

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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አህፅሮት
እ.ኤ.አ ጁን 2009

በጁን 2009 እ.ኤ.አ የመጀመሪያው አስርተ ቀናት ዝናብ ሰጪ የሚቲዎሮሎጂ ክስተቶች ለዝናብ መኖር ምቹ ሁኔታ ባለመፍጠራቸው ምክንያት የክረምት ዝናብ ቀደም ብሎ በሚጀምሩባቸው አካባቢዎች ዝናቡ በደከመ ሁኔታ የቀጠለ ቢሆንም በሰሜን ምዕራብ፣ ሰሜን ምስራቅ፣ ምስራቅና ደቡብ የሀገሪቱ ክፍሎች አልፎ አልፎ ሲጥል የነበረው ዝናብ አጥጋቢ ባይሆንም ለግጦሽ ሳርና ለክረምቱ እርሻ የማሳ ዝግጅት እንዲሁም ለአገዳ ተክሎች እንደ በቆሎና ማሽላ ለመሳሰሉት በጎ ጎን የነበረው ሲሆን በትግራይ አንዳንድ ኪስ ቦታዎች የአማራ ምዕራብና ምስራቅ አካባቢዎች በቤንሻንጉል ጉሙዝ፣ ጋምቤላ፣ ምዕራብና መካከለኛው ኦሮሚያ፣ የደቡብ ብሔር ብሔረሰቦች ህዝቦች ክልል እንዲሁም የምስራቅ ኢትዮጵያ አካባቢዎች ዝናብ አግኝተዋል። ይህም ሁኔታ ለክረምቱ የእርሻ እንቅስቃሴና በአካባቢው ለሚኖሩ ጥምር ግብርና ለሚያካሂዱ አርብቶ አደሮች አዎንታዊ ተፅዕኖ የጎላ ነበር። በሌላ በኩል የሰሜን ምስራቅ ቆላማ የሀገሪቱ ክፍሎች የቀኑ ሙቀት በመጨመሩ ምክንያት ሞቃትና ደረቅ የአየር ሁኔታ አመዝናባቸው ተስተውሏል። ይህም ሁኔታ በእርሻው እንቅስቃሴና በአካባቢው ለሚበቅሉ ቋሚ ተክሎችና ለአርብቶ አደሩ አሉታዊ ተፅዕኖ እንደነበረው ተስተውሏል።

በጁን 2009 እ.ኤ.አ ሁለተኛው አስርተ ቀናት ዝናብ ሰጪ ክስተቶች በአብዛኛው የክረምት ዝናብ ተጠቃሚ አካባቢዎች ላይ ታይተው ነበር። በመሆኑም በአብዛኛው የምዕራብ አጋማሽ የሀገሪቱን ክፍሎች መካከለኛውንና ምስራቅ ኢትዮጵያን ያዳረሰ ዝናብ ተስተውሏል። በዚህም መሠረት ምዕራብ ትግራይ፣ አብዛኛው አማራ፣ ቤንሻንጉልጉሙዝ፣ ጋምቤላ፣ አብዛኛው ኦሮሚያ፣ የደቡብ ብሔር ብሔረሰቦች ህዝቦች ክልል፣ ሰሜናዊ አጋማሽ፣ ሶማሊና ደቡብ አፋር ዝናብ አግኝተዋል። ይህም ሁኔታ በአሁኑ ወቅት እየተካሄደ ላለው የክረምት ወቅት የእርሻ እንቅስቃሴ፣ ለቋሚ ተክሎች፣ ለአጠቃላይ የእርሻ እንቅስቃሴ እና ለአርብቶ አደሩና ለከፊል አርብቶ አደሩ ለመጠጥ ውሃ አቅርቦትና ለግጦሽ ሳር ልምላሜ አመቺ ሁኔታ እንደነበረው እሙን ነው። በአንጻሩ አብዛኛው የአፋር ክልል ከፊል ደመናማ የአየር ሁኔታ የታየበት ቢሆንም ፀሐያማ ሁኔታ አመዝናበት ሰንብቶአል። በመሆኑም በአካባቢው ለሚኖሩ አርብቶ አደሮች እና ከፊል አርብቶ አደሮች ለግጦሽ ሳር እና ለውሃ አቅርቦት በመጠኑም ቢሆን አሉታዊ ተፅዕኖ ነበረው።

