

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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በጁላይ የመጀመሪያዎቹ አሥር ቀናት የዝናቡ መጠንና ሥርጭት አብዛኛዎቹን የመኸር ዝናብ ተጠቃሚ አካባቢዎችን ያዳረሰ ነበር። በአጠቃላይ ባለፉት አሥር ቀናት አብዛኛው ኦሮሚያ፣ አማራ፣ ቤንሻንጉል-ጉሙዝ ፣ ጋምቤላ፣ ምሥራቅ ትግራይ፣ የደቡብ ብሔር ብሔረሰቦችና ህዝቦች ክልል፣ ደቡብ አፋር፣ ድሬዳዋ፣ ሐረሪ እና የሰሜን ሶማሌ ኪስ ቦታዎች ከቀላል እስከ ከባድ መጠን ያለው ዝናብ ነበራቸው ይኸውም የመኸር አብቃይ አካባቢዎችን በስፋት ያዳረሰ ዝናብ ቀደም ሲል ከሰኔ በፊት ለተዘሩት የረጅም ጊዜ ሰብሎች፣ እንደበቆሎና፣ ማሻሻላ ላሉት ሰብሎች ምቹ ሁኔታን ከመፍጠሩም በላይ በክረምቱ ለተዘሩትና በመዘራት ላይ ለሚገኙት የብርዕ ሰብሎች በጎ ጎን እንደነበረው ይታመናል። በተጨማሪም ወደ ሰሜን ምሥራቅ ኢትዮጵያ ቀስ በቀስ የተስፋፋው ዝናብ በአካባቢው ለሚካሄደው የእርሻ እንቅስቃሴ እና ጥምር ግብርናን ለሚያካሂዱት አርብቶ አደሮችና ከፊል አርብቶ አደሮች፣ ለቋሚ ተክሎች፣ የውሀ ፍላጎት መሟላት ከፍተኛ አስተዋጽኦ ይኖራል። በሌላም በኩል በአንዳንድ የደቡብ ምዕራብ፣ የምዕራብ፣ የሰሜን ምዕራብ እና የመካከለኛው የሀገሪቱ ክፍሎች ላይ በረዶ ቀላቅሎ የጠለው ከባድ መጠን ያለው ዝናብ ተመዝግቧል። ለመጥቀስ ያህል በአዋጣ 37.2፣ በዳንግላ 44.5፣ በነቀምት 59.2፣ በደባርቅ 122.0፣ በጎሬ 42.3፣ በመካከሰላም 48.1፣ በኑራኤራ 70.0፣ በመተሀራ 39.6፣ በወሊሶ 47.0፣ በቡኢ 32.0፣ በአፀቢ 48.8፣ በጨፋ 32.3፣ በጃራ 56.0፣ በአምቦ 45.5፣ በሴሩ 45.7፣ በደብረብርሀን 33.0፣ በቻግኒ 40.2፣ በአርጆ 46.6፣ በወለንጨቲ 80.2፣ በሾላገበያ 37.2 እና በአዳማ 57.9 ሚ.ሜ. ይገኙበታል። ይኸውም የዝናብ ሁኔታ በአንዳንድ ኪስ ቦታዎች በአዝዕርት ላይ መጠነኛ ጉዳት ማድረሱ ይታመናል።

በአጠቃላይ በጁላይ ሁለተኛው አሥር ቀናት ለክረምት ዝናብ መኖር አመቺ የሆኑ የአየር ሁኔታ ክስተቶች በይበልጥ በመጠናከራቸው ምክንያት በክረምት ዝናብ ተጠቃሚ አካባቢዎች ላይ ብዙ ቦታን የሸፈነ ዝናብ ነበራቸው። በመጠንም ረገድ ቅጽበታዊ ጎርፉ ሊያስከትል የሚችል ከባድ መጠን ያለው ዝናብ በአብዛኛው አማራ፣ መካከለኛውና ምስራቅ ትግራይ፣ ቤንሻንጉል ጉምዝ፣ ጋምቤላ ምዕራብ መካከለኛና ምስራቅ ኦሮሚያ እንዲሁም የደቡብ ብሔር ብሔረሰቦችና ህዝቦች ክልል ሰሜናዊ ክፍል መካከለኛውና ደቡባዊ አፋር፣ ድሬዳዋ እና ሐረሪ ብዙ ቦታዎቻቸውን የሸፈነ ዝናብ አግኝተዋል። ይህም ሁኔታ ቀደም ብሎ ለተጀመረው የማሣ ዝግጅት ፣ የዘር ጊዜ፣ በበልግ ወቅት ተዘርቶ በተለያየ የዕድገት ደረጃ ላይ ለሚገኙ የረጅም ጊዜ የመኸር ሰብሎች እና ቋሚ ተክሎች የውሃ ፍላጎት እንዲሁም ለአርብቶ አደሩና ከፊል አርብቶ አደር አካባቢዎች የግጦሽና

