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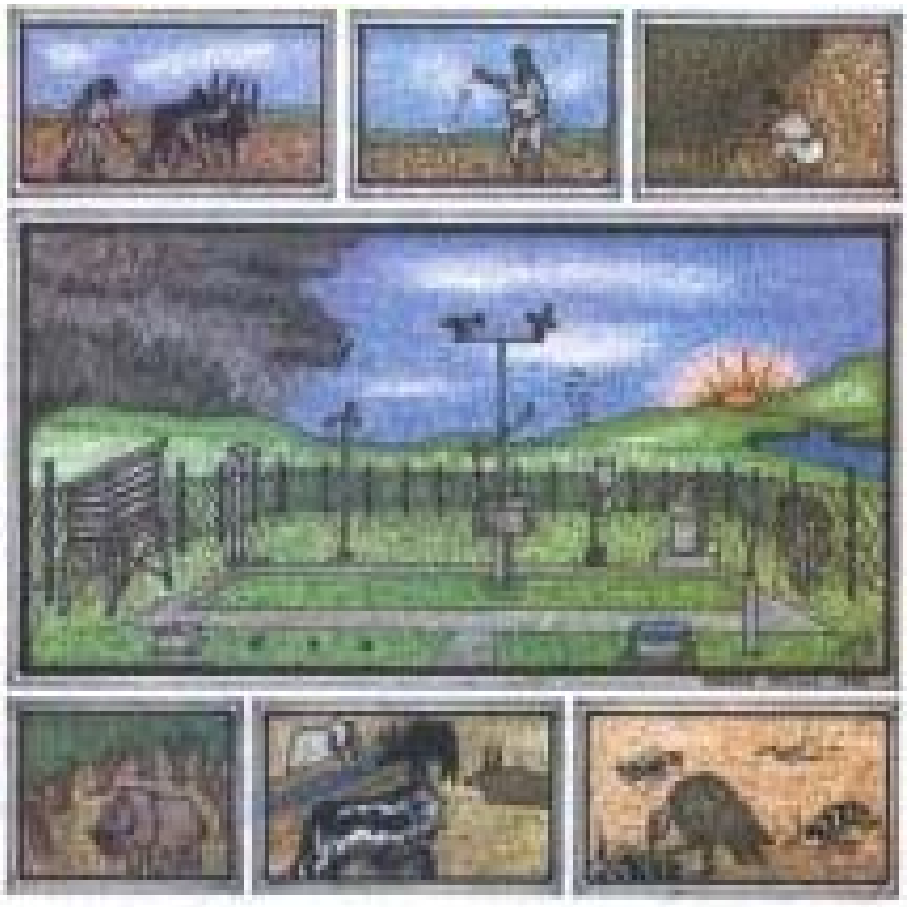


P.O.BOX 1090, ADDIS ABABA, ETHIOPIA
E.Mail: nmsa@ethionet.et Fax: 251-11-6625292, Tel. 251-11-6615779

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.

Director General
NMA
P.O.Box 1090
Tel: 011661-57-79
FAX 00251-11-6625292
E-mail nmsa@ethionet.et
Addis Ababa
Web site: - http://www.ethiomet.gov.et
http://www.Ethiopia.ranet.net

አህፅሮት
እ.ኤ.አ በልግ 2009

በመደበኛ ሁኔታ መካከለኛው የሰሜን ከፍተኛ ቦታዎች የምስራቅ ከፍተኛ ቦታዎች ከፊል የመካከለኛው የደቡብ ምዕራብና የደቡብ Iትዮጵያ በልግ አብቃይ በመባል ይታወቃሉ። በሰሜን" በሰሜን ምሥራቅና በምስራቅ ከአመታዊው ምርት የበልግ ምርት አስተዋፅኦ ከ5-30% በደቡብና ደቡብ ምዕራብ ከ30-60% ይደርሳል። ሰሜን ሽዋ" ምስራቅና ምእራብ ሐረርጌ" አርሲ" ባሌ" ሰሜንና ደቡብ ወሎ" ቦረናና የደቡብ ብሔር ብሔረሰቦችና ህዝቦች ክልል (ከምባታ" ሀድያ" ወላይታ" ጉለኔ" ከፋና ቤንች) የማሣ ዝግጅትና የዘር ጊዜ የሚጀምሩት ከታህሳስ እስከ የካቲት ባለው ጊዜ ውስጥ ነው። በተጨማሪም ወቅቱ የደቡብና ደቡብ ምስራቅ አከባቢዎች ለግጦሽ ሣርና ውሃ አቅርቦት የሚሆን ውሃ የሚያከማቹበት ቦታ ነው።

እ.ኤ.አ በየካቲት ወር 2009 የነበረው የዝናብ መጠን እንብዛም የተጠናከረ መልክ ባይኖረውም በምዕራብ የሀገሪቱ አጋማሽ ላይ ግን ዝናቡ ተከታታይነት ያለውና በመጠንና በቦታ ሽፋን ረገድ ጥሩ ገፅታ እንደነበረው ተስተውሏል። ይህም ለበልግ እርሻ እንቅስቃሴ ማለትም ለዘርና ለማሳ ዝግጅት እንዲሁም ለቋሚ ተክሎችና ለአርብቶ አደሩና ለከፊል አርብቶ አደሩ ለመጠጥ ውሃ አቅርቦት እና ለግጦሽ ሳር ልምላሜ አዎንታዊ ተፅዕኖ የነበረው ሲሆን ይህም ለበልግ አብቃይ አካባቢዎች ለወቅቱ ዝናብ መደበኛውን ፈር ተክትሎ መጣሉ ለበልጉ እርሻ እንቅስቃሴ በጎ ጎን መኖሩ ከመረጃ ዘጋቢ ጣቢያዎቻችን ለማወቅ ተችሏል። በአጠቃላይ መልኩ ሲታይ የፌብሪዋሪ ዝናብ በአብዛኛው አማራ ኦሮሚያ እና የደቡብ ብሔር ብሔረሰቦችና ህዝቦች ክልል ለበርካታ ቀናት ዝናብ ሲያገኙ የቆዩ ሲሆን በሰሜን ምስራቅ አማራ በምዕራብ ኦሮሚያና አጎራባች የደቡብ ብሔር ብሔረሰቦች ክልል አንዳንድ ቦታዎች ላይ ከባድ ዝናብ የተመዘገበ መሆኑን ከዝናብ መረጃዎች ለማወቅ ተችሏል ሆኖም ግን በአዝርዕትና በሰው ላይ ያደረሰው ጉዳት አልነበረም። በወሩ መጨረሻ ቀናት ውስጥም ከደቡብ ምዕራብ እስከ ሰሜን ምስራቅ የሚገኙትን የበልግ አብቃይ አካባቢዎች የተስፋፋ ሲሆን ይህም ለበልጉ እርሻ እንቅስቃሴ በጎ ጎን እንደነበረው ታውቋል። ከዚህም ሌላ በወሩ ውስጥ የተሻለ የዝናብ መጠን ስርጭት በምዕራብ ኦሮሚያ በደቡብ ብሔር ብሔረሰቦች ክልል በምስራቅ አማራ አካባቢዎች ሰፖኑ የዝናብ መጠንና ስርጭት ይነስ እንጂ የደቡብ እና የሰሜን ሶማሌ የምስራቅ ኦሮሚያና የምዕራብ አማራ አካባቢዎችም ለተወሰነ ቀናት ዝናብ አግኝተዋል ይህም ለበልጉ ወቅት የእርሻ ሥራ እንቅስቃሴ ለአርብቶ አደሩና ለከፊል አርብቶ አደሩ በጎ ጎን እንደነበረው ተስተውሏል።በየካቲት ወር የነበረውን የእርጥበት ካርታ ጠቋሚ ስንመለከት በአንዳንድ የደቡብ ብሔር ብሔረሰቦች ክልል" ምስራቃዊ አማራ ኪስ ቦታዎች እንዲሁም መካከለኛው ኦሮሚያ የተወሰኑ ቦታዎች በስተቀር አብዛኛው የሀገሪቱ ክፍሎች ደረቅና በጣም ደረቅ (dry to very dry) ሁኔታ ነበር የተስተዋለው።

እ.ኤ.አ መጋቢት ወር 2009 በተለይ በወሩ በመጀመሪያው አጋማሽ በአብዛኞቹ በልግ አብቃይ አካባቢዎች ደረቅና ፀሐያማ የአየር ሁኔታ ነበር የተዘወተረው በመሆኑም በተለይ ቀደም ብለው የዘር ጊዜያቸውን ባደረጉት አካባቢዎች በአዝርዕት ላይ የውሃ እጥረት ያስከተለ ነበር። ይሁንና ከወሩ ሁለተኛ አጋማሽ ጀምሮ በመጠጥም ሆነ በስርጭት በተለይ በደቡብ ምዕራብ እና በምዕራብ ሰሜን ምስራቅ እና በምስራቅ የሀገሪቱ ክፍሎች እየታየ የመጣው መደበኛና ከመደበኛ በላይ ዝናብ በተለያየ የእድገት ደረጃ ላይ ላሉ የበልግ ሰብሎች እንዲሁም ለቋሚ ሰብሎችና በሃገሪቱ ዝቅተኛ ቦታዎች ለሚገኙ ለአርብቶ አደሩና ለከፊል አርብቶ አደሩ ለግጦሽ ሳርና ለመጠጥ ውሃ አቅርቦት በጎ ጎን እንደነበረው ይታመናል። በተጨማሪም በሃገሪቱ ዝቅተኛ ቦታዎች በተለይም ሰሜን ምስራቅ" የደቡብ ምስራቅ ዝቅተኛ ቦታዎች የተገኘው ከፍተኛ ሙቀት የአካባቢውን የትነት መጠን

