation was very important in terms of improving their water needs for long-term crops such as sorghum and maize, perennial plants, fruits and garden vegetables that were already sown at different stages of growth and fruiting. The enhanced moisture might have played crucial role toward improving the availability of pasture and drinking water. Moreover, during the second and third dekad of the month, the increased moisture extended to the southern parts of the country, creating favorable conditions for land preparation and sowing of crops in the

southern highlands. It also improved the availability of pasture and water in pastoral areas of the northeastern and eastern regions, significantly enhancing both man-made and natural water sources. On the other hand, due to heavy and continuous moisture in some areas of the country, there have been flood events in flood-prone areas, landslides and ground cracks, as well as waterlogging that led to the inundation of crops. Also, the high moisture created favorable conditions for the spread of weeds and the occurrence of crop diseases such as fungi. Field data revealed that landslides in Asagart Woreda of the North Shewa Zone, as well as the excessive moisture in Tercha Woreda of the Dawro Zone in Southwest Ethiopia, caused damage of crops, animals, and property.

Generally during Kiremt 2024, due to Well-organized and strong seasonal-rain-producing systems fully established create favorable conditions for the existence of Kiremt rains, especially in the south and southwest parts of the country the rainfall was started on time and gradually covers the whole Kiremt rain benefiting and Meher producing areas of the country and it has been led to a wet Kiremt season, with extremely heavy rainfall outcomes and well-above average cumulative rainfall resulted in wetter than normal over Kiremt rain benefiting areas of the country. The situation was a significant and positive contribution with respect to satisfying the water need of early sown long cycle crops (Maize, sorghum) which were at different phenological stages, late sown cereal crops like (Teff, wheat and barley) and pulses (beans, peas and haricot beans) and perennial plant as well as it improved pasture and drinking water availability over eastern and north-eastern pastoral and agro pastoral areas of the country. Moreover under normal condition, Kiremt rains start to retreat by the second dekad of September from northeastern Ethiopia. However, as the major rain-producing systems the June-to-September rainy season has remained active, with continuous rainy conditions across the central, eastern and northern half of Ethiopia. The situation had been favor the existing Meher crops where not yet fully matured and late sown pulses and oil seeds. On the other hand the observed continuous and heavy rainfall might have caused soil erosion, water logging, swamping of crop, land slide and cracks as well as the flood affected crops, life and property. The field data indicates that there has been Landslides occurred in Gofa, Dessie, Central Sidama, Jimma, and Kofele woredas, causing significant damage to people, animals, crops, and property and The heavy and continuous rains over Harar Gelemso woreda, Kindo Koisha in Walayta zone, Belemt, Janamora, Adiarkai and Yeda woreda in northern Gondar zone, Gulo Mehda woreda in southern and eastern Tigray zone, Efratana Gidam woreda in northern Showa zone, and Debresina woreda in northern Showa

zone, Silte woreda, Dodola , Gog, Lare, Jorna, Wantewa woreda in Gambella Region and Werebabo woreda in South Wolo Zone the heavy and continuous rains in some areas led to flooding and inundation of crop fields, negatively impacting ongoing agricultural activities.. Generally with the exception of crops affected due to heavy fall in some areas the overall situation was favorable for Kiremt season's agricultural activities.

Kiremt 2024 Moisture Status Map

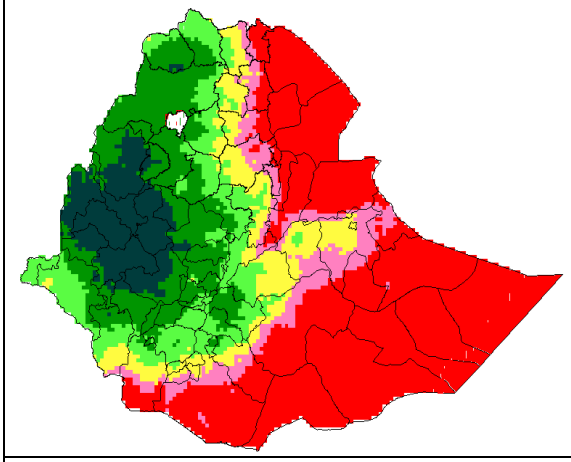


Figure 1. Moisture status for the month of June 2024

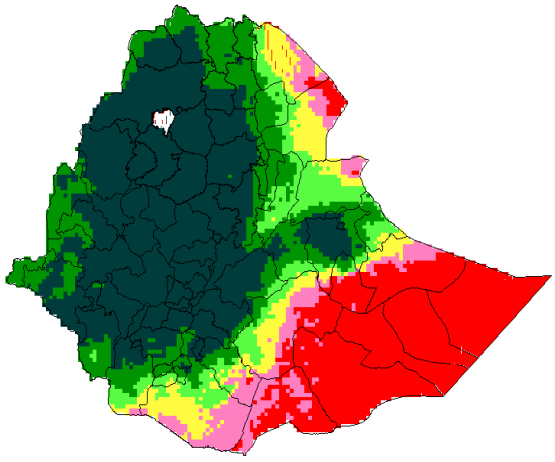


Figure 2. Moisture status for the month of July 2024

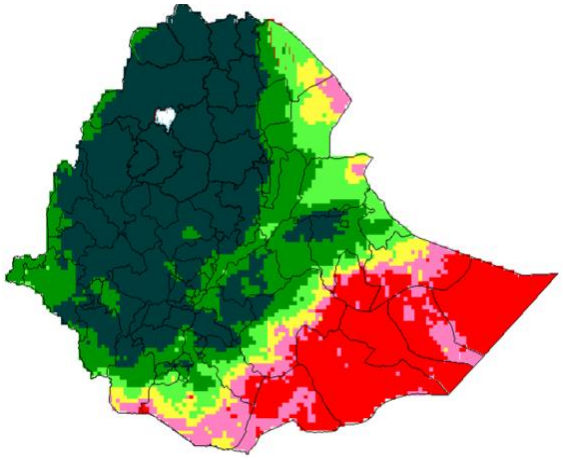


Figure 3. Moisture status for the month of August 2024

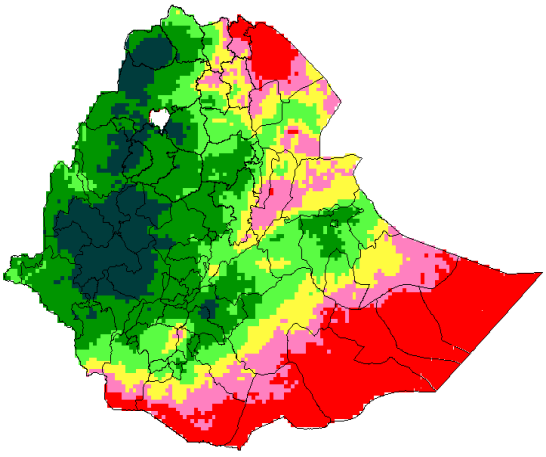
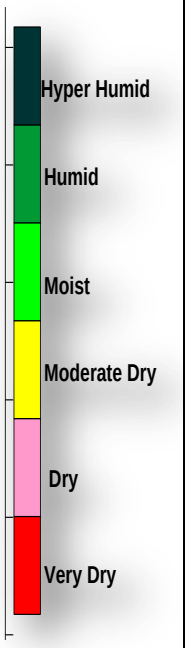


