

NATIONAL METEOROLOGICAL SERVICES AGENCY

TEN DAY AGROMETEOROLOGICAL BULLETIN

P.BOX 1090 ADDIS ABABA TEL 512299 FAX 517066 E-mail nmsa@ethionet.et

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

አህጉር

ኢ.ኤ.አ ጁሳይ 2007

ኢ.ኤ.አ በጁሳይ 2007 በመጀመሪያው አስር ቀናት የክረምቱ ዝናብ በመደበኛ ሁኔታ ቀደም ብሎ ዝናብ ከሚጀምርባቸው የሀገሪቱ ምዕራባዊ አካባቢዎችና የመካከለኛው ኢትዮጵያ በተጨማሪም ወደ ሰሜን ምሥራቅና ምሥራቅ የሀገሪቱ ክፍሎች ሳይ ቀስ በቀስ እየተስፋፋ ብዙውን የሀገሪቱን ክፍል አዳርሶ ነበር። ስለዚህ ደህ የክረምት ዝናብ ሁኔታ በምዕራባዊ የሀገሪቱ አካባቢዎችና የመካከለኛው ኢትዮጵያ አካባቢዎች እየተካሄደ ሳለው የክረምት የእርጅና እንቅስቃሴ ማስተም ቀደም ብለው በማሳቸው ሳይ ሰብሱች ዘርተው በተስደዩ የሰዶግት ደረጃ ሳይ ሳሉ አዝርሶች በጎ ጎን ደኖረዋል። በሌላ በኩል የሀገሪቱን ደቡባዊ ክፍሎች በአስረ ቀናት መጀመሪያዎቹ ሳይ ዝናብ ሲያገኙ የምሥራቅና ሰሜን ምሥራቅ የሀገሪቱ አካባቢዎች አሰፊ ሰዎቹት ቀናት ዝናብ ያገኙ ሲሆን ደህ የዝናብ ሁኔታ በደቡብ፣ በምሥራቅና በሰሜን ምሥራቅ የሀገሪቱ አካባቢዎች ሰሚኖረ ስርብቶ አደር እና ከሌላ ስርብቶ አደር አካባቢዎች ሰግጦሽ ሳርና ስመጠኖ ውሃ አቅርቦት አመቺ ነበር። ከዘጋቢ ጣቢያዎቻችን ባገኘነው መረጃ መሠረት ከ30 ሚ.ሜ በሳይ ከፍተኛ ዝናብ በብዙዎቹ ጣቢያዎች የተመዘገበ ቢሆንም ከ50 ሚ.ሜ በሳይ ከፍተኛ ዝናብ የተመዘገበባቸው ጣቢያዎች አስምከተማ፣ አሶሳ፣ ባህርዳር፣ ባቲ፣ ቻግኒ፣ ጨፍ፣ ኮምቦሽቻ፣ ዱብቲ፣ ኢጃጃ፣ ኢናዋሪ፣ ሚኤሶ፣ ማዳማሪ 60.9፣ 103፣ 57.7፣ 59.6፣ 55.5፣ 66.3 ፣54.3፣ 58.6፣ 84.6 ፣51.3 ፣50.2፣ 59.5 በቀደም ተከተላቸው በአንድ የዝናብ ቀን ተመዝግቦባቸው ነበር። ደህም ከፍተኛ ዝናብ በመሀል ሜዳ ባቄሳ እና ገብስ ሰብሱችን ጎርፍ ጠርጎ በመውሰድ ጉዳት አድርጏል።

ኢ.ኤ.አ በጁሳይ 2007 በሁለተኛው አስርቱ ቀናት የክረምቱ ዝናብ በሀገሪቱ ሰሜናዊ አጋማሽና መካከለኛው ኢትዮጵያ ሳይ ዝናብ ሰጠ የአየር ሁኔታ ገጽታዎች ተጠናክረው በመገኘታቸው ስለጠቃሳይ የእርጅና ስራ እንቅስቃሴ በጎ ጎን ነበረው። ሆኖም በሰሜን ምዕራብ፣ በምዕራብ፣ በሰሜን መስራቅና በሰሜን የሀገሪቱ ክፍሎች ሳይ ከባድ ዝናብ የተመዘገበ ሲሆን፣ ደህም ሁኔታ አሰፊ አሰፊ በቡቃዎ ሳይ በሚገኙ ሰብሱች ሳይ ስራታዊ ተደብኖ እንደሚኖረው ይገመታል። የዝናብ መረጃ ከሚሰጡ ጣቢያዎቻችን ካገኘነው መረጃ ከ50ሚ.ሜ በሳይ ከተመዘገበባቸው ጣቢያዎች መካከል ባቲ፣ ማጃቲ፣ ሲሙጎነት፣ አርጃ፣ መተማና ማንኩሽ 52.2፣ 53.0፣ 53.5፣ 58.3፣ 59.4 እና 73.2 ሚ.ሜ. በአንድ የዝናብ ቀን በቀደም ተከተል ተመዝግቧል።