የመጠጥ ውሃ አቅርቦት የጎላ ጠቀሜታ እንደነበረው እሙን ነው ። ከዚህም በተጨማሪ በአንዳንድ ቦታዎች ላይ የጣለው ከባድ ዝናብ ያስከተለው ጎርፍ በሰብሎችና በንብረት ላይ መጠነኛ ጉዳት እንዳደረሰ ከተሰበሰቡት መረጃዎች ለማወቅ ተችሏል።

በጁላይ መጨረሻዎቹ አሥር ቀናት በሀገሪቱ የክረምት ዝናብ ተጠቃሚ አካባቢዎች በመጠንም ሆነ በስርጭት የተስፋፋ ዝናብ ተስተውሏል። ይህም አጠቃላይ የመኸር አብቃይ አካባቢዎችን ያዳረሰ ዝናብ በተለያዩ የእድገት ደረጃ ላይ ለሚገኙ የመኸር ወቅት የረዥም ጊዜ ሰብሎች፣ ለብርዕ ሰብሎችና ለቋሚ ተክሎች ከፍተኛ አስተዋፅኦ ነበረው። በተጨማሪም ወደ ሰሜን ምስራቅ ተስፋፍቶ የነበረው ዝናብ በአካባቢው ለሚገኙት አርብቶ አደሮችና ከፊል አርብቶ አደሮች ለግጦሽና ለመጠጥ ውሃ አቅርቦት በጎ ጎን እንደነበረው ይታመናል። በሌላም በኩል በምዕራብ፣ በመካከለኛውና በሰሜን ምስራቅ አንዳንድ የሀገሪቱ አካባቢዎች ከባድ መጠን ያለው ዝናብ በወረባቡ 48.8፣ በመካከለኛውም 70፣ በጨፋ 48.0፣ በአልጌ 116.0፣ በመተሀራ 40.5፣ በአምባማሪያም 56.0፣ በባህርዳር 45.6፣ በፍቼ 45.6፣ በቋራ 50.3፣ በሻምቡ 43.6፣ በጎሬ 49.4፣ በንፋስ መውጫ 68.7፣ በማይጨው 46.0፣ በእንደስላሴ 67.3፣ በማይፀመሪ 64.1፣ በኮምቦልቻ 48.9፣ በሊሙጎነት 52.0 እና በአዳማ 45.4 በሚ.ሜ. የተመዘገበ ሲሆን ከዚህ ጋር ተያይዞ እንደ ዳንግላ፣ ሻምቡ፣ ዝዋይ እና አልጌ ላይ የዘነበው ከባድ ዝናብ በአዝዕርቶች ላይ መጠነኛ ጉዳት እንዳደረሰ ከየስፍራዎቹ ከደረሰን መረጃ ለማወቅ ተችሏል።

በአጠቃላይ በዘንድሮው የጁላይ ወር ዝናብ ሰጭ ክስተቶች ከቀዳሚው ወር በተሻለ ሁኔታ አንፃራዊ ጥንካሬ ያሳዩበት ጊዜ ነበር። በትግራይ፣ በአማራ፣ በንጃንጉል ጉሙዝ፣ የደቡብ ብሔር ብሔረሰቦችና ሕዝቦች ክልል፣ በጋምቤላ፣ በአብዛኛው አሮሚያ፣ በድሬዳዋና በሃረሪ፣ በአፋርና በሰሜን ሶማሌ አካባቢዎች የተስፋፋ ዝናብ አግኝተዋል። ይህም ሁኔታ ቀደም ሲል ለተዘሩት የረጅም ጊዜ ሰብሎች ምቹ ሁኔታ ከመፍጠሩም በተጨማሪ በክረምት መግቢያ አካባቢ ለተዘሩት የብርዕ ሰብሎች ማለትም እንደ ስንዴ፣ ገብስ፣ አጃ ለመሣሰሉትና ለጥራጥሬ እህሎች አመቺ ሁኔታ እንደነበረው እሙን ነው። ይሁንና በአንዳንድ አካባቢዎች ላይ በነበረው ከባድ ዝናብ ምክንያት በቻግኒ፣ በደባርቅ፣ በጎሎልቻ፣ በዳንግላ፣ በሻምቡ፣ በዝዋይና በአልጌ አካባቢዎች በተለያዩ የዕድገት ደረጃ ላይ በሚገኙ ሰብሎች ላይ አሉታዊ ተፅዕኖ እንደነበረው ከመረጃዎች ለማወቅ ተችሏል።

SUMMARY

JULY 2013

During the first dekad of July 2013, better rainfall distribution observed over most parts of seasonal rainfall benefiting areas of the country. As a result most of Oromia, Amhara, Benshangul-Gumuze, Gambela, eastern Tigray, SNNPR, southern Afar, Dire dawa, Harari and pocket area of northern Somali received slight to heavy rainfall. This situation have a significant contribution for Meher agricultural activities early planted long cycle crops, cereals & pulses crops which were found at different phenological stages. More over the extended rainfall over eastern and north eastern parts could have a positive impact for Meher agricultural activities and availabilities of pasture and drinking water. On the other hand Some areas of south western, southern, northwestern and central parts of the country exhibited heavy fall ranging from (37 - 122) mm in one rainy day. Thus this condition resulted in crop damage in some areas that caused damage on crops.

