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 ኖቬምበር 2011

እ.ኤ.አ በኖቬምበር የመጀመሪያው አሥር ቀናት ወቅታዊ ያልሆኑ ዝናብ መፈጠር አመቺ የሆኑ የሚቲዎሮሎጂ ክስተቶች በመከሰታቸው ምክንያት ወደ ሀገራችን የሚገባ እርጥበት አዘል አየር በመጨመሩ የተነሳ በትግራይ፣ በአማራ ፣በመካከለኛ፣ በደቡብና ምዕራብ ኦሮምያ፣ በጋምቤላ ፣በደቡብ ብሔር ብሔረሰቦችና ሕዝቦች ክልል፣ በደቡብ ሶማሌ ዝቅተኛ ቦታዎች በአንዳንድ ሥፍራዎች እንዲሁም በሴሜን ሶማሌ፣ በአፋርና በቤንሻንጉል-ጉምዝ በጥቂት ቦታዎቻቸው ላይ ዝናብ ነበራቸው። በተለይም በአቦምሣ፣ በኢጃጂ እና በሞጣ ከባድ ዝናብ ጥሏል። ይህም ሁኔታ ዘግይተው ለተዘሩ የመኸር ሰብሎች፣ ለቋሚ ተክሎች ለመጠጥ ውሃና ግጦሽ ሣር አቅርቦት አዎንታዊ ተጽዕኖ ነበረው፡፡ ሆኖም ለደረሱ የመኸር ሰብሎች ስብሰባና ድህረ- ሰብል ስብሰባ አሉታዊ ተጽዕኖ እንደሚኖረው ይታመናል፡፡ በሌላ በኩል ሁለተኛ የዝናብ ወቅታቸው ለሆነት የደቡብና ደቡብ ምስራቅ የሀገሪቱ ክፍሎች ለግጦሽ ሣርና የመጠጥ ውሃ አቅርቦት የጎላ ጠቀሜታ እንደነበረው እሙን ነው።

እ.ኤ.አ በኖቬምበር 2011 ሁለተኛ አሥር ቀናት በኖቬምበር ሁለተኛው አሥር ቀናት በአብዛኛው የአገሪቱ ክፍሎች የበጋው ደረቅ፣ ፀሐያማና ነፋሻማ የአየር ሁኔታ ተስተውሏል። ይህም ደረቅ፣ ፀሐያማና ነፋሻማ የአየር ሁኔታ የእድገት ጊዚያቸውን ጨርሰው በመሰብሰብ ላይ ላሉት የመኸር ሰብሎች አዎንታዊ ተፅእኖ ነበረው፡፡ በሌላ በኩልም ሁለተኛ የዝናብ ወቅታቸው በሆኑት በደቡብና በደቡብ ምሥራቅ የአገሪቱ ክፍሎች ዝናቡ በመጠንም ሆነ በሥርጭት እየቀነሰ በመምጣቱ ምክንያት በአካባቢው ለሚኖሩት አርብቶ አደሮችና ከፊል አርብቶ አደሮች ለግጦሽና ለመጠጥ ውሃ አቅርቦት ላይ በመጠኑም ቢሆን አሉታዊ ተፅዕኖ ነበረው።

በእ.ኤ.አ በኖቬምበር ሶስተኛ አሥር ቀናት በሰሜን ምሥራቅ፣ በምሥራቅ፣ በመካከለኛው ኢትዮጵያና በአርሲና ባሌ ከፍተኛ ቦታዎችን ጨምሮ ወቅታዊ ያልሆነ ዝናብ የነበራቸው ይህም ሁኔታ በአብዛኛው የመኸር አብቃይ አካባቢዎች የመኸር ሰብል ስብሰባ ላይ አሉታዊ ተፅዕኖ እንዳሰላደረ እሙን ነው ። ሆኖም በአንዳንድ ደጋማ የሀገሪቱ ክፍሎች ላይ ዘግይተው ተዘርተው ላልደረሱ የመኸር ሰብሎች፣ ለቋሚ ተክሎች እንዲሁም ለግጦሽ ሳር አቅርቦት አዎንታዊ ተፅዕኖ ነበረው። በሌላ በኩል የወቅቱ ዝናብ ተጠቃሚ የሆኑት የደቡብ፣ የደቡብ ምሥራቅና የደቡብ ምዕራብ የሀገሪቱ አካባቢዎች በአብዛኛው ዝናብ አግኝተዋል በመሆኑም በአካባቢው ለሚኖሩት አርብቶ አደሩና ከፊል አርብቶ አዱሩ ለመጠጥ ውሃና ለግጦሽ ሳር አቅርቦት አዎንታዊ ተፅዕኖ ነበረው ይታመናል።