እንደሚጨምረው ይታመናል። የመጋቢት ወር የእርጥበት ጠቋሚ ካርታ እንደሚያሳየው ደቡብና ደቡብ ምዕራብ" የምዕራብና የምስራቅ ኦሮሚያ ኪስ ቦታዎች እንዲሁም የምስራቅና ሰሜን አማራ የተወሰኑ ቦታዎች ከእርጥበት በጣም እርጥበት (moist to humid) አግኝተዋል። ይህም ሁኔታ በተለያየ የእድገት ደረጃ ላይ ለሚገኙት የበልግ ሰብሎች እና ለቋሚ ሰብሎች እንዲሁም ለአርብቶ አደሩና ከፊል አርብቶ አደሩ ለግጦሽና ለመጠጥ ውሃ አቅርቦት ጠቀሜታው የጎላ ነበር በሌላም በኩል በደቡብ ትግራይ በምስራቅ አማራ የተወሰኑ ቦታዎች በመካከለኛው ኢትዮጵያ እንደዚሁም በተቀሩት የሀገሪቱ ክፍሎች ቀደም ባለው ወር የእርጥበት እጥረት የነበረው ሁኔታ አባብሶባቸዋል። በእርሻው እንቅስቃሴ ላይም አሉታዊ ተፅዕኖ አሳድሯል።

እ.ኤ.አ በሚያዝያ ወር 2009 በአብዛኛው ኦሮሚያ የደቡብ ብሔር ብሔረሰቦችና ሕዝቦች ክልል ጋምቤላ የምስራቅ ኢትዮጵያ አካባቢዎችና የምስራቅ አማራ ኪስ ቦታዎች በመጠን ከ50-296 ሚ.ሜ ከ10 እስከ 22 ቀናት የነበረ በመሆኑ ለእርሻ ሥራ እንቅስቃሴ ከፍተኛ ጠቀሜታ የነበረው ሲሆን በአብዛኛው ምስራቅ አማራ መካከለኛውና ምስራቅ ኢትዮጵያ ቤንሻንጉል ጉሙዝ ደቡባዊ አጋማሽ በመጠን ከ25-50 ሚ.ሜ በስርጭት ከ5-10 ቀናት ዝናብ በማግኘታቸው በአጠቃላይ ለእርሻና እርሻ ሥራ እንቅስቃሴ በመጠኑም ቢሆን ጠቀሜታ ነበረው። የሚያዚያ ወር እርጥበት ጠቋሚ ካርታ እንደሚያመለክተው የበልግ ወቅት ተጠቃሚና የረጅም ጊዜ ቋሚ ሰብሎች የሚያበቅሉ አካባቢዎች ባብዛኛው ኦሮሚያ" የደቡብ ብሔር ብሔረሰቦች ጋምቤላ የምስራቅ አማራ ኪስ ቦታወች እና የምስራቅ ኢትዮጵያ የተወሰኑ ቦታዎች ላይ ከእርጥበት እስከ በጣም እርጥበት (moist to humid) የእርጥበት ሁኔታ ተስተውሎባቸዋል። ይህም ሁኔታ ለበልግ ሰብሎች" ለቋሚ ሰብሎች እንዲሁም የረጅም ጊዜ ሰብሎችን ለመዝራት አዎንታዊ ተፅዕኖ ነበረው። እንዲሁም በሚያዚያ የተገኘው እርጥበት ለአርብቶ አደሩም አካባቢ ጠቀሜታው የጎላ ነበር።በሌላም በኩል ሰሜናዊ አጋማሽ የሀገሪቱ ክፍሎች ትግራይ አብዛኛው አማራ ቤንሻንጉል ጉሙዝ አፋር እና ሱማሌ ከደረቅ እስከ በጣም ደረቅ (dry to very dry) ሁኔታ ተስተውሎባቸዋል። ይህም ሁኔታ በመካሄድ ላይ ላለው የእርሻ እንቅስቃሴ አሉታዊ ተፅዕኖ አሳድሯል። በሌላም በኩል በደቡብ በደቡብ ምዕራብ በምዕራብ እና በምስራቅ የሀገሪቱ ክፍሎች የእፅዋት ሽፋን ተሻሽሏል።

ከግብርናና ገጠር ልማት ሚኒስቴር በሚያዚያ ወር የፊልድ መረጃ በተለያዩ የሀገሪቱ ክፍሎች ላይ ሰብሎች ያሉበትን የእድገት ደረጃ እንደሚያሳየው ከመዝራዘት እና ቡቃያ እስከ ብቅለት (በደቡብ ህዝቦች እና ኦሮሚያ)" ከብቅለት እስከ እድገት (በደቡብ ሕዝቦች" በኦሮሚያ እና በአማራ) እንዲሁም ከእድገት እስከ ማበብ (በደቡብ ሕዝቦች) እንዲሁም የመኸር ወቅት የረጅም ጊዜ ሰብሎች በኦሮሚያ" በአማራ በትግራይና በድሬዳዋ አስተዳደር በአብዛኛው ስፍራዎቻቸው በመዘራት እና በብቅለት ደረጃ ላይ እንደሚገኝ ተገልጿል። በሌላም በኩል በአንዳንድ የደቡብ ትግራይ" ሰሜን ሸዋ ኦሮሚያ ዞን እንድሁም በደቡብ ህዝቦች በእርጥበት እጥረት ምክንያት የሰብሎች መጠውለግና መጥፋት ምክንያት ማሳ ተገልብጦ እንደገና ተዘርቷል።

እ.ኤ.አ በግንቦት ወር 2009 የበልግ ወቅት የመጨረሻ ወር በመሆኑ የበልግ ዝናብ ሰጪ የአየር ሁኔታ ክስተቶች ቀስ በቀስ በሀገሪቱ የበልግ ዝናብ ተጠቃሚ በሆኑት ስፍራዎች ላይ የሚዳከሙበት ጊዜ ነው። በዚህ የሚይ የመጀመሪያ አስር ቀናት የዝናቡ ስርጭትና መጠን በደቡብና በደቡብ ምዕራብ የሀገሪቱ አካባቢዎች የተሻለ ገፅታ የነበረው ሲሆን አልፎ አልፎ በጥቂት የምስራቅና የሰሜን ምስራቅ እንዲሁም የምዕራብ የሀገሪቱ አካባቢዎች ውስን ቦታዎች ላይ ዝናብ ነበር።ይህም ሁኔታ ለረጅም ጊዜ ሰብሎች" ለቋሚ ሰብሎች" በተለያዩ እድገት ደረጃ ላይ ላሉ የበልግ ሰብሎች እና ለመኸር የማሳ ዝግጅት ጠቀሜታ ሲኖረው በወሩ አጋማሽ አካባቢ ባሉት የወሩ ሁለተኛ አስር ቀናት መጀመሪያ ላይ ዝናቡ የተጠናከረ መልክ የነበረው ከመሆኑም ባሻገር የሶማሌ ደቡባዊ አካባቢዎች ላይ ተስፋፍቶ ተስተውሏል። በመሆኑም በመጠኑ የተጠናከረ ዝናብ በደቡባዊ የሀገሪቱ አጋማሽ አንዳንድ አካባቢዎች ነበር። ይህም ሁኔታ ለመኸር ወቅት ለማሳ ዝግጅት" ለአጠቃላይ የእርሻ እንቅስቃሴ እና ለአርብቶ አደሩና ከፊል አርብቶ አደሩ ለግጦሽ ሳር እና ለመጠጥ ውሃ አቅርቦት አመቺ ሁኔታ የነበረው ሲሆን በመቀጠል ከወሩ አጋማሽ በኋላ ባሉት የመጨረሻዎቹ አስር ቀናት

የዝናቡ ሁኔታ በስርጭትም ከደቡብ ምስራቅ የሀገሪቱ አካባቢዎች ተስፋፍቶ ተስተውሏል። በተጨማሪም በነዚ አካባቢዎች ጥቂት ስፍራዎች ላይ ከባድ መጠን ያለው ዝናብ እንደነበር ከየስፍራው የተገኙት መረጃዎች ይጠቁማሉ። ይህም ሁኔታ በስፍራው ለሚካሄደው የመኸር ወቅት የማሳ ዝግጅት" ለአጠቃላይ የእርሻ እንቅስቃሴ እና ለግጦሽ ሳር እና ለመጠጥ ውሃ አቅርቦት አዎንታዊ ተፅዕኖ ነበረው።በግንቦት ወር የእርጥበት ጠቋሚ ካርታ እንደሚያመለክተው በአብዛኛው የደቡብ ህዝቦች "ጋምቤላ" ቤንሻንጉል ጉሙዝ" ኦሮሚያ እንዲሁም የደቡብ የምስራቅ አማራ አንቅስቃሴም ሆነ በደቡብና ደቡብ ምስራቅ ለሚገኙት አርብቶ አደሮች ለግጦሽና ለመጠጥ ውሃ አቅርቦት ጠቀሜታው የጎላ እንደነበር ይታመናል።

