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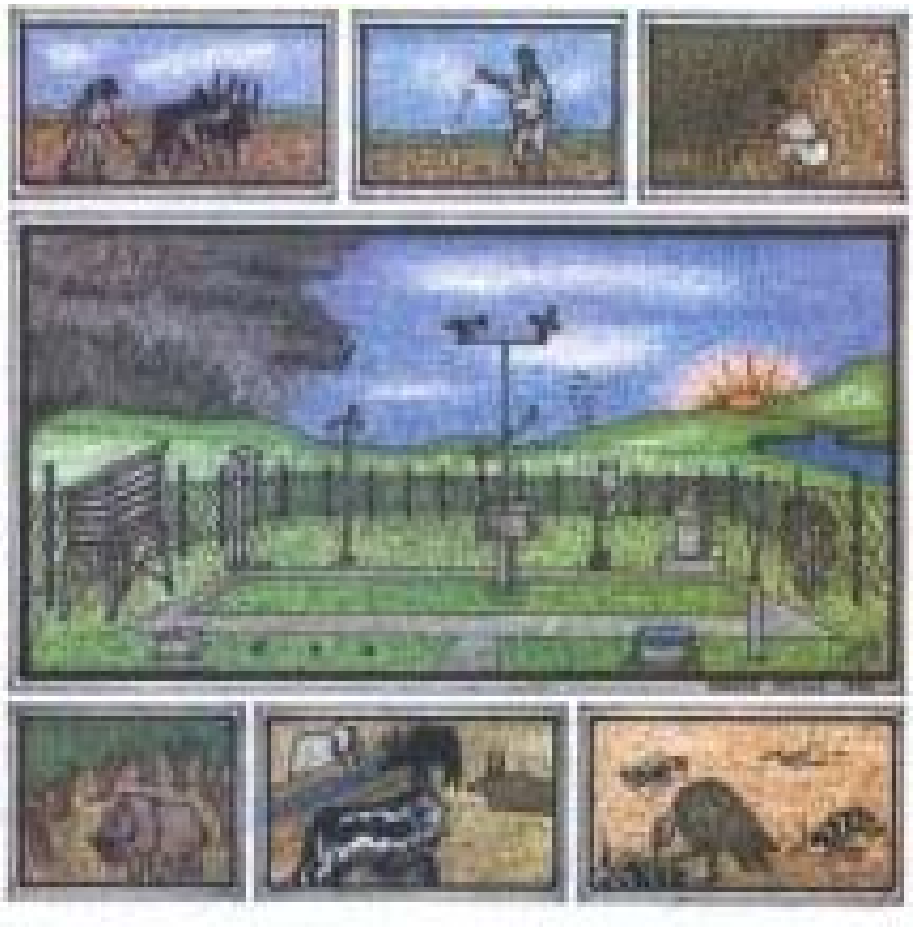

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FORE WARD

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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አህጽሮት
እ.ኤ.አ ጁን 2006

እ.ኤ.አ በጁን 2006 በመጀመሪያው አስርተ ቀናት የትግራይ፣ የሰሜንና የምስራቅ አማራ፣ በመካከለኛው ኦሮሚያና በቤንሻንጉል ጉሙዝ ደቡባዊ ክፍል የነበረው ከመደበኛ በታች የሆነ ዝናብ በተለይ ለጤፍ፣ ለስንዴ፣ ለገብስ፣ ለጥራጥሬና ለአትክልቶች የማሳ ዝግጅት መጠነኛ ተፅዕኖ የሚኖረው ሲሆን በተለይ ከአለፈው የአሥር ቀናት ጊዜ ጀምሮ የእርጥበት እጥረት በነበረባቸው ከፊል የምሥራቅና የደቡብ ምስራቅ አማራ፣ መካከለኛው ኦሮሚያ አካባቢዎች ላይ ቀደም ብለው በማደግ ላይ ባሉት አዝዕርት የውሀ ፍላጎት ላይ መጠነኛ ተፅዕኖ እንደሚኖረው እሙን ነው። በአንፃሩ በቤንሻንጉል ጉሙዝ፣ ምዕራብ አማራ፣ ምዕራብና ምሥራቅ ኦሮሚያ፣ ጋምቤላ፣ የደቡብ ብሔር ሔረሰቦችና ሕዝቦች ክልል አብዛኛው ክፍል ላይ የነበረው ተከታታይነት ያለው ዝናብ ለወቅቱ የእርሻ እንቅስቃሴ አመቺ ሁኔታን ፈጥሮ እንደነበር ከደረሰው የአዝርዕት መረጃ ሪፓርት መረዳት ተችሏል። ይሁንና በአንዳንድ አካባቢዎች እንደ አይራ፣ ጎሬ፣ አልጌ፣ ሐረር፣ በደሌ፣ ገለምሶ፣ ጊምቢ፣ ቻግኒ፣ ደምቢደሎ፣ ዳንግላና አርባ ምንጭ ባሉት መጠኑ ከ30 - 66 ሚ.ሜትር የሚደርስ ከባድ ዝናብ በአንድ ቀን ብቻ የተመዘገበ ሲሆን እንደ ዳንግላ ባሉት አካባቢዎች ንፋስ ቀላቅሎ የጣለው ከባድ ዝናብ በቋሚ ሰብሎች ላይ ጉዳት ማድረሱን ከደረሰው ሪፖርት መረዳት ተችሏል። የአየር ሙቀትን በተመለከተ ሚኤሶ፣ ጎዴ፣ ጋምቤላ፣ ጨፋ፣ መተማ፣ ሽዋ ሮቢት እና ድሬደዋ 35.5°C፣ 35.5°C፣ 36.2°C፣ 36.4°C፣ 37.0°C፣ 37.6°C እና 37.8°C ከፍተኛ የሙቀት መጠን በቅደም ተከተላቸው ተመዝግቦባቸዋል።