በአጠቃላይ በወሩ ውስጥ በደቡብና በምሥራቅ ትግራይ፣ በአብዛኛው አማራ፣ በአፋር ጥቂት ቦታዎች በምዕራብ፣ በመካከለኛውና በምዕራቅ ኦሮሚያ፣ በአርሲና በባሌ ከፍተኛ ቦታዎች ወቅታዊ ያልሆነ ዝናብ ከ25 እስከ 328 ሚ.ሜ ከ 8 እስከ 25 ቀናት ያገኙ ሲሆን የተቀሩት የአገሪቱ አካባቢዎች ደግሞ 25 ሚ.ሜ ዝናብ አግኝተዋል። ይህም ሁኔታ ዘግይተው ተዘርተው በተለያየ የእድገት ደረጃ ላይ ለሚገኙት የጥራጥሬ ሰብሎች፣ ቋሚ ተክሎች እንዲሁም ለመጠጥ ውሃና ለግጦሽ ሳር አቅርቦት በጎ ጎን የነበረው ሲሆን በሌላ በኩል በደረሱና በመሰብሰብ ላይ ላሉ የመኸር ሰብሎች ላይ አሉታዊ ተፅዕኖ ነበረው። ሆኖም ግን ሁለተኛ የዝናብ ወቅታቸው የሆኑት የደቡብ ኦሮሚያ፣ የደቡብ ብሔር ብሔረሰቦችና ህዝቦች ክልል፣ የደቡብ ሶማሌና ጋምቤላ የወቅቱን ዝናብ አግኝተዋል በመሆኑም በአካባቢው ለሚኖሩት አርብቶ አደሮችና ከፊል አርብቶ አደሮች ለመጠጥ ውሃና ለግጦሽ ሳር አቅርቦት አዎንታዊ ተፅዕኖ እንደነበረው ይታመናል። በሌላ በኩል የሰሜን ምሥራቅ የመካከለኛውእና የምሥራቅ የአገሪቱ ከፍተኛ አካባቢዎች የሌሊቱና የማለዳው ቅዝቃዜ ጠንከር ብሎ ተስተውሏል ለመጥቀስም ያህል በኮፈሌ 0.0°C በአለምማያ -1.0°Cና ዳንግላ 0.6°C ይገኝበታል። በደጋማው አካባቢ ውርጭ የመከሰት ዕድል ስለሚኖረው ገና ፍሬ በሞምላት ላይ ላሉት እና ላልደረሱ ሰብሎችእንዲሁም በአካባቢው ለሚኖሩት እንሰሳት ጤናማ ዕድገትና ምርታማነት ላይ አሉታዊው ተፅዕኖ እንደሚኖረው እሙን ነው።

SUMMARY

November 2011

During the first dekad of November 2011, rain bearing meteorological phenomenon were prevailed over most parts of the country. As a result parts of Tigray, Amhara, central, southern and western Oromia, Gambella, SNNPR, lowlands of southern and pocket areas of northern Somali, Afar and Benishangul-Gumuz received a considerable amount of rainfall. Moreover, some reporting station reported heavy falls ranging from30.0 to 63.5 mm of rainfall in one rainy day. The situation might have favored perennial crops, late sawn pulse crops that are found at different phonological stages and availability of water for pasture, while the unseasonal rainfall observed might have a negative impact on fully matured Meher crops and harvest activities. On the other hand, Bega rain benefiting areas of southern and south eastern pastoral and agro pastoral areas of the country have got 25.1 to 121.2 mm of rainfall from 1 to10 days. The situation might have a positive impact on pasture and drinking water availability.

During the second dekad of November 2011, Bega, dry, sunny and windy weather condition prevailed over most parts of the country. The situation might have a positive impact on harvest and post harvest activities. Bega weather which was prevailing over most parts of the country will occur early mooring and night cold. On line to this some station from central, eastern and southeastern high lands of the country would report minimum temperature less than zero. This situation would have a negative impact on the normal growth of plants and livestock. On the other hand with the exception of Jinka and Maji reported heavy fall 34.1 and 33.0 mm in one rainy day respectively, rainfall decrease in amount and distribution over Bega rain benefiting areas of southern and south eastern pastoral and agro pastoral areas of the country this might have a negative impact on the availability of pasture and drinking water and water requirement for perennial plants.

During the third of November2011 rain bearing meteorological phenomenon were prevailed over eastern, northeastern and central, Arsi and Bale high lands of the country would received unseasonla rainfall this situation would have a negative impact over most Meher growing areas where crops are fully matured and harvest and post harvest activities are takes place, however the situation might have favored perennial crops, late sawn pulse crops that are found at different phonological stages and availability of drinking water and pasture. On the other and Bega rain benefiting areas of southern, southeastern and southwestern parts of the country would get 25-174mm of rainfall for 2-9 days. While heavy fall reported in some reporting station over southern and southeastern low ands of the country ranging from 35.0- 91.0mm in one rainy day. The situation might have favored availability of water for perennial plants, late sawn pulse crops found at different phonological phase and pasture and drinking water for pastoral and agro pastoral areas.