በአጠቃላይ በበልግ 2009 የእርጥበት ጠቋሚ ካርታ እንደሚያሳየው የደቡብ ኢጋማሽ የሀገሪቱ ክፍሎች አብዛኛው የደቡብ ህዝቦች" የደቡብ የምስራቅ እንዲሁም መካከለኛ ኦሮሚያ የተወሰኑ ቦታዎች አንዲሁም የምስራቅና የደቡብ አማራ ኪስ ቦታዎች የተስተካከለ እርጥበት አግኝተዋል። የግብርናና ገጠር ልማት ሚኒስቴር ሪፖርትም እንደሚያረጋግጠው በአብዛኛው የደቡብ ህዝቦች ኦሮሚያ እንዲሁም ምስራቅ አማራ የተወሰኑ ቦታዎች ካለፈው አመት ጋር ሲወዳደር የተሻለ ዝናብ አግኝተዋል። በተጨማሪም በሚያዚያና በግንቦት በአብዛኛው የመኸር ወቅት የረጅም ጊዜ ሰብሎች አብቃይ አካባቢዎች ከእርጥበት እስከ በጣም እርጥብ (moist to humid) ሁኔታ ተስተውሎባቸዋል። ይህም ሁኔታ ለመኸር ሰብሎች የማሳ ዝግጅትም ሆነ ለዘር በወቅቱ ተከናውኗል። በተጨማሪም በደቡብ" በደቡብ ምዕራብ" በምስራቅ ዝቅተኛ ቦታዎች ለግጦሽ አመቺ ሁኔታ ነበር።

አጠቃላይ የሰብሎችን የውሃ አቅርቦትን (WRSI) ካርታ እንደሚያሳየው በምስራቅ የተወሰኑ ቦታዎች የተሟላ አልነበረም። ባጠቃላይ የሰብሎች የውሃ ፍላጎት ትንተና (WRSI) እንደሚያመለክተው በደቡብ በደቡብ ምዕራብ በባሌና በአርሲ ዞኖች የተገኘው እርጥበት የሰብሎችን የውሃ ፍላጎት ያሟላ እንደነበርና በነኝህ አካባቢዎች ለበልግ ምርት የተሻለ ሁኔታ አንደነበር መረጃዎች ያመለክታሉ። በተጨማሪም በበልግ ወቅት በሀገሪቱ በየትኛውም አካባቢ በእፅዋትም ሆነ በእንሰሳት ላይ የደረሰ ተዛማች በሽታም ሆነ የሰደድ እሳት እንዳልደረሰ ተገልፃል።

BELG 2009
SUMMARY

Normally central parts of northern highlands, eastern highlands, parts of central, southwestern and southern Ethiopia are known as Belg growing areas .The contribution of Belg rainfall is ranging from 5-30% over north, northeastern, and eastern highlands, where as 30-60% over south and southwestern parts of the country from annual total crop production of the areas. North Shewa, East and West Hararge, Arsi, Bale, north and south Wello, Borena and SNNPR (Kembata, Hadiya and Wolaita, Gurage, Keffa and Bench) start their land preparation and sowing activities during December to February. It is the time for water harvesting over pastoral and agro pastoral areas of southern and southeastern Ethiopia.

During the month of February 2009, the rainfall activities over most Belg growing areas of the country favored land preparation. While over western and southwestern parts of Belg growing areas the rainfall activities were conducive for Belg agricultural activities as well as for perennial crops. Belg rain-benefiting areas of southwestern and northeastern portions of the country recorded sufficient rain, which favored for Belg agricultural activities as well as availability of drinking water and pasture. Although, limited amount of rainfall was observed over parts of southern and northern Somalia, eastern Oromiya and western Amhara the rainfall activity favored Belg agricultural activities, availability of pasture and drinking water. The moisture status for the month of February indicated Moist to humid moisture over some parts of southwestern SNNPR, pocket areas of eastern Amhara and central Oromia. this situation was conducive for Belg land preparation for area which sowing activity start earlier.

During the month of March 2009, sunny and dry weather condition has been observed during the first half of the month, the situation might have negative impact on areas where Belg agricultural activities start earlier. During the second half of march the seasonal rainfall activities intensified in terms of distribution and amount due to the intensification of rain bearing system, particularly south western, western, north eastern and eastern parts of the country which received normal to above normal rainfall. Besides the widely observed distributed rainfall situation might have positive contribution for the development of Belg crops which were at different growing stages, perennial crops and availability of pasture and drinking water over pastoral and agro pastoral areas of the country. On the other hand, the observed extreme maximum temperature over lowland parts of the country particularly over northwestern, southeastern and northeastern lowland parts of the country might have increased the rate evapo-transpiration. During the month of March southern and south western parts of the country, pocket areas of western and eastern Oromia and eastern and northern Amhara exhibited moist to humid moisture status. This condition might have positive contribution on the development of Belg crops and perennial crops which were at different growing stages, and availability of pasture and drinking water over pastoral and agro pastoral areas of the country. On the other hand the observed dry and very dry moisture status exacerbate the deficient condition persisted during the month of February which affected the Belg's agricultural activity in southern Tigray, some pats of eastern Amhara and central Ethiopia.

During the month of April 2009, the rainfall activity covered much of Belg growing areas. The rainfall amount and distribution was better over much of Oromia, SNNPR, Gambela, some parts of eastern Ethiopia and pocket areas of eastern Amahara within the range of 50-296 mm for 10 to 22 rainy days in the month. The amount of rainfall was heavy over western and southwestern

parts of the country. Arjo, Gore, Bedelle, Jinka, Amman, Masha and Bati recorded 73.2, 60.0, 68.4, 52.0, 50.0 and 45.8 mm of rainfall in one rainy day respectively. The rainfall activity of April 2009 was normal to above normal over western Oromia and surrounding Benishangul - Gumz Gambela, western half of SNNPR and western Amhara. The situation was conducive for the on going agricultural activities, perennial crops and availability of pasture, water. While the rest part of the country experienced below normal rainfall which had negative impact on agriculture activities and general vegetation conditions. During the month of April Moist to humid moisture status has been covered in most Belg and long cycle crops growing areas over much of Oromia, SNNPR, Gambela, some parts of eastern Ethiopia and pocket areas of eastern Amahara. The situation helped Belg crops, perennial crops and planting of long cycle crops. The conditions during April have helped to improve the existing water shortage in pastoral areas as well. On the other hand northern half the country like Tigray, most of Amhara, B.Gumuze, Afar and Somali experienced dry and very dry moisture condition which had negatively affected the on going agricultural activities and pasture and drinking water. The vegetation cover improved over southern, south western, western and eastern parts of the country due to the better moisture obtained.

Ministry of agriculture and Rural Development filed report stated **Phenological** status of crops during the month of April to be from **sowing** and **germination** to **seedling** stages in **SNNPR** (Sidama, Gedeo zone, Amaro, Alaba, Basketo special woredas), **Oromia** (West Arsi, Arsi, Bale East and west Harerge, and Guji zones), From **seedling** to **vegetative** stage in **SNNPR** (Welaita, Hadia, Gamogofa, south Omo zons and Konso special woreda), **Oromia** (Guji zone), **Amhara** (north shewa, Oromia, South and North Wollo zone) and Tigray (Rayaa Azebo, wereda) and From **vegetative** to **flowering** stages in **SNNPR** (Keffa, sheka, bench Maji and Dawro zons). **Long cycle meher crops are at, sowing, and seedling stages in Oromia** region; (Ilubabore, Jimma east and west wellega (Qelem and Horogudru), Borena, **Amhara** region; (Sowthwest Shewa in North Wollo, North Shewa, south and north Gonder, Weast Gojame and Awi zones), **Tigray** Region; (Raya Azebo and Afrom Wredas) and **Diredawa** administration.

On the other hand, severer **wilting and damage** of belg crops, owing to moisture stress, and consequently **replanting** is reported from some belg growing area of the country such as **southern zone of Tigray** and **North shewa zone of Oromia** and some parts of **SNNPR** (Gurage, Kembata Tembaro, Hadia, Sidama Konso zone) and **Oromia** (Arsi, Guji zone).

During the month of May 2009, under normal circumstance the rainfall activity exhibited a decreasing in belg growing areas of the country. However, the first dekad of the month exhibited better rainfall amount and distribution over southern and southwestern and some pocket areas of eastern, northeastern and western parts of the Country. This situation would have significant contribution for belg crops which were at different phenological stage, Perennial crops and meher long cycle crops. Moreover, during the second and third dekad of May southern parts of the country including southern Somali and south eastern parts of the country received wide distribution of rainfall. The observed wide distribution of rainfall could have a positive contribution for belg crops, sowing of long cycle crops like maize and sorghum including pulse crops like haricot bean and also fevered for pasture and drinking water over the low lands of pastoral and agro postural area of the country. The analysis of moisture status indicated that there was significant increase in moisture condition over most parts of SNNPR, Gambela, Benshangul-Gumuze, Most parts of Oromia and south and eastern Amhara during the month of May. The situation favored the general agricultural activities and availability of pasture and drinking water over southern and south eastern lowlands of the country.

Generally During Belg 2009, both moisture status and water balance analysis shows that the overall moisture condition during the season was in good shape over southern half of the country including most parts of SNNPR, some parts of central, southern and eastern Oromia and moderate condition was observed over pocket areas of eastern & southern Amhara. Besides the field report made by **MoARD** confirmed that, the observed rainfall condition over most parts of Belg growing area of SNNPR, Oromia and some parts of eastern Amhara was better as compared to last year. Moreover moist to humid moisture status has been observed in most meher long cycle crops growing area during the month of April and May and the situation favoured for land preparation and sowing activity. Improvement of pastors conditions over postural areas is more confined to the southern, southwestern and eastern low lands of the country.