እ.ኤ.አ በጁን ወር 2006 በሁለተኛው አስርተ ቀናት ከአብዛኛው ትግራይ ከሰሜን አመራ ከጥቂት የሰሜን ሶማሌና ከጥቂት የመካከለኛው ኦሮሚያ በስተቀር በአብዛኛው የመኸር አብቃይ አካባቢዎች መደበኛና ከመደበኛ በላይ የሆነ ዝናብ ነበር የታየው። ይህም ሁኔታ በስንዴ ገብስ ጤፍና ቦሎቄ የዘር ጊዜያቸው ለሆነው እንደ አድዋ" ለማሽላ የዘር ጊዜ በምሥራቅ እንደ ገለምሶ ላሉት አካባቢዎች ከሰሜን ምሥራቅ ለገብስ ስንዴና ጥራጥሬ የዘር ጊዜያቸው ለሆነው እንደ አምባ ማርያም ደብረ ብርሃንና ላሊበላ ላሉት አካባቢዎች አመች ሁኔታን እንደሚፈጥር ይታመናል። በአንዳንድ የምዕራብ የሀገሪቱ ክፍሎች አይራ፣ ዳንግላ፣ ሊሙጎነት፣ ማሻ፣ በደሌ፣ ዝዋይ፣ ጎሬ፣ አልጌ፣ ቡለን፣ ማኩሽ እና ጊምቢ ከ30-57 ሚ.ሜ የሚደርስ ከባድ ዝናብ ተመዝግቦ ነበር። ሆኖም በአዝርዕት ላይ የጎላ ችግር እንዳልነበረ ከደረሰን የአዝዕርት መረጃ ሪፖርት መረዳት ተችሏል። የአየር ሙቀትን በተመለከተ ጨፋ ጋምቤላ ሽዋ ሮቢት መተማ ድሬደዋ መተሃራ ሰመራ እና ዱብቲ 35.0°C ፣ 35.6°C ፣ 36.1°C ፣ 36.2°C ፣ 37.2°C ፣ 38.5°C ፣ 44.0°C እና 44.5°C ከፍተኛ የሙቀት መጠን በቅደም ተከተላቸው ተመዝግቦባቸዋል።

እ.ኤ.አ በጁን ወር 2006 በሦስተኛው አስርተ ቀናት አብዛኛው የትግራይ ምሥራቃዊ አጋማሽ፣ መካከለኛውና ደቡብ ምሥራቅ አማራ መካከለኛውና ምዕራብ ኦሮሚያ፣ አብዛኛው የደቡብ ብሔር ሔረሰቦችና ሕዝቦች ክልል እና አብዛኛው ጋምቤላ የነበረው መደበኛና ከመደበኛ በላይ የሆነ ዝናብ በመካሄድ ላይ ላለው የግብርና እንቅሥቃሴ አመቺ ሁኔታን ፈጥሮ የነበረ ሲሆን፣ በአንዳንድ፣ የምዕራብ፣ ሰሜን ምዕራብና መካከለኛው ኢትዮጵያ ላይ ከ33-68 ሚ.ሜትር ከባድ ዝናብ በአንድ የዝናብ ቀን ብቻ መመዝገቡ በተለይ ውሃ ገብና ረባዳማ በሆኑ ማሳዎች አሉታዊ ተፅዕኖ እንደሚያሳድር እሙን ነው። በመሆኑም አንዳንድ አካባቢዎች በእፅዋት ላይ ጉዳት አስከትሎ ነበር ለምሣሌ በዝዋይ ጥሎ የነበረው ከባድ ዝናብ በአበባ ልማት ላይ ጉዳት ማስከተሉን ከደረሰው ሪፖርት መረዳት ተችሏል። በአንፃሩ በምሥራቅ አማራ ሰሜናዊ ክፍል በምሥራቅ ኦሮሚያ በጥቂት የደቡብ ብሔር ሔረሰቦችና ሕዝቦች ምስራቃዊ ክፍልና በሰሜን ሶማሌ ከፍተኛ ቦታዎች የነበረ ከመደበኛ በታች የሆነ ዝናብ በማደግ ላይ ባሉ አዝርዕቶች የውሃ ፍላጎት ላይ አሉታዊ ተፅዕኖ እንደሚያሳድር ይታመናል። የአየር ሙቀትን በተመለከተ ማጀቴ፣ ጨፋ፣ ድሬደዋ፣ መተሐራ፣ ኢልዳር፣ አሳይታ እና

ዱብቲ 35.0°C ፣ 36.5°C ፣ 37.5°C ፣ 39.0°C ፣ 44.1°C ፣ 45.0°C እና 45.5°C ከፍተኛ የሙቀት መጠን በቅደም ተከተላቸው ተመዝግቦባቸዋል።

ጠቅለል ባለ መልኩ እ.ኤ.አ በጁን 2006 በመካከለኛው ትግራይ በደቡብና ምዕራብ አማራ፣ ቤንሻንጉል ጉሙዝ አብዛኛው ኦሮሚያና የደቡብ ብሔር ብሔረሰቦች ሕዝቦች ክልል ጋምቤላ የደቡብ አፋር ዳርቻና ጥቂት የሰሜን ሶማሌ አካባቢዎች ላይ የነበረው መደበኛና ከመደበኛ በላይ የሆነ ዝናብ በተለይ ከሥርጭት አኳያ በምዕራብ ከ20-28 ቀናት እንዲሁም በመካከለኛው ኢትዮጵያ 13 – 23 ቀናት መዝነቡ ለሰብሎች ልምላሜ አመቺ ሁኔታን ፈጥሮ እንደነበር ይጠቁማል። በወሩ ውስጥ የተደረገው የአዝርዕት መረጃ ሪፖርትም ይህንኑ ሁኔታ ያረጋግጣል። ከዘጋቢ ጣቢያዎቻችን ወደ 29 የሚሆኑ ጣቢያዎችን ከ30-93 ሚ.ሜትር የሚደርስ ከባድ ዝናብ የመዘገቡ ሲሆን አልጌ፣ በደሌ፣ ጪራ፣ ጊምቢ፣ መተማ፣ አርባ ምንጭ፣ ባሕር ዳር፣ ሆሳዕናና ሊሙጎነት 50፣ 50፣ 52፣ 58፣ 65፣ 66፣ 69፣ 74 እና 94 ሚ.ሜትር ከባድ ዝናብ በአንድ የዝናብ ቀን ብቻ እንደቅደም ተከተላቸው መዝግበው ነበር። ይህም ሁኔታ በአንዳንድ አካባቢዎች የሰብል ልማት ላይ ችግር እንዳስከተለ ከደረሰው ሪፖርት መረዳት ተችሏል።