Generally, during the month of November2011, southern and eastern Tigray, most parts of Amhara, and Afar and few places of western, central and eastern Oromia, Arsi and Bale high lands of the country would receive unseasonal rain in relation to this the minimum temperature in early morning and night increase. This situation would have a negative impact over most Meher growing areas where Meher crops are fully matured and harvest and post harvest activities are takes place, conversely the situation might have favored availability of water for perennial crops, late sawn pulse crops that are found at different phonological stages, drinking water and pasture. On the other hand Bega rain benefiting areas of southern, southeastern and southwestern parts of the country would get 35.2-361.5mm of rainfall for 2-24 days. While heavy fall ranging from 35.0- 91.0mm of rainfall reported over southern and southeastern low ands of the country in one rainy day. The situation might have favored the availability of water for perennial plants, pasture and drinking water for pastoral and agro pastoral areas.

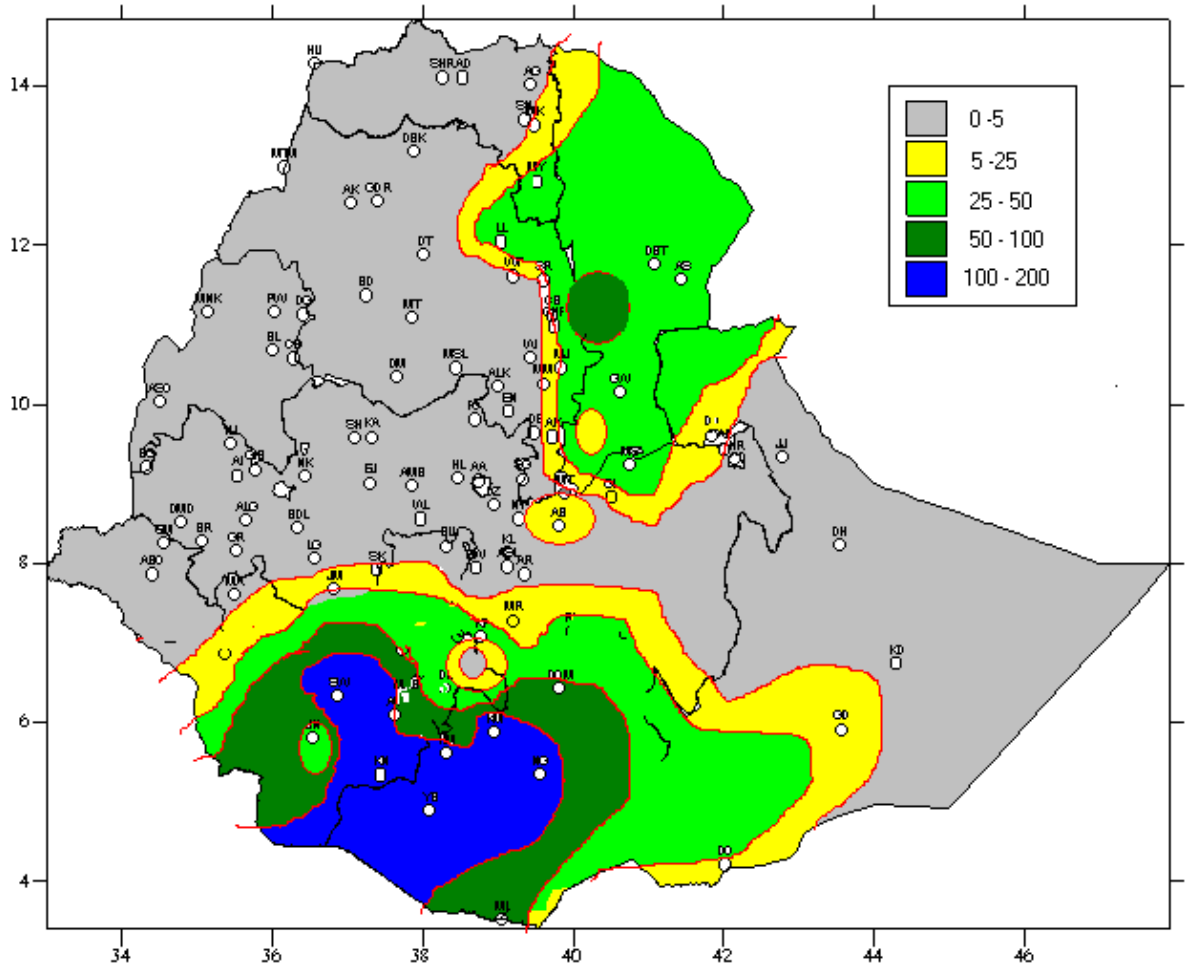


Fig 1. Rainfall distribution in mm (21 – 31 November, 2011)

1. WEATHER ASSESSMENT

1.1 (21- 31 November, 2011)

1.1.1 Rainfall amount (Fig.1)

Some parts of northern and southern SNNPR and southern Oromia received 100-200 mm of rainfall. Much of western and southern SNNPR and southern Oromia, and pocket areas of eastern Amahra and adjoining areas of Afar received 50-100mm of rainfall. Much of southern and western SNNPR and southern and western Oromia , southern Somalia and most parts of Afar experienced 25-50 mm of rainfall. Western and southern Afar and adjoining areas of Amhara, western and southern Oromia, southern Somalia received 5-25 mm of rainfall. The rest parts of the country experienced little or no rainfall.