Total crops water requirement for this Belg season is said to be total failure for northern, northeastern & parts of eastern Ethiopia. Moderate to very good **WRSI** condition is confined over southern, southwestern, Bale & Arsi zones of Belg growing areas of the country the condition is comparatively better than that of last year. Moreover, there were no reports on the occurrence of pest and/or livestock outbreak and fire hazards not reported from any region during the season.

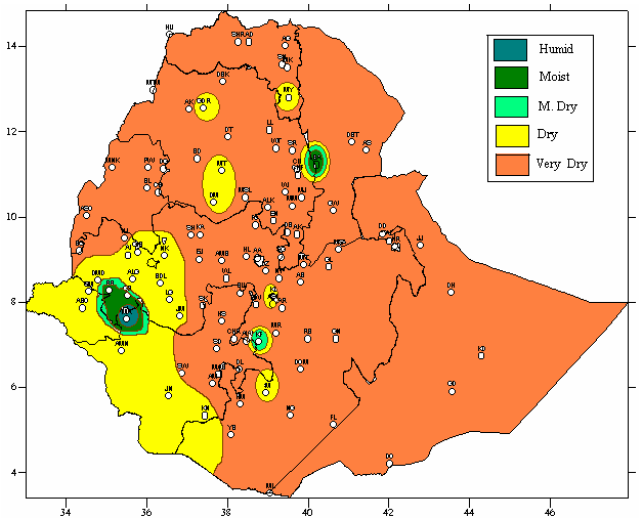


Figure.1 Moisture status for February 2009

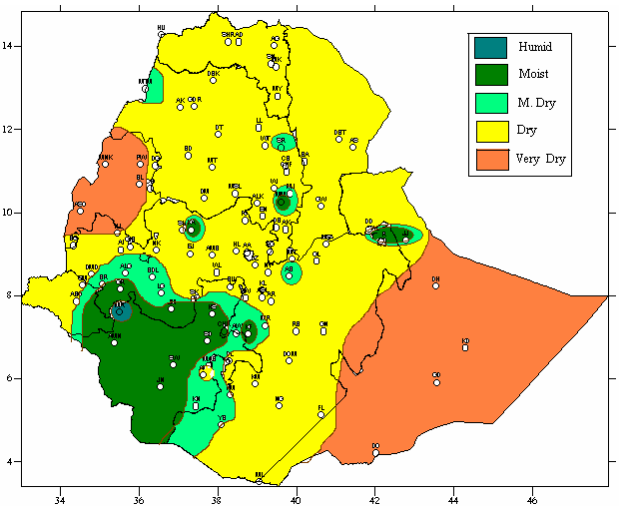


Figure.2 Moisture status for March 2009

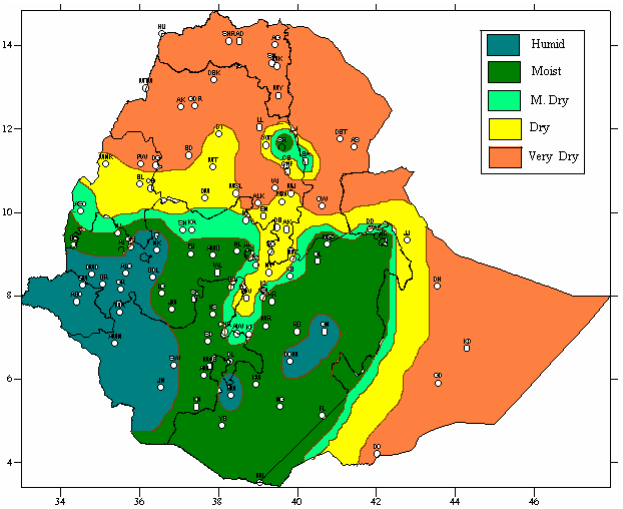


Figure.3 Moisture status for April 2009

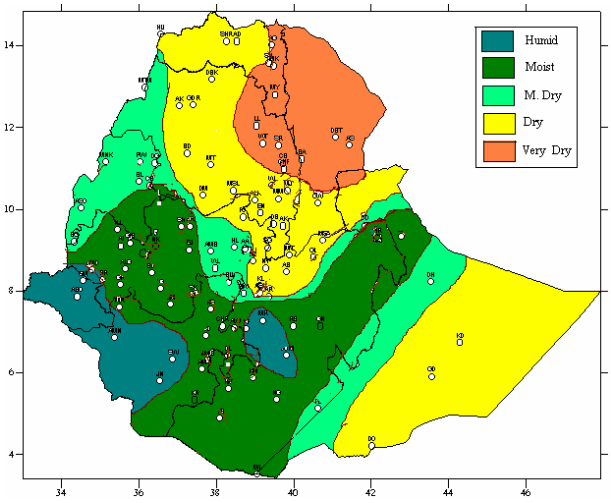
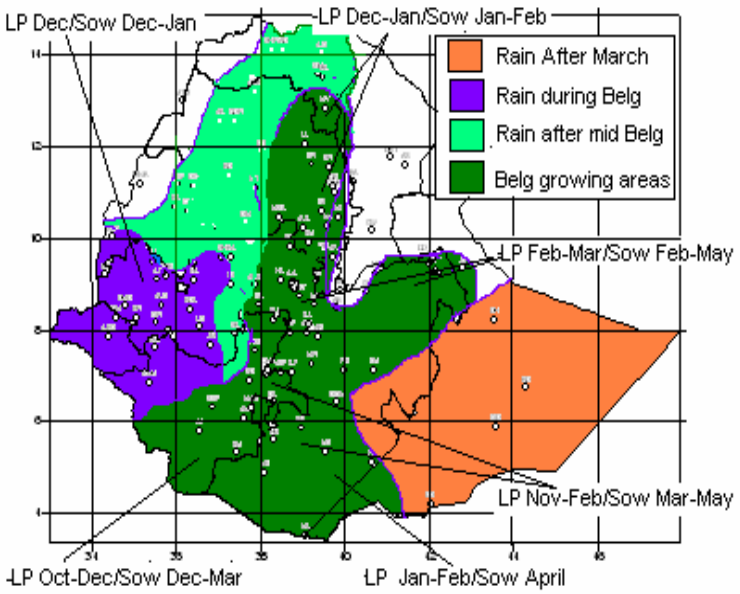


Figure.4 Moisture status for May 2009

Figure.5 Belg growing areas of the country (The Green shaded areas)



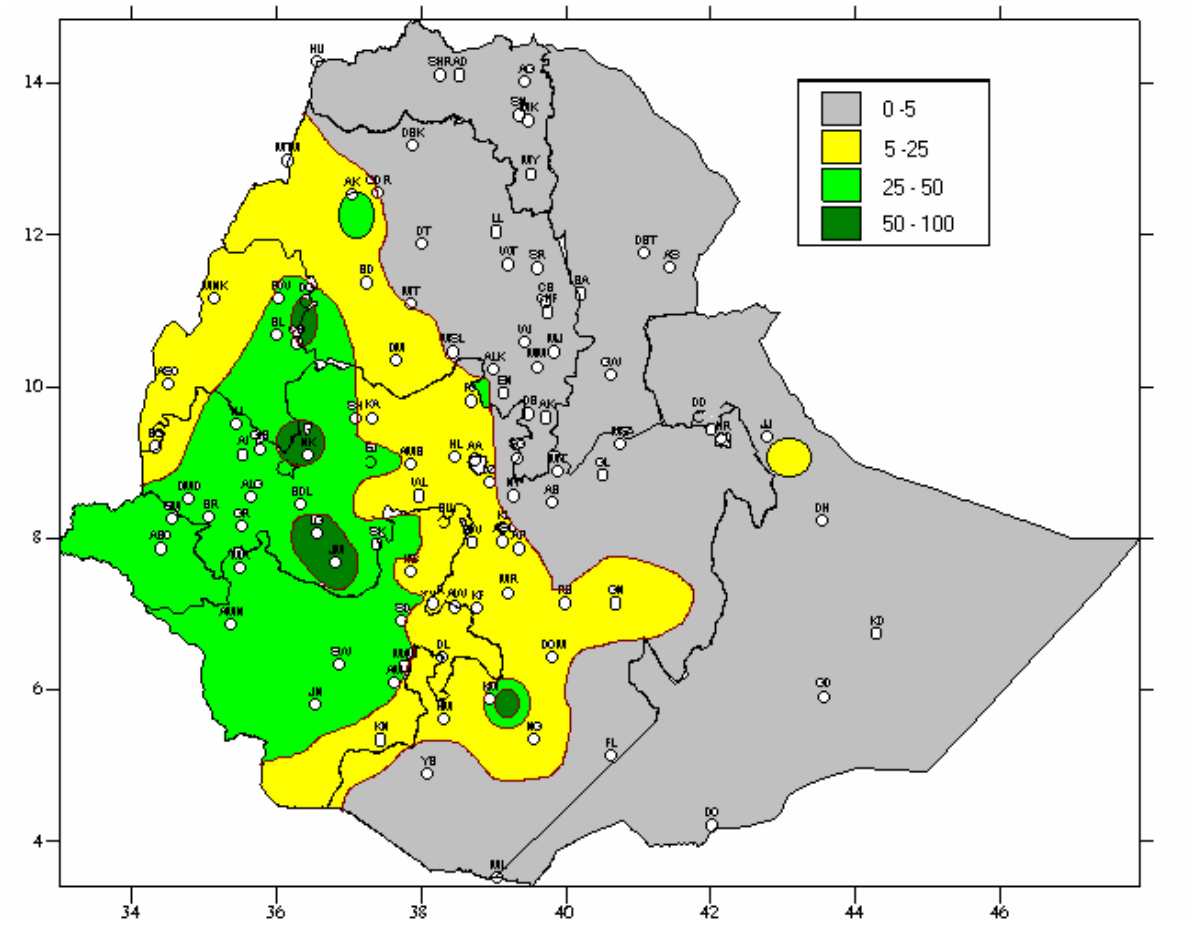


Fig. 6. Rainfall distribution in mm (21-31 May, 2009)

1. WEATHER ASSESSMENT

1.1 May 21-31, 2009

1.1.1 Rainfall Amount (Fig 6)

Pocket areas of western and southern Oromia and eastern Benshangul-Gumuz received 50-100 mm rainfall. Gambela, western half of SNNPR and eastern Benshangul-Gumuz, parts of western and pocket area of southern Oromia and pocket area of western Amhara experienced 25-50 mm rainfall. Western half of Benshangul-Gumuz, parts of western, central and southern Oromia and southwestern Amhara, margin of eastern SNNPR and pocket area of northern Somali exhibited 5-25 mm rainfall. The rest parts of the country received little or no rainfall.

