SUMMARY
October 2004

During the month of October 2004, much of Tigray, Amhara, southern Afar, Somali, Oromiya and SNNPR experienced normal to above normal rainfall condition. Thus this can be considered to contribute positively to the improvement of pasture and water problem over parts of southern and southeastern lowlands of the country. Among some of the reporting stations Assela, Negelle, Shambu, Jimma, Gelemso, Gimbi, Dolo Mena, Aira, Kibre Mengist, Moyale, Gore and Chagni received 158.1, 138.1, 134.8, 134.1, 132.1, 125.9, 125.7, 121.7, 121.6, 121.3, 112.5 and 102.2 mm of monthly rainfall, respectively.

During the first dekad of October 2004, most parts of the country experienced normal to above normal rainfall. This condition favored crops that are at reproductive stage and the recently sown pulse crops in the areas. On the contrary, some areas from the west (Aira, Alge, Bedele and Shambu), central (Addis Ababa), southwest (Jima and Sekoru), eastern (Gelemso and Miesso) and south (Kibre Mengist) exhibited heavy falls ranging from 32 - 46 mm. As a result, some areas like Asosa reported crop damage and livestock loss due to heavy fall with thunderstorm. Pursuant to the crop phenological report harvesting of root crops and cereals was under way in some areas of northeastern parts of the country. Medium field condition due to water stress has been observed in some areas of eastern Tigry and Amhara. Shambu and Arsi Robe reported severe weed infestation on beans and teff crops, respectively.

During the second dekad of October 2004, southern and pocket areas of western Oromiya, eastern and central Benishangul-Gumuz, pocket areas of eastern SNNPR, western, central and eastern Tigray and pocket areas of northern Amhara and eastern Hararghe exhibited normal to above normal rainfall while the rest portions of the country were under below normal rainfall. This above normal rainfall condition over some Meher producing areas favored the existing crops as well as the late sown crops and the crops that are going to be sown like chickpea, lentil and some short season verities of crops over agro-pastoral areas of southern Oromiya. Besides, it had indispensable contribution to mitigate the shortage of pasture and drinking water over northern Somali and the lowland of southern Oromiya. On the contrary, the observed below normal rainfall over some areas of southern and northeastern Amhara, western and eastern Oromiya, northern SNNPR, eastern and southwestern Benishangul-Gumuz and southeastern Tigray negatively affected the crops on their water requirements, thus some stations: Majete, Laliblela, Gimbi, Dembi Dolo, Bullen, Assosa and Mekele reported slight wilting and medium field condition due to moisture stress. Moreover, the observed dry spells over some Meher producing areas of northern SNNPR, eastern Amhara, central, eastern and western Oromiya facilitated the on going harvest and post harvest activities of long and medium cycle crops.

During the third Dekad of October 2004, with the exception of parts of southern Oromiya, pocket areas of central and western Oromiya as well as southern Somali, much of Meher growing areas of the country experienced below normal rainfall. This situation facilitated the ongoing harvest and post harvest activities of long and medium cycle crops over much of Meher growing areas of the country like western, central and eastern Oromya, northern SNNPR, Much of Amhara, Tigray, Benishangul-Gumuz and Gambella. On the contrary, it had negative impact on the water requirements of the crops that are attaining at flowering stage over eastern margin of Amhara. Regarding air temperature, the highlands of Amhara (Ambamariam, Debre Birhan, Enewary, Mehal Meda, Wegel Tena), Tigray (Adigrat), and Oromiya (BaleRobe, Meraro,Fitche,

Kofele and Alemaya) exhibited extreme air temperature below 5^0C from two to ten days; particularly Debre Brehan recorded extremism air temperature below 0^0C for ten consecutive days. This situation negatively affected crops that are attaining at flowering and grain filling stage. Besides, extreme air temperature above 35^0C occurred over Afar (Assaita, Dubti and Gewane) and Somali (Gode) from three to ten consecutive days. Regarding phenological reports, harvest and post harvest activities of long and medium cycle cereal and pulse crops have been performed over much of Meher growing areas of the country since the beginning of the second dekad of October. Maize was at full ripeness stage over eastern and western Amhara, western and central Oromiya, at wax ripeness stage in northwestern Amhara and at flowering stage over some areas of eastern Amhara while at tasseling stage over southeastern and central Oromiya and at emergence stage over southern Oromiya. Sorghum was at ripeness stage over eastern Amhara, eastern Oromiya and at flowering stage over eastern Amhara, western Oromiya, northern SNNPR as well as southeastern Benishangul-Gumuz also millet was at flowering stage over some areas of western Oromiya as well as eastern Benishangul-Gumuz while at tasseling stage in western Amhara. Wheat was at ripeness stage over southern and eastern Amhara as well as central Oromiya and at flowering stage in central Oromiya while at lower vegetative stage over some areas of southern Amhara. Teff was at ripeness stage over eastern Amhara, western and central Oromiya as well as northeastern SNNPR while at flowering stage over western and southern Amhara, central Oromiya, northern SNNPR and southwestern Benishangul-Gumuz while at tasseling stage over southeastern Oromiya. Pulse crops like beans and Peas were at ripeness stage over southern and northeastern Amhara and central Oromiya while at flowering stage in northeastern SNNPR. Oil crop like Nug was at ripeness stage over central and western Oromiya as well as eastern Benishangul-Gumuz while at flowering stage over central Oromiya and at tasseling stage in some areas of western Oromiya.