በሌላ በኩል በምዕራብ ትግራይና በሰሜን ምሥራቅ አምሐራ በወሩ ውስጥ በአብዛኛው እጥረት መታየቱ በማደግ ላይ ባሉ እፅዋት ላይ አሉታዊ ጎን እንደሚኖረው እሙን ነው።

SUMMARY
JUNE 2006

During the first dekad of June 2006 the observed below normal rainfall over Tigray, most parts of Amhara, central Oromiya and southern parts of Benishangul – Gumuz could have negative impact on land preparation and sowing activities of teff, wheat, barley, pulses and vegetable crops. Besides it could affect the water requirement of the existing growing crops particularly in areas where there was prolonged deficient condition during the preceding dekads like parts of eastern and southeastern Amhara including central Oromiya. On the other hand the continues and better rainfall condition observed over Benishangul-Gumuz, western Amhara, western and eastern Oromiya, Gambela and most parts of SNNPR favored the normal growth and development of plants in the areas. Nevertheless some areas like Ayra, Gore, Alge, Harer, Bedelle, Gelemso, Gimbi, Chagni, Dembi Dolo, Dangila and Arba Minch exhibited heavy falls ranging from 30-66mm in one rainy day. As a result some areas like Dangla reported perennial crop like trees damage due to heavy fall and strong wind.

During the second dekad of June 2006, with the exception most parts of Tigray, northern Amhara, few areas of Somali and central Oromia, most parts of Meher growing areas received normal to above normal rainfall. This situation has significant contribution for sowing activities of cereal crops (wheat, barely, teff, millet and sorghum) and pulse crops (haricot bean) over central (Kulumsa, Nazareth, Meraro, Weliso and Ziway), northern (Adwa) and northeastern (Amba Mariam, Debre Brhan, Lalibela) parts of the country. Though, heavy falls (30-57 mm in one rainy day) observed over some areas like Dangla, Limu Genet, Masha, Bedelle, Ziway, Gore, Alge, Bullen, Mankush, and Gimbi, no significant crop damage has been reported as per the crop phonological report. With regard to extreme maximum temperature Cheffa, Gambela, Shewa Robit, Metema, Dire Dawa, Metehera, Semera and Dubti recorded extreme maximum temperature as high as 35.0, 35.6, 36.1, 36.2, 37.2, 38.5, 44.0, and 44.5 ^{0}C, respectively.

During the third dekad of June 2006, the observed normal to above normal rainfall over most parts of eastern half of Tigray, central and western Oromia, much of SNNPR, as well as Gambella had significant contribution for the ongoing season's agricultural activities. The observed heavy fall (33-68 in one rainy days) over some areas of western, northwestern, and central Ethiopia could have negative impact particularly over low–lying areas. Thus, this condition resulted in crop damage in some areas. In accordance with the crop phenological report Ziway reported Horticultural crop (Flower) damage due to heavy fall. On the contrary, the observed below normal rainfall over the northern parts of eastern Amhara, eastern Oromia, few areas of eastern parts of SNNPR and highlands of northern Somali, could have a negative impact on the water requirement of the existing growing crops. Among the reporting stations, Bihar Dar, Begi, Chira, Bedelle, Alge, Aira, Nekemte, Sekoru, Gimbi, Adis Ababa (Obs), Gore, Mankush and Arjo received rainfall 68.2, 53.1, 52.0, 50.0, 50.0, 49.2, 48.5, 47.7, 46.5, 42.6, 40.3, 39.5, and 31.6 mm in one rainy day , respectively. With regard to air temperature, Majete, Cheffa, DireDawa, Metehara, Elidar, Assayta, and Dubti recorded extreme maximum temperature as high as 35.0, 36.5, 37.5, 39.0, 44.1, 45.0 and 45.5 ^{0}C respectively.

Generally the observed normal to above normal rainfall condition over central, Tigray, southern and western Amhara, Benshangul-Gumuz, much of Oromia and SNNPR, Gambela, southern margin of Afar and few areas of northern Somali favored season's agricultural activities. Western and central parts of Ethiopia received good amount of rainfall for 20-28 and 13-23 rainy days, respectively which can indicates that it's favorable nature of distribution in terms of the crops water requirements. Besides, as the crop phenological data confirmed that the performance the crops were in a good shape in most parts of the country. Among the reporting stations, about 29 stations recorded heavy falls ranging from 30-93 mm. Some stations like Alge, Bedelle, Chira, Gimbi, Metema, Arba Minch, Bahir Dar, Hosaina, and Limu Geneet exhibited 50, 50, 52 58, 65, 66, 69, 74 and 94 mm heavy rainfall in one rainy days. Hence, this situation resulted in crops damage in some pocket areas of Ethiopia. On the other hand, the observed deficient moisture condition over western Tigry and northeastern Amhara could have negative impact on the existing crops over the areas.