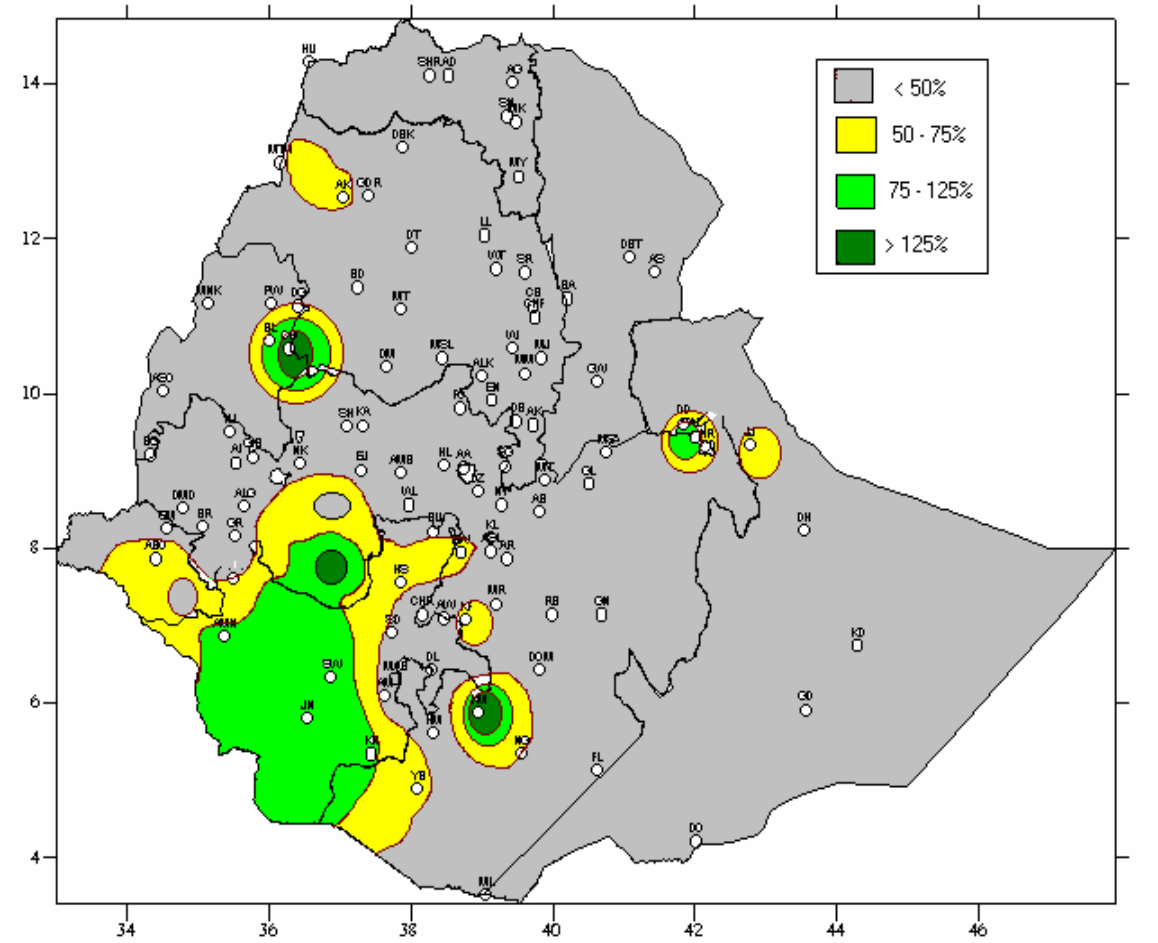


Fig. 7 Percent of normal (21-31 May 2009)

Explanatory notes for the Legend:
< 50-Much below normal
50-75%-Below normal
75-125%- Normal
> 125% - Above normal

1.1.2 **Rainfall Anomaly (Fig 7)**

Western half of SNNPR, pocket areas of southern and eastern Oromia and eastern Benshangul-Gumuz received normal to above normal rainfall. The rest parts of the country exhibited below normal to much below normal rainfall

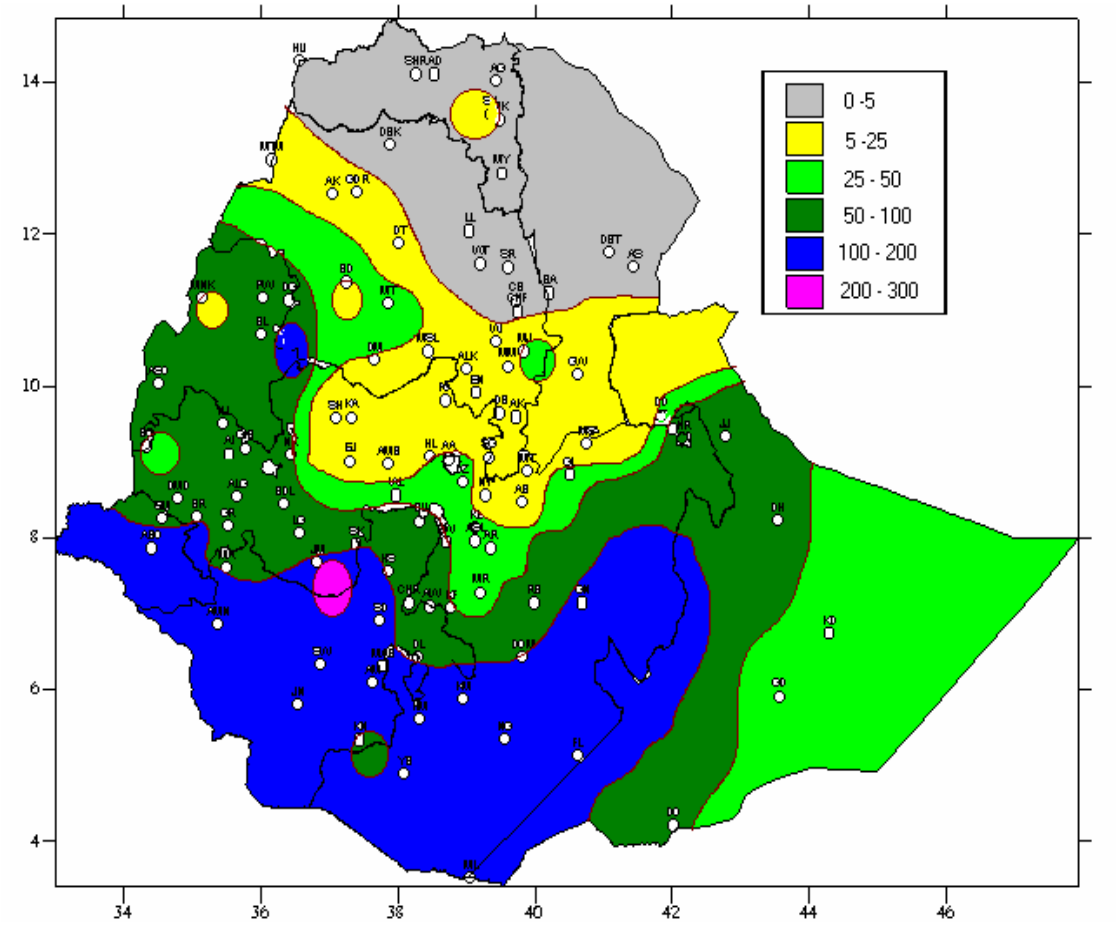


Fig. 8 Rainfall Distribution in mm for the month of May 2009

1.2 May 2009

1.2.1 Rainfall Amount (Fig. 8)

Some parts of western Oromia few areas of SNNPR and Benishangul –Gumz and pocket areas of Amhara exhibited 300-400mm of rainfall. Some parts of western Oromia, of SNNPR, of Benishangul –Gumuz, of central Amhara, and few areas of central and pocket areas of eastern Oromia received 200-300mm of rainfall. Much of Amhara, Gambela, some parts of SNNPR, Benishangul-Gumuz and central and eastern Oromia experienced100-200mm of rainfall. Much eastern, southern central Oromia, south-western parts of SNNPR, much of Benishangul-Gumuz, some parts of Amhara, Tigray, and Somali exhibited 50-100mm of rainfall. Much of Tigray, Somali, eastern parts of Amhara, received 25-50mm of rainfall. While pocket areas of southern Oromia and the rest parts of the country exhibited 5-25mm of rainfall.