በጁን 2009 እ.ኤ.አ ሶስተኛ አስርተ ቀናት ለክረምት ዝናብ መፈጠር መንስኤ የሚሆኑ የአየር ሁኔታ ገፅታዎች ለምዕራባዊ የሀገሪቱ ክፍል ላይ የተሻለ ጥንካሬ ያለውን የተስፋፋ ዝናብ እንዲኖር መንስኤ የነበሩ ቢሆንም የተቀሩትም የምዕራባዊ አጋማሽ እና የመካከለኛው አካባቢዎችም በአብዛኛዎቹ አስር ቀናት ዝናብ አግኝተዋል። በተጨማሪም የምስራቅ እና የደቡብ የሀገሪቱ ደጋማ አካባቢዎችም ዝናብ ነበራቸው። ይህም ሁኔታ በአሁኑ ጊዜ እየተካሄደ ላለው የክረምት የእርሻ ስራ እንቅስቃሴ ማለትም ለማሳ ዝግጅትና ለዘር ጊዜ እንዲሁም በመብቀል ላይ ላሉ የመኸር ሰብሎች ለቋሚ ተክሎች ለአርብቶ አደሩና ለከፊል አርብቶ አደሩ ለግጦሽ ሳር ልምላሜና ለመጠጥ ውሃ አቅርቦት አመቺ ሁኔታ ነበረው።

በጁን 2009 እ.ኤ.አ ወር የዝናቡ መጠንና የቦታ ሽፋን በሀገሪቱ ደቡብ ምዕራብ አካባቢ ላይ በይበልጥ የተወሰነ ነበር ማለት ይቻላል። ይሁንና አልፎ አልፎ ከተፈጠሩት የተመቻቹ የሚቲዎሮሎጂ ገፅታዎች ጋር ተያይዞ በተለይም በወሩ መጨረሻ ሳምንት ላይ ዝናቡ በሰሜን፣ ሰሜን ምስራቅ መካከለኛውና ምስራቅ ኢትዮጵያ ላይ ተስፋፍተው ሲዘንብ ነበር። ይህም ሁኔታ ለክረምት የእርሻ ስራ እንቅስቃሴ ለቋሚ ተክሎች ለአጠቃላይ የእርሻ እንቅስቃሴ ለአርብቶ አደሩና ለከፊል አርብቶ አደሩ እንደየ አካባቢው የዝናቡ አጀማመር ሁኔታ ጋር ጠቀሜታ እንደነበረው እሙን ነው።

SUMMARY

JUNE 2009

During the first dekad of June 2009, rain giving meteorological compartments did not favored the rainfall activities where Kiremt rain normally will start earlier over northwester parts of the country, while northeastern, eastern and southern portions of the country exhibited small amount of rainfall. However some pocket areas of Tigray, western and eastern Amhara, Benshangul-Gumuz, Gambella, western and eastern Oromiya, SNNPR and eastern parts of the country received rainfall, this situation might have favored Kiremt agricultural activities, land preparation and water supply for perennial crops and availability of drinking water and pasture. Some stations over western part of the country reported daily rainfall as high as 41.2, 46.7, 47.8 and 40.0 mm over Arjo, Begi, Chagni and Nejo respectively. On the other hand, dry and sunny conditions were prevailed over northeaster lowlands of the country. The satiation might have caused water stress on perennial crops as well as on pasture and drinking water availability.

During the second dekad of June 2009, the rain bearing meteorological phenomenon were dominated over most Kiremet rain benefited areas. As result, the rainfall was observed over most parts of western half of the country, central and eastern parts of Ethiopia. Related to this, over western Tigray, most of Amhara, Benshangul-Gumuz, Gambela, most of Oromia, SNNPR, southern half of Somali, and northern Afar were observed rainfall. The situation might have favored for perennial crops, Kiremt agricultural activities and for pasture and water availability over pastoral and agro-pastoral areas. On the other hand the dry and sunny weather condition was observed over Afar, this situation might have a negative impact for pasture and drinking water.

During the third dekad of June 2009, as result of the strength of kiremt rain bearing weather system over western half of the country and central parts of the country exhibited rainfall. In addition over eastern and southern highlands observed rainfall. The situation might have favored for meher agricultural activities like land preparation and sowing activities, perennial crops and for pasture and drinking water availabilities over pastoral and agro-pastoral areas.

Generally, during the month of June 2009, the rainfall amount and distribution was confidential over southwestern the country. However, in last week of the month as result of favorable weather system, over southern, southeastern, central and eastern parts of the country were observed rainfall. The situation might have favored for meher agricultural activities like land preparation and sowing activities, perennial crops and for pasture and drinking water availabilities over pastoral and agro-pastoral areas.