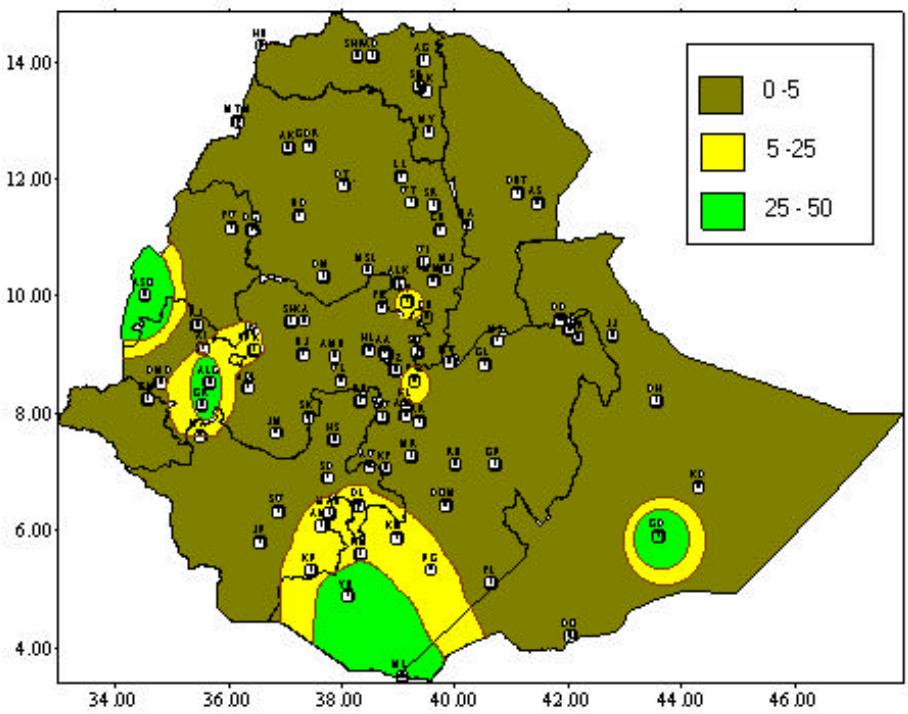

Fig 1. Rainfall distribution in mm (21-3l October, 2004)

1. WEATHER ASSESSMENT

1.1 21-31 October 2004

1.1.1 Rainfall amount (Fig.1)

Southern SNNPR, southern, southeastern and parts of western Oromiya, pocket areas of southern Amhara southern and southeastern Somali much of Benishangul-Gumuz received from 5-50mm of rainfall while the rest parts of the country received below 5mm**.**

