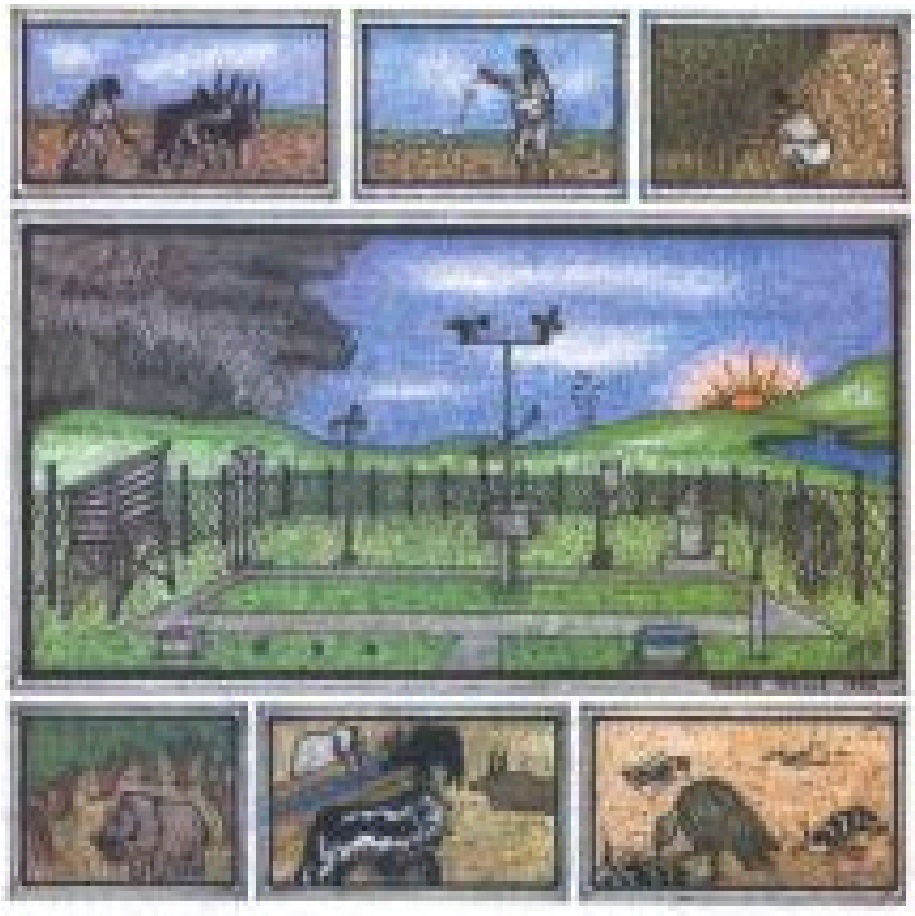
NATIONAL METEOROLOGICAL AGENCY AGROMETEOROLOGICAL BULLETIN

MONTHLY AGROMETEOROLOGICAL BULLETIN
FEBRUARY 2006
VOLUME 16 No. 6
DATE OF ISSUE: - March 6, 2006



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FORE WARD

This Agro met Bulletin is prepared and disseminated by the National Meteorological Services Agency (NMSA). 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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SUMMARY
FEBRUARY 2006

During the first dekad of February 2006, with the exception of Gambela, western Oromya and few areas of northwestern and southern Afar most parts of the country exhibited below normal rainfall distribution. Besides some lowland areas of southeastern, northwestern and central Ethiopia exhibited extreme maximum temperature ranging from 36-42.6°C that could aggravate the stress condition on plants by increasing potential evapotranspiratin. Moreover the deficient condition could affect early season's agricultural activities like land preparation and sowing activities in areas where Belg activities are started earlier. Among the reporting stations Semera, Metehara, Gode, Pawe, Mankush, Gambela, and Metema recorded extreme maximum temperature as high as 36.3, 37.0, 37.2, 38.5, 39.6, 41.5 and 42.6 ^{0}C respectively.

During the second dekad of February 2006, though the observed rainfall has covered most parts of Belg growing areas, it was intensive (2-3 rainy days in most places) in terms of distribution in most cases. As a result some areas like Sirinka, Jimma, Methera, Jinka, Arba Minch and Adama recorded heavy rainfall ranging from 35.1 – 62.8 mm in one rainy day. However the observed rainfall particularly over central, southwestern, southern and eastern highlands could have significant contribution for the ongoing early season's agricultural activities in the areas. On the contrary, the pronounced dry spell over southern Tigray and parts of eastern Amhara could have negative impact on Belg agricultural activities. With regard to air temperature, Arba Minch, Gode, Methera, Asayta, Blate, Gambela, Mankush, Metema, Mirab Abya, Pawe and Semera recorded extreme maximum temperature ranging from 35.1^{0}C – 41.5^{0}C.