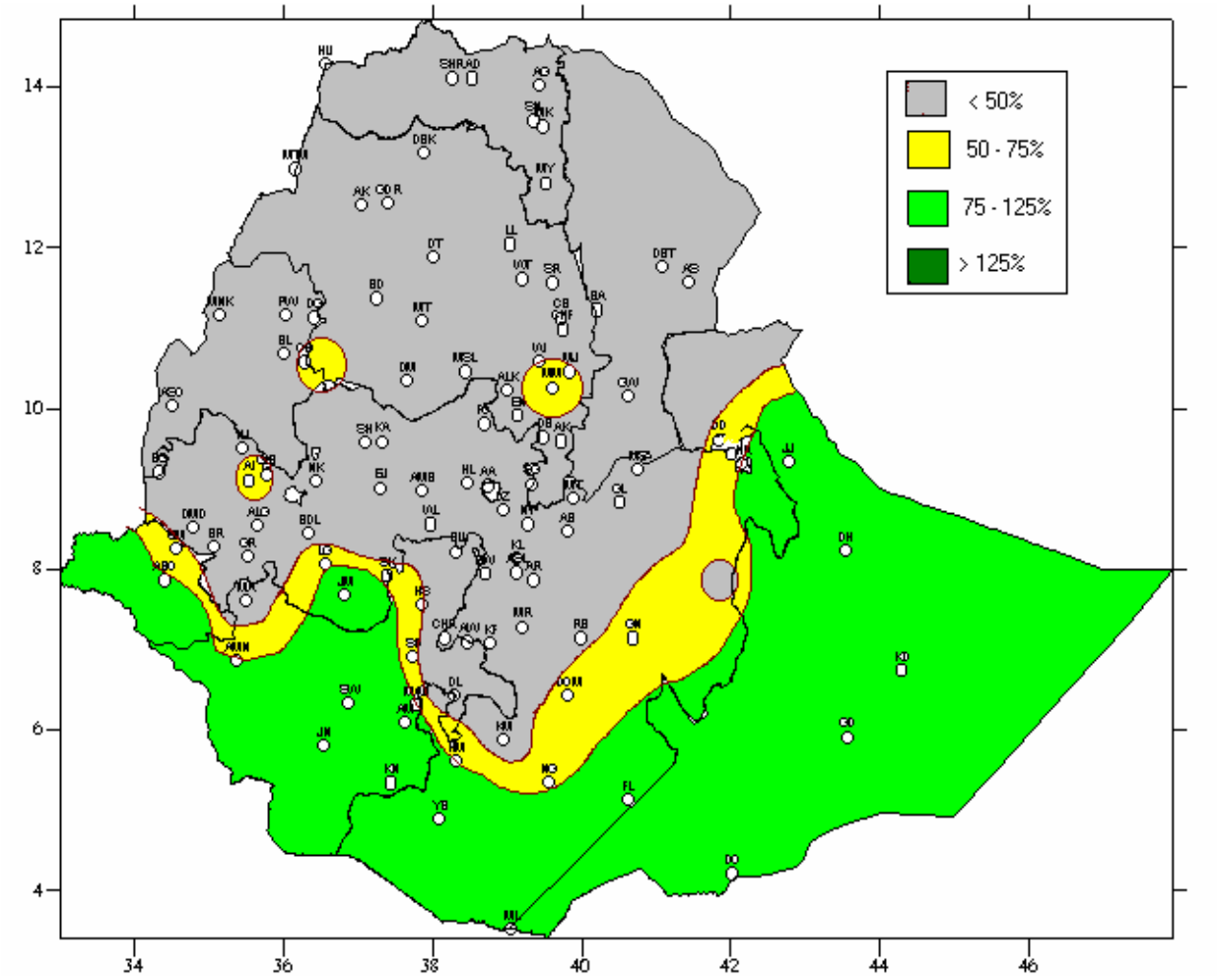


Fig. 9 Percent of Normal Rainfall for the month of May 2009

Explanatory notes for the Legend:
< 50 -Much below normal
50-75%-Below normal
75-125%- Normal
> 125% - Above normal

1.2.2 Rainfall Anomaly (Fig. 9)

Most of SNNPR and Somali, southern half of Gambela and part of southern Oromia received normal rainfall. The rest parts of the country experienced below normal and much below normal rainfall.

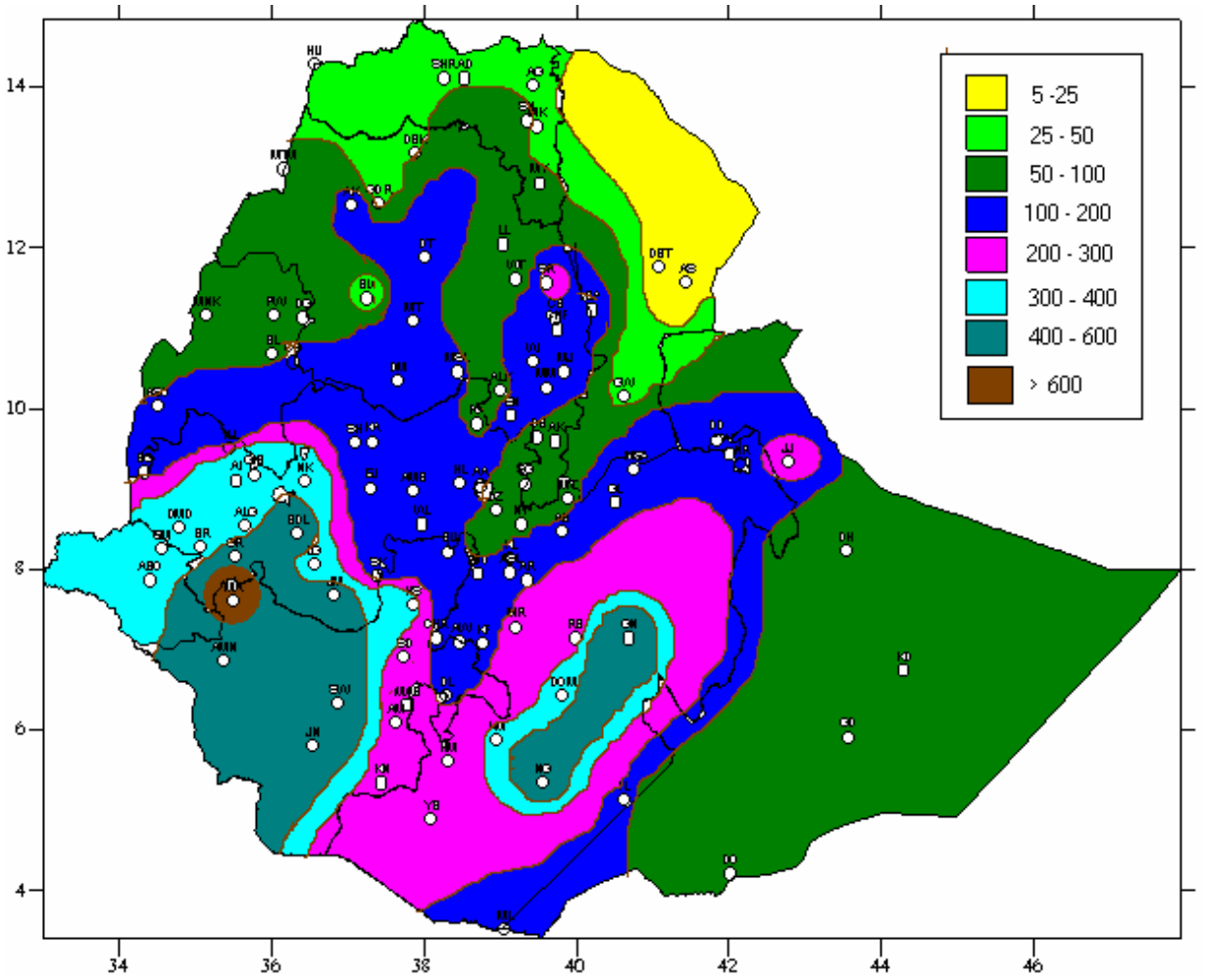


Fig. 10 Rainfall Distribution in mm for Belg 2009

1.3 Belg 2009

1.3.1 Rainfall Amount (Fig. 10)

Pocket area of western SNNPR received above 600mm rainfall, western half of SNNPR, eastern half of Gambela and part of western and southern Oromia received 400-600 mm rainfall. Western half of Gambela, western and southern Oromia and margin of western SNNPR experienced 300-400 mm rainfall. Parts of western Gambela, western and southern Oromia, eastern and northeastern SNNPR and tip of southern Somali exhibited 200-300 mm rainfall. Parts of western, central and eastern Oromia, southeastern Benshangul-Gumuz, northern and western Somali and part of southern, eastern, and central Amhara received 100-200 mm rainfall. Northern half of Benshangul-Gumuze, central Oromia, Much parts of Somali and southern Afar, part of southern and pocket areas of central and western Amhara and some parts of central and southern Tigray experienced 50-100 mm rainfall. Most of Tigray, northern tip of Amhara,western and southern Afar and northern Somali exhibited 25-50 mm rainfall. Most parts of Afar received 5-25 mm rainfall.