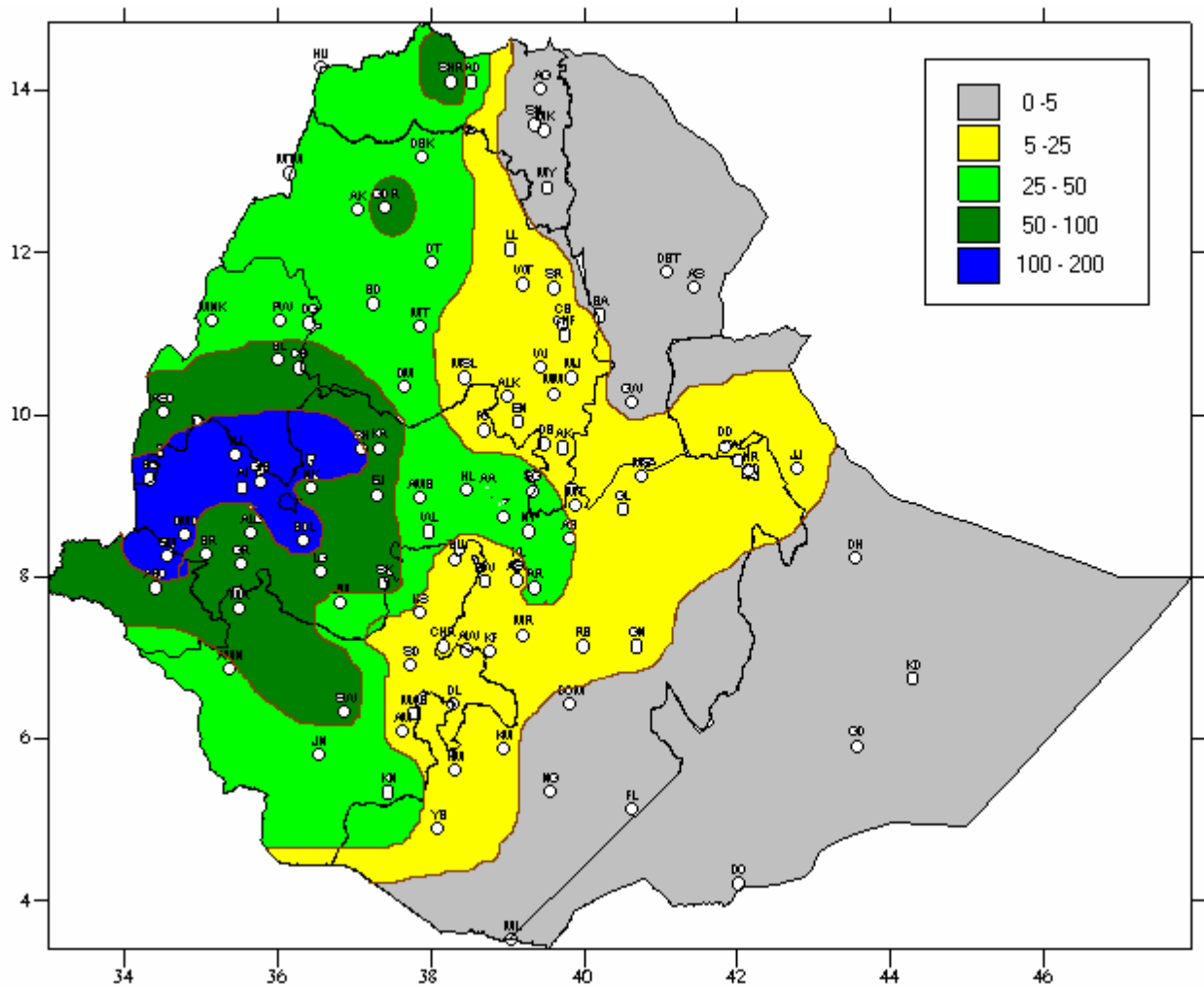


Fig 1. Rainfall distribution in mm (21 – 31 June, 2009)

1. WEATHER ASSESSMENT

1.1 (21- 31 June, 2009)

1.1.1 Rainfall amount (Fig.1)

Some parts of western Oromia, northern tip of Gambela, southern parts of Benshangul-Gumuz received 100-200mm rainfall. Southern half of Benshangul-gumuz, some parts of western Oromia, most parts of Gambela, northern parts of SNNPR, pocket area of central Amhara and Some parts of northern Tigray received 50-100mm rainfall. Western half of Amhara, western half of Tigray, some parts of central Oromia and western half of SNNPR exhibited 25-50mm rainfall. Eastern and southern Oromia, eastern half of Amhara and eastern parts of SNNPR received 5-25mm rainfall. The rest parts of the country received below 5mm rainfall.