During the second dekad of July 2013, much of Amhara central and eastern Tigray, Benishangul-Gumuz, Gambella, northern SNNPR western, central and eastern Oromia, central and southern Afar, Dire Dawa and Harari received rainfall which covered much of Kiremt rain benefiting areas of the country. The situation might have favored land preparation already carried on and sowing activities of different Meher crops, fulfillment of water demand of long cycle Meher crops sown in Belg season and found at different phases of growth and perennial crops, pasture and drinking water availability in pastoral agro pastoral areas. Moreover, heavy fall with hailstorm and strong wind within the range of 45.0 to 101.0 mm in one rainy day was reported from some parts of the country which resulted in flooding that caused damage to crops and properties as information received from some stations indicated.

During the third dekade of July, rain bearing meteorological phenomena farther strengthened over much of kiremt rain benefiting areas of the country. As a result, Amhara, Tigray, Gambella, Benshangul-gumz, western, central, eastern and high lands of southern Oromia, SNNPR, Dire dawa, Harari, Afar and northern Somali received light to heavy rainfall. This situation might have a positive contribution for the ongoing Meher agricultural activities, water requirement for perennial plants, improvement of pasture and drinking water availability over pastoral and agro pastoral areas of the country. However, heavy rainfall ranging from (40.5 - 116.0) mm exhibited in one rainy day over western, northeastern and central parts of the country. To mention some of them which recorded above 40.0 mm Worebabu, Mekaneselam, Chefa, Alge, Methara, Amba

mariam, Bahir dar, Fitcha, Quara, Shambu, Gore, Nifase mewcha, Michew, Endesilase, Maitsemri, Kombolcha, Limugenet and Adama recorded 48.8, 70.0, 48.0, 116.0, 40.5, 56.0, 45.6, 45.6, 50.3, 43.6, 49.4, 68.7, 46.0, 67.3, 64.1, 48.9, 52.0 and 45.4 mm of rainfall respectively in one rainy day. As a result crop damage was reported over Dangila, Shambu, Ziway and Alge.

Generally during the month of July 2013, the season's rain was widely distributed over most parts of Kiremt rain benefiting areas of the country. In line with this, Tigray, Amhara, Benshangul-Gumuz, SNNPR, Gambela, much of Oromia, Dire dawa, harari, Afar and northern Somali received slight to heavy rainfall. The situation might have created positive impact for early sown long cycle crops, perennial plants as well as crop like Cereals (Barely, Wheat and Oat) and pulse crops which were found at different growing stage. On the other hand, occasional heavy fall accompanied with hail observed over some areas of western, central, northern and northeastern parts of the country, as a result crop damage was reported over Chagni, Debark, Gololcha, Dangila, Shambu, Ziway and Alge.