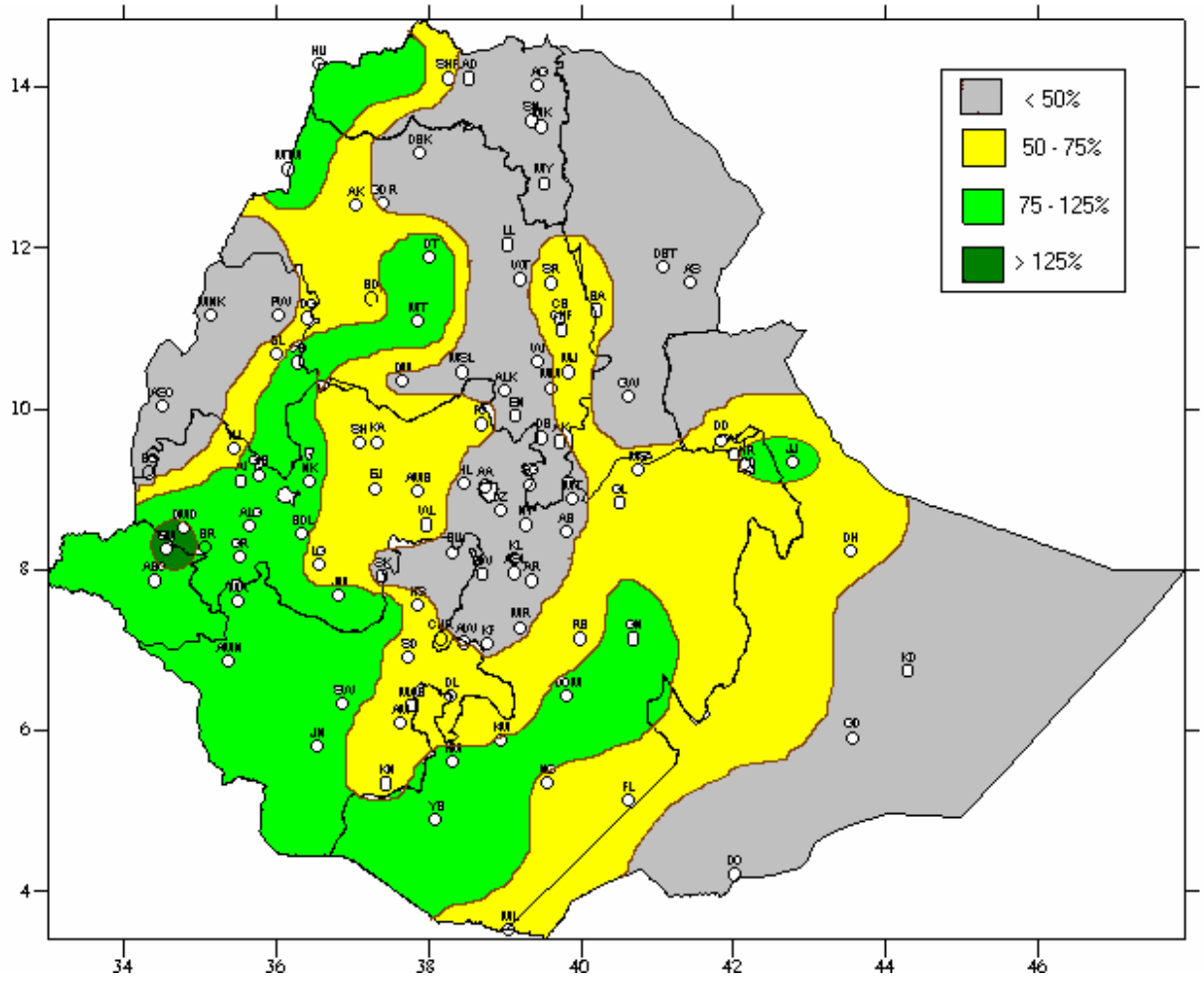


Fig. 11 Percent of Normal Rainfall for Belg 2009

Explanatory notes for the Legend:
< 50 -Much below normal
50-75%-Below normal
75-125%- Normal
> 125% - Above normal

1.3.2 Rainfall Anomaly (Fig. 11)

Some parts of western Tigray, central and western tip of Amhara, some parts of western and southern Oromia, eastern parts of Benshangul-Gumuz, Gambela, western half of SNNPR northern tip of Somali exhibited normal to above normal rainfall. The rest parts of the country experienced below to much below normal rainfall.

1.4 TEMPERATURE ANOMALY

Many stations recorded extreme maximum temperature 35^{o} C and above during the season. To mention some of them which recorded above 40^{o} C Humera, Metema, Gambela, Mankush ,Gewane, Dubti, Semera, Mille, Aisha, Elidar and Assayta recorded extreme maximum temperature as high as 44.7, 43, 43.5, 42.5, 40.0, 42, 41.5, 41.0, 41.0, 44.5, and 40.6 respectively during the season. This condition might affect the normal growth and development of plants as well as living livestock over the aforementioned areas.

2. AGROMETEOROLOGICAL CONDTIONS AND IMPACT ON AGRICULTURE

2.1 VEGETATION CONDITION AND IMPACT ON AGRICULTURE DURING BELG 2009

Generally During Belg 2009, both moisture status and water balance analysis shows that the overall moisture condition during the season was in good shape over southern half of the country including most parts of SNNPR, some parts of central, southern and eastern Oromia and moderate condition was observed over pocket areas of eastern & southern Amhara. Besides the field report made by **MoARD** confirmed that, the observed rainfall condition over most parts of Belg growing area of SNNPR, Oromia and some parts of eastern Amhara was better as compared to last year. Moreover moist to humid moisture status has been observed in most meher long cycle crops growing area during the month of April and May and the situation favoured for land preparation and sowing activity. Improvement of pastors conditions over postural areas is more confined to the southern, southwestern and eastern low lands of the country.

Total crops water requirement for this Belg season is said to be total failure for northern, northeastern & parts of eastern Ethiopia. Moderate to very good **WRSI** condition is confined over southern, southwestern, Bale & Arsi zones of Belg growing areas of the country the condition is comparatively better than that of last year. Moreover, there were no reports on the occurrence of pest and/or livestock outbreak and fire hazards not reported from any region during the season.

2.2 EXPECTED WEATHER IMPACTS ON AGRICULTURE DURING THE COMING KIREMT SEASON

In normal condition most parts of the highlands including southern and eastern midlands are known as Kiremt growing areas. The Belg season rainfall particularly the rainfall amount and distribution observed during April and May has significant impact on the performance of long cycle crop like Maiz and Sorghum which achieve maturity during the Bega season. Their contribution is about 35% of the total meher production.

Western Ethiopia will experience a probability of normal to above normal availability of moisture which is Conducive for Meher agricultural activities and availabilities of pasture and drinking water. Northeastern and northwestern, central and eastern Ethiopia will experience a probability of moisture deficiency condition which which will cause negative impact on Meher agricultural activities, perennial crops and availability of pastor & water over pastoral and agro pastoral areas thus we advice cautiously taken care off appropriate action (water harvest, conservation and short varieties crops) to alleviate the expected risk. Parts of southern Ethiopia and southern half of Somali expected to experience probability of normal to above normal condition which is conducive for availabilities of pasture and water.

The analyzed moisture status of all selected analogue years expected to favor Meher agricultural activities over Meher growing areas of the country and availability of pasture and water over pastoral and agro-pastoral areas of the Country. Occasional heavy rainfall activity over some highland areas, can lead to water logging over low-lying areas characterized with verity soil type of soil. Thus, farmers advised to make small water channel on their plot of land and advised to strengthen soil conservation structure, which were in place over sloppy and mountainous places, where agriculture farming will take place.

Table 1. Climatic and Agro-Climatic elements of different stations for the month of May 2009

Stations	Region	Amount of rainfall	Normal	Percent of Normal	ETo mm/day	Monthly ETo	Moisture status
Adigrat		NA	NA	NA	NA	NA	NA
Adawa		NA	NA	NA	NA	NA	NA
Humera	**TIGRAI**	0.0	NA	0.0	5.86	175.8	VD
Mekele		0.0	30.1	0.0	6.78	203.4	VD
Maichew		NA	NA	NA	NA	NA	NA
Senkata		26.7	62.3	42.9	6.35	190.5	D
Dubti		0.0	13.5	0.0	6.74	202.2	VD
Semera	**AFAR**	1.0	62.3	1.6	6.3	189	VD
A. Ketema		13.6	70.9	19.2	6.3	189	D
Ayehu		NA	NA	NA	NA	NA	NA
Aykel		41.8	179.3	23.3	6.18	185.4	D
Bahirdar		7.5	84.7	8.9	5.52	165.6	VD
Bati		2.0	62.9	3.2	4.91	147.3	VD
Combolcha		6.4	58.8	10.9	4.74	142.2	VD
Chefa		NA	NA	NA	NA	NA	NA
D.Birhan		14.9	34.9	42.7	4.99	149.7	D
D.Markos		14.4	94.9	15.2	5.24	157.2	D
D.Tabor		28.2	92	30.7	4.98	149.4	D
Dangila		NA	NA	NA	NA	NA	NA
Enwary	**AMHARA**	0	51.6	0.0	6.36	190.8	VD
Gonder		8.9	88.8	10.0	5.64	169.2	D
M.Meda		18.2	35.9	50.7	5.11	153.3	D
Majete		50.5	85.2	59.3	5.24	157.2	MD
Metema		64.1	75.1	85.4	5.88	176.4	MD
Lalibela		2.3	34.6	6.6	5.16	154.8	VD
Motta		NA	NA	NA	NA	NA	NA
S. Gebeya		14.6	48.8	29.9	5.13	153.9	D
Abomsa		28.7	71.4	40.2	5.79	173.7	D
Alemaya		90	103.9	86.6	3.86	115.8	M
Alge		80	211.6	37.8	4.23	126.9	M
Ambo		47.5	78.3	60.7	4.91	147.3	MD
Arjo		141.3	249.3	56.7	4.4	132	M
Bedelle		69.2	226.1	30.6	NA	NA	NA
Begi		41.9	230	18.2	4.07	122.1	MD
D.Mena		185.8	190	97.8	4.01	120.3	H
D.Zeit		17.5	51.6	33.9	5.52	165.6	D
Fitche		16.4	55.8	29.4	4.64	139.2	D
Ejaji		NA	NA	NA	NA	NA	NA
Gelemso		NA	NA	NA	NA	NA	NA
Gimbi	**OROMIYA**	28.5	183.4	15.5	4.83	144.9	D
Ginir		113.1	211.3	53.5	4.18	125.4	M
Gore		85.1	240.2	35.4	3.88	116.4	M
H. Mariam		28.5	183.4	15.5	4.83	144.9	D
Jimma		113.1	211.3	53.5	4.18	125.4	M
K.Mengist		85.1	240.2	35.4	3.88	116.4	M
Kachisa		155.1	187.6	82.7	3.14	94.2	H