ኢ.ኤ.አ በጁሳይ 2007 በሶስተኛው አስርቱ ቀናት የክረምቱ ዝናብ በአብዛኛዎቹ የሀገሪቱ አካባቢዎች ተስፋፋቸው ተጠናክሮ ነበር የተስተዋለው። በዚህም የተነሳ በተስደዩ ቦታዎች የዝናቡ መጠን ጠንክሮ ብሎ ታደቷል። ደህም የዝናብ ሁኔታ ስሁን በመካሄድ ሳይ ሳለው የመኻገር የእርጅና እንቅስቃሴ ማስተም ሰማሳ ዝግጅት እንዲሁም ተዘርተው በቡቃዎ ሳይ ሳሉትና ሰረጅም ጊዜ ሰብሱች ጥረ ስለተዋሰነ እንደሚኖረው ይታመናል። ደሁንና በአንዳንድ ሥፍራዎች ሳይ ከ30 ሚ.ሜ በሳይ ከባድ ያለ ዝናብ በአንድ የዝናብ ቀናት ብቻ ተመዝግቧል። ጥቂቶቹን ከ50 ሚ.ሜ በሳይ የተመዘገበባቸውን ስመጠኖ በነጃ 55.2፣ በአንቃጣ 55.3፣ በፓዌ 56.6፣ በአድዋ 68.2 እንዲሁም በአሶሳ 102.5 ሚ.ሜ የደረሰ ከባድ ዝናብ በአንድ የዝናብ ቀናት ብቻ ተመዝግቦባቸዋል። ደህም የዝናብ ሁኔታ ተዳፋትና ወንዝ ዳርቻ ሰሚገኙ ማሳዎች

አሱታዊ ተሳታፊ ስንደሚያሳድር ስሙን ነው።

ጠቅላይ ሰነድ ሙሉ በሙሉ ወር 2007 ወቅታዊው ዝናብ በአብዛኛው የሀገሪቱ ክፍሎች ከደቡብ ምሥራቅ ሲተኮሩ ስኬታዎች በስተቀር በተጠናከረ ሙሉ ሁኔታ ነበር የተስተዋለው። ይህም የዝናብ ሁኔታ ቀደም ሲል ከሰነድ በፊት ስተዘረ የረጅም ጊዜ ስብሰታ ስንደ በቅሱ ማሸላ ሳሱት ምቹ ሁኔታን ከመፍጠሩም በላይ ስብሰታ ስብሰታ ስንደ፣ ገብስ፣ ስጃ ስመሳሰሉት የዘር ጊዜና በቡቃዎ ሳይ ሳሱት ስንደሁም ስጥራጥራ ስህሉት በጎ ጎን ስንደሚኖረው ይታመናል። ይሁንና በስንደንድ ስኬታዎች ሳይ ጠንክር ብሎ የታየው (30-102.5 ሚ.ሜ) የደረሰ ከባድ ዝናብ በስንደ የዝናብ ቀናት በቻ ተመዝግቧል። ከ50 ሚ.ሜ በላይ ያሉትን ስመጥቀስ ያህል ዳቡቲ፣ ስነዋሪ፣ ማደጫ፣ ሲሪንቃ፣ ማጃቱ፣ ማንኩሽ፣ ባህርዳር፣ ኮምቦሽ፣ ስርጃ፣ ስሶሳ፣ ስደከል፣ ባቲ፣ ቻግኒ፣ ጨፍ፣ ስድዋ፣ ነጃ፣ ፓዌ ስና ስንቃጣ 58.6፣ 51.3፣ 59.5፣ 59.0፣ 53.0፣ 73.2፣ 57.7፣ 54.3፣ 58.3፣ 102.5፣ 51.3፣ 59.6፣ 55.5፣ 66.3፣ 68.2፣ 55.2፣ 56.6፣ 55.3 ስንደየቀደም ተከተላቸው በስንደ የዝናብ ቀናት ብቻ ተመዝግበዋቸዋል። ምንም ስንኳን ከመረጃ ክፍላችን ከሳይ በተጠቀሰው ከባድ ዝናብ ምክንያት በደረሰን ሪፖርት በመሠሰ ሜዳ ማቢያ ሳይ ብቻ በ05ሀ07ሀ07 የጣሰው ከፍተኛ ዝናብ ጎርፍ በማስከተሉ በተዘረ በባላሳና ገብስ ስብሰታ ሳይ ከፍተኛ ጉዳት ቢያስከትልም ስተከታታይ ጊዜያት ካስመቋረጥ ሲዘንብ የነበረው ከፍተኛ ዝናብ በስንደንድ ተዳፍትና በወንዝ ዳርቻ ሳይ በሚገኙ የስርሻ ማሳዎች ሳይ ጉዳት ሲያደርስ ስንደሚችል ይታመናል።

SUMMARY

JULY 2007

During the first dekad of July 2007, kiremt rainfall strengthened over the western part of the country and central Ethiopia. In addition in northeastern and eastern part of the country the rainfall distributed widely to cover most part of the country. Thus, the situation might have a positive contribution for the existing Meher crops. On the other hand eastern, northeastern part of the country received rainfall in some places. Therefore, the situation had a significant contribution for the availability of pasture and drinking water over pastoral and agro pastoral areas of aforementioned parts of the country. Most stations reported heavy fall greater than 30mm. Some stations reported rainfall above 50mm in one rainy day. Among reporting stations Alem Ketema, Assosa, Bahir Dar, Bati, Chagni, Cheffa, Combolcha, Dubti, Ejaji, Enawary, Meiso and Mytsemeri reported 60.9, 103, 57.7, 59.6, 55.5, 66.3, 54.3, 58.6, 84.6, 51.3, 50.2 and 59.2 mm in one rainy day respectively. Heavy rainfall caused damage on bean and barely crop in Mehal Meda.