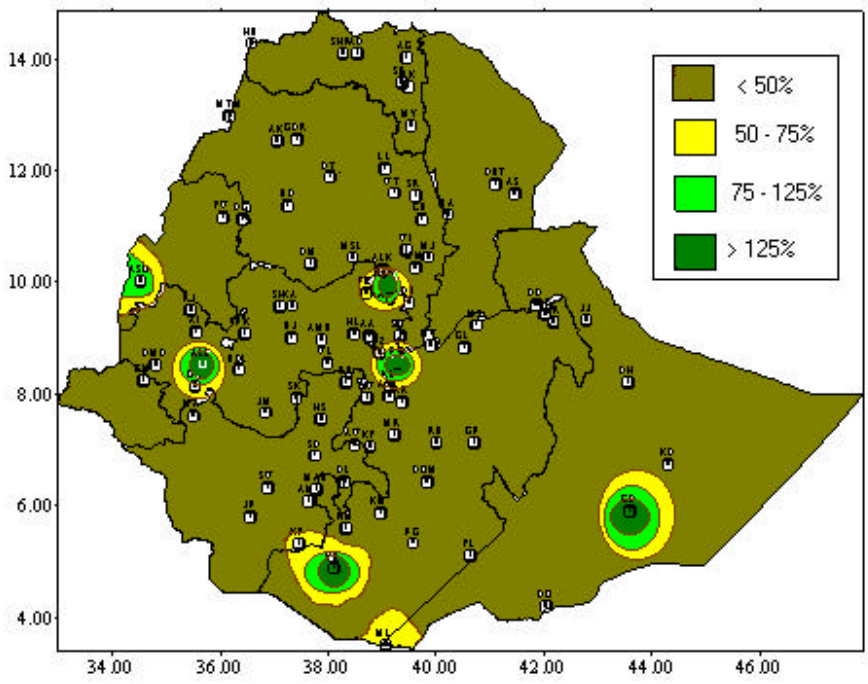

Fig. 2 Percent of normal rainfall (21-31 October, 2004)

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 parts of southern Oromiya, pocket areas of central and western Oromiya as well as southern Somali much of Meher growing areas of the country experienced below normal rainfall.

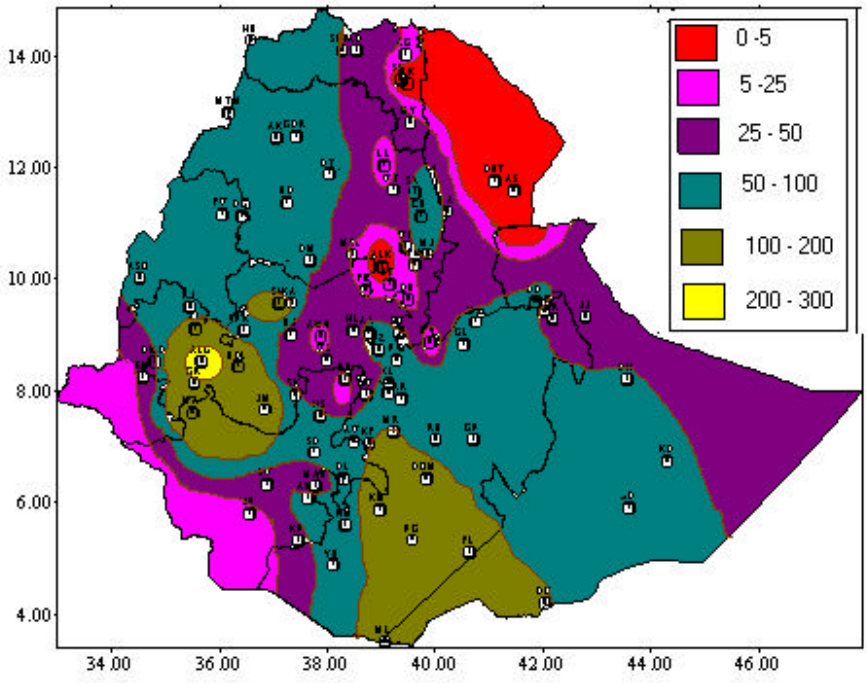

Fig. 3 Rainfall Distribution in mm for the month of October 2004

1.2 October 2004

1.2.1 Rainfall October (Fig.3)

Assela, Negelle, Shambu, Jimma, Gelemso, Gimbi, Dolo Mena, Aira, Kibre Mengist, Moyale, Gore and Chagni received 158.1, 138.1, 134.8, 134.1, 132.1, 125.9, 125.7, 121.7, 121.6, 121.3, 112.5 and 102.2 mm of monthly rainfall, respectively.