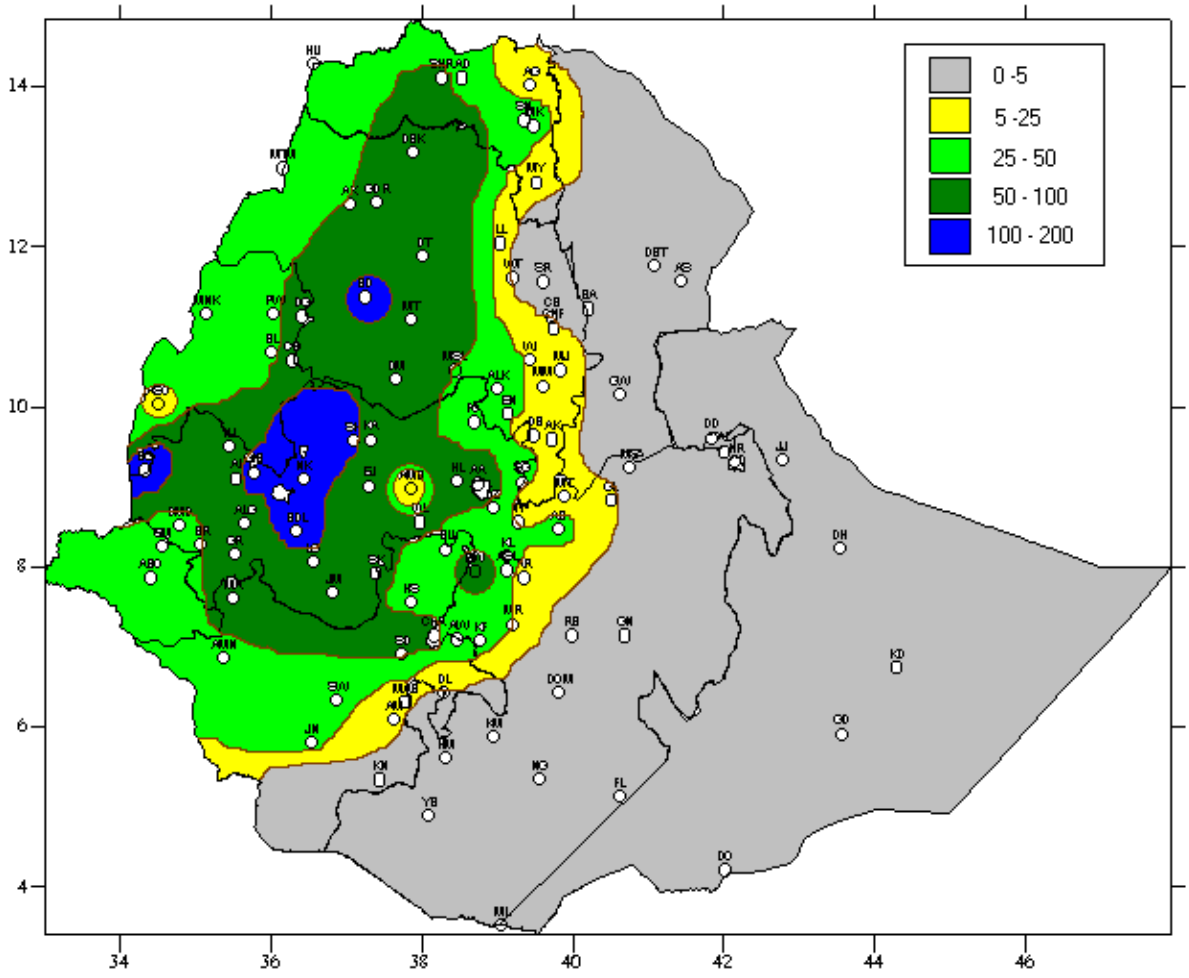


Fig 1. Rainfall distribution in mm (21 - 30 June, 2006)

1. WEATHER ASSESSMENT

1.1 (21- 30 June, 2006)

1.1.1 Rainfall amount (Fig.1)

Pocket areas of south western Amhara, southeastern tip of Benishangul-Gumuz and some western Oromia, received 100-200mm of rainfall. Some areas of central Tigray, most parts of Amhara, western and parts of central Oromia and parts of north and northwestern SNNPR exhibited 50 – 100mm of rainfall. Gambela, few areas of western, central and parts of south-eastern Tigray, northwestern, eastern and parts of eastern Amhara, western half of Benshagul-Gumuz, parts of central Oromia and parts of northern half of SNNPR experienced 25-50 mm of rainfall. Parts of eastern and South Tigray and southeastern Amhara, parts of central Oromia, and parts of eastern and southertn SNNPR received 5-25mm of rainfall. There was little or no rainfall for the rest parts of the country.

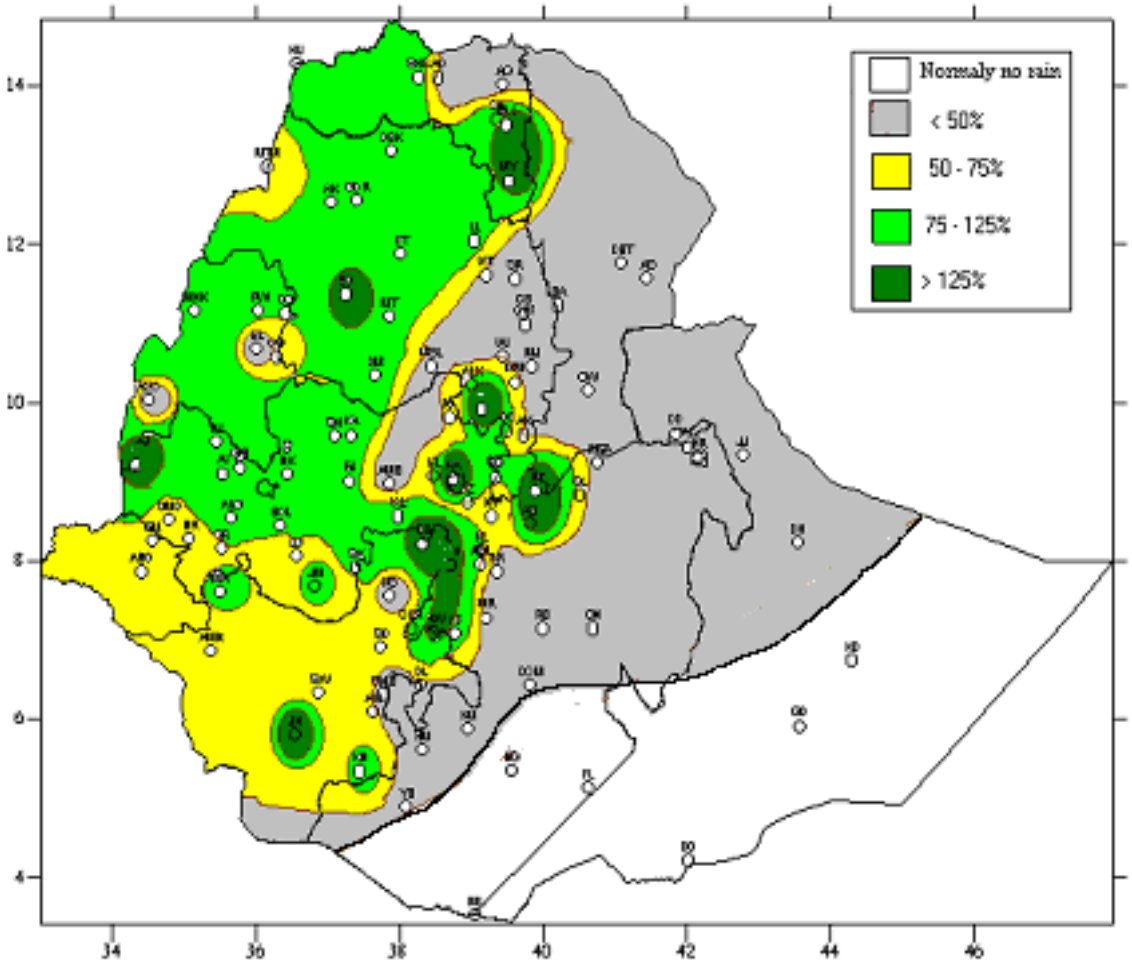


Fig. 2 Percent of normal rainfall distribution (21-30 June, 2006)

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. 2)

Western half and few areas of eastern and South Tigray, much of Amhara,, most parts of Bensahgul-Gumuz, western and parts of central Oromia ,northern tip and pocket areas of southern SNNPR exhibited normal to above normal rainfall. The rest parts of the country exhibited below to much below normal rainfall. It has been dry spell for parts of southern and southeastern Ethiopia as per normal condition.