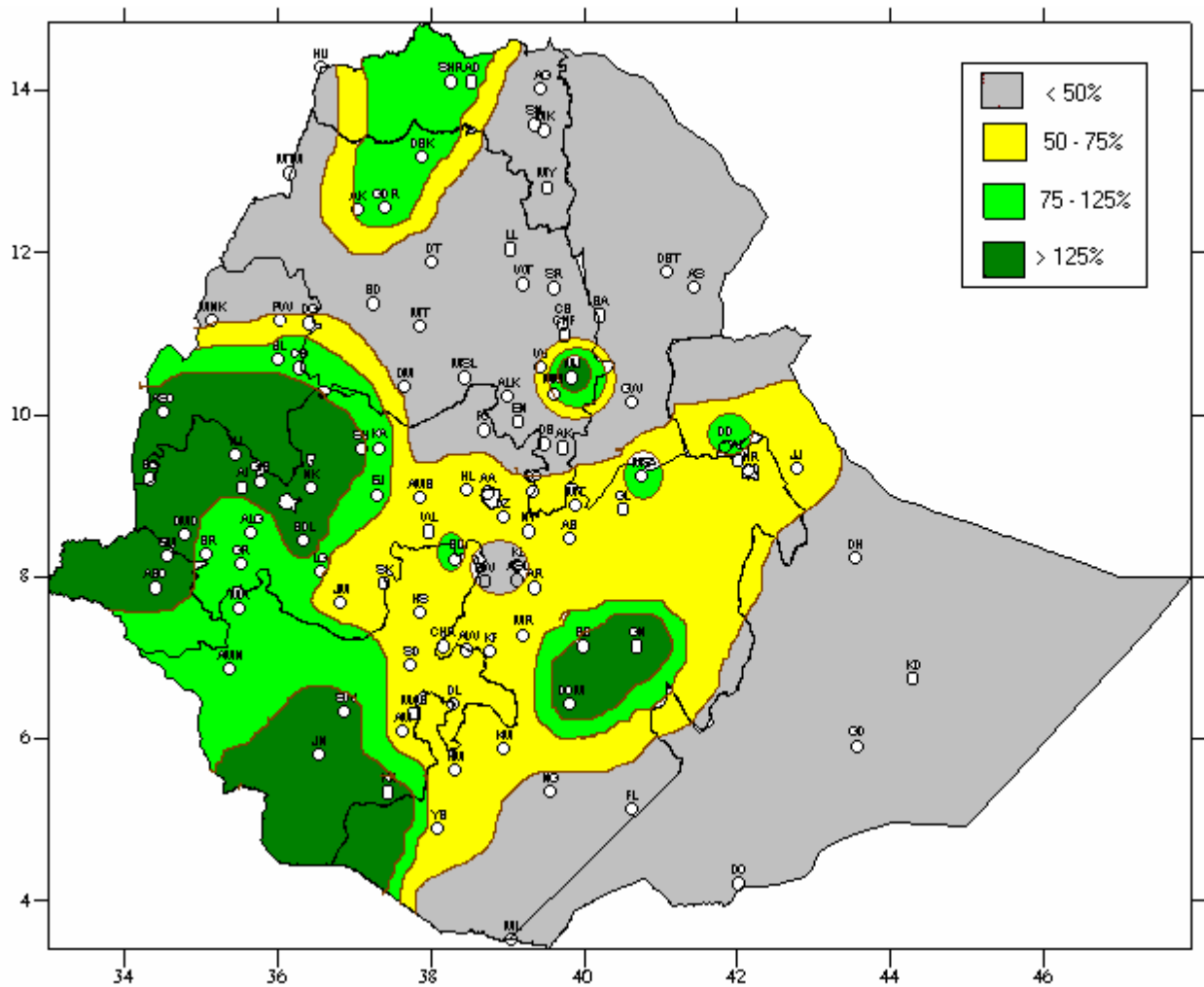


Fig. 2 Percent of normal rainfall distribution (21-31 June, 2009)

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. 2)

Gambela Most parts of SNNPR, Western and some parts of southern and eastern Oromia, southern half of Benshangul-Gumuz, northern Tigray, northern tip and pocket area of southern Amhara received normal to above normal rainfall. The rest parts of the country experienced below normal to much below normal rainfall.