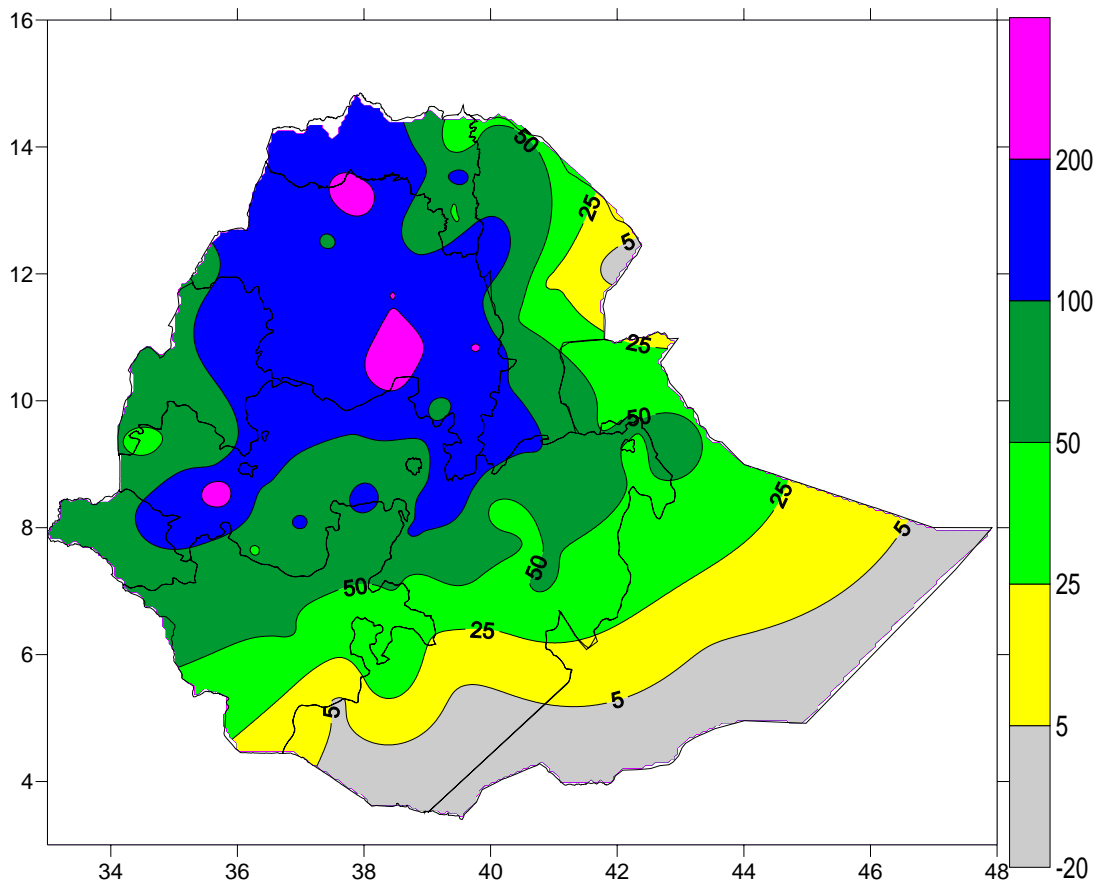


Fig 1. Rainfall distribution in mm (21 – 31 July 2013)

1. WEATHER ASSESSMENT

1.1. Rainfall amount (Fig.1)

Pocket areas of western Oromia north and south Amhara exhibited 200-300 mm of rainfall. Much of Amhara, western ,pocket area of eastern and parts of southern Tigray, western southern margins of Afar eastern half of Beshangul –Gumuz, parts of western northern and central Oromia and eastern Gambela exhibited 100-200 mm of rainfall. Much of Beshangul –Gumuz , Gambela and SNNPR, eastern half of Tigray, western northeastern marginf of Amahra, western,central ,eastern and southern parts of Oromia western half of Afar Dire Dawa, Harari and parts of northern Somali received 50 -100 mm of rainfall.Much of Somali, parts of southern and pocket areas of western Oromia central parts of Afar and north tip of Tigrayreceived 25-50 mm of rainfall.Parts o south Oromia, parts of southern Somalia and eastern Afar received 5-25 mm of rainfall. The rest parts of the country exhibited little or no rainfall.