During the second dekad of July 2007, the intensified seasonal rainfall over northern half of the country and central Ethiopia might have a positive contribution for the ongoing meher agricultural activities. However, heavy rainfall exhibited over northwestern, western, northeastern and northern parts of the country. This situation might have a negative impact for crops, which are found at emergence stage. According to the reporting stations, most parts of the country exhibited rainfall within the range of 30-73.2 mm in one rainy day. Some stations recorded above 50 mm of rainfall: Bati, Majete, Limu Genet, Arjo, Metema, and Mankush reported 52.2, 53.0, 53.5, 58.3, 59.4 and 73.2 mm in one rainy days respectively.

During the third dekad of July 2007, the seasonal rain was distributed widely over most Kiremt rain benefiting areas. The condition favored Meher agricultural activities, land preparation, sowing activities, development of crops at different stages and perennial crops as well. Many stations recorded heavy falls that exceed 30 mm in one rainy day. Some stations reported rainfall that exceeds 50 mm in one rainy day among reporting stations: Nejo, Senkata, Pawe, Adwa, and Assosa recorded 55.2, 55.3, 56.6, 68.2 and 102.5 mm respectively in one rainy day. The condition might have negative impact on agricultural activities over steep slope and riverbank areas.

Generally during the month of July 2007, the seasonal rain continued over most parts of the country with the exception of southeastern Ethiopia as result favored early planted long cycle crops, cereals & pulses at different phase of development. Most of the stations reported heavy falls in the range of 30 to 102.5 mm in one rainy day. Some stations reported rainfall that exceed 50 mm: Dubti, Enewary, Maytsemri, Sirinka, Majete, Mankush, Bahir Dar, Combolcha, Arjo, Assosa, Aykel, Bati Chagni, Cheffa, Adwa, Nejo, Pawe and Senkata recorded 58.6, 51.3, 59.5, 59.0, 53.0, 73.2, 57.7, 54.3, 58.3, 102.5, 51.3, 59.6, 55.5, 66.3, 68.2, 55.2, 56.6 and 55.3 mm respectively. However, as reported heavy fall caused damage on Bean and Barley crops over Mehal Meda, besides, heavy and continuous rainfall over different parts of the country might have affected agricultural activities due to flooding over steep slope areas and at banks of rivers.

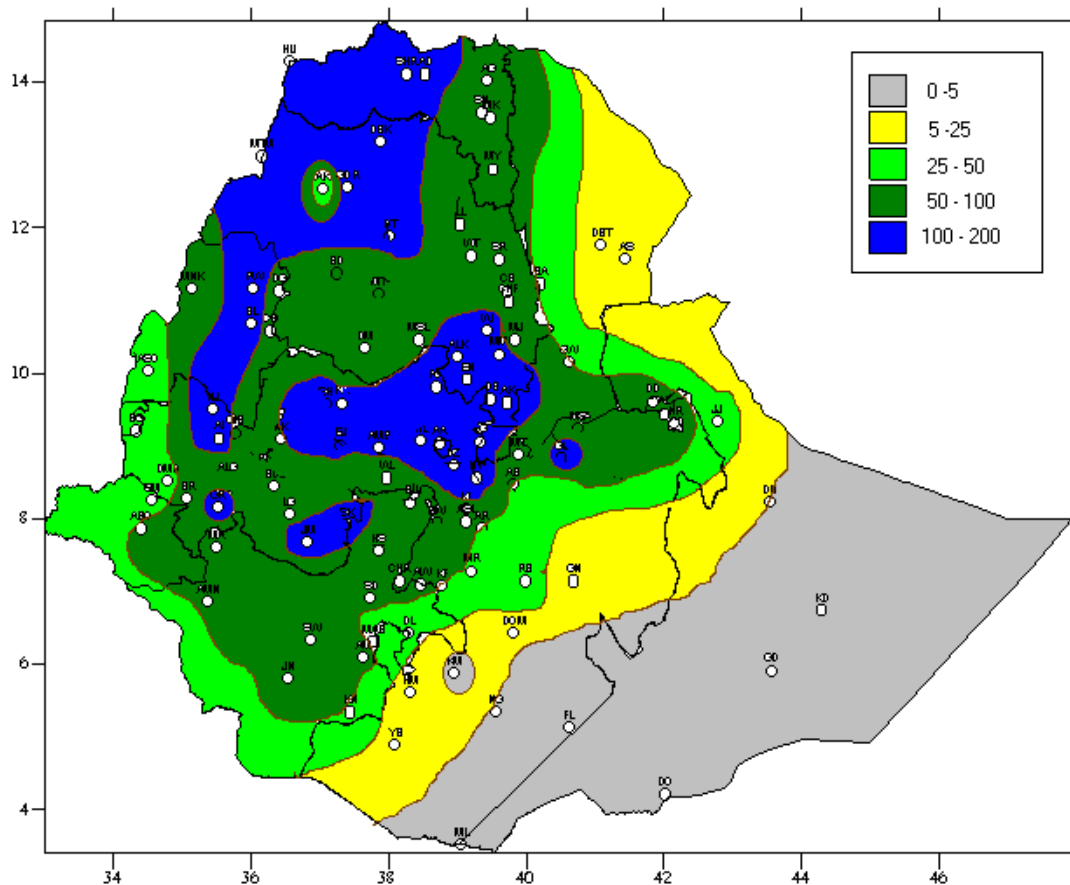


Fig 1 . Rainfall distribution in mm (21 – 31 July, 2007)