Figure 4. Moisture status for the month of September 2024



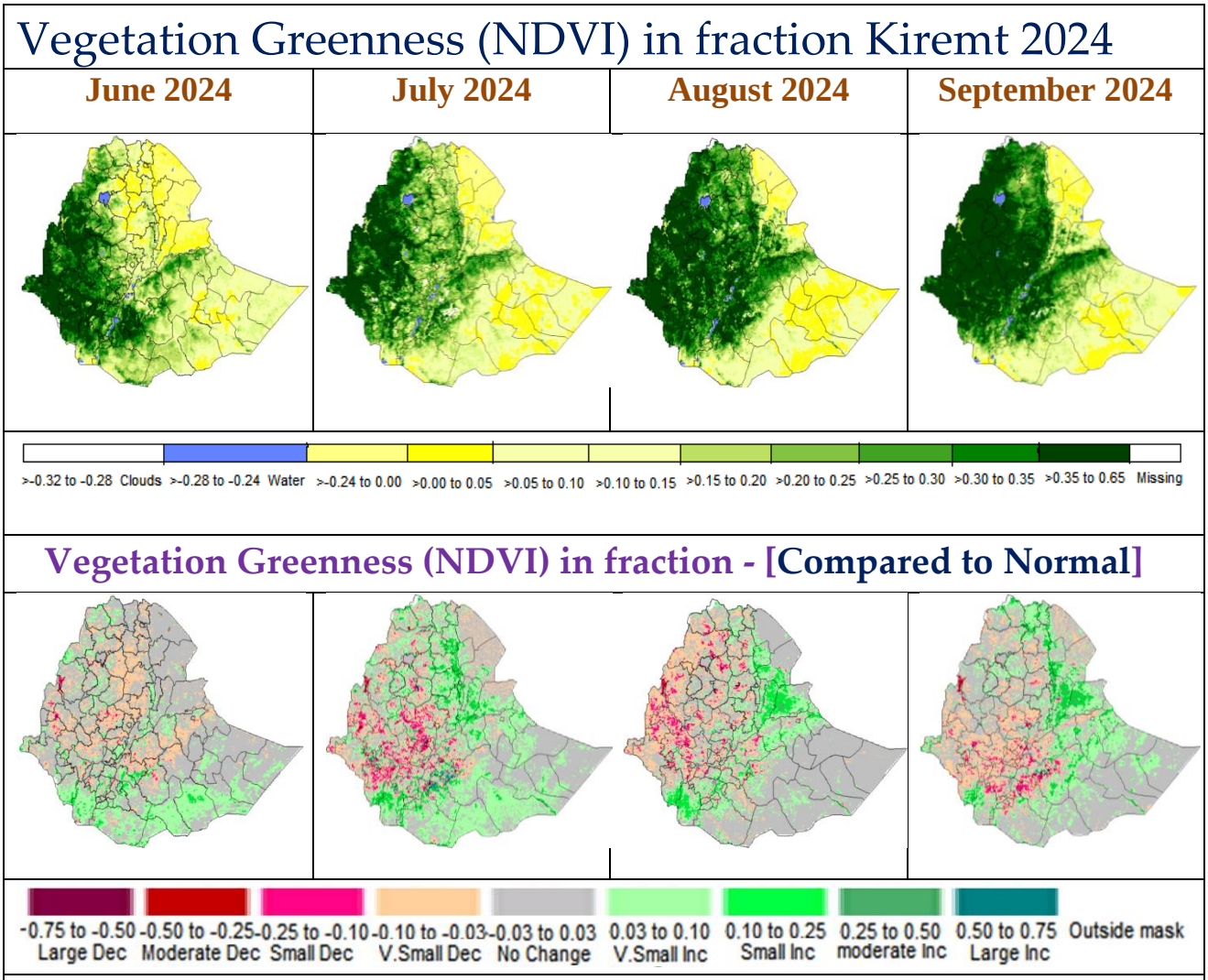


Fig. 5. Vegetation Greenness (NDVI) in fraction and Compared to Normal Kiremt (June-September) 2022

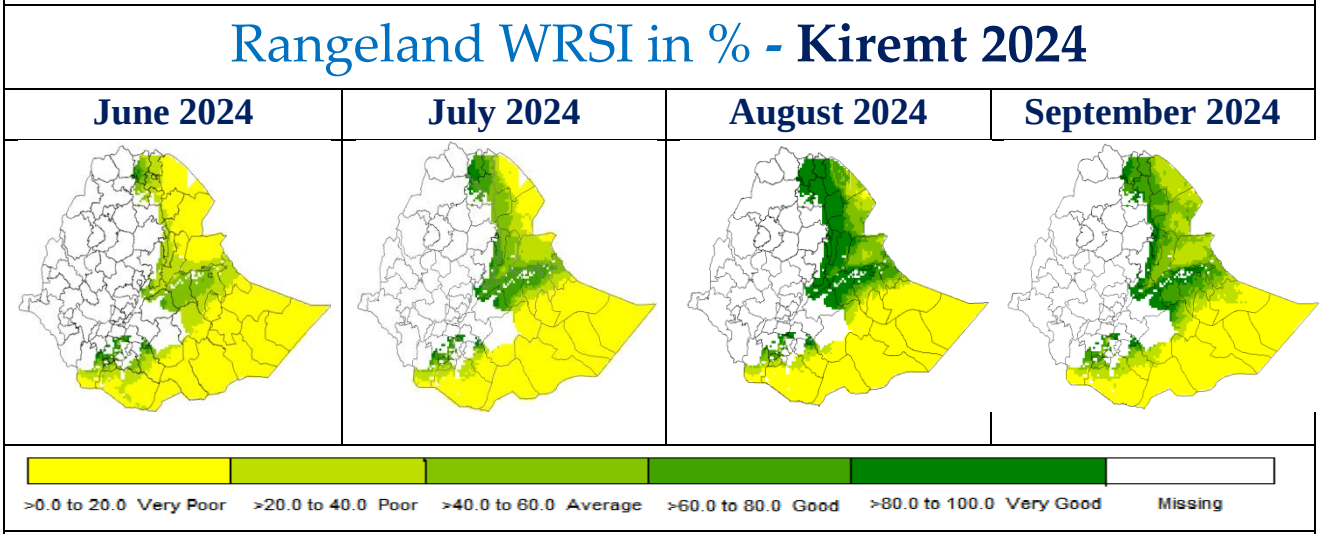
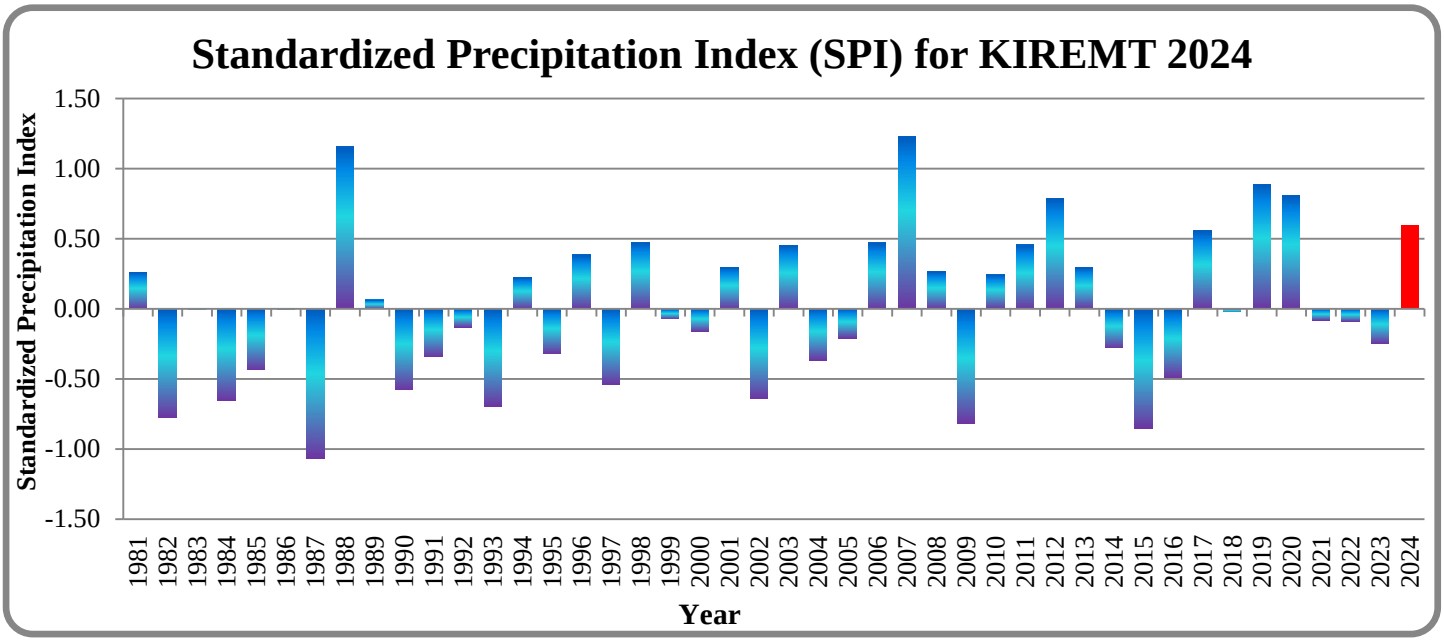