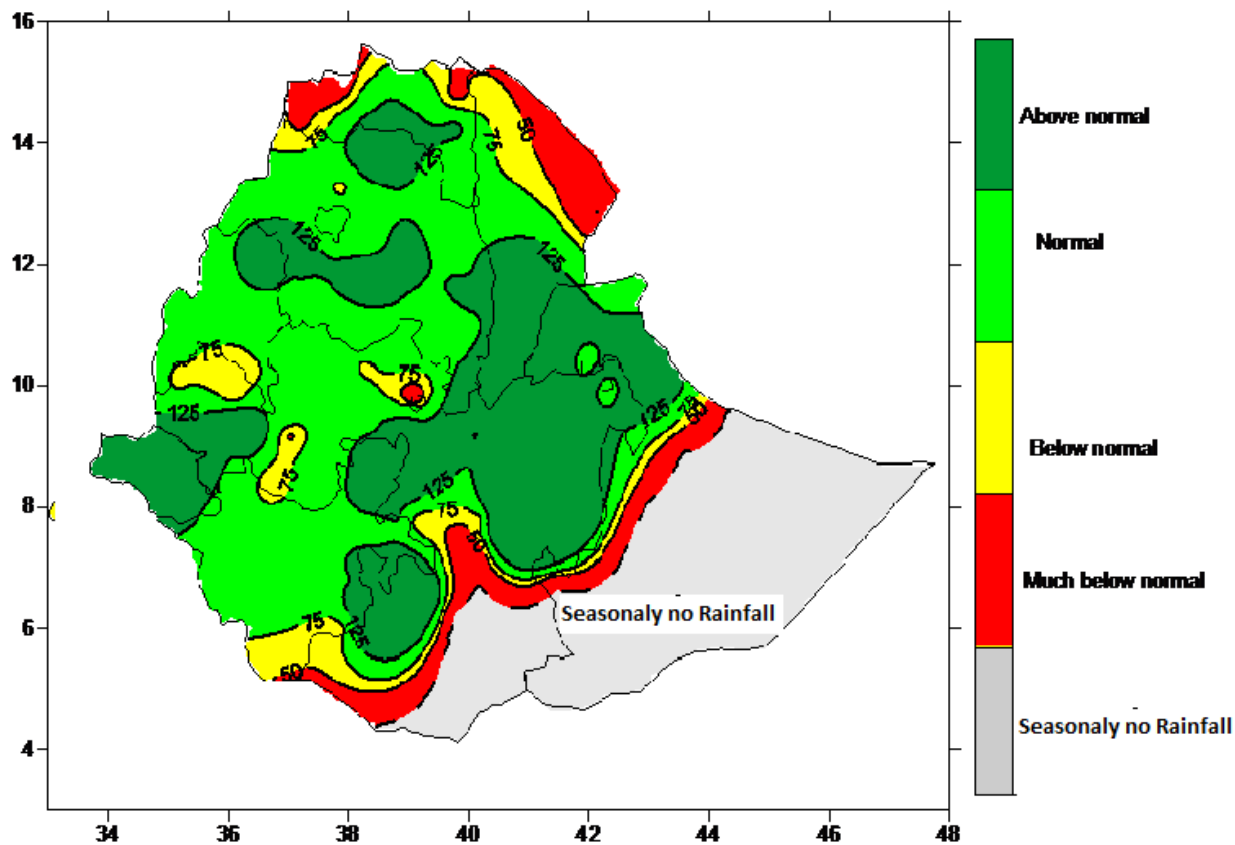


Fig. 2 Percent of normal rainfall distribution (21-31 July 2013)

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)

Much of Benshangul-Gumuz, Oromia, Amhara, SNNPR Gambella, ,central and eastern Tigray north Somali parts of and except parts of north eastern Afar exhibited normal to above normal rainfall. The rest parts of the country received below normal too much below normal rainfall.