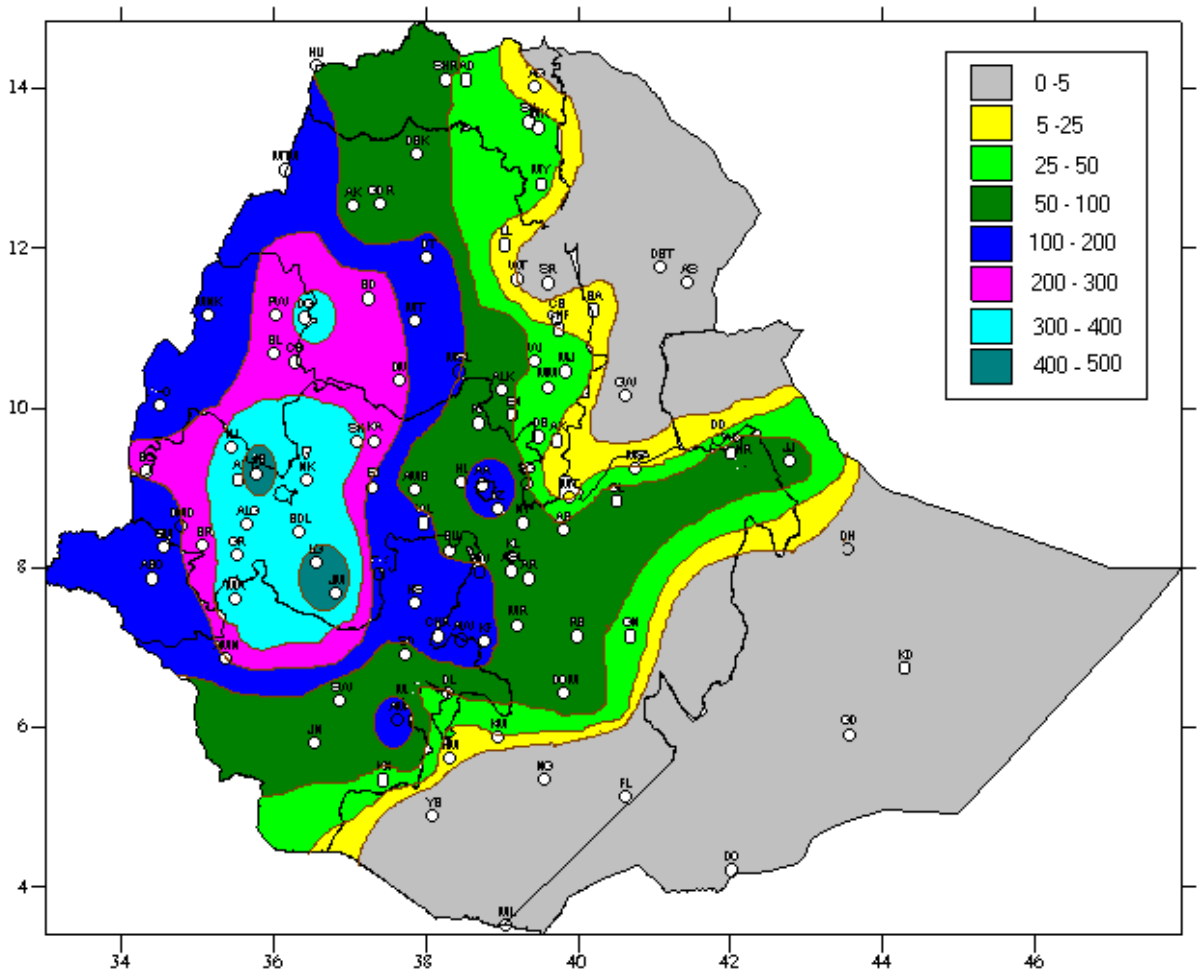


Fig. 3 Rainfall distribution in mm for the month of June 2006

1.2 June 2006

1.2.1 Rainfall distribution (Fig.3)

Pocket areas of western Oromia received 400-500mm of rainfall. Pocket areas of southwestern tip of Amhara, and some areas of western Oromia, southeastern margin of Benishangul-Gumuz and parts of northwestern SNNPR received 300-400mm of rainfall. Few areas of southwestern Amhara, parts of eastern Benshagul-Gumuz, and parts of western Oromia and SNNPR experienced 200-300mm of rainfall. Gambella, parts of northwestern and southern Amhara, western of Benshangul-Gumuz, parts of western Oromia, and northastern SNNPR and pocket areas of central Oromia exhibited 100-200mm of rainfall. Most parts of western half of Tigray, parts of northern and few areas of central parts Amhara, central and parts of eastern Oromia including parts of western, central and few areas of eastern SNNPR experienced 50-100mm of rainfall. Parts of eastern and South Tigray, parts of eastern and southeastern Amhara, few areas of eastern Oromia, parts of northern Somali and southern SNNPR experienced 25-50mm of rainfall. Parts of northeastern tip of Tigray, few areas of eastern and midlands of southern Oromia and few areas of northern Somali received 5-25 mm of rainfall. There was little or no rainfall for the rest parts of the country.