1. WEATHER ASSESSMENT

1.1 (21- 31 July, 2007)

1.1.1 Rainfall amount (Fig.1)

Much of western Tigray, Amhara, eastern Benshangul-Gumuz, much of central and pocket areas of western Oromia exhibited (100-200) mm of rainfall. Most parts of eastern Tigray and Amhara, parts of southwestern Amhara, parts of eastern and western Oromia and most parts of SNNPR and some parts of eastern Gambela exhibited (50-100) mm of rainfall. Parts of western half of Afar, parts of northern Somali, eastern Oromia and southern Oromia and SNNPR received (25-50) mm of rainfall. Some areas of eastern half of Afar, northern Somali and southern Oromia experienced (5-25) mm of rainfall. Little or no rainfall exhibited for the rest parts of the county.

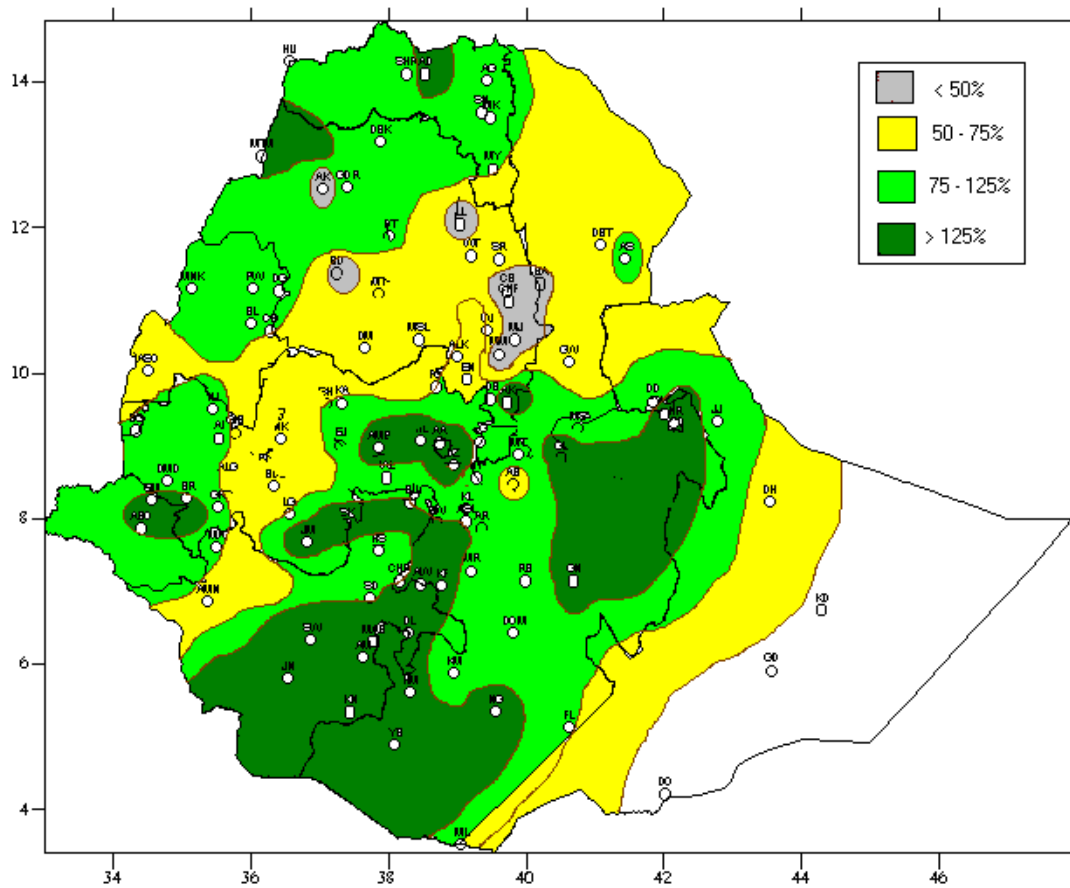


Fig. 2 Percent of normal rainfall distribution (21-31 July, 2007)

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)

With the exception of south and southeastern Somali, southern Amhara, much of Afar, and western Oromia, southern Benshangul-Gumuz, parts of southwestern Oromia, and western SNNP, the rest parts of the country received normal to above normal rainfall.