Fig.6. Rangeland WRSI in % Kiremt (June- September) 2024

Standardized Precipitation Index (SPI)
For Kiremt 2024



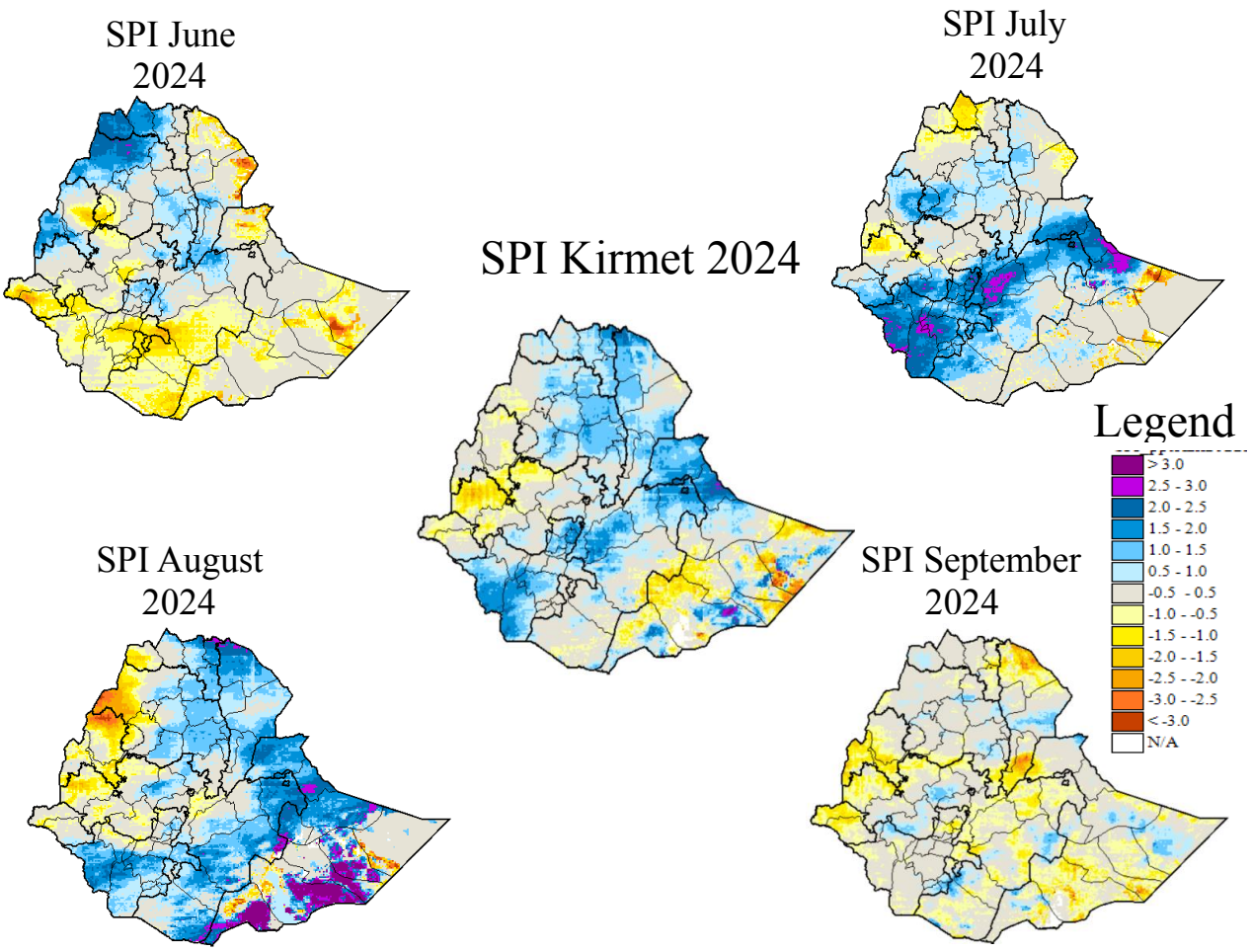


Fig.7. Standardized Precipitation Index (SPI) Kiremt (June- September) 2024

Final Index (WRSI) in fraction - Meher 2024

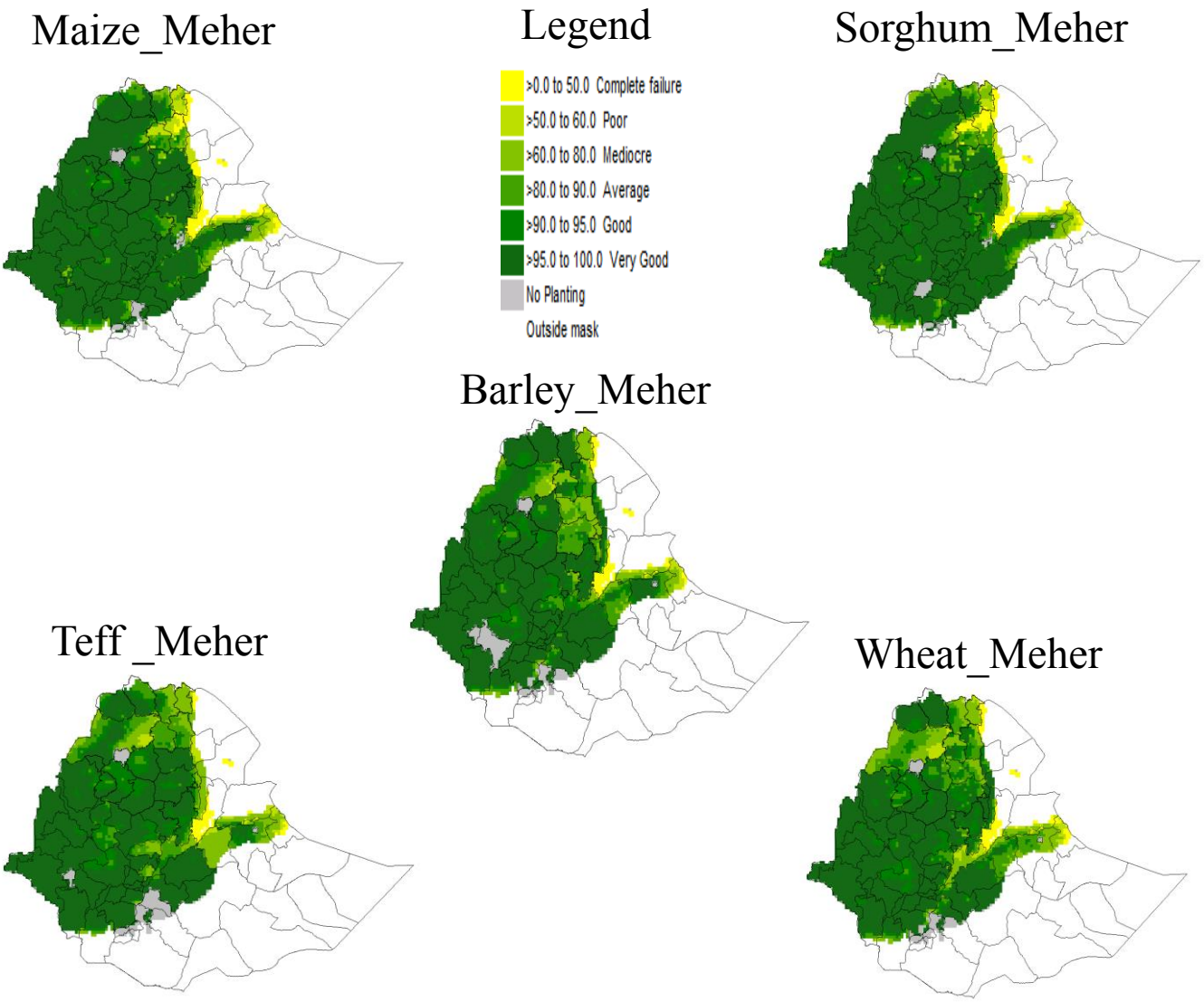


Fig.8. Final Index (WRSI) for Major crops (Maize, Sorghum, Barley, Teff and Wheat in fraction - Meher 2024