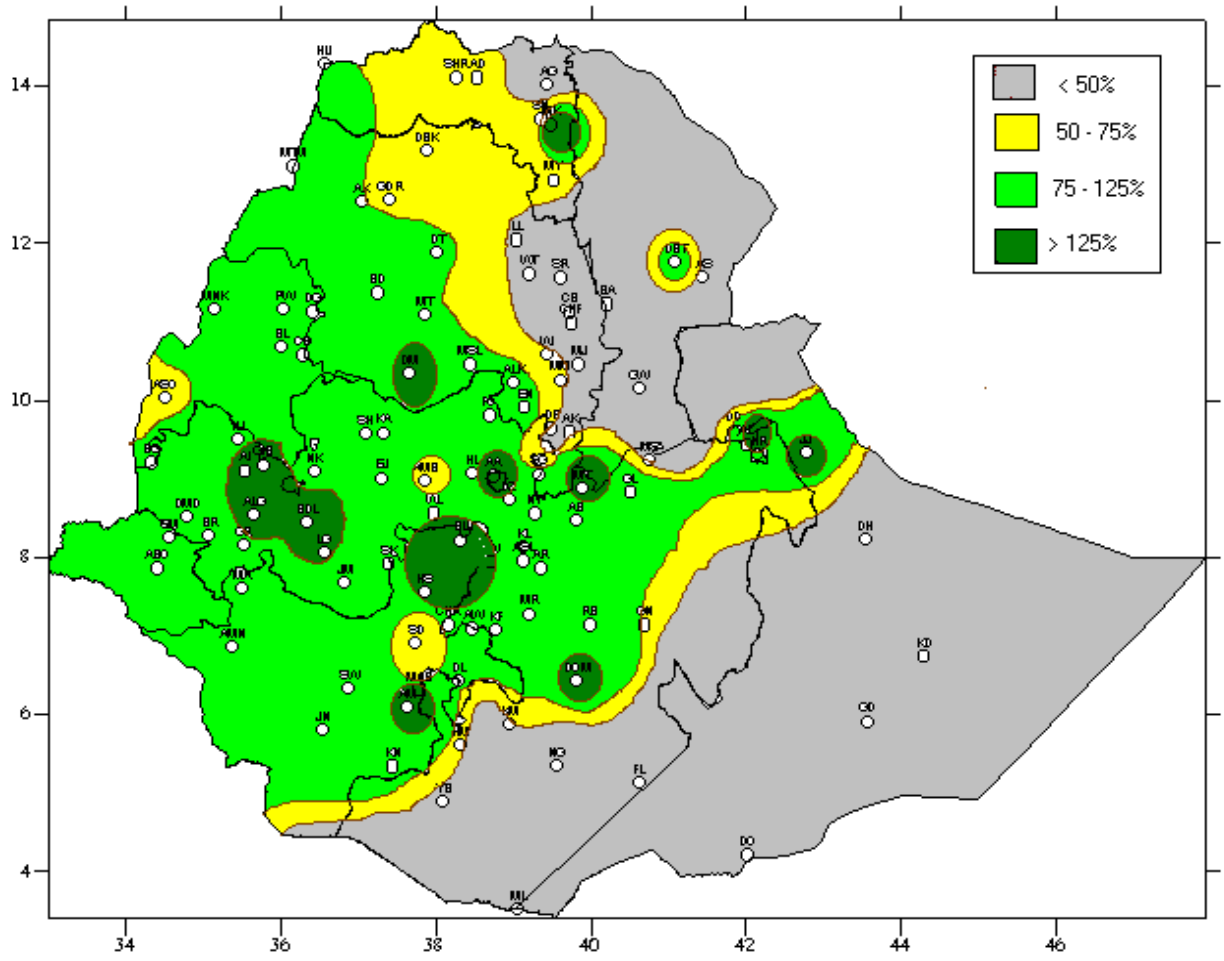


Fig. 4 Percent of Normal Rainfall distribution for the month of June 2006

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. 4)

Benshangul-Gumuz, Gambela, pocket areas of southeastern and parts of western Tigray, most parts of western and southwestern Amhara, ,much of Oromia, SNNPR and pocket areas of Afar, and parts of northern Somli, experienced normal to above normal rainfall while the rest parts of the country received below to much below normal rainfall.

1.3 TEMPERATURE ANOMALY

Meisso, Gambella, Cheffa, Metema, Shewa Robit, Dire Dawa, Metehara, Elidar , Semera , Assayta and Dubti exhibited extreme maximum temperature as high as 35.5, 36.2, 36.5, 37.0, 37.6 37.8, 39.0, 44.1 44.8 ,45.0, ,and 45..5 ^{0}C, respectively during the month.

2. WEATHER OUTLOOK

2.1 For the first dekad of July 2006

For the coming ten days, the seasonal rain bearing systems are expected to have a better strength over the Kiremt rain-benefiting areas. In general, Tigray Amhara, Benshagul-Gumuz, central and western Oromia, Gambella and SNNPR regions will get normal to above normal rainfall with heavy fall in some places. Moreover, Afar, eastern Oromia, Harari, DireDawa, as well as northern Somali are anticipated to have close to normal rainfall. However, some places will get below normal rainfall. Southern and southeastern parts of the country will be under dry weather condition with patches of clouds.

2.1 For the month of July 2006

For the coming month (July 2006) the rain- producing system are expected to be a good position and have a better strength over most parts of the kiremt rain-benefiting areas of the nation. Hence, the seasonal rain continued over western half of the country and advance across eastern sectors. Generally, Tigray, Amhara, western and central Oromia, Benshgul-Gumuz, Gambella and northern SNNPR regions will have a highest probability of getting normal to above normal rainfall, with heavy fall at some places besides. Besides eastern Oromia, Harari, Dire Dawa, Afar, and northern Somali as well as southern SNNPR region will get close to normal rainfall, however, some places will have a probability of getting below normal rainfall. Dry weather condition will dominate southern and southeastern parts of the country.

3. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE

3.1 VEGETATION CONDITION AND IMPACT ON AGRICULTURE

Generally the observed normal to above normal rainfall condition over central, Tigray, southern and western Amhara, Benshangul-Gumuz, much of Oromia and SNNPR, Gambela, southern margin of Afar and few areas of northern Somali favored season's agricultural activities. Western and central parts of Ethiopia received good amount of rainfall for 20-28 and 13-23 rainy days, respectively which can indicates that it's favorable nature of distribution in terms of the crops water requirements. Besides, as the crop phenological data confirmed that the performance the crops were in a good shape in most parts of the country. Among the reporting stations, about 29 stations recorded heavy falls ranging from 30-93 mm. Some stations like Alge, Bedelle, Chira, Gimbi, Metema, Arba Minch, Bahir Dar, Hosaina, and Limu Geneet exhibited 50, 50, 52 58, 65, 66, 69, 74 and 94 mm heavy rainfall in one rainy days. Hence, this situation resulted in crops damage in some pocket areas of Ethiopia. On the other hand, the observed deficient moisture condition over western Tigry and northeastern Amhara could have negative impact on the existing crops over the areas. Pursuant to the crop phenological report sowing of millet was underway in some areas of eastern Benhsanful-Gumuz (Chagni, Bullen) while at emerging stage in some areas of western Oromia (LimuGenet). Sowing of teff and maize was underway in some areas of central Oromia(Ziway) and in some areas of eastern SNNPR (Mirab Abaya). It was at emerging stage in eastern Benshagul-Gumuz (Dangla) and southern Amhara(Debre Markos) while at ninth leaf and tassling stages in some areas of western Oromia (Alge, Gimbi, Sekoru) and eastern Amhara (Bati) in some areas of eastern Oromia (Gelemso), southern Oromia (Kibre Mingist), western Benhsangul-Gumuz (Mankush) , western Oromia (Bedelle, Gimibi, Ayra). Moreover it was at waxy ripeness and full ripeness stage in some areas of western Oromia (Chira) and southern Oromia (Dolo Mena) respectively. Sorghum was at third leaf and tillering stage in some areas of eastern Amhara (Bati) and western Benshangul-Gumuz (Assosa), respectively. Barely was at flowering stage in some areas of eastern Amhara (Wegel Tena). Pulse crops like beans and peas were at ripeness stage in some areas of central Oromia (Fitche and ArsiRobe).

3.2 EXPECTED WEATHER IMPACT ON AGRICULTURE DURING THE COMING DEKAD

The anticipated rainfall distribution which would cover Tigray, Amhara, Oromia, Benshangul-Gumuz, Gambela, SNNPR, northern half of Somali, Harari, Dire Dawa and Afar would favor season' agricultural activities. In case of pastoral agro pastoral areas like Somali and Afar, it would favor the availability of pasture and drinking water while it would favor land preparation and sowing activities of teff, wheat and barely in case of the highlands and midlands of crop growing areas where the activities are under question like some areas of central, western and eastern Oromia, northeastern parts of SNNPR, eastern and southeastern Amhara. It would also favor the existing crops that are found at different crop phonological stages. However, the expected heavy fall over some areas of Tigry, Amhara, western and central Oromia, Benshagul-Gumuz, Gambela would have negative impact on crop field's particularly low-lying areas and near riverbank. Thus, proper attention should be undertaken to minimize the risk that would happen due to the expected excess moisture condition. On the other hand, the expected below normal rainfall distribution over some areas of southern half of SNNPR, eastern Oromia, Harari, Dire Dawa, Afar and northern Somali would have a negative impact in areas where there was deficient moisture condition during the previous month (Northern Somali) and in areas which were under stress condition like eastern Oromia during the third dekad of June 2006. Therefore, appropriate attention is advisable particularly over the lowlands in terms of water harvesting techniques. Moreover, the expected little moisture together with sunny outbreak condition particularly over the lowlands of the above mentioned areas would create conducive atmosphere for the outbreak of pests and diseases. Thus proper precautious should be carried out ahead of time to minimize the risk that would be due adverse weather condition.

Table 1. Climatic and Agro-Climatic elements of different stations for the month of June 2006

Stations	Region	A/ rainfall	Normal	%of Normal	Eto mm/day	Monthly Eto	Moisture status
Adigrat	**TIGRAY**	10.6	31.4	33.7	4.72	141.6	VD
Adwa		40.3	72.7	55.4	5.11	153.3	MD
Mekele		38.1	27.7	137.7	4.88	146.4	MD
Michew		24.5	36.9	66.5	4.85	145.5	D
Senkata		NA	NA	NA	NA	NA	NA
Shire		93.4	145.9	64.0	4.88	146.4	M
Assayta	**AFAR**	NA	NA	NA	NA	NA	NA
Dubti		2.8	2.7	102.0	7.32	219.6	VD
A. Ketema	**AMHARA**	68.9	NA	NA	4.31	129.3	M
Bahirdar		225.5	197.5	114.2	4.2	126.0	H
Bati		10.3	79.3	13.0	4.85	145.5	VD
Bullen		226.2	264.8	85.4	3.39	101.7	H
Chagni		224.9	259.9	86.5	3.52	105.6	H
Combolcha		NA	NA	NA	4.54	136.2	NA
Chefa		NA	NA	NA	5.61	168.3	NA
D.Birhan		35.2	50.6	69.5	4.11	123.3	MD
D.Markos		210.6	157.1	134.1	3.23	96.9	H
D.Tabor		160	182.4	87.7	NA	NA	NA
Dangla		339.7	153.9	220.7	3.65	109.5	H
Enwary		57.2	58	98.6	4.42	132.6	MD
Gonder		98.7	165.4	59.7	3.85	115.5	M
Lalibela		18.3	41.7	43.9	4.02	120.6	D
Majete		36.4	NA	NA	4.97	149.1	D
Metema		171.8	180.6	95.2	5.09	152.7	H
Motta		132.0	NA	NA	4.16	124.8	H
S. Gebeya		51.3	66.7	76.9	3.77	113.1	MD
Sirinka		4.3	31.1	13.8	4.93	147.9	VD
Wegeltena		0.6	28.9	2.1	4.16	124.8	VD
Wereilu		NA	NA	NA	NA	NA	NA
Ambo Agi.	**OROMIYA**	93.1	154.1	60.4	NA	NA	NA
Arjo		NA	NA	NA	2.98	89.4	NA
Arsi Robe		63.1	100.2	63.0	NA	NA	NA
Abomsa		51.8	56.5	91.7	NA	NA	NA
Aira		305.9	190.4	160.7	NA	NA	NA
Alemaya		74	52.7	140.3	3.92	117.6	M
Alge		387	292.7	132.2	NA	NA	NA
Assela		NA	NA	NA	NA	NA	NA
Bedelle		438.8	294.6	148.9	NA	NA	NA
Begi		277.2	255	108.7	NA	NA	NA
Bui		73.0	34.1	214.1	NA	NA	NA
Chira		384.9	253.3	152.0	NA	NA	NA
D.Dollo		189.2	193.1	98.0	3.16	94.8	H
D.Mena		64.7	28.7	225.6	2.99	89.7	M
D.Zeit		94.7	105.0	90.2	4.25	127.5	M
Ejaji		69.5	154.1	45.1	NA	NA	NA
Fitche		75.2	87.2	86.2	3.88	116.4	M
Gelemso		90.8	94.3	96.2	4.19	125.7	M
Gimbi		469.2	330.2	142.1	3.51	105.3	H