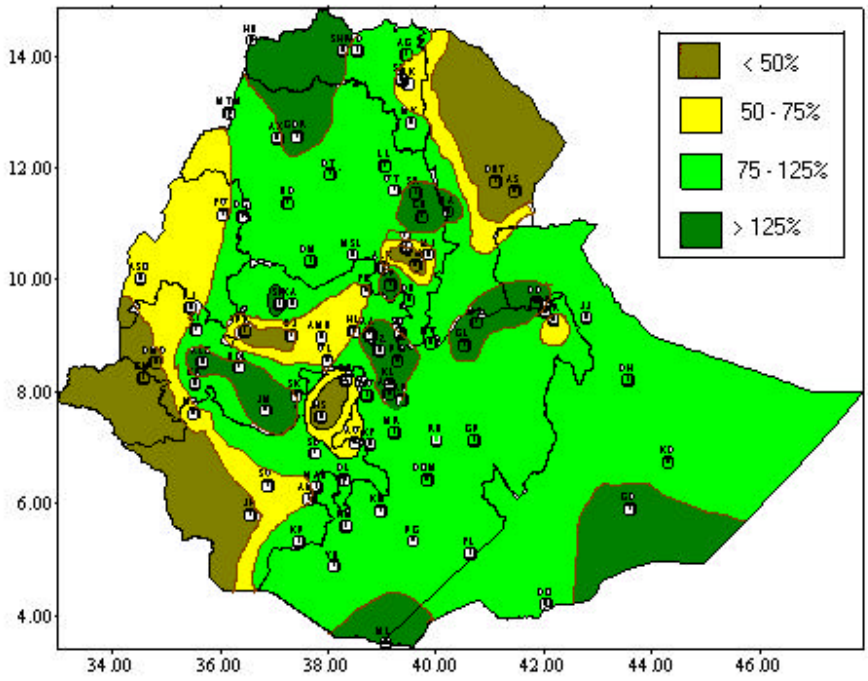

Fig. 4 Percent of Normal Rainfall for the month of October 2004

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 Tigray, Amhara, southern Afar, Somali, Oromiya, SNNPR, experienced normal to above normal rainfall condition while the rest portions of the country exhibited below normal.

1.3 TEMPERATURE ANOMALY

The highlands of Amhara (Ambamariam, Debre Birhan, Enewary, Mehal Meda, Wegel Tena), Tigray (Adigrat), and Oromiya (Bale Robe, Meraro,Fitche, Kofele and Alemaya) exhibited extreme air temperature below 5^0C from two to ten days, particularly Debre Brehan recorded extremism air temperature below 0^0C for ten consecutive days. This situation negatively affected crops that are attaining at flowering and grain filling stage. Besides, extreme air temperature above 35^0C occurred over Afar (Assaita, Dubti and Gelemso) and Somali (Gode) from three to ten consecutive days.

2. WEATHER OUTLOOK

2.1 For the first dekad of November 2004

In the coming ten days, near normal rain is anticipated over much of SNNPR, Gambella, Benshagul-Gumuz, Westwrn Tigray and Amhara as well as much of Oromiya and Somalia. On the other hand, Afar, eastern Tigray, central and eastern Amhara and southern margins of SNNPR will have below rainfall**.**

2.2 For the month of November 2004

For an incursion of moisture from Arabian Sea and Indian Ocean is expected over various parts of the country. Hence the occurrence of unseasonal rains is highly likely over different parts of the country. In general, Ben-Gumuz, Gambella, western and southern Oromiya, SNNPR will get normal rainfall. However, they will have limited number of rainy days. Besides, southern portions of Somali will have rains for few days. Amhara, Tigray, central and eastern Oromiya, which will have dry weather under normal condition, will have unseasonable rains for few days.

3. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE

3.1 VEGETATION CONDITION AND IMPACT ON AGRICULTURE

The observed dry weather condition over much of Meher growing areas of the country facilitated the ongoing harvest and post harvest activities of long and medium cycle crops. The observed normal to above normal rainfall over parts of south and southeastern eastern Ethiopia had indispensable contribution to crops that were attaining at emergence and late vegetative stages over south and southeastern Oromiya and the availability of pasture and drinking over southern Somali and the lowland of Borena. Regarding phenological reports, maize was at full ripeness stage over eastern and western Amhara (Cheffa and Chagni,), western and central Oromiya (Aira, Gimbi, Dembi Dolo, Nejo, Limu Gent Bedelle and Sekoru), at wax ripeness stage in northwestern Amhara (Bahir Dar) and at flowering stage over some areas of eastern Amhara (Bati) while at tasseling stage over southeastern (Dolo Mena) and central Oromiya (Fitche) and at emergence stage over southern Oromiya (Kibre Mengist). Sorghum was at ripeness stage over eastern Amhara (Cheffa and Combolcha), eastern Oromiya (Gelemso) and at flowering stage over eastern Amhara (Bati), western Oromiya (Dembi Dolo, Nejo, Alge, Aira, Gimbi), northern SNNPR (Bui) as well as southeastern Benishangul-Gumuz (Assosa) also millet was at flowering stage over some areas of western Oromiya (Nejo and Limu Gent) as well as eastern Benishangul-Gumuz (Bullen) while at tasseling stage in western Amhara (Chagni). Wheat was at ripeness stage over southern and eastern Amhara (Debre Birhan and Combolcha) as well as central Oromiya (Shambu) while at flowering stage in central Oromiya (Kachissei) and at lower vegetative stage over some areas of southern Amhara (Kibre Mengist).Teff was at ripeness stage over eastern Amhara (Cheffa, Sirinka and Combolcha), western and central Oromiya (Gimbi, Bedelle and Fitche) as well as northeastern SNNPR (Sodo) while at flowering stage over western and southern Amhara (Dangila and Woreilu), central Oromiya (Shambu, Kachissei and Woliso), northern SNNPR (Bui), southwestern Benishangul-Gumuz (Assosa) and at tasseling stage over southeastern Oromiya (Dolo Mena).Beans and Peas were at ripeness stage over southern and northeastern Amhara (Wereilu, Amhara and Wegel Tena) and central Oromiya (Fitche) while at flowering stage in northeastern SNNPR (Sodo).Nug was at ripeness stage over central and western Oromiya (Wolis and Limu Gent) as well as eastern Benishangul-Gumuz (Bullen) while at flowering stage over central Oromiya (Kachissei) and at tasseling stage in some areas of western Oromiya (Alge).