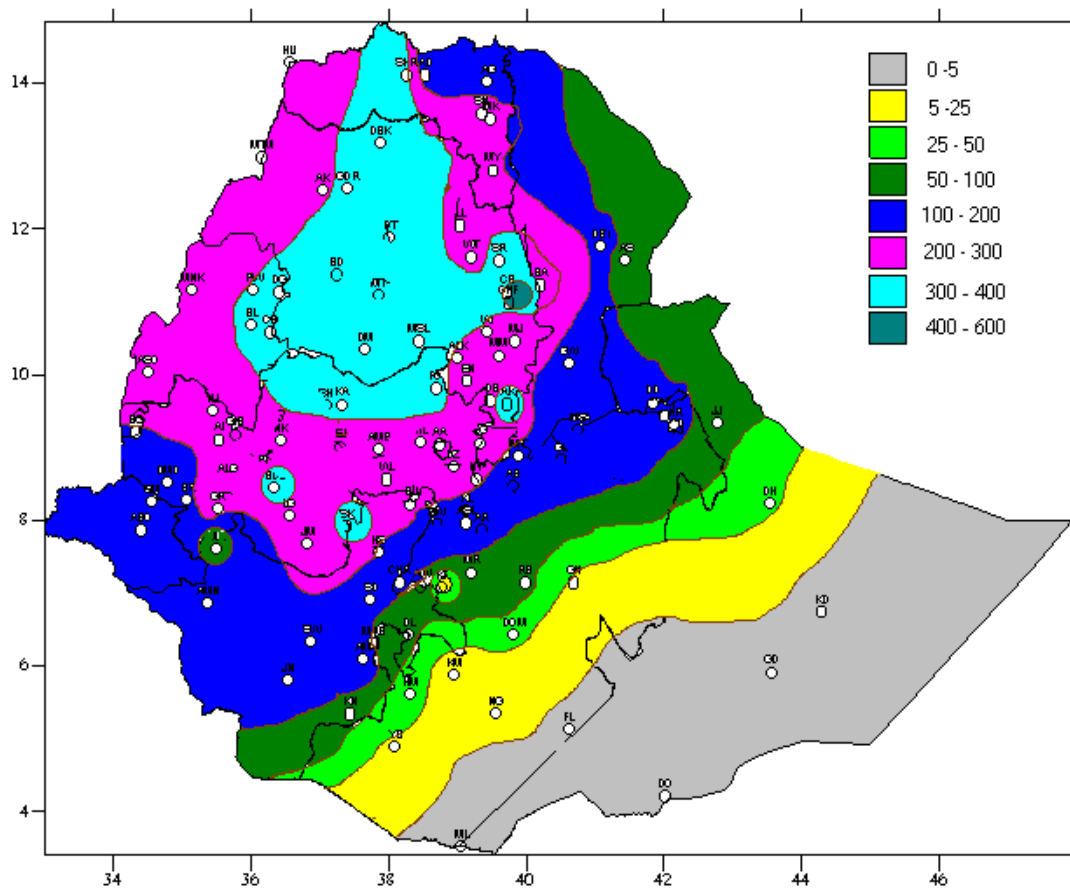


Fig. 3 Rainfall distribution in mm for the month of July 2007

1.2 July, 2007

1.2.1 Rainfall distribution (Fig.3)

Pocket of eastern Amhara, exhibited (400 -600) mm of rainfall. Much of Amhara, some parts of western Tigray, parts and pocket areas of western Oromia exhibited (300-400) mm of rainfall. Parts of western and eastern tip of Tigray and Amhara, much of Benshangul-Gumuz, western Oromia and some areas of western Afar received (200-300) mm of rainfall, Gambela, much of SNNPR eastern Oromia parts of northern Tigray, western Afar and northern Somali experienced (100-200) mm of rainfall. Parts of eastern Afar, northern Somali, eastern SNNPR and eastern Oromia exhibited 50-100mm of rainfall. Parts of southern Oromia, northern Somali exhibited (25-50) mm of rainfall. Some parts of eastern Somali and southern Oromia received (5 -25) mm of rainfall. There was little or no rainfall for the rest parts of the country.