Ginir		NA	NA	NA	NA	NA	NA
Gore		308.8	275.1	112.2	3.09	92.7	H
H. Mariam		12.8	73.6	17.4	NA	NA	NA
Jimma		207.4	204.5	101.4	3.28	98.4	H
K.Mengist		37.6	65.5	57.4	3.05	91.5	MD
Kachise		NA	NA	NA	NA	NA	NA
Koffele		108	117.1	92.3	2.76	82.8	H
Kulumsa		80.6	90.3	89.3	3.76	112.8	M
Lumugenet		435.5	260.3	167.3	3.48	104.4	H
Meisso		17.7	48.1	36.8	NA	NA	NA
Metehara		25.4	24.9	102.0	NA	NA	NA
Moyale		4	16.9	23.6	3.84	115.2	VD
Nazreth		58.7	70.8	82.9	3.75	112.5	M
Neghele		1.3	11.6	11.2	4.41	132.3	VD
Nedjo		NA	NA	NA	NA	NA	NA
Nekemte		301.7	389.9	77.4	3.05	91.5	H
Robe(Bale)		64.1	54	118.7	3.92	117.6	M
Sekoru		191.9	228.4	84.0	3.41	102.3	H
Shambu		305.3	247.3	123.4	3.69	110.7	H
Weliso		164.5	179.5	91.6	NA	NA	NA
Yabello		2.6	16.2	16.1	3.53	105.9	VD
Ziway		137.9	85.9	160.5	5.04	151.2	M
Jijiga	**SOMALI**	59.7	47.6	125.5	NA	NA	NA
Gode		0	0.5	0.0	NA	NA	NA
A.Minch	**SNNPR**	130.5	62.2	209.9	3.7	111.0	H
Awassa		107.6	99.4	108.3	3.67	110.1	M
Billate		NA	NA	NA	NA	NA	NA
Hosaina		169.8	125.3	135.5	3.26	97.8	H
Jinka		78.9	98.8	79.8	3.11	93.3	M
Konso		39	42.2	92.3	4.21	126.3	MD
M.Abay		46.4	74.9	61.9	4.56	136.8	MD
Masha		327.8	303.0	108.2	2.65	79.5	H
Sodo		99	160.9	61.5	NA	NA	NA
Assosa	**B/GUMUZ**	136.8	188.4	72.6	3.69	110.7	H
Pawe		NA	NA	NA	NA	NA	NA
Gambela	**Gambela**	145.7	145.4	100.2	NA	NA	NA
A.A.Obs.	**A.A**	150.2	128.3	117.1	2.86	85.8	H
A.A. Bole		154.5	120.2	128.5	3.97	119.1	H
Diredawa	**D.D**	5.4	23.7	22.8	6.96	208.8	VD
Harar	**Harar**	74	70.0	105.7	3.7	111.0	M

Legend

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

Explanatory Note ETo Reference Evapotranspiration(mm)

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.

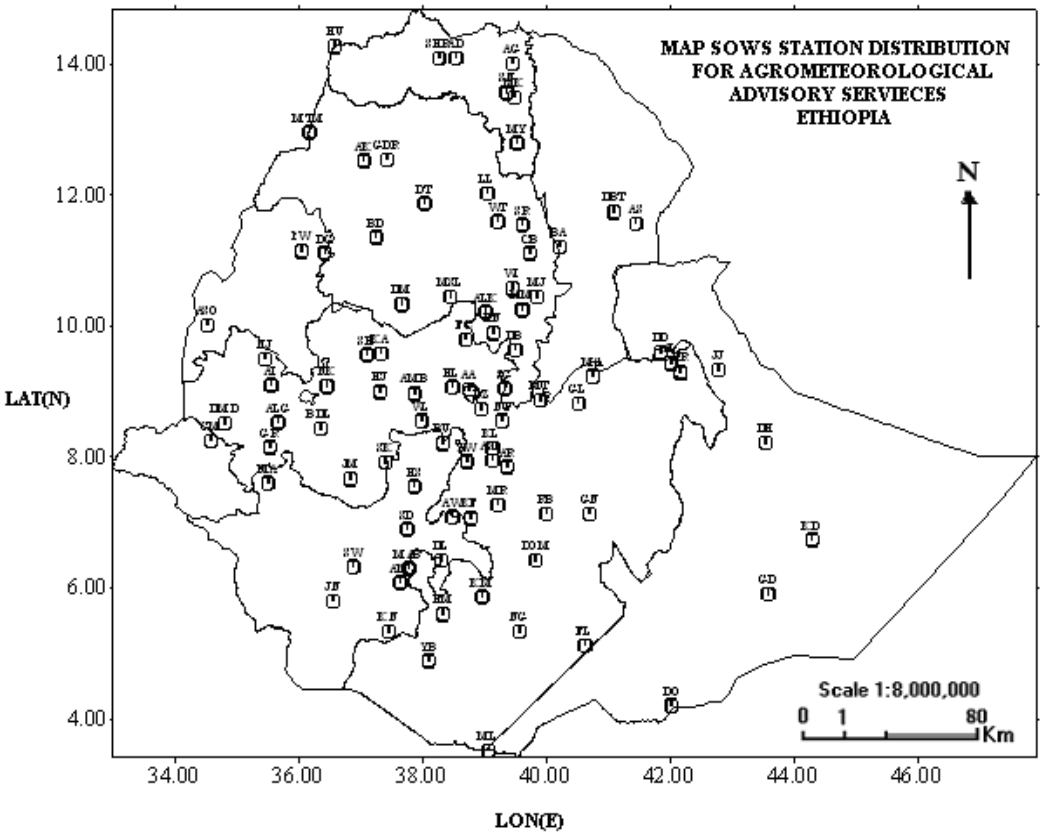
DEKAD: - First or second ten days or the remaining days of a month.

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