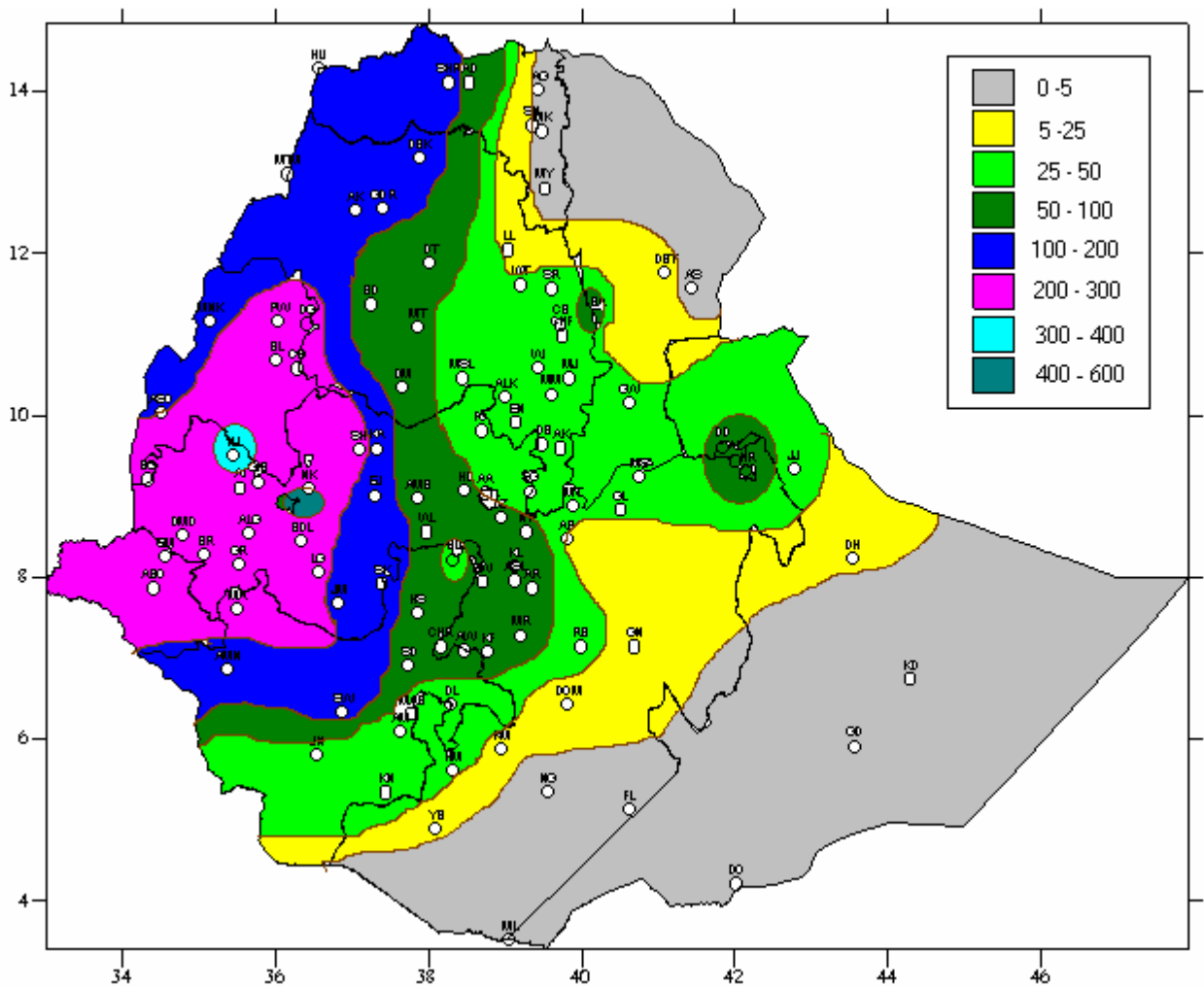


Fig. 3 Rainfall distribution in mm for the month of June 2009
1.2 June, 2009

1.2.1 Rainfall distribution (Fig.3)

Pocket area of western Oromia received above 300mm rainfall. Gambela Most parts of western Oromia and Benshangul-Gumuz and southern tip of SNNPR received 200-300mm rainfall. Parts of western Tigray, Amhara and SNNPR received 100-200mm rainfall. Central Amhara and Tigray and central and some parts of eastern Oromia received 50-100mm rainfall. Eastern half of Amhara most parts of eastern Oromia and southern parts of SNNPR and northern parts of Somali received 25-50mm rainfall. Central Tigray, northern Afar some parts of central Oromia received 5-25mm rainfall the rest parts of the country received little or no rainfall.