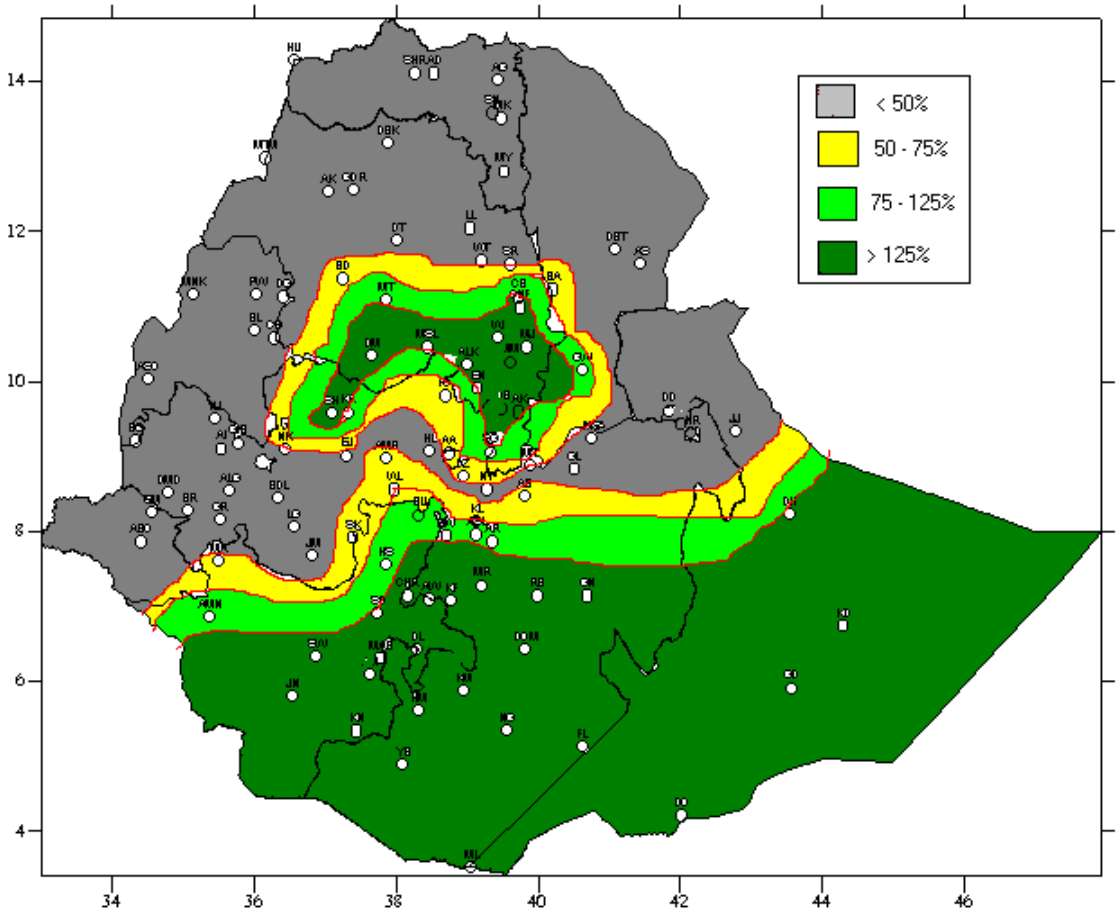
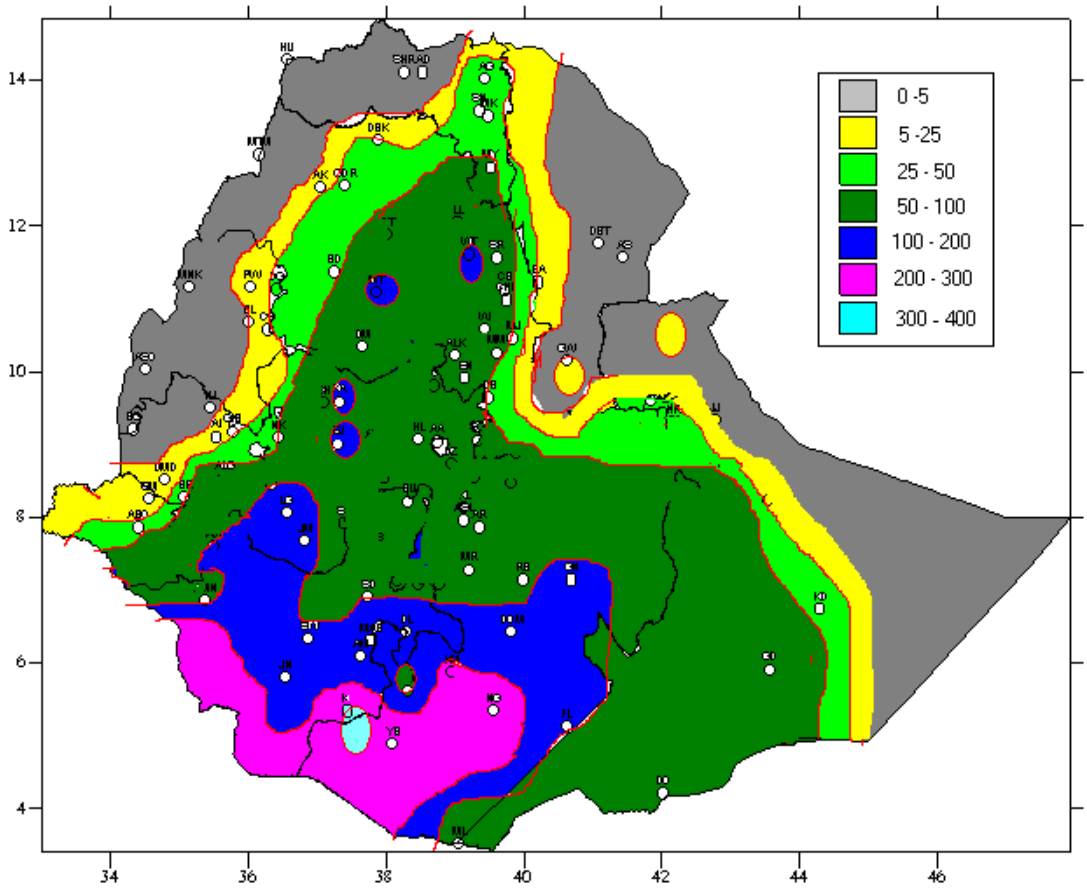