3.2 EXPECTED WEATHER IMPACTS ON AGRICULTURE DURING THE COMING DEKAD

The anticipated near normal rainfall condition over southwestern, south and southeastern Ethiopia will have positive impact on the availability of pasture and drinking water over southern Oromiya and southern Somali. It also has great contribution to the crops that are attaining at emergence stage over southern Oromiya and at late vegetative stage in southeastern Oromiya. Besides, it has significant contribution to late sown long and medium cycle crops over Meher growing areas of northern and western SNNPR. On the contrary, this wet weather condition adversely can affect the on going harvest and post harvest activities that are being performed over the aforementioned areas of SNNPR. The expected dry weather condition over much of Tigray, central, eastern and western Amhara will create suitable condition to harvest crops that are attaining at full ripeness stage.

	Table 1 Climatic and Agro-Climatic elements of different stations for the month of October 2004							
	Stations	Region	A/ rainfall	Normal	%of Normal	Eto mm/day	Monthly Eto	Moisture status
1	**Adigrat**	**TIGRAI**	23.7	20.6	115.1	3.86	119.66	D
2	**Mekele**		3.1	5.9	52.5	5.37	166.47	VD
3	**Michew**		37.7	49.7	75.9	3.53	109.43	MD
4	**Senkata**		2.4	28.4	8.5	4.94	153.14	VD
5	**Shire**		80.6	29.6	272.3	4.61	142.91	M
1	**Assayta**	**AFAR**	0.4	8.5	4.7	6.76	209.56	VD
2	**Dubti**		NA	3.8	NA	3.97	123.07	NA
3	**Gewane**		32.4	13.1	247.3	6.12	189.72	D
1	**Alemketema**	**AMHARA**	3.1	26.9	11.5	NA	NA	NA
2	**Bahirdar**		72.6	81.8	88.8	4.18	129.58	M
3	**Bati**		48.6	30.3	160.4	3.92	121.52	MD
4	**Combolcha**		58.3	32.8	177.7	3.34	103.54	M
5	**Chefa**		42.3	41.8	101.2	4.18	129.58	MD
6	**Chagni**		102.9	185.3	55.2	3.54	109.74	M
7	**Debre Birhan**		14	21.4	65.4	3.65	113.15	D
8	**Debre Markos**		87.5	72.6	120.5	3.75	116.25	M
9	**Dolo Mena**		125.7	154.1	81.6	3.85	119.35	H
10	**DebreTabor**		85.8	81.1	105.8	NA	NA	NA
11	**Dangla**		94.7	81.9	115.6	3.44	106.64	M
12	**Enwary**		14.7	4	367.5	4.57	141.67	D
13	**Gonder**		67.6	52.4	129.0	4.13	128.03	M
14	**Mehal Meda**		8.6	38.2	22.5	NA	NA	NA
15	**Majete**		49.8	41.6	119.7	4.06	125.86	MD
16	**Lalibela**		10.2	10.1	101.0	4	124	VD
17	**Sirinka**		58.5	43.2	135.4	3.8	117.8	MD
18	**Woreilu**		4	14.3	28.0	4.68	145.08	VD
19	Wegel Tena		10.3	11.9	86.6	3.76	116.56	VD
1	Abomssa	**OROMIYA**	56	47.9	116.9	NA	NA	NA
2	**Aira**		121.7	135	90.2	3.5	108.5	H
3	**Alge**		211	152.1	138.7	NA	NA	NA
4	**Alemaya**		43.8	40.8	107.4	4.01	124.31	MD
5	**Ambo**		19	28.3	67.1	4.31	133.61	D
6	**Arsi Robe**		50	61.3	93.6	NA	NA	NA
7	**Bedelle**		168	129.3	129.9	NA	NA	NA
8	**Bui**		26.8	11	243.6	4.56	141.36	D
9	**Dembi Dollo**		27.3	94.1	29.0	NA	NA	NA
10	**Dolo Mena**		125.7	154.1	81.6	NA	NA	NA
11	**Debre Zeit**		24	16.7	143.7	4.51	139.81	D
12	**Ejaji**		33.5	80.2	41.8	3.81	118.11	MD
13	**Fitche**		14.9	26.7	55.8	3.5	108.5	D
14	**Gelemso**		132.1	93.8	140.8	3.97	123.07	H
15	**Gimbi**		125.9	114.3	110.2	NA	NA	NA
16	**Gore**		112.5	186.2	60.4	3.53	109.43	H
17	**Hagere Mariyam**		62.3	144.9	43.0	NA	NA	NA
18	**Jimma**		134.1	88	152.4	3.44	106.64	H
19	**Kachissie**		87.2	110.7	78.8	NA	NA	NA