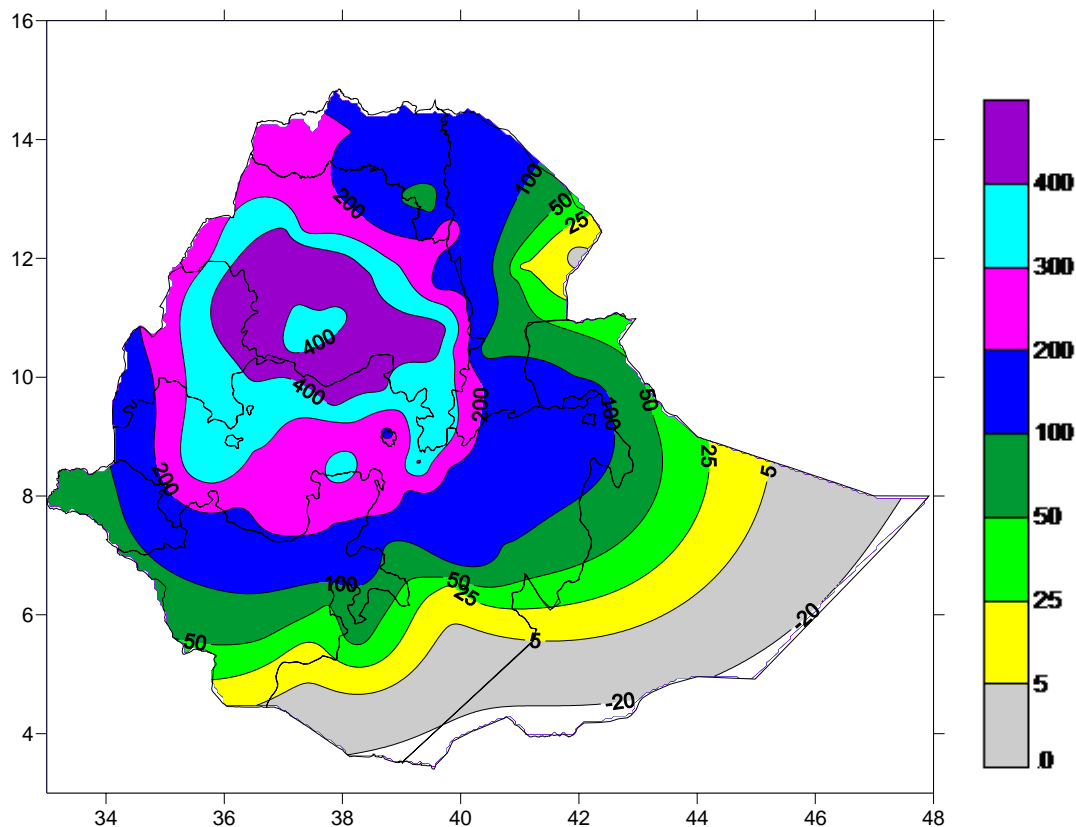


Fig. 3 Rainfall amount in mm for the month of July 2013

1.2.1 Rainfall amount (Fig.3)

Much of central Amhara and north margin of Oromia received 400-500 mm of rainfall. Parts of western, southern and eastern southern Amhara, eastern half of Beshangul –Gumuz and parts of western and central Oromia received 300-400 mm of rainfall. Much of western Tigray, western margin parts of north and eastern Amhara, much of central, parts of western and eastern Oromia and parts of northern Beshangul–Gumuz experienced 200-300 mm of rainfall. Eastern half Tigray, much of north, western and southern Afar, parts of western Beshangul –Gumuz north eastern and eastern Amhara eastern Gambella, much of SNNPR, much of eastern, parts of southern and western tip of Oromia, Dire Dawa and Harari exhibited 100-200 mm of rainfall. Western half of Gambella, parts of southern SNNPR, parts of eastern and southern Oromia, parts of north Somali, and central Afar and pocket areas of southern Tigray received 50-100 mm of rainfall. Parts of southern Oromia and eastern Afar received 5-25 mm of rainfall. The rest parts of the country exhibited little or no rainfall.

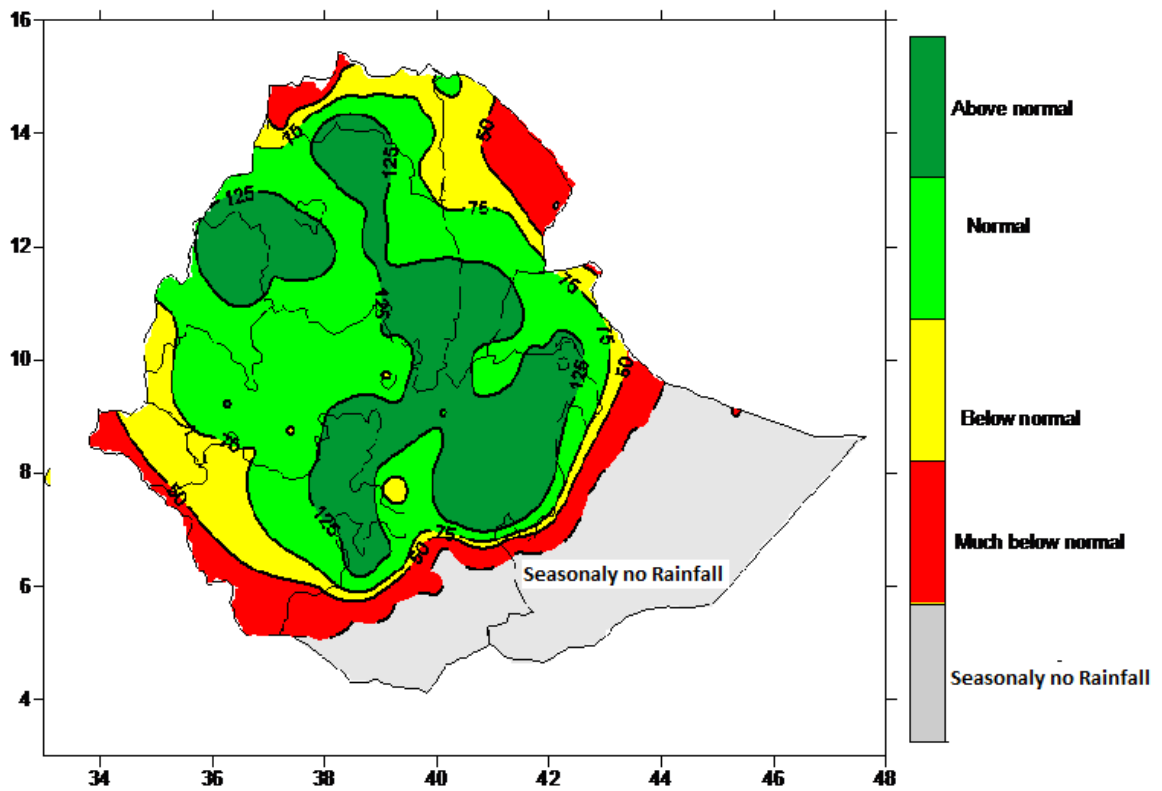


Fig. 4 Percent of Normal Rainfall for the month of July 2013

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)

Much of Amhara, Oromia, Benshangul-Gumuz, SNNPR western central and pocket areas of eastern, eastern half of Tigray and parts of southern and north tip of Afar exhibited normal to above normal rainfall. The rest parts of the country received below normal too much below normal rainfall.