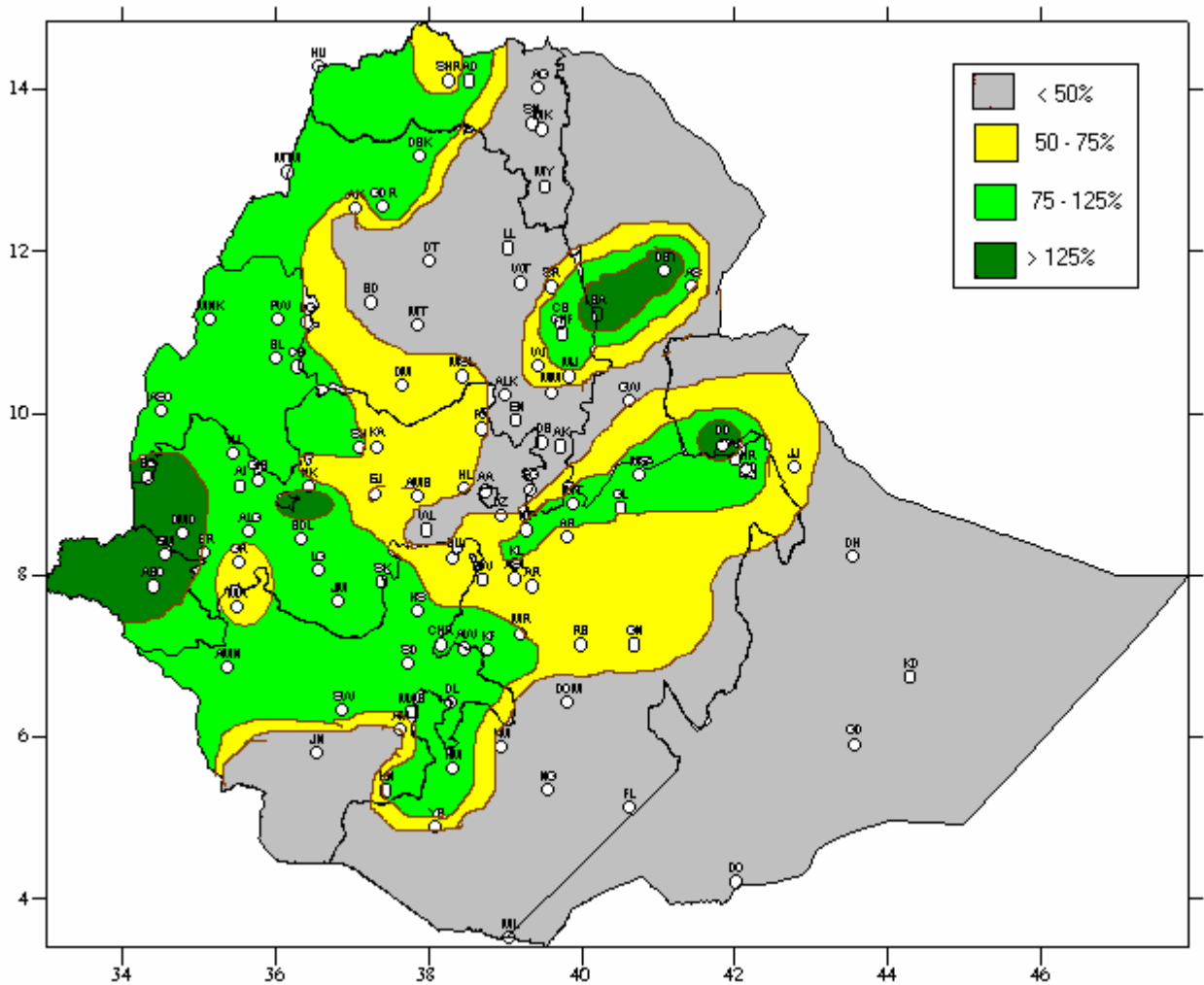


Fig. 4 Percent of Normal Rainfall distribution for the month of June, 2009

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. 4)

Gambela, Benshangul-Gumuze, most parts of SNNPR, western Amhara and Tigray, western and eastern Oromia and south western parts of Afar *received normal to above normal rainfall. The rest parts of the country exhibited below normal to much below normal rainfall.*

1.3 TEMPERATURE ANOMALY

Some stations recorded extreme Maximum temperature above 35 °C for 3-11 consecutive days. Dire dawa, Gode, Metehara, Aysha, Dubti, Gambella, Humera, Majete, Mankush, Miesso, Metema, Mille, Semera and mytsemrie reported 39.5, 36.5, 41.0, 41.5, 45.0, 37.0, 42.0, 36.0, 37.0, 38.0, 38.7, 44.5, 44.0, and 37.0 °C, respectively, this situation might have a negative impact on the normal growth and development of plants and livestock.

2. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE

2.1 VEGETATION CONDITION AND IMPACT ON AGRICULTURE

The rainfall amount and distribution was confidential over southwestern the country. However, in last week of the month as result of favorable weather system, over southern, southeastern, central and eastern parts of the country exhibited rainfall. The situation might have favored for meher agricultural activities like land preparation and sowing activities, perennial crops and for pasture and drinking water availabilities over pastoral and agro-pastoral areas.

2.2 EXPECTED WEATHER IMPACT ON AGRICULTURE DURING THE COMING MONTH

In the coming month, normal and in some place above normal rainfall will be expected over western Tigray, western and central Amhara, western and central Oromia, Benshangul-Gumuz, Gambela, northern half of SNNPR. In addition over eastern Amhara, eastern Tigray, Afar, northern half of Somali and eastern Oromia will expected normal and in some place below normal rainfall. The situation will have a positive impact for meher agricultural activities, general agricultural activities, perennial crops and pasture and drinking water availabilities. On other hand, the dry weather will dominated over southern and southeastern low lands hence the situation will have a negative impact for pasture and water availabilities.