During the third dekad of February 2006, the observed normal to above normal rainfall over most parts of southern half of the country could have a significant contribution for land preparation and sowing activities in the areas. On the other hand, the observed deficient falls persisted over northern half of the country particularly over Belg growing areas of southern and eastern Amhara, and South Tigray, in areas where Belg agricultural activities start earlier than the normal on-set of the season could have a negative impact on Belg crops. With regard to air temperature, Gode, Assayta, Dubti, Gambela, Mankush, Metema, Pawe and Semera recoded extreme maximum temperature ranging from 35.2 – 43.0 ^{0}C.

Generally the rainfall condition observed as of the second dekad of the month particularly over Belg growing areas of central, south and southwestern Ethiopia including south and southeastern lowlands might have significant contribution mainly for land preparation. Besides it could be helpful to start sowing activity in some isolated areas of Belg growing areas. On the other hand as the anticipated weather condition, it has been a dry spell over south Tigray and eastern Amhara (Mehal Meda, Wegel Tena) including central Oromiya like Arsi Robe, Meraro, Kofele and Ziway in areas where the early season's agricultural activities start earlier under normal circumstance and in areas where sowing activity is under question. Thus, the persisted moisture stress in the aforementioned stressed areas could have significant negative impact on season's agricultural activities.

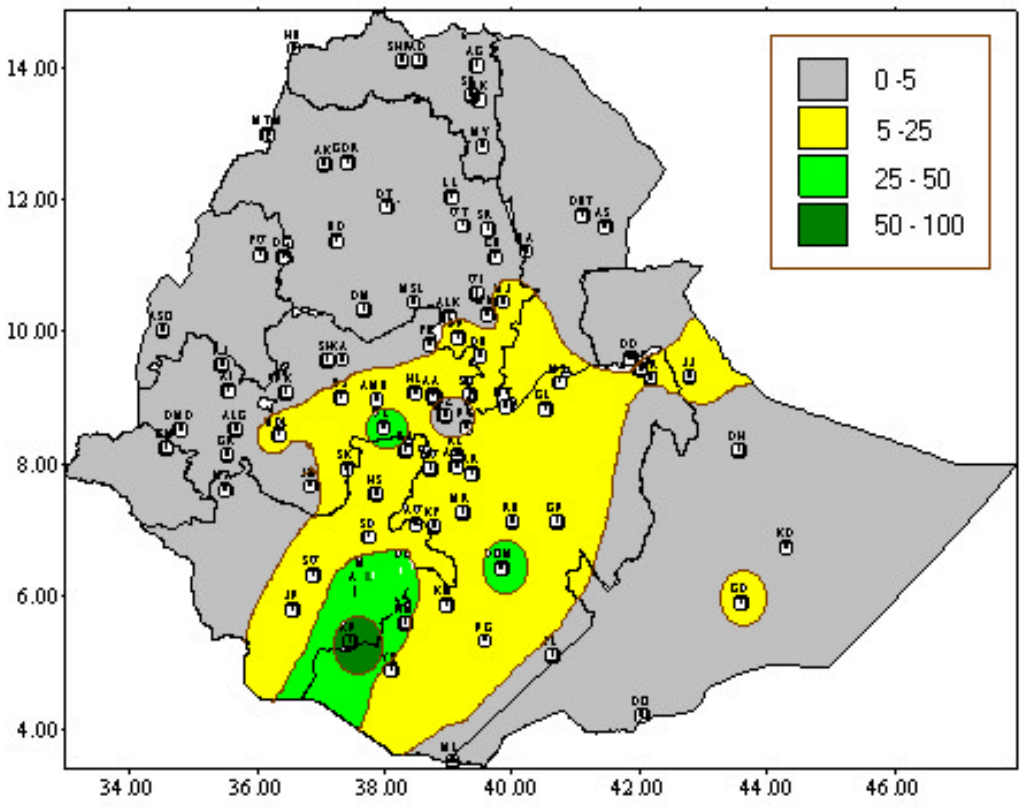


Fig 1. Rainfall distribution in mm (21 - 28 February, 2006)

1. WEATHER ASSESSMENT

1.1 (21 – 28 February, 2006)

1.1.1 Rainfall amount (Fig.1)

Pocket areas of southern SNNPR exhibited rainfall 50 – 100mm. Pocket areas of central and southern Oromya, southeastern parts of SNNPR received 25-50 mm of rainfall. Some areas of southern Amhara, much of Oromya, parts of SNNPR, pocket areas of southern and few areas of Somali received 5-25 mm of rainfall. There was little or no rainfall for the rest parts of the country.