Fig. 2 Percent of normal rainfall distribution (21-31 November, 2011)

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)

Most parts of southern Somali, southern and southwestern Oromia, western and southern SNNPR southern and central received normal to above normal rainfall. The rest parts of the country experienced below normal to much below normal rainfall.



Rainfall distribution in mm for the month of November2011

1.2 November, 2011

1.2.1 Rainfall distribution (Fig.3)

Pocket area of southern Oromia experienced 300-400mm of rainfall. Some of southern SNNPR and southern Oromia received 200-300 mm of rainfall. Most parts of SNNPR and southern and southwestern Oromia and pocket areas of Amhara received100-200mm of rainfall. Much of southern and eastern Amhara, Oromia, SNNPR and southern and southwestern Somali received 50-100mm of rainfall. Some parts of northern, western and eastern Amhara , western and eastern Oromia and northeastern Tigray pocket areas of western Gambela and parts of Southern and western Somali received 25-50 mm of rainfall. Much of northern and eastern Tigray, southern and eastern Amhara, western Oromia and northern and central Somalia received 5-25 mm of rainfall. The rest parts of the country experienced little or no rainfall.

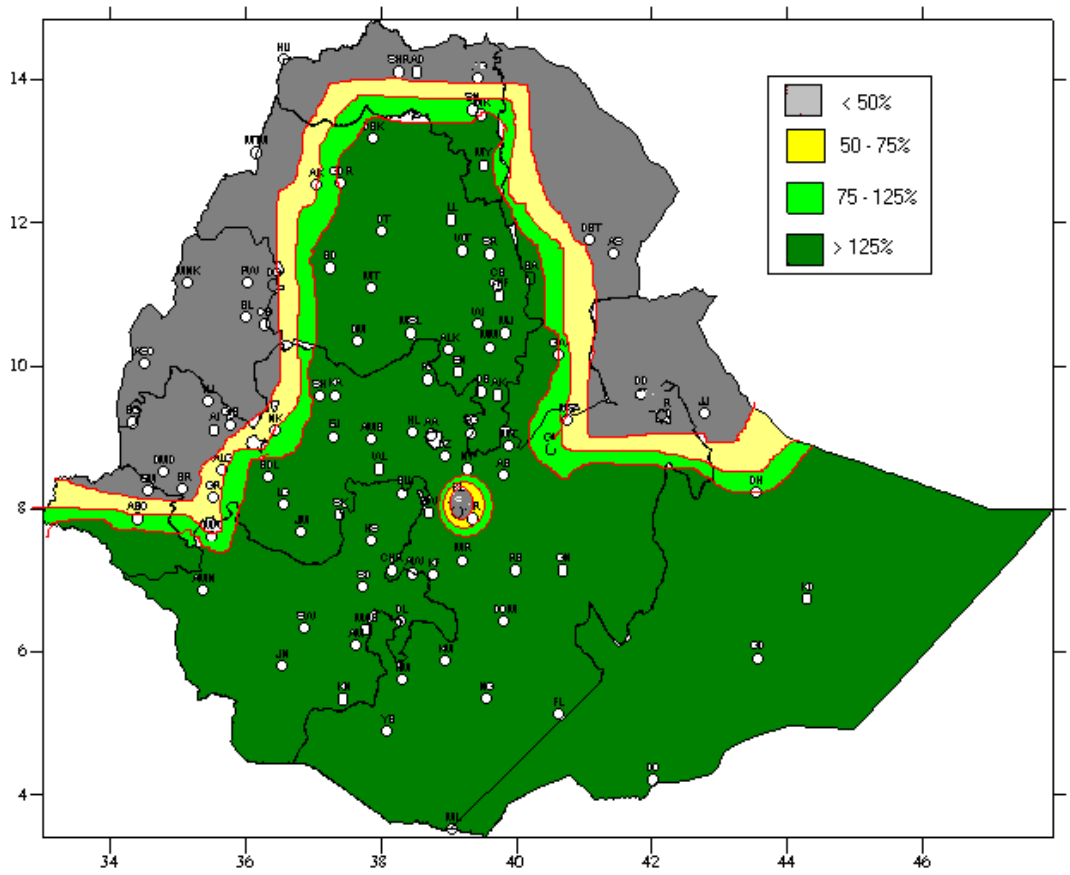


Fig. 4 Percent of Normal Rainfall distribution for the month of November, 2011

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)

Most parts of SNNPR, Oromia, eastern, southern and central Amhara, southern southeastern and southwestern Somalia and pocket area southern Tigray experienced normal to above normal rainfall. The rest parts of the country experienced below normal to much below normal rainfall.

1.3 TEMPERATURE ANOMALY

Some stations over the lowlands parts of the country recorded extreme maximum temperature greater than 35^{o}C. Among the reporting stations: Awash Arba, Gewan, Humera and Semera recorded 36.5, 36.2, 38.0 and 35.5 and 41.0^{o}C respectively. On the other hand Dire Dewa, Alimaya, Arsi Robe, Chagnie, Dangla, Debark, Debre Berhan, Debre Tabour, Jijiga, Koffel, Mehal Meda, Nejo and Wegle Tena recorded a minimum temperature as low as 4.0, -1.0, 3.5, 4.5, 0.6, 3.6, 3.5, 4.8, 3.4, 0.0, 4.8, 3.5 and 2.5°C respectively. The situation might have a negative impact on the normal growth and development of plants and livestock.

2. AGROMETEOROLOGICALCONDITIONSAND MPACT ON AGRICULTURE

2.1 VEGETATION CONDITION AND IMPACT ON AGRICULTURE