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

Stations	Region	Amount of rainfall	Normal	Percent of Normal	ETo mm/day	Monthly ETo	Moisture status
Adigrat	TIGRAI	0.0	32	0.00	5.21	156.3	VD
Adawa		67.6	72.7	92.98	4.84	145.2	M
Humera		39.1	93.7	41.73	8.68	260.4	D
Mekele		3.9	29.1	13.40	6.14	184.2	VD
Maichew		0.3	31.6	0.95	4.8	144	VD
Senkata		2.3	115.5	1.99	5.83	174.9	VD
Dubti	AFAR	0.0	13.5	0.0	6.74	202.2	VD
Semera		16.5	NA	NA	6.68	200.4	VD
A. Ketema	AMHARA	24.6	72.3	34.02	4.21	126.3	MD
Ayehu		NA	NA	NA	NA	NA	NA
Aykel		101.5	253.5	40.04	4.57	137.1	M
Bahirdar		57.9	192.4	30.09	4.46	133.8	MD
Bati		61.7	15.4	400.65	4.94	148.2	MD
Combolcha		34.6	32.2	107.45	4.58	137.4	D
Chefa		NA	NA	NA	NA	NA	NA
D.Birhan		13.7	47.4	28.90	4.93	147.9	VD
D.Markos		88.6	161.3	54.93	4.17	125.1	M
D.Tabor		66.8	182.6	36.58	3.93	117.9	M
Dangila		NA	NA	NA	NA	NA	NA
Enwary		0.0	51.6	0.0	6.36	190.8	VD
Gonder		196.4	172.6	113.79	4.01	120.3	H
M.Meda		26.3	38.4	68.49	4.94	148.2	VD
Majete		24.6	28.2	87.23	5.19	155.7	VD
Metema		163	183.4	88.88	5.49	164.7	H
Lalibela		5.2	42.6	12.21	4.85	145.5	VD
Motta		NA	NA	NA	NA	NA	NA
S. Gebeya		30.7	62.6	49.04	4.19	125.7	D
Abomsa		OROMIYA	22.4	56.5	39.65	5.62	168.6
Alemaya	53.8		57.7	93.24	3.79	113.7	D
Alge	271.2		292	92.88	4.69	140.7	M
Aambo	96.4		155.6	61.95	3.78	113.4	D
Arjo	475.5		309.7	153.54	3.88	116.4	H
Bedelle	291.2		290.7	100.17	3.67	110.1	H
Begi	266.9		255	104.67	3.65	109.5	H
Bui	12.9		34.1	37.83	4.51	135.3	MD
Bilate	55.4		79.1	70.04	NA	NA	NA
Chira	202.7		253.8	79.87	3.71	111.3	H
D.Zeit	51.3		92.7	55.34	5.03	150.9	D
D.Mema	12.5		27.5	45.45	3.98	119.4	D
Fiche	42.3		84.3	50.18	4.41	132.3	D
Gimbi	249.9		330.2	75.68	4.01	120.3	H
Ginir	22.2		31.7	70.03	4.69	140.7	D
Gore	209.3		315.9	66.26	3.16	94.8	H
H.Mariyam	0		63.7	0.00	3.4	102	VD
Harar	74.6		68.2	109.38	3.84	115.2	MD
K/Mingist	17.7		62.6	28.27	3.06	91.8	D
Kachise	155.9		249.1	62.59	4.06	121.8	H
koffele	87.5		110.9	78.90	3.28	98.4	H
Kulumsa	2.5		89.8	2.78	3.73	111.9	VD
Limugent	204.8		260.5	78.62	3.92	117.6	H
Metehara	29.7		24.1	123.24	6.01	180.3	D