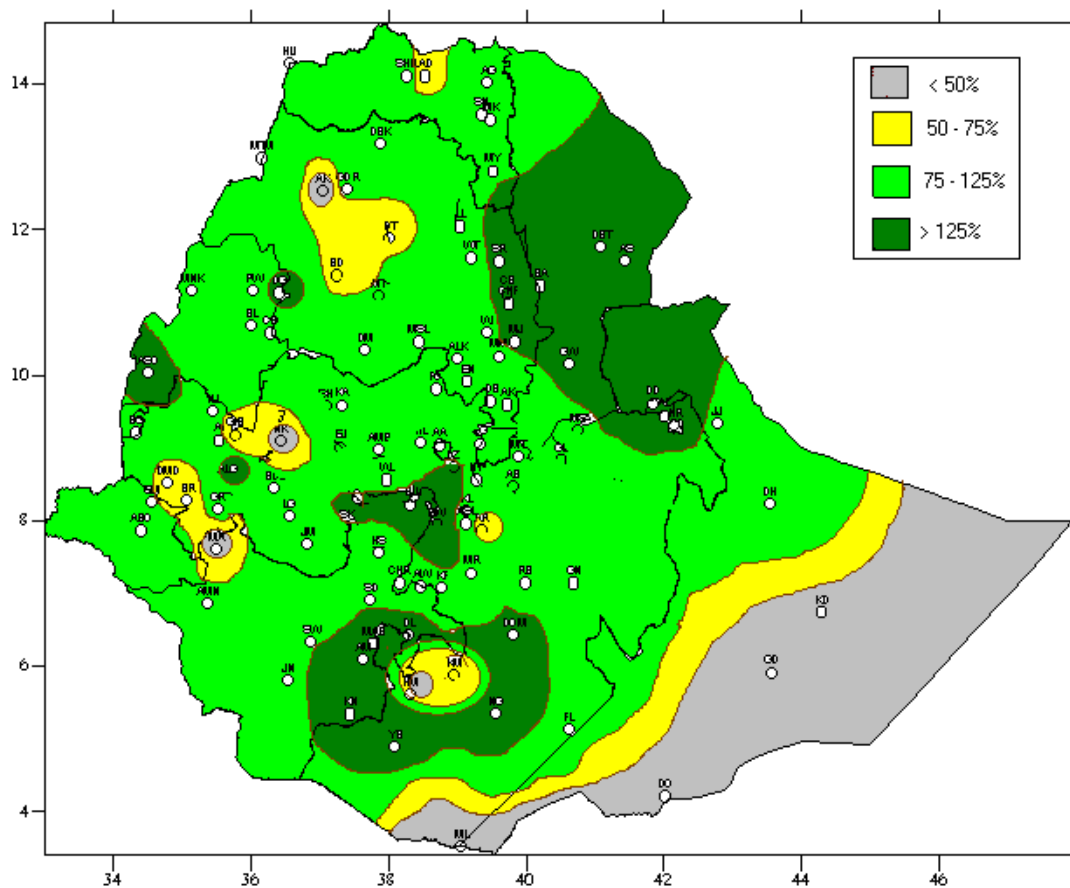


Fig. 4 Percent of Normal Rainfall distribution for the month of July, 2007

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)

With the exception of pocket areas of central Amhara, northern Tigray, western and southern Oromia and most parts of south and southeastern Somali, the rest parts of the country exhibited normal to above normal rainfall distribution.

1.3 TEMPERATURE ANOMALY

Some stations recorded extreme maximum temperature 35° C and above for 2-10 consecutive days. Methara, Gambela, Metema, Semera, Assayta, Elidar and Dubti recorded extreme maximum temperature as high as 40.0, 40.0, 39.6, 35.5, 35.0 35 °C respectively. The situation might have a negative impact on the normal growth and development of plants.

2. WEATHER OUTLOOK

2.1 For the first dekad of August 2007

Most of the rain-producing systems are expected to be strengthened across the major portion of the country. As a result, much of Tigray, Benishangul-Gumuz, Amhara, Gambela, western and central Oromiya and northern half of SNNPR will get normal to above normal rain. Besides, Afar, Dire Dawa, Harari, eastern Oromiya, and northern portion of Somali are highly likely to get better rains as compared to the preceding dekads despite the decadal rainfall totals within the normal range. In association with intense systems, there will be heavy rains inundating some places of Tigray, Benishangul-Gumuz, Oromiya, and Amhara regions.

2.2 For the month of August 2007

In the month of August 2007, heavy rains accompanied by thunder and hailstorms are the most commonly occurring weather phenomena over Kiremt rain-benefiting areas of Ethiopia. The current and anticipated oceanic and atmospheric conditions reveal that much of the country with the exception of south and southeast lowlands will be getting higher rains. In particular, Tigray, Amhara, parts of Oromiya will get normal to above normal rains. Similarly, near normal rain is anticipated over Gambela, SNNPR, eastern Oromiya, Afar, Dire Dawa, Harari and northern half of Somali regions. However, some portions of eastern Ethiopia will experience below normal rains in the month.

3. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE

3.1 VEGETATION CONDITION AND IMPACT ON AGRICULTURE

During the month of July 2007, the seasonal rain continued over most parts of the country with the exception of southeastern Ethiopia as result favored early planted long cycle crops, cereals & pulses at different phase of development. Most of the stations reported heavy falls in the range of 30 to 102.5 mm in one rainy day. Some stations reported rainfall that exceed 50 mm: Dubti, Enewary, Maytsemri, Sirinka, Majete, Mankush, Bahir Dar, Combolcha, Arjo, Assosa, Aykel, Bati Chagni, Cheffa, Adwa, Nejo, Pawe and Senkata recorded 58.6, 51.3, 59.5, 59.0, 53.0, 73.2, 57.7, 54.3, 58.3, 102.5, 51.3, 59.6, 55.5, 66.3, 68.2, 55.2, 56.6 and 55.3 mm respectively. However, as reported heavy fall caused damage on Bean and Barley crops over Mehal Meda, besides, heavy and continuous rainfall over different parts of the country might have affected agricultural activities due to flooding over steep slope areas and at banks of rivers.

Pursuant to crop phenological report sowing of teff underway in some areas of western Oromia (Kachise). It was at emerging stage in some areas of eastern Amhara (Bati), southern Amhara (Alem Ketema, Majete), northern Oromia (Fitch). Moreover it was at third leaf stage in some areas of central Amhara (Debre Tabor). Wheat was at emerging and third leaf stages in some areas of eastern Amhara (Wegel Tena), southern Amhara (Shola Gebeya), central Amhara (Debre Tabor), central Oromia (Kulumsa), and northern Oromia (Fitch). Barley was at third leaf and tillering stages in some areas of southern Amhara (Mehal Meda) and central Amhara (DebreTabor). Maize was at emerging and ninth leaf stage in some areas of southern Amhara (Majete) and central Tigray (Shire), while it was at tasseling and flowering stages in some areas of eastern Benshangul-Gumuz (Pawe), western Oromia (Nedjo), and eastern Oromia (Gelemso) and at full ripeness stage in some areas of western Oromia (chira). Sorghum was at emerging, third leaf and tasseling stages in some areas of eastern Benshangul gumuze (Bullen) and western

Oromia (Nedjo, Chira). Millet was at emerging and tillering stages in some areas of eastern Benshangul Gumuze (Dangla). Beans were at emerging stage in some areas of southern Amhara (Mehal Meda), eastern Amhara (Wegel Tena), central Oromia (Kulumsa), southern Amhara (Shola Gebeya) and western Oromia (Kachise), while it was at budding stage in some areas of northern Oromia (Fitcha). Peas were at Budding stage in some areas of eastern Amhara (Bati). Oats were at emerging stage in some areas of eastern Amhara (Wegel Tena). Rice was at third leaf stage in some areas of western Oromia (Limu Genet).