During the month of November2011, southern and eastern Tigray, most parts of Amhara, and Afar and few places of western, central and eastern Oromia, Arsi and Bale high lands of the country would receive unseasonal rain in relation to this the minimum temperature in early morning and night increase. This situation would have a negative impact over most Meher growing areas where Meher crops are fully matured and harvest and post harvest activities are takes place, conversely the situation might have favored availability of water for perennial crops, late sawn pulse crops that are found at different phonological stages and drinking water and pasture. On the other hand Bega rain benefiting areas of southern, southeastern and southwestern parts of the country would get 35.2-361.5mm of rainfall for 2-24 days. While heavy fall ranging from 35.0- 91.0mm of rainfall reported over southern and southeastern low ands of the country in one rainy day. The situation might have favored the availability of water for perennial plants, pasture and drinking water for pastoral and agro pastoral areas.

2.2 EXPECTED WEATHER IMPACT ON AGRICULTURE DURING THE COMING MONTH

In normal condition in the month of December Bega's dry, sunny and windy weather condition dominate over most parts of the country in line to this harvest and post harvest activist takes place over most Meher crops growing areas. But due to the intensification of rain bearing meteorological phenomena near normal rainfall activities will expect over eastern and central Oromia, Arsi and Bale high lands, eastern Amhara, eastern Tigray. Therefore, this situation will have a negative impact for harvest and post harvest activities of Meher crops. Thus farmers and the concerned body should have harvested-matured crops on time and place appropriately in order to minimize the risk. Besides, to this expected rainfall in the aforementioned areas will favor water availability for perennial plants and pulse crops which are found at different phonological stage and availability of pasture and drinking water. On the other hand Bega rain benefiting areas of SNNPR, southern Oromia and southern Somalia parts of the country will expect normal rainfall this might have favor availability of water for perennial plants, pasture and drinking water for pastoral and agro pastoral areas.

Table 2. Climatic and Agro-Climatic elements of different stations for the month of November2011