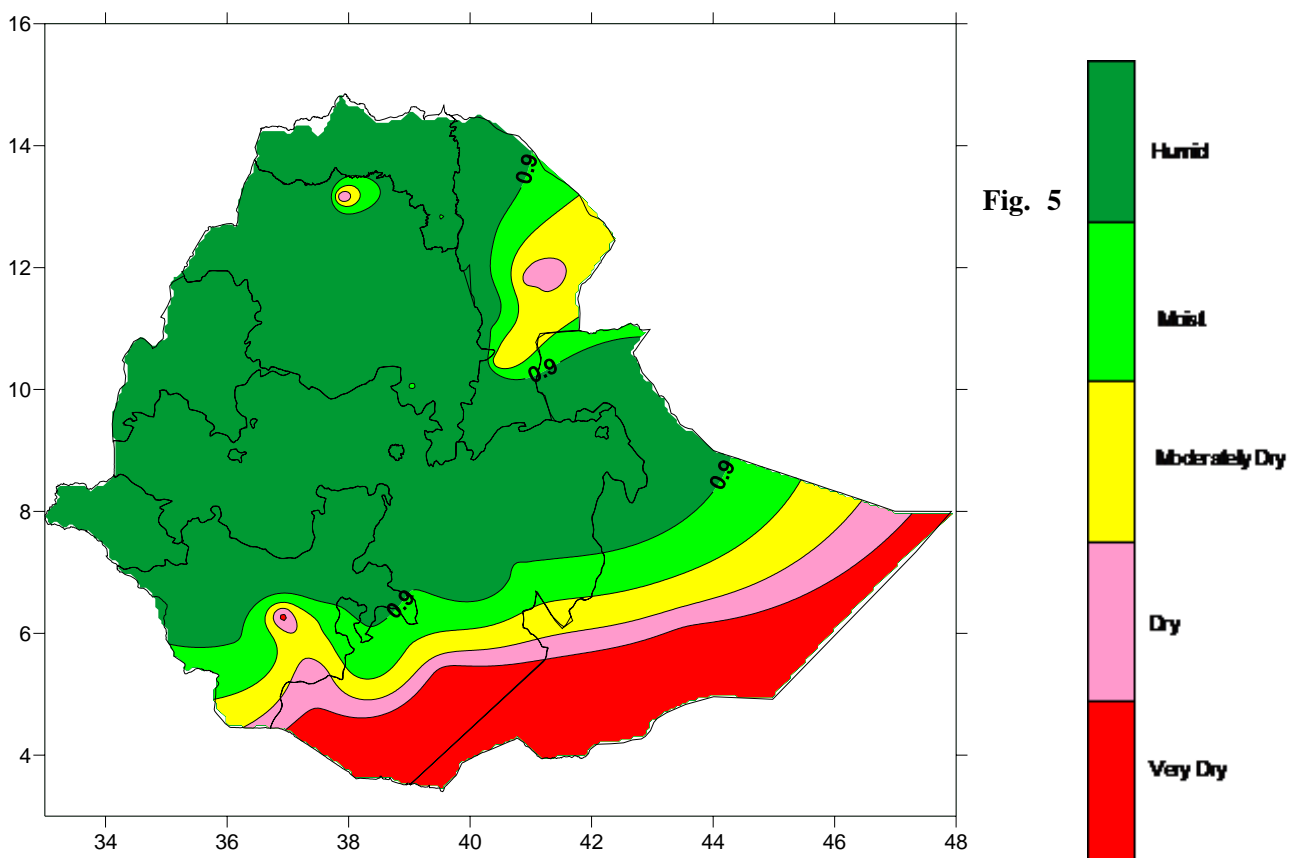
1.3 TEMPERATURE ANOMALY

During the month under review, some stations found in the lowland parts of the country exhibited extreme maximum temperature above 35°C. Among reporting stations: Dire Dawa, Gode, Methara, Aisha, Chifra, Dubti, Elidar, Errer, Gewane, Semera, Mille, Quara recorded extreme maximum temperature as high as 37.4, 37.5, 38.6, 38.0, 40.0, 44.5, 43.5, 37.5, 41.8, 43.5, 43.0, 38.0 °C respectively. The condition might have caused a negative impact on the normal growth and developments of plants and animals.

2. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE

2.1 VEGETATION CONDITION AND IMPACT ON AGRICULTURE

On the month of July 2013, the season's rain was widely distributed over most parts of Kiremt rain benefiting areas of the country. In line with this, Tigray, Amhara, Benshangul-Gumuze, SNNPR, Gambela, much of Oromia, Dire dawa, harari, Afar and northern Somali received slight to heavy rainfall. The situation might have created positive impact for early sown long cycle crops, perennial plants as well as crop like Cereals (Barely, Wheat and Oat) and pulse crops which were found at different growing stage. On the other hand, occasional heavy fall accompanied with hail observed over some areas of western, central, northern and northeastern parts of the country, as a result crop damage was reported over Chagni, Debark, Gololcha, Dangila, Shambu, Ziway and Alge.



moisture status for the month of July 2013

As indicated on moisture map above, much of Tigray, AMHARA, Benishangul- Gumuz, Oromia, Gambella, SNNPR, northern Somali and parts of north western and south Afar experienced moist to humid moisture condition. Southern SNNPR, parts of southern Oromia and southern Somali exhibited moderately moist condition. The situation is conducive for on going seasonal agricultural activities. While, the rest parts of the country experienced dry to very dry condition.