20	**Kibre Mengist**		121.6	182.1	66.8	3.38	104.78	H
21	**Koffele**		100.3	80.6	124.4	3.33	103.23	M
22	**Kulumsa**		80.9	33.2	243.7	4.46	138.26	M
23	**Limugente**		54	132.9	40.6	NA	NA	NA
24	**Meisso**		56.8	34	167.1	4.56	141.36	MD
25	**Metehara**		15.9	21.6	73.6	5.24	162.44	VD
26	**Meraro**		33.5	33.4	100.3	NA	NA	NA
27	**Moyale**		121.3	82.6	146.9	4.2	130.2	M
28	**Nazreth**		58.6	25.2	232.5	5.21	161.51	MD
26	**Neghele**		138.1	163.6	84.4	4.51	139.81	M
30	**Nedjo**		82.5	116	71.1	3.38	104.78	M
31	**Nekemte**		69.8	142.4	49.0	3.41	105.71	M
32	**Robe(Bale)**		90.7	75.7	80.2	3.33	103.23	M
33	**Sekoru**		82.1	65.6	125.2	3.67	113.77	M
34	**Shambu**		134.8	73.8	182.7	3.07	95.17	H
35	**Woliso**		32.4	13.1	247.3	4.97	154.07	D
36	**Yabello**		89.8	90.7	99.0	NA	NA	NA
37	**Zeway**		10.9	40.9	26.7	4.82	149.42	VD
1	**Dege Habur**	**SOMALI**	52.5	54.9	96.6	5.64	174.84	MD
2	**Gode**		70.8	47.7	148.4	5.85	181.35	MD
4	**Jijiga**		41	46	89.1	4.73	146.63	MD
1	**Arba Minch**	**SNNPR**	60.9	98	32.1	3.66	113.46	M
2	**Awassa**		57.1	80.8	70.7	3.77	116.87	MD
3	**Dilla**		NA	NA	NA	3.74	115.94	NA
4	**Hosaina**		55.1	70	78.7	3.7	114.7	MD
5	**Jinka**		13.1	115	11.4	NA	NA	NA
6	**Konso**		33.1	36.6	90.4	4.48	138.88	D
7	**Masha**		139	188.4	73.8	2.9	89.9	H
8	**Mirab Abaya**		15.9	21.6	76.6	NA	NA	NA
9	**Sawla**		29.3	169.9	17.3	4.15	128.65	D
10	**Sodo**		93	94.9	98.0	4.98	154.38	M
1	**Pawe**	**B/GUMUZ**	69.7	130.9	52.3	2.53	78.43	M
2	**Bullen**		76.7	159.7	48.0	3.47	107.57	M
3	**Assossa**		84	135.7	61.9	3.79	117.49	M
1	**Gambella**	**Gambella**	25	104.5	23.9	NA	NA	NA
1	**A.A.Obs.**	**A.A**	77	35.5	216.9	3.29	101.99	M
1	**Diredawa**	**D.D**	85.6	23.9	358.2	4.58	141.98	M
1	**Harar**	**Harai**	28.5	41.5	68.7	3.86	119.66	D

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)