1. WEATHER ASSESSMENT

1.1. Rainfall amount (21 – 30) September 2024

During the third dekad of September 2024, most Kiremt rain benefiting and meher crop growing areas were recived much in amount and distribution of rainfall. In line with this, adjacent areas of East Wollega, Jimma and Illubabor and West Wollega zones were received above 100 mm of rainfall. Some parts of the Metekel, West Tigray, North Gonder, Awi, Bahirdar, East and West Gojam, Kemashe, East and West Wollega, Jimma and Illubabor, Keffa, Dawuro, some parts of Gambela zone 2, Sheka, Sidama, Gedeo and Bale zones were dominantely received 50-100 mm of rainfall. Most parts of Western Tigray, Gonder zones, some parts of South Wollo, Metekel, Assossa, Kemashe, Godere, Sheka, Basketo, Dawro, South Ommo, Derashe, Konso, Amaro, Borena, Guji, Gedeo, Wolayta, Hadia, Alaba, Guraghe, Arsi, Bale, East and West Hararghe zones were dominantly received 25-50 mm of rainfall. Some parts of Central and Eastern Tigray, Adjacent areas of South and North Gonder, South and North Wollo, most Shewa zones, some parts of Shinle, Jigjiga, Degahabupr, Fik, Bale, Afder, Liben, and Southern Borena and South Ommo zones were received 5-25 mm of rainfall. However, the rest parts of the country especially Southeastern and Northeastern parts of the country were received less than 5 mm of rainfall.

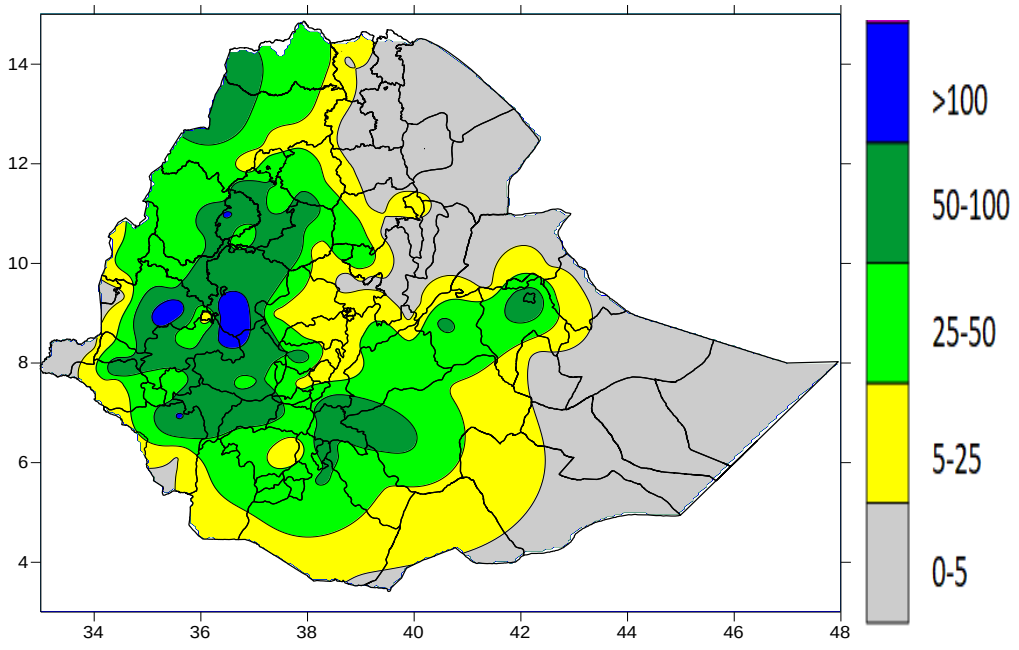


Fig 9. Rainfall distribution in mm (21 – 30) September 2024

1.2. Rainfall Anomaly (21 – 30) September 2024

During the third dekad of September 2024, Northwestern, Western, Central and Southern as well as some Eastern parts of the country were exhibited Normal to Above Normal Rainfall condition. On the other hand, some parts of Northeastern, Eastern and Southeastern parts of the country were experienced below Normal too Much below Normal rainfall condition.

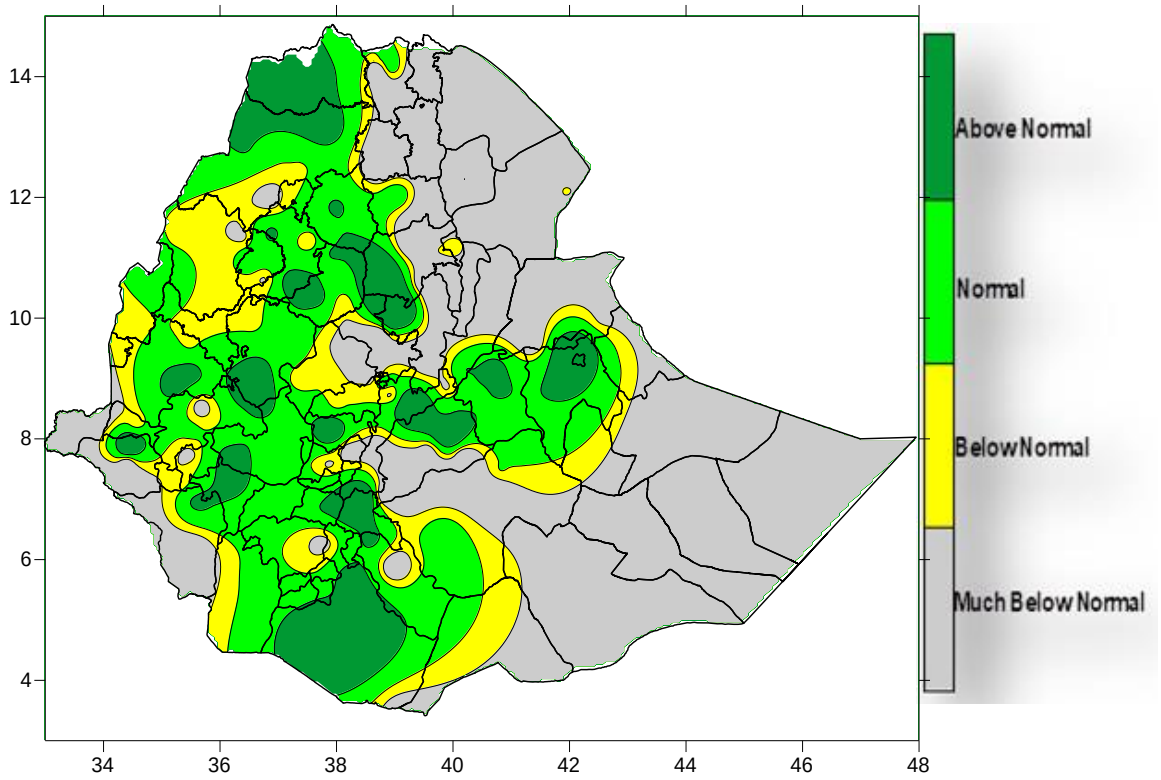


Fig. 10. Percent of normal rainfall distribution (21 – 30September 2024)

Explanatory notes for the Legend

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

1.3. Moisture status (21 – 30) September 2024

During the third dekad of September 2024, much of Kirmt and Meher rain fall benefiting areas western Amhara, western Tigray, Benishangul Gumuz, most parts of Oromia, Gambella, Southern Margin of Afar, Sidama and southwestern and southern regions including Southern Highlands of the country exhibited moist to hyper humid moisture conditions. The rest parts of the country moderately dry to very dry moisture condition