Limugenet		67.8	220.1	30.8	3.31	99.3	D
Mieso		16.5	128.3	12.9	4.9	147	D
Metehara		47	114.5	41.0	3.46	103.8	MD
Moyale		92.3	214.1	43.1	4.17	125.1	M
Nazreth		15.8	58.6	27.0	5.78	173.4	D
Neghele		14.1	35.4	39.8	5.95	178.5	D
Nedjo		NA	NA	NA	NA	NA	NA
Nekemte		22.1	56.7	39.0	6.59	197.7	D
Nuraera		131.9	147.2	89.6	4.08	122.4	M
Robe (Bale)		72	186.7	38.6	4.08	122.4	M
Sekoru		107.2	237.8	45.1	4.08	122.4	M
Shambu		NA	NA	NA	NA	NA	NA
Wolliso		44.4	93.4	47.5	4.18	125.4	MD
Zeway		NA	NA	NA	NA	NA	NA
Gode		42.1	53.4	78.8	5.95	178.5	D
Jijiga	**SOMALI**	90.7	103.1	88.0	4.84	145.2	M
A.Minch		100.1	153.2	65.3	4.15	124.5	M
Awassa		62.4	123.3	50.6	4.33	129.9	M
Bui		NA	NA	NA	NA	NA	NA
Dilla	**SNNPR**	NA	NA	NA	NA	NA	NA
Hosaina		107.4	131	82.0	3.97	119.1	M
Jinka		152	158	96.2	3.94	118.2	H
Konso		93	98.6	94.3	4.19	125.7	M
M.Abay		NA	NA	NA	NA	NA	NA
Sawla		132	167.9	78.6	3.76	112.8	H
Assosa		NA	NA	NA	NA	NA	NA
Chagni		102.3	146.3	69.9	4.62	138.6	M
Bullen	**B/GUMUZ**	NA	NA	NA	NA	NA	NA
Pawe		42.1	120.9	34.8	5.09	152.7	MD
Gambela	**Gambela**	136.9	160.4	85.3	4.15	124.5	H
A.A. Bole.		38.1	78.5	48.5	5.64	169.2	MD
A.A. Obs	**A.A**	NA	NA	NA	NA	NA	NA
Diredawa	**D.D**	24.0	46.8	51.3	5.8	174	D
Harar	**Harai**	NA	NA	NA	NA	NA	NA

Legend

VD	Very Dry	< 0.1
D	Dry	0.1 - 0.25
MD	Moderately Dry	0.25 - 0.5
M	Moist	0.5 - 1
H	Humid	>1

Explanatory Note

ETo	Reference Evapotranspiration (mm)
NA	Data not available

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 southeastern 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 northeastern 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.

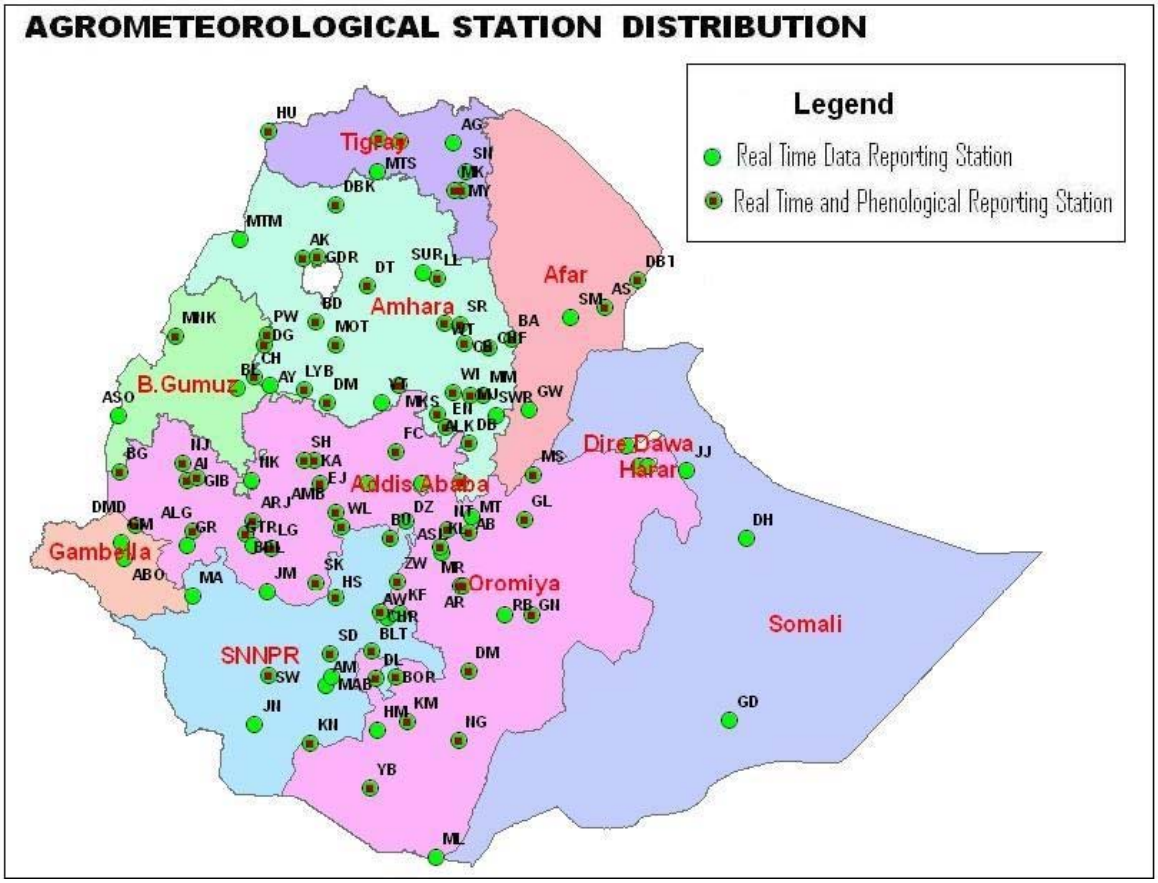
DEKAD: - First or second ten days or the remaining days of a month.

EXTREME TEMPERATURE: - The highest or the lowest temperature among the recorded maximum or minimum temperatures respectively.

ITCZ: - Intertropical 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 southeastern lowlands of the country.

RAINY DAY: - A day with 1 or more mm of rainfall amount.



Station	CODE	Combolcha	CB	Gonder	GDR	Metema	MTM
A. Robe	AR	Chagni	CH	Gore	GR	Mieso	MS
A.A. Bole	AA	Cheffa	CHF	H/Mariam	HM	Moyale	ML
Abomsa	AB	Chira	CHR	Harar	HR	Motta	MT
Abobo	ABO	D.Berehan	DB	Holleta	HL	M/Selam	MSL
Adigrat	AG	D.Habour	DH	Hossaina	HS	Nazereth	NT
Adwa	AD	D.Markos	DM	Humera	HU	Nedjo	NJ
Aira	AI	D.Zeit	DZ	Jijiga	JJ	Negelle	NG
Alemaya	AL	Debark	DBK	Jimma	JM	Nekemte	NK
Alem Ketema	ALK	D/Dawa	DD	Jinka	JN	Pawe	PW
Alge	ALG	D/Mena	DOM	K.Dehar	KD	Robe	RB
Ambo	AMB	D/Odo	DO	K/Mingist	KM	Sawla	SW
Aman	AMN	D/Tabor	DT	Kachise	KA	Sekoru	SK
Ankober	AK	Dangla	DG	Koffele	KF	Senkata	SN
Arbaminch	AM	Dilla	DL	Konso	KN	Shambu	SH
Asaita	AS	Dm.Dolo	DMD	Kulumsa	KL	Shire	SHR
Asela	ASL	Dubti	DBT	Lalibela	LL	Shola Gebeya	SG
Assosa	ASO	Ejaji	EJ	Limugent	LG	Sirinka	SR
Awassa	AW	Enwary	EN	M.Meda	MM	Sodo	SD
Aykel	AK	Fiche	FC	M/Abaya	MAB	Wegel Tena	WT
B. Dar	BD	Filtu	FL	Maichew	MY	Woliso	WL
Bati	BA	Gambela	GM	Majete	MJ	Woreilu	WI
Bedelle	BDL	Gelemso	GL	Masha	MA	Yabello	YB
Begi	BG	Gewane	GW	Mankush	MNK	Ziway	ZW
BUI	BU	Ginir	GN			Mekele	MK
Bullen	BL	Gimbi	GIB			Merraro	MR
Bure	BR	Gode	GD			Metehara	MT