3.2 EXPECTED WEATHER IMPACT ON AGRICULTURE DURING THE COMING MONTH

The anticipated normal to above normal rainfall during the month of August 2007 over Tigray, Afar Amhara, Benshangul-Gumuz, Gambela, SNNPR and Oromia will favor the seasonal agricultural activities; however, heavy falls that occur occasionally may cause crop damage on those at critical stages of developments. The expected heavy and continuous rainfall over aforementioned areas could have negative impact on the on going agricultural activities due to excessive moisture as water lodging; flooding over steep slope areas and the over flow of rivers to the surrounding crop fields. Thus proper attention should be given in order to minimize the negative effect of adverse condition. On the other hand, the expected near normal rainfall over eastern Oromia, Dire Dawa, Harari and Somali will favor pastoral & agro pastoral areas for availability of pasture and drinking water. Moreover, the expected near normal rain over southern Roomy & southern margins of SNNPR will have a positive impact for perennial crops. In the coming 1-10 August 2007, the expected normal to above normal monthly rainfall over Tigray, Amhara, Benishangul-Gumuz, Gambela, SNNPR and Oromiya will favor the ongoing agricultural activities. On the other hand, the expected better rainfall over eastern Oromia, Dire Dawa, Hareri and northern half of Somali will favor pastoral & agro pastoral areas for availability of pasture and drinking water.

Table 1. Climatic and Agro-Climatic elements of different stations

for the month of July 2007

Stations	Region	A/ rainfall	Normal	%of Normal	Eto mm/day	Monthly Eto	Moisture
Adigrat	TIGRAI	178.9	157.8	113.4	NA	NA	NA
Adwa		146	205.1	71.2	NA	NA	NA
Mekele		226.6	198.0	114.4	3.37	104.47	H
Senkata		205.6	236.7	86.9	2.60	80.60	H
Shire		307.7	291.1	105.7	3.24	100.44	H
Assayta	AFAR	55.1	34.1	161.6	NA	NA	NA
Dubti		132.9	43.4	306.2	NA	NA	NA
Semera		104.4					
A. Ketema	AMHARA	373.4	316.6	117.9	2.79	86.49	H
Aykel		168.6	376.2	44.8	NA	NA	NA
Bahirdar		273.6	422.5	64.8	2.74	84.94	H
Bati		318.4	174.3	182.7	NA	NA	NA
Bullen		319.8	361.0	88.6	NA	NA	NA
Combolcha		320.3	265.1	120.8	3.62	112.22	H
Chefa		411.2	228.8	179.7	2.61	80.91	H
D.Birhan		241	264	91.2	3.36	104.16	H
D.Markos		250.4	297.2	84.3	2.68	83.08	H
D.Tabor		392.8	448.7	87.5	NA	NA	NA
Dangila		311.8	250.3	124.6	2.65	82.15	H
Enwary		197.1	223.5	88.2	NA	NA	NA
Gonder		331.6	323.7	102.4	2.06	63.86	H
M.Meda		286.7	295.1	97.2	2.71	84.01	H
Majete		298.2	189.0	157.8	4.43	137.33	H
Metema		266.8	220.0	121.3	3.62	112.22	H
Lalibela		207.4	245.0	84.7	2.41	74.71	H
Pawe		298.4	341.0	87.5	2.76	85.56	H
S. Gebeya		282.5	271.5	104.1	2.56	79.36	H
Sirinka		359.7	210.2	171.1	3.62	112.22	H
Wegeltena		272.5	233.1	116.9	2.75	85.25	H
Wereilu		240.8	358.3	67.2	2.81	87.11	H
	OROMIYA						
Abomsa		121.8	161.3	75.5	4.00	124.00	M
Ambo Agri.		NA	NA	NA	2.75	85.25	NA
Aira		224.6	301.9	74.4	2.60	80.60	H
Alge		234.6	30.6	766.7	NA	NA	NA
Ambo		238.4	226.3	105.3	NA	NA	NA
Arjo		407.0	314.0	129.6	NA	NA	NA
Arsirobe		126.8	184.0	68.9	3.25	100.75	H
Bedelle		303.8	316.6	96.0	2.24	69.44	H
Begi		186.0	164.0	113.4	NA	NA	NA
Bui		270.1	83.7	322.7	NA	NA	NA
Chira		215.8	252.1	85.6	NA	NA	NA
D.Dollo		109.4	165.7	66.0	2.58	79.98	H
D.Mena		29.1	13.6	214.0	NA	NA	NA
D.Zeit		296.1	219.1	135.1	3.05	94.55	H
Fitche		332.7	326.1	102.0	2.61	80.91	H
Ejaji		122.8	136.7	89.8	NA	NA	NA
Gelemso		136.6	13.4	1019.4	3.90	120.90	H
Gimbi		253.2	355.3	71.3	NA	NA	NA
Ginir		21.9	22.0	99.5	NA	NA	NA
Gore		204.9	329.3	62.2	NA	NA	NA
H. Mariam		45.9	119.0	38.6	2.50	77.50	M