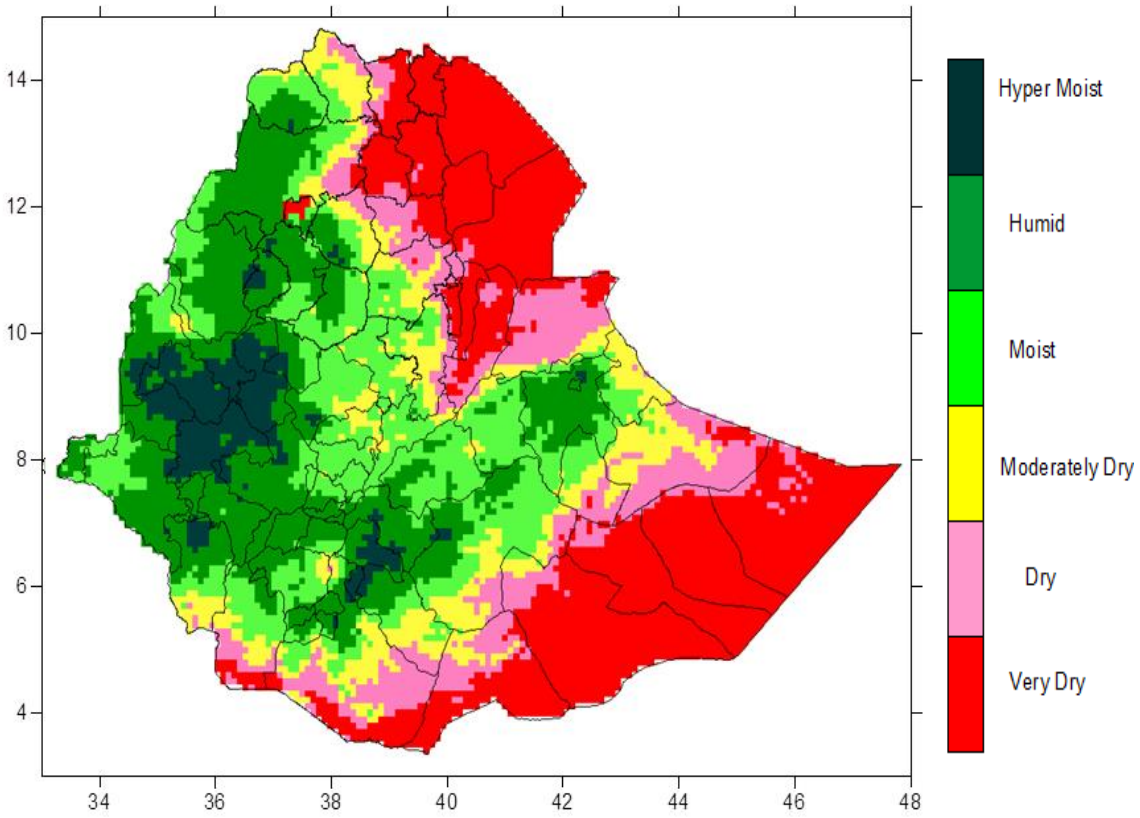


Fig.11. Moisture Status (21-31 September 2024)

1.4. Rainfall amount on the month of September 2024

During the Month of September 2024, most Kiremt rain benefiting and meher crop growing areas especially adjacent areas of East and West Wollega and Jimma and Illubabor zones were received above 300 mm of rainfall. Some parts of the Metekel, Awi, Bahirdar, South Gonder, Kemashe, East and West Wollega, Gambela zone 2, Sheka, Godere, Keffa, Dawuro, Jimma and Adjacent areas of tip of Shewa zones were received 200-300 mm of rainfall. Most parts of Western Tigray, most parts of Gonder zones, most parts of Gojam Zone, South Wollo, Oromia Special zone, All Shewa zones, Guraghe, Siltie, Alaba Wolyta, Hadia, Bench Maji, Basketo, Gambela zone 1 Assossa, and some parts of kemashe, West Hararghe and East hararghe, Harar as well as Jigjiga zones were dominantly received 100-200 mm of rainfall. Some parts of Central and Eastern Tigray, Waghimira, North Wollo Afar Zone 3 and 5, Eastern and Western Hararghe, Arsi, Bale, Gedeo, Sidama and Guji zones were received 50-100 mm of rainfall. South Tigray, Waghimira, Some parts of North Wollo, some parts of Afar zone 1, Shinle, some parts of Bale, Borena, Guji and Amaro zones were received 25-50 mm of rainfall. However, most parts of Afar 2, 4 and 1 Zones, some parts of Shinle, Degahabur, Afder, Gode, Liben and Borena zone were dominantly received 5-25 mm of rainfall. However, the rest parts of the country especially Southeast parts of the country were received less than 5 mm of rainfall.

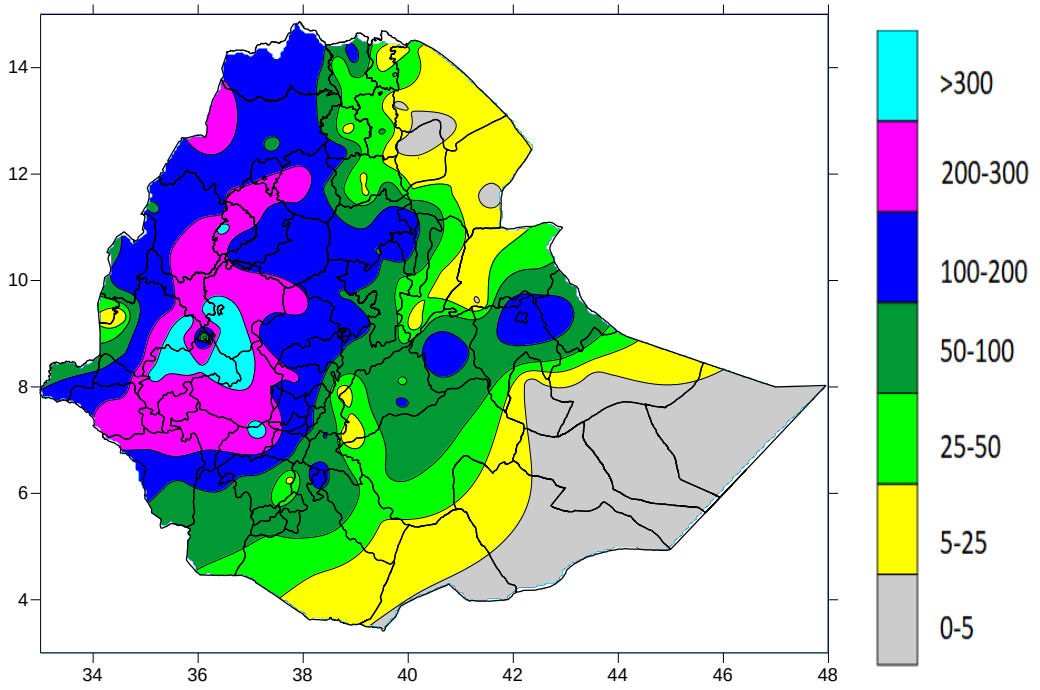


Fig. 12. Rainfall amount in mm for the month of September 2024

1.5. Rainfall Anomaly on the month of September 2024

During the month of September 2022 West Central and East Tigray, pocket area of (South Tigray, North Wello, Oromia Zone, Afar Zone 1,3 &5,Sowth West Shewa Arsi, East Hararge, Bale, Gurji, Gurage, SW Siliti, Alaba, Hadiya, Sidama, Jimma, Illibabur, Godere, Bench Maji,) South Wello, Shinile, Assosa, Tango, half of West Wellega, West Hararghe, Noth Gonder, Gambella Zone 1,2, &3, Wagihemra Zones are exhibited Normal to Above Normal. The rest parts of the countries exhibited Below Normal too Much Below Normal.