No	Stations	Region	R/fall	Normal	% of Normal	Eto mm/day	Eto monthly	Moisture	Moisture statues
1	Ayder	TIGRAY	7.1	NA	NA	4.2	130.8	0.0	VD
2	Adigrat		0.0	27.8	0.0	3.3	101.1	0.0	VD
3	Adwa		43.0	27.3	157.5	3.3	100.8	0.4	MD
4	Chercher		1.0	NA	Na	5.1	156.6	0.0	VD
5	Humera		9.7	15.8	61.4	6.3	194.4	0.0	VD
6	Maichew		6.6	49.7	13.3	3.6	112.8	0.4	MD
7	Mekele		0.0	6.0	0.0	4.0	125.2	0.0	VD
8	Senkata		1.6	41.8	3.8	4.5	140.1	0.0	VD
9	Shire		3.5	29.6	11.8	4.2	130.2	0.0	VD
1	Awash 40	AFAR	0.0	NA	NA	5.9	181.4	0.0	VD
2	Gewane		0.0	16.0	0.0	6.7	206.8	0.0	VD
3	semera		0.0	23.6	0.0	6.9	214.2	0.0	VD
1	A/Ketema	AMHARA	0.0	26.9	0.0	4.6	143.5	0.0	VD
2	Aykel		60.8	146.1	41.6	4.0	124.6	0.7	M
3	Amba Mariam		4.4	NA	NA	3.9	119.7	0.0	VD
4	B. Dar		33.5	96.4	34.8	3.2	100.4	0.2	D
5	Bati		9.2	30.3	30.4	3.6	111.6	0.3	MD
6	Chagni		174.2	185.3	94.0	3.5	107.3	1.6	H
7	Cheffa		8.0	41.8	19.1	NA	NA	NA	NA
8	Combolcha		11.6	36.4	31.9	3.0	91.8	0.2	D
9	D.Berehan		0.0	23.9	0.0	3.7	115.9	0.0	VD
10	D.Markos		0.0	81.6	0.0	3.9	119.7	0.0	VD
12	D.Tabor		2.2	86.6	2.5	NA	NA	NA	NA
13	Debark		5.0	108.4	4.6	3.7	113.8	0.0	VD
14	Enewari		0.0	8.4	0.0	3.4	106.6	0.0	VD
15	Gondar		23.7	71.6	33.1	3.8	116.3	0.2	D
16	Lalibela		1.2	16.6	7.2	4.4	134.9	0.0	VD
17	M.Meda		1.6	29.2	5.5	4.0	125.2	0.0	VD
18	Majete		14.5	33.8	42.9	4.1	126.5	0.1	D
19	Mota		31.7	84.3	37.6	4.0	123.4	0.3	MD
20	M/ Selam		0.0			4.0	125.2	0.0	VD
21	Sirinka		1.0	59.2	1.7	3.3	102.9	0.0	VD
22	w/lllu		2.5	13.6	18.4	3.5	109.4	0.0	VD
23	W.Tena		0.5	8.3	6.0	3.3	101.7	0.0	VD
1	A. Robe	OROMIA	4.2	68.4	6.1	3.3	101.7	0.0	VD
2	Abomsa		3.8	76.7	5.0	3.9	120.3	0.0	VD
3	Aira		25.5	135.0	18.9	3.5	108.2	0.3	MD
4	Alemaya		0.0	45.1	0.0	4.5	138.3	0.0	VD
5	Ambo		0.0	41.5	0.0	3.7	113.5	0.0	VD
6	Arjo		15.2	108.8	14.0	3.6	112.2	0.1	D
7	Bedelle		16.7	129.3	12.9	4.2	129.0	0.1	D
8	Bui		0.0	21.8	0.0	4.7	146.0	0.0	VD
9	Chria		54.0	144.8	37.3	3.5	109.4	0.4	MD
10	D.Zeit		0.0	21.5	0.0	4.2	129.0	0.0	VD
11	D/mena		173.8	214.5	81.0	3.5	107.9	1.6	H
12	Ejaji		19.0	80.2	23.7	4.3	133.9	0.1	D
13	Fiche		0.0	28.6	0.0	3.6	111.6	0.0	VD
14	Gimbi		41.6	131.9	31.5	3.9	121.8	0.3	MD
15	Ginir		137.9	190.7	72.3	3.7	113.5	1.3	H
16	Gore		173.4	194.3	89.2	2.9	88.4	1.4	H