2.2 EXPECTED WEATHER IMPACT ON AGRICULTURE DURING THE COMING MONTH

In the coming month of August, Kiremt rain bearing meteorological phenomena will be expected to further strengthen over Kiremt rain benefiting areas of the country. As a result of this, Tigray, Amhara, Benshangul-Gumuz, Gambela, western and central Oromia and SNNPR will expect normal to above normal rainfall. Thus the situation will favor seasonal agricultural activities, water requirement for long cycle crops, perennial plants and late sown cereals & pulses crops which were found at different phenological stages. On the other hand the expected heavy and continuous rainfall over the aforementioned areas could have a negative impact on the ongoing agricultural activities due to excessive moisture as water logging; flooding over steep slope areas and the overflow of rivers to the surrounding crop fields. Thus proper attention should be given in order to minimize the negative effect of adverse conditions. Moreover eastern Oromia, Afar, northern Somali, Dire Dawa and Harari will expect near normal rainfall it would have a positive contribution for the water requirement of the existing crops and availability of pasture and drinking water over pastoral and agro-pastoral areas of the country.

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.

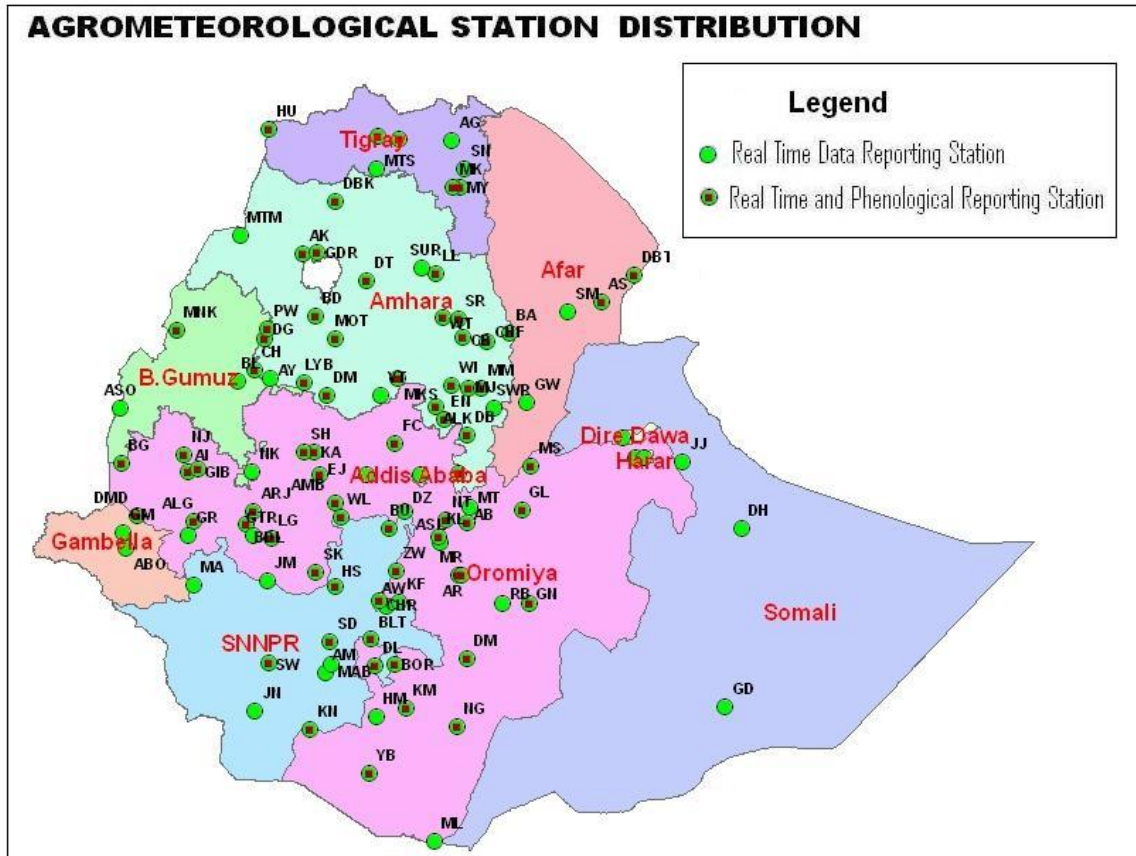
EXTREME TEMPERATURE: - The highest or the lowest temperature among the recorded maximum or minimum temperatures respectively.

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.

AGROMETEOROLOGICAL STATION DISTRIBUTION



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		