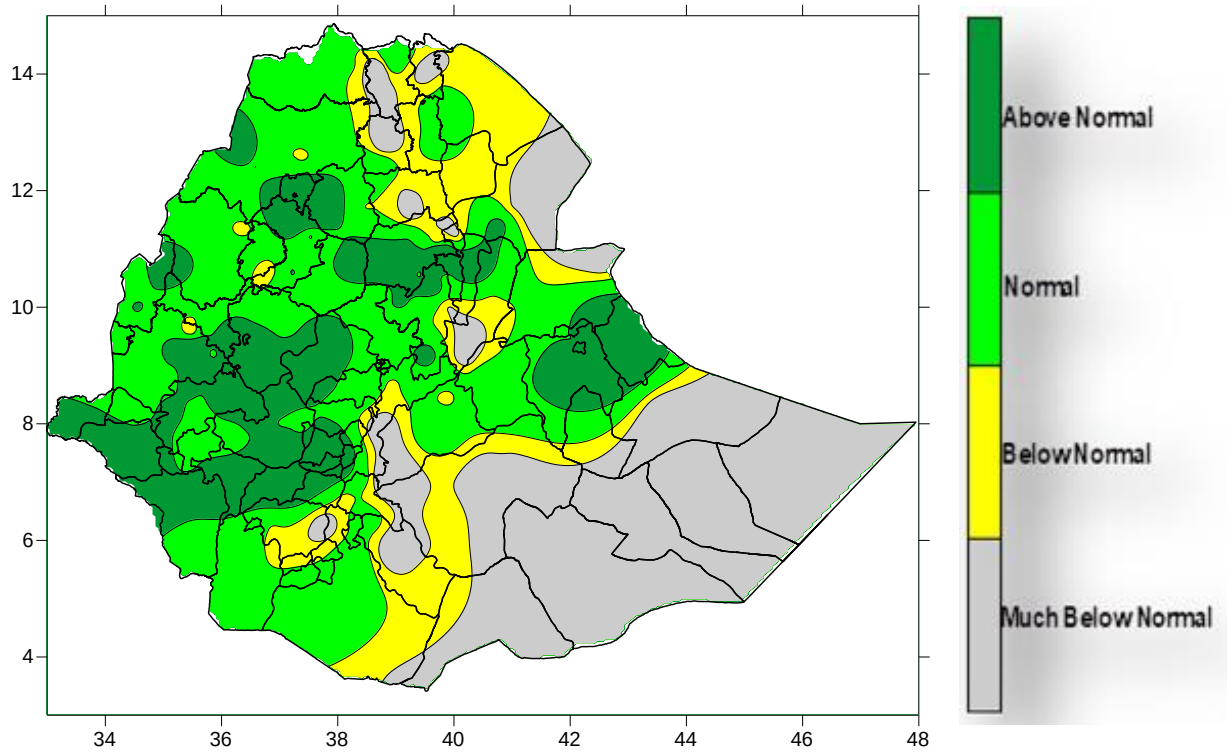


Fig. 13.Percent of Normal Rainfall for the month of September 2024

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 September 2024

During the month of September 2024 West Central and East Tigray, North Wello, Oromia Zone, Afar Zone 3 &5, Sowth West Shewa Arsi, East Hararge, Bale, Gurji, Gurage, SW Siliti, Alaba, Hadiya, Sidama, Jimma, Illibabur, Godere, Bench Maji, South Wello, Shinile, Assosa, Tango, half of West Wellega, West Hararghe, Noth Gonder, Gambella Zone 1,2, &3, Wagihemra Zones are exhibited Normal to Above Normal. The rest parts of the countries exhibited Below Normal too Much Below Normal.

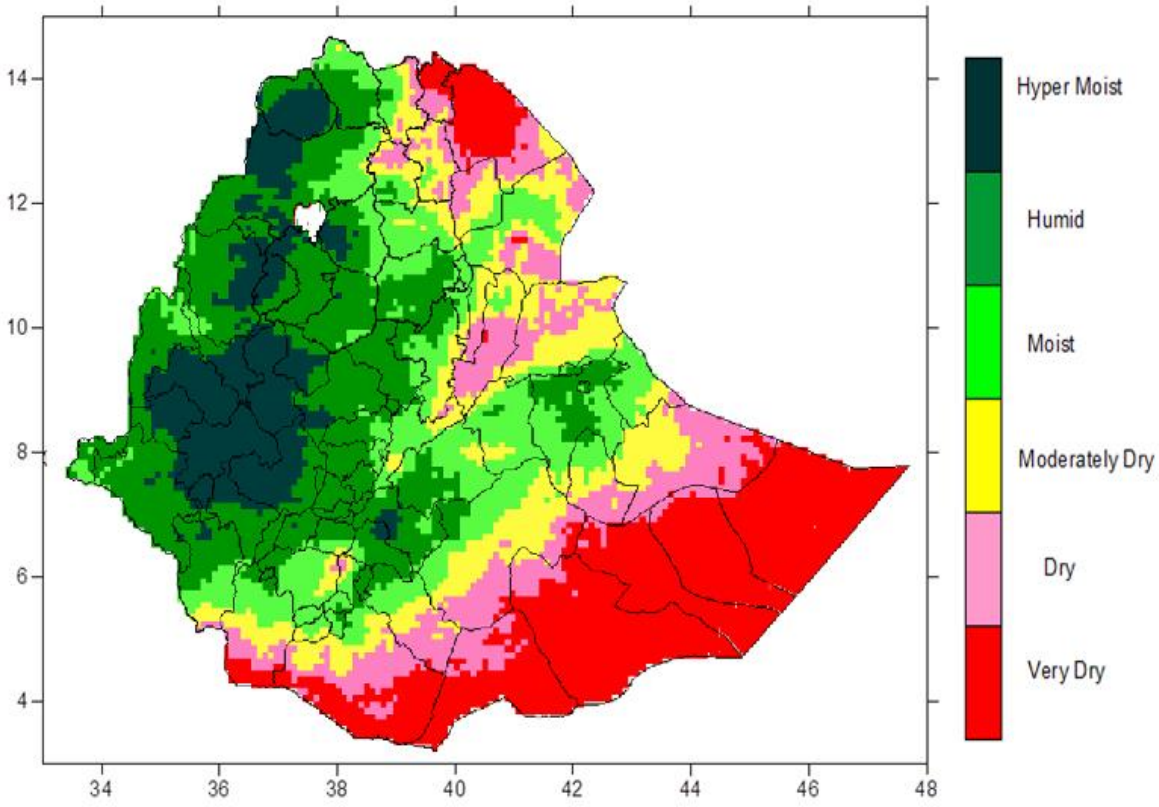


Fig.14. Moisture status for the month of September 2024

1.7. Rainfall Amount on Kiremt season 2024

During Kirmmt 2024 season the rain fall distribution was , West, centeral and south Tigray, North and South Gonder ,North and South Wello,East and West Gojjam, Bahir Dar, Metkel, Assossa, Kamashi, East and West Wellega, North and West Shewa, Addis Ababa,Tango, Illibabur, Jimma, South West Shewa, Gurage, Siliti, Alaba,Gidayana,Hadiya, Gambela Zone1&2,Godere, Keffa, Dawero, Bench Maji, Basketo,Alaba, Arsi, including half of West and East Hararaghe Zones ,Generally most kirmet rain benefiting areas was recived 400 up to 1200 and above 1200mm rain fall. On the other hand Afar Zone 1,2,3,4&5, Shinile, West and East Hararaghe, Jijiga, Degahabur, Fik,Bale, Guji,Konso, Amaro, Borena, South Omo, Gambela Zone,Gode Zones are 100 up to 400 mm rain fall. The rest part of the country was below 100mm rain fall.