Mieso		41.1	48.1	85.45	5.9	177	D
Nazereth		50	65.6	76.22	6.14	184.2	D
Nedjo		339.7	303.6	111.89	3.75	112.5	H
Negelle		2.5	12	20.83	4.34	130.2	VD
Nekemte		211	388	54.38	3.52	105.6	H
Robe (Bale)		32.2	54	59.63	4.41	132.3	D
Sekoru		187.7	225.2	83.35	3.97	119.1	H
Shambu		229.4	244.8	93.71	NA	NA	NA
Wolliso		77.9	178	43.76	3.66	109.8	M
Zeway		NA	NA	NA	NA	NA	NA
Gode		0.0	0.6	0.00	6.72	201.6	VD
Jijiga	SOMALI	28.8	50.9	56.58	5.2	156	D
A.Minch		14.9	61.4	24.27	4.56	136.8	D
Awassa		53.5	101.3	52.81	4.28	128.4	MD
Bui		12.9	34.1	37.83	4.51	135.3	MD
Dilla	SNNPR	NA	NA	NA	NA	NA	NA
Hosaina		122.7	124.1	98.87	3.81	114.3	H
Jinka		39.6	94	42.13	3.61	108.3	MD
Konso		34.5	40.5	85.19	4.42	132.6	D
M.Abay		NA	NA	NA	NA	NA	NA
Sawla		99.8	101.8	98.04	3.62	108.6	MD
Assosa		NA	NA	NA	NA	NA	NA
Chagni		261.8	263.6	99.32	3.81	114.3	H
Bullen	B/GUMUZ	NA	NA	NA	NA	NA	NA
Pawe		301.1	295.5	101.90	4.65	139.5	H
Gambela	Gambela	215.4	145.4	148.14	4.04	121.2	H
A.A. Bole.		42.5	118.4	35.90	5.02	150.6	MD
A.A. Obs	A.A	42	123.5	34.01	NA	NA	NA
Diredawa	D.D	51.6	22.8	226.32	3.78	113.4	M
Harar	Harai	74.6	68.2	109.38	3.84	115.2	MD

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

ET _o	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 June and covers southern, central, eastern and northeastern parts of the country.

Crop Water Requirements: - The amount of water needed to meet the water loss through evapo-transpiration of a disease free crop, growing under non-restricting soil conditions including soil water and fertility.

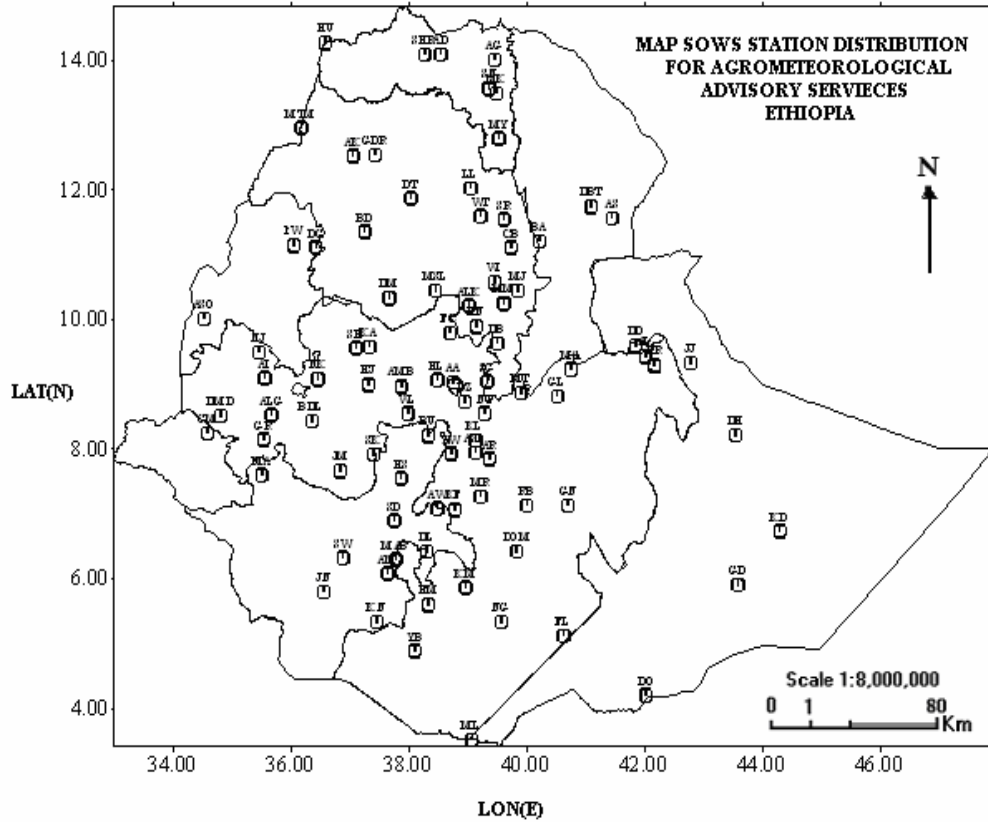
DEKAD: - First or second ten days or the remaining days of a month.

Extreme Temperature: -The highest or the lowest temperature among the recorded maximum or minimum temperatures respectively.

ITCZ: - Inter-tropical convergence zone (narrow zone where trade winds of the two hemispheres meet).

KIREMT: - Main rainy season that extends from June to September for most parts of the country with the exception of the southeastern lowlands of the country.

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



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