17	Jimma		10.6	101.5	10.4	3.5	107.9	0.1	D
18	Kachise		2.4	106.3	2.3	4.0	124.6	0.0	VD
19	koffele		34.5	98.1	35.2	3.5	108.8	0.3	MD
20	Kulumsa		0.0	38.1	0.0	5.0	154.7	0.0	VD
21	Limugent		49.8	188.3	26.4	3.9	119.7	0.4	MD
22	Sekoru		7.7	152.2	5.1	3.6	112.5	0.1	D
23	Masha		37.4	202.8	18.4	NA	NA	NA	NA
24	Metehara		0.0	21.1	0.0	4.4	136.4	0.0	VD
25	Mieso		0.0	40.5	0.0	4.1	128.3	0.0	D
26	Nazereth		0.0	53.6	0.0	5.9	181.4	0.0	D
27	Nedjo		51.2	67.9	75.4	3.1	95.8	0.5	MD
28	Negelle		135.2	125.1	108.1	3.6	110.1	1.0	H
29	Nekemte		82.1	182.0	45.1	3.0	93.6	0.9	M
30	Nuraera		0.0			4.4	137.0	0.0	VD
31	Robe		36.9	118.0	31.3	3.0	91.5	0.4	MD
32	Shambu		7.3	81.8	8.9	3.3	102.9	0.1	D
33	S/Robit		1.8	36.6	4.9	NA	NA	NA	NA
34	Woliso		0.0	39.4	0.0	5.1	157.8	0.0	VD
35	Ziway		0.0	35.8	0.0	4.9	151.9	0.0	VD
1	Arba minch	SNNPR	52.8	119.8	44.1	3.5	109.7	0.4	MD
2	Awassa		5.5	84.3	6.5	3.3	103.2	0.3	MD
3	Bilate		36.6	61.5	59.5	4.2	129.3	0.3	MD
4	H.Mariyam		105.9	125.1	84.7	3.1	96.1	1.5	H
5	Hossaina		9.0	79.8	11.3	3.9	120.0	0.1	D
6	Jinka		173.3	136.7	126.8	3.0	93.9	2.2	H
7	Konso		160.5	88.2	182.0	3.9	119.7	1.1	H
8	Mirababaya		103.6	92.4	112.1	4.0	125.2	0.8	M
9	Sawla		32.6	64.7	50.4	3.1	94.6	0.3	MD
	Asossa	B/Gumuz	173.0	132.6	130.5	2.8	86.5	2.0	H
	Dangila		48.0	81.9	58.6	3.5	107.3	0.4	MD
	Mankush		51.6	NA	NA	3.7	114.7	0.4	MD
	Pawe		80.5	137.9	58.4	3.1	95.8	0.8	M
1	Aysha	SOMALIA	0.0	NA	NA	4.3	131.8	0.0	VD
2	Gode		86.0	59.4	144.8	5.3	163.1	0.6	M
3	Jiiiga		0.0	49.5	0.0	4.7	145.7	0.0	VD
1	Harar	HARAR	7.3	42.4	17.2	4.2	130.2	0.1	M
1	D/Dawa	D/DAWA	0.0	25.5	0.0	3.6	111.9	0.0	VD
1	A.A. Bole	A.A	0.0	33.7	0.0	4.2	131.1	0.0	VD
	Gambella	Gambella	205.1	104.3	196.6	3.7	115.9	2.0	H
1	Lare		109.3	NA	NA	4.1	128.3	0.9	M

Explanatory Note

Reference Evapo-transpiration (mm)

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

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 evapo-transpiration of a disease free crop, growing under non-restricting soil conditions including soil water and fertility.

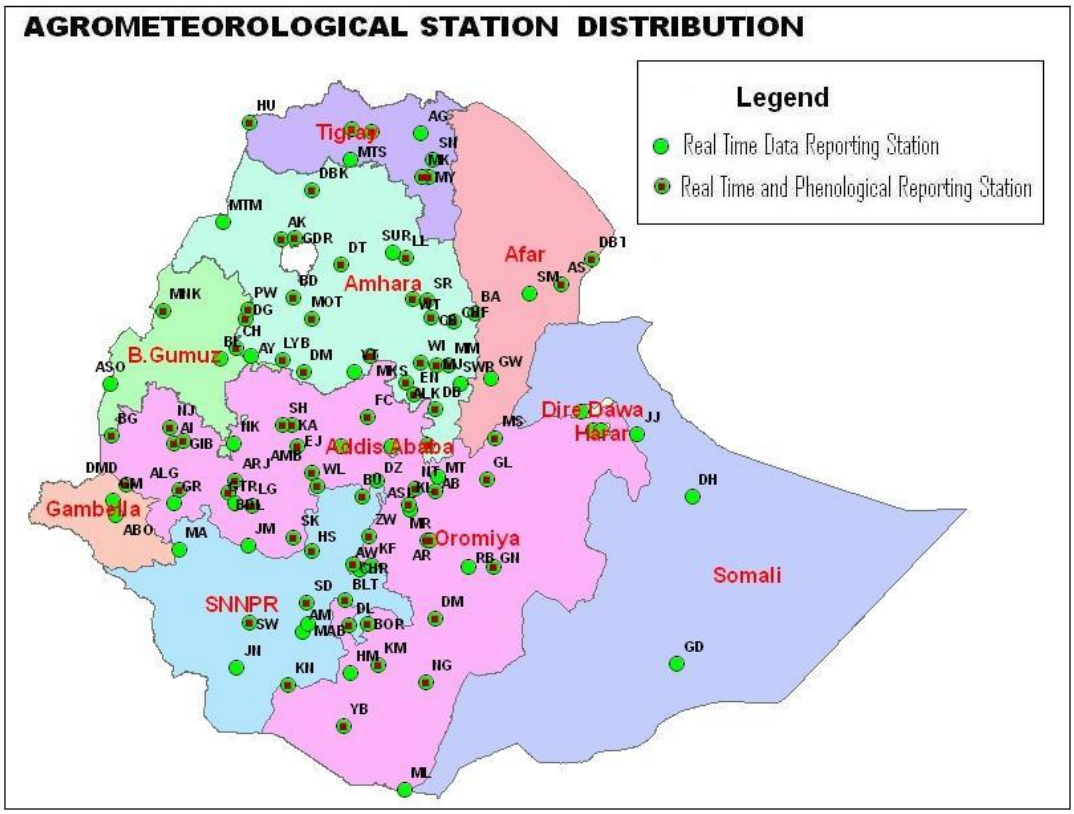
DEKAD: - First or second ten days or the remaining days of a month.

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	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		