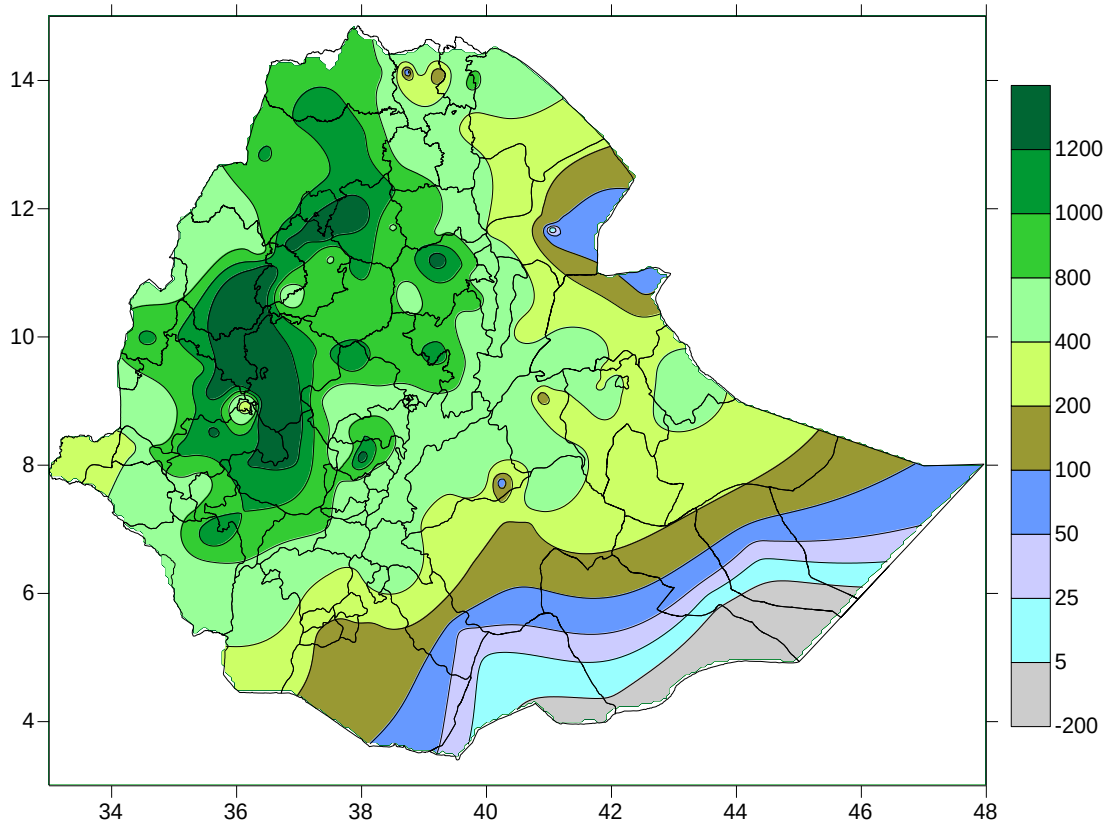


Fig.15. Rainfall amount in mm for Kiremt 2024

1.8. Rainfall Anomaly on Kiremt Season 2024

During Kirmmt 2024 season the rain fall distribution was , West, centeral and south Tigray, North and South Gonder ,North and South Wello,East and West Gojjam, Bahir Dar, Metkel, Assossa, Kamashi, East and West Wellega, North and West Shewa, Addis Ababa,Tango, Illibabur, Jimma, South West Shewa, Gurage, Siliti, Alaba,Gidayana,Hadiya, Gambela Zone1&2,Godere, Keffa, Dawero, Bench Maji, Basketo,Alaba, Arsi, including half of West and East Hararaghe Zones ,Generally most kirmet rain benefiting areas was recived 400 up to 1200 and above 1200mm rain fall. On the other hand Afar Zone 1,2,3,4&5, Shinile, West and East Hararaghe, Jijiga, Degahabur, Fik,Bale, Guji,Konso, Amaro, Borena, South Omo, Gambela Zone,Gode Zones are 100 up to 400 mm rain fall. The rest part of the country was below 100mm rain fall.

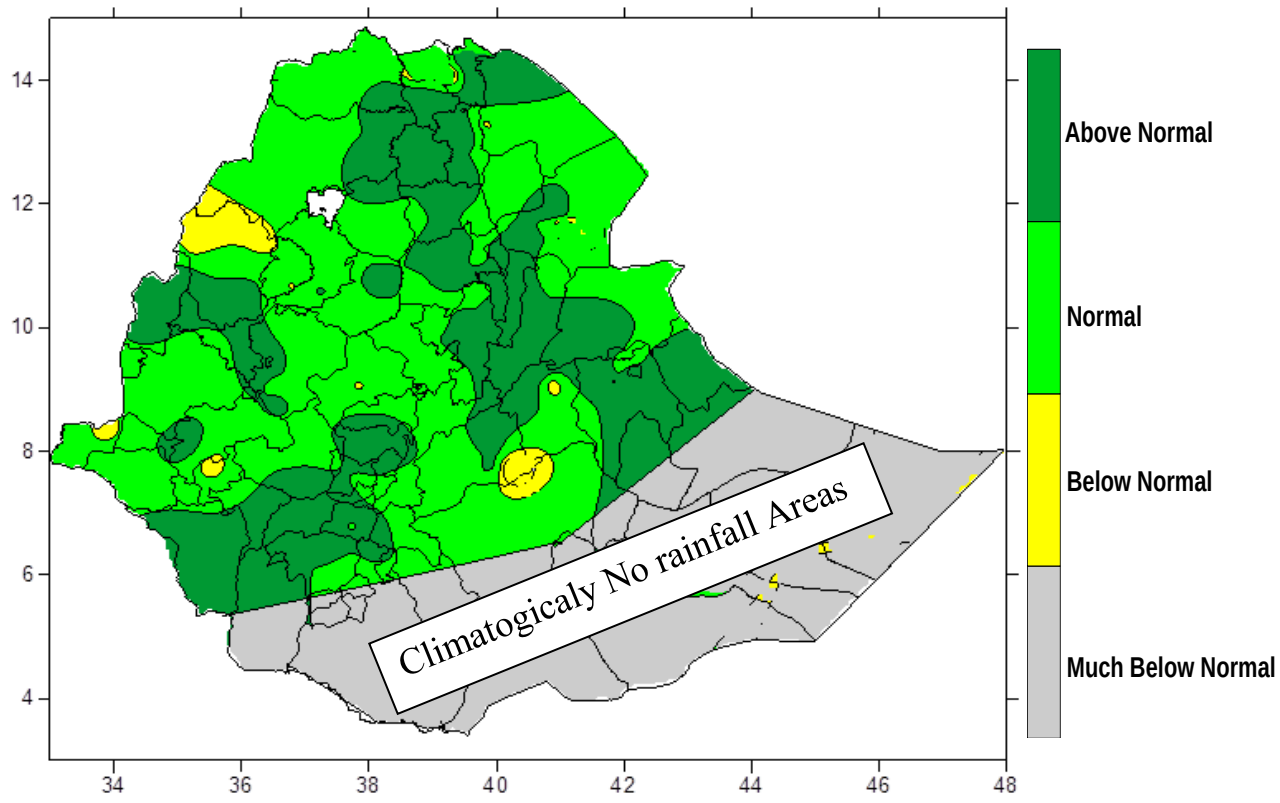


Fig.16. Percent of Normal Rainfall for Kiremt 2024

2. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE

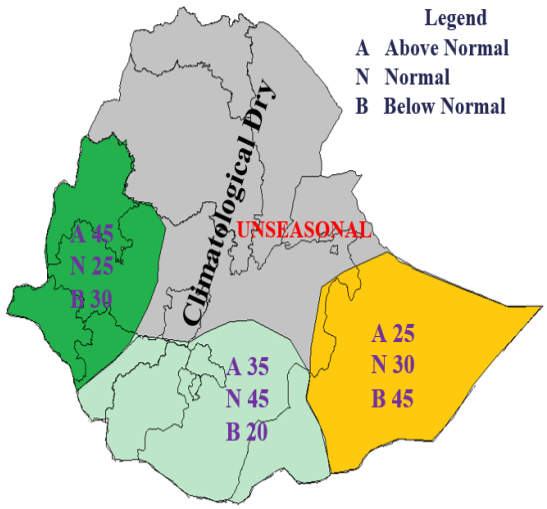
2.1. VEGETATION CONDITION AND IMPACT ON AGRICULTURE DURING KIREMT 2024

During Kiremt 2024, the observed good moisture condition throughout the season (figure 1 to 4) benefited Meher agricultural activities, availability of pasture and drinking water over eastern and north-eastern pastoral and agro-pastoral areas, without considerable crops affected due to heavy fall, land slide in some areas of the country. The computed WRSI (figure.8) for Meher Maize, Sorghum, Barley, Teff and Wheat indicates that Meher rain performed well and expected a good prospect for Meher crop production. The range land index based on WRSI (figure.6) and NDVI (figure.5) computed for Meher 2024 month to month shows good improvement. The situation was highly favorable for availability of pasture and water over eastern and north-eastern pastoral and agro-pastoral areas. Generally with the exception of the observed excess moisture over some areas and crop damaged due to soil erosion, water logging and land slide as well as the flood affected crops, life and property damaged due to heavy fall in some areas. the overall situation was favorable for kiremt season's agricultural activities.

2.2. EXPECTED WEATHER IMPACT ON AGRICULTURE DURING THE COMING BEGA, 2024_25 SEASON

Normally during Bega season, harvest and post-harvest activities are the major practices over most parts of Meher growing areas. It is time to perform water-harvesting activities for pastoral and agro pastoral areas of southern and south-eastern lowlands. The weather situation would favor the outbreak of pests if there were favorable environment, susceptible host and the pest itself. Under normal circumstance, there is a possibility of frost hazard during the season, mainly over north-eastern, central, eastern and southern highland.