Jimma		247.4	208.8	118.5	2.83	87.73	H
K.Mengist		14.7	28.8	51.0	2.37	73.47	D
Kachisa		342.8	420.7	81.5	2.36	73.16	H
Koffele		15.7	142.6	11.0	NA	NA	NA
Kulumsa		130.4	124.2	105.0	3.02	93.62	H
Limugenet		267.0	294.0	90.8	NA	NA	NA
Masha		66.7	304.7	21.9	NA	NA	NA
Mieso		153.8	129.5	118.8	5.10	158.10	M
Metehara		124.0	120.0	103.3	4.80	148.80	M
Moyale		2.8	6.6	42.4	3.59	111.29	VD
Nazreth		204.6	118.4	172.8	3.39	105.09	H
Neghele		11.6	6.9	168.1	3.94	122.14	VD
Nedjo		254.1	317.5	80.0	2.11	65.41	H
Robe(Bale)		145.9	92.5	157.7	3.21	99.51	H
Sekoru		342.7	213.6	160.4	2.59	80.29	H
Shambu		336.1	366.5	91.7	2.61	80.91	H
Yabello		20.2	13.6	148.5	2.99	92.69	D
Woliso		248.7	262.2	94.9	NA	NA	NA
Ziway		195.4	146.1	133.7	3.91	121.21	H
Gode	SOMALI	0.0	0.7	0.0	5.98	185.38	VD
Jijiga		68.6	74.4	92.2	NA	NA	NA
A.Minch	SNNPR	112.0	47.9	233.8	3.09	95.79	H
Awassa		129.1	123.3	104.7	3.16	97.96	H
Blate		58.1	100.5	57.8	NA	NA	NA
Hosaina		138.3	153.7	90.0	2.66	82.46	H
Jinka		104.3	103.4	100.9	2.30	71.30	H
Konso		52.8	21.9	241.1	3.40	105.40	M
M.Abay		56.6	43.6	129.8	2.95	91.45	M
Sawla		170.5	100.9	169.0	2.95	91.45	H
Assosa	B/GUMUZ	298.0	234.4	127.1	2.99	92.69	H
Chagni		301.1	342.8	87.8	NA	NA	NA
Mankush		279.3					
Gambela	Gambela	162.9	201.9	80.7	NA	NA	NA
A.A.Obs.	A.A	240.1	259.4	92.6	2.34	72.54	H
A.A. Bole		193.4	239.7	80.7	2.93	90.83	H
Diredawa	D.D	133.3	92.6	144.0	4.89	151.59	M
Harar	Harai	121.9	93.7	130.1	3.04	94.24	H

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

ET_o 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.

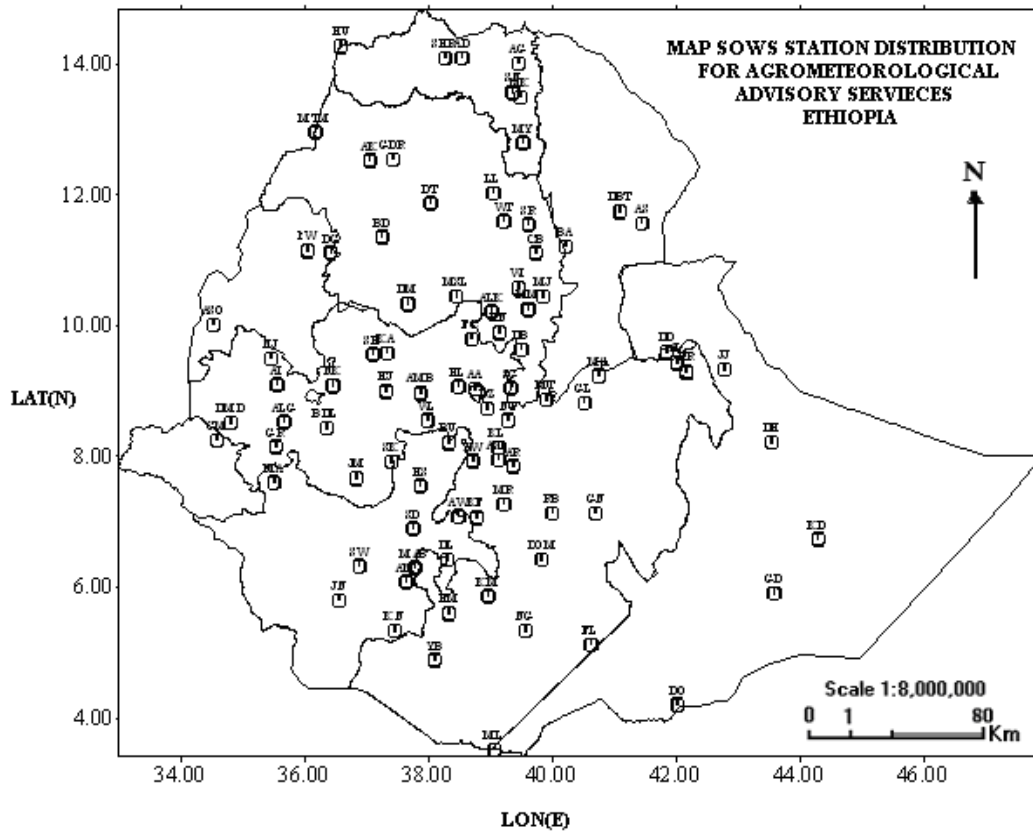
DEKAD: - First or second ten days or the remaining days of a month.

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						
		D. Markos	DM	Hossaina	HS	M/Selam	MSL
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
Alem Ketema	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	Wegel Tena	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		