TERCILE PROBABILITY FOR BEGA (ONDJ) 2024_25



IMPLICATION OF THE SEASON:-

- *Neutral IOD and NEUTRAL-LA NINA episode projected*
- *Normal rainfall performance is anticipated to dominate across Borena, Guji, Sidama and Southern portions of Ethiopia.*
- *However, below normal rainfall will prevail across southern portions of Somali region.*
- *Early onset and early cession of Bega 2024/25 rainfall will be expected.*
- *Nevertheless, much of the northern, north-eastern, eastern and central Ethiopia will have above normal rainfall (unseasonal rainfall).*
- *There will be a high probability of frost occurrence during NDJ*
- *The south-western and western portions of the country dominantly will receive above normal rainfall with occasional heavy rainfall pattern.*
- *Above-normal temperature expected over eastern, central and south eastern.*
- *The daily minimum temperature will be expected <5 degree Celsius over north-eastern, eastern, and southern areas.*

The indicated selected analogue year for Bega 2024_25 are 2020/21 and 1995/96, particularly in the months of October and November experienced extended rainfall, resulting in favorable moisture conditions, SPI, vegetation cover, and good Rangeland index

distribution across western parts of Meher producing areas, as well as the southern and some parts of southeastern pastoral and agro-pastoral regions, the expected moisture conditions to the south and southeast where Bega is the second rainy season will create favorable conditions for land preparation and sowing crops over the highland parts and insure the availability of pasture and drinking water. Also for the selected analogue years of temperature frost indicated in frost-prone areas of the Northern, Northeastern, Eastern, and Southern highlands. Moreover the observed moisture in the month of January for land preparation for the upcoming Belg season.

In the coming Bega 2024/25 season, the expected normal to above-normal moisture conditions over southern areas, particularly in the few Beg growing regions, will have a positive impact by supporting early land preparation and sowing activities. Moreover, it will play a beneficial role in the availability of pasture and drinking water in pastoral and agro-pastoral areas. On the other hand, the anticipated normal to below-normal moisture conditions over the south-eastern part of the country may negatively affect the supply of drinking water and pasture.

On the other hand, the expected unseasonal rains in the North, Northeast, Northwest, East, and Central parts of the country, which are not typically rain-receiving during this period, will negatively affect harvesting and post-harvest activities. In contrast, areas such as Benshangul-Gumuz, West Oromia, Gambella, and Southwest Ethiopia are expected to receive above-normal rainfall, which will positively contribute to full fill the water needs of crops still in growth stages, perennial plants, availabilities of pasture and the supply of drinking water. However, the expected unseasonal moisture could negatively affect crop harvesting and post-harvest activities in areas where crops are fully matured. Additionally, the expected extreme minimum temperatures might lead to frost in highland areas prone to frost occurrence.

The expected dry moisture condition in most of Meher-growing areas may lead to both positive and negative impacts, and the following recommendations are provided accordingly.

Positive impact

- The dry and sunny weather condition will have a positive impact for crop harvesting and post-harvest activities.
- It creates a favorable condition for transportation of harvested crops and for creating market linkages.
- Satisfy the water need for not fully matured Meher crops, late sown pulses seed crop, and perennial plants.
- For the Bega moisture benefiting areas will have a positive impact for land preparation and sowing crops.
- It will have a positive impact in animal fodder and drinking water supply in the pastoral areas of South and Southwestern parts.
- In areas where expected normal to above normal moisture condition will reduce the occurrence of night and morning cold and frost, so it will have a positive impact for both perennial plants and irrigated crops.
- The expected moderately moisture conditions during January will have a positive impact for land preparation, especially Belg crop growing areas.
- Dry conditions could reduce the breeding and spread of the desert locust and water-borne livestock and human diseases.

Negative impact

- The Expected below normal moisture condition over southeastern areas will have a negative impact on the availability of moisture for Bega crops, animal feed and drinking water.
- Unseasonal rains in the North, Northeast, East and Central parts of the country will have a negative impact on crop harvesting and post-harvesting activities.
- Due to Night and morning cold in the highland areas of the country that are vulnerable to frost, especially after the month of October, has a negative impact on the growth and productivity of various crops and permanent plants.

Agro-met Advisory.

- It is necessary to make harvest and post harvesting activities in the meanwhile to reduce crop damaged due to unseasonal rains.
- It is recommended that advance preparations be made to protect the harvested crops from pest damage and product loss by collecting and storing it in moisture-proof areas.
- It is necessary to practices irrigation and land preparations for Belg growing areas.
- Precaution should be taken to prevent crop damage that are grown by irrigation particularly the areas that are frost is expected.
- The dry and windy weather since November increases water evaporation, it can have a negative impact on irrigation water; therefor, the relevant authorities should ensure that irrigation water is used properly.
- In the pastoral and agro-pastoral areas, it is necessary to make advance preparations so that there is no shortage in the supply of feed and drinking water for the animals due to the expected shortage of moisture.

Finally, we advise immediately disseminate this early warning information to decision makers, timely activation of the task force(s) on drought that involves the different sector ministries and also farmers advised using climate and weather updates as provided by the Ethiopia Meteorology Institute (EMI).

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.

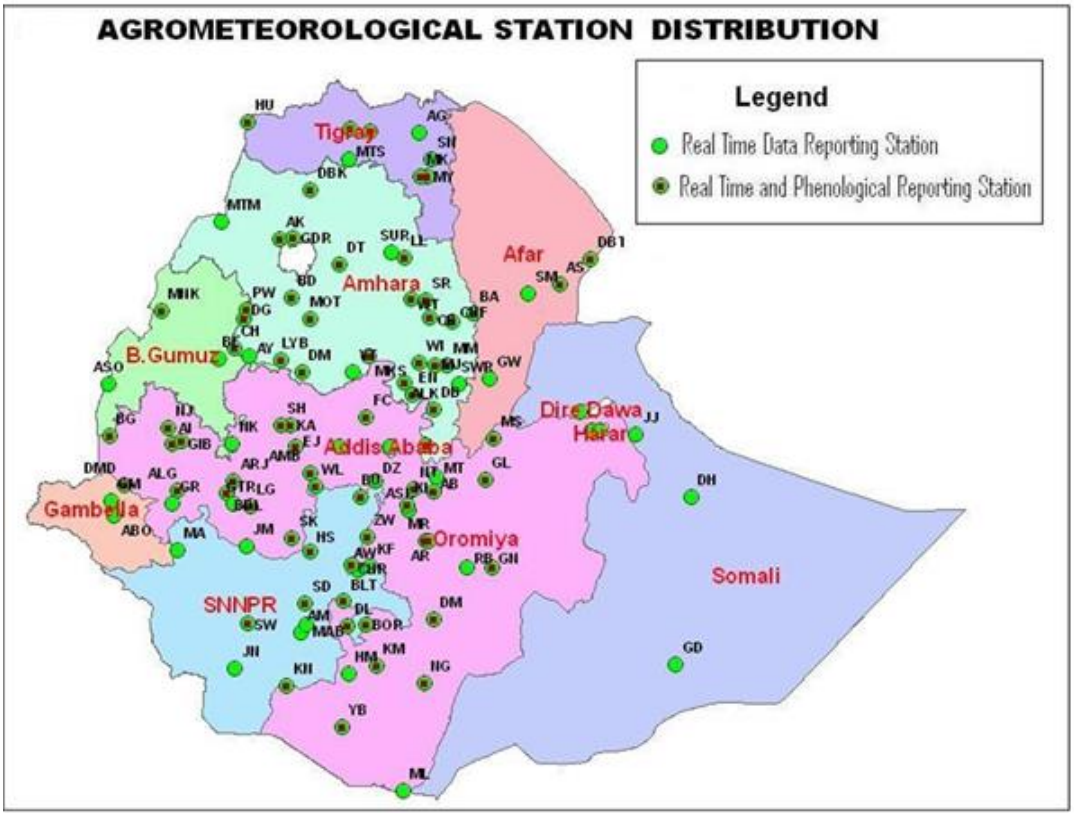
DEKAD: - First or second ten days or the remaining days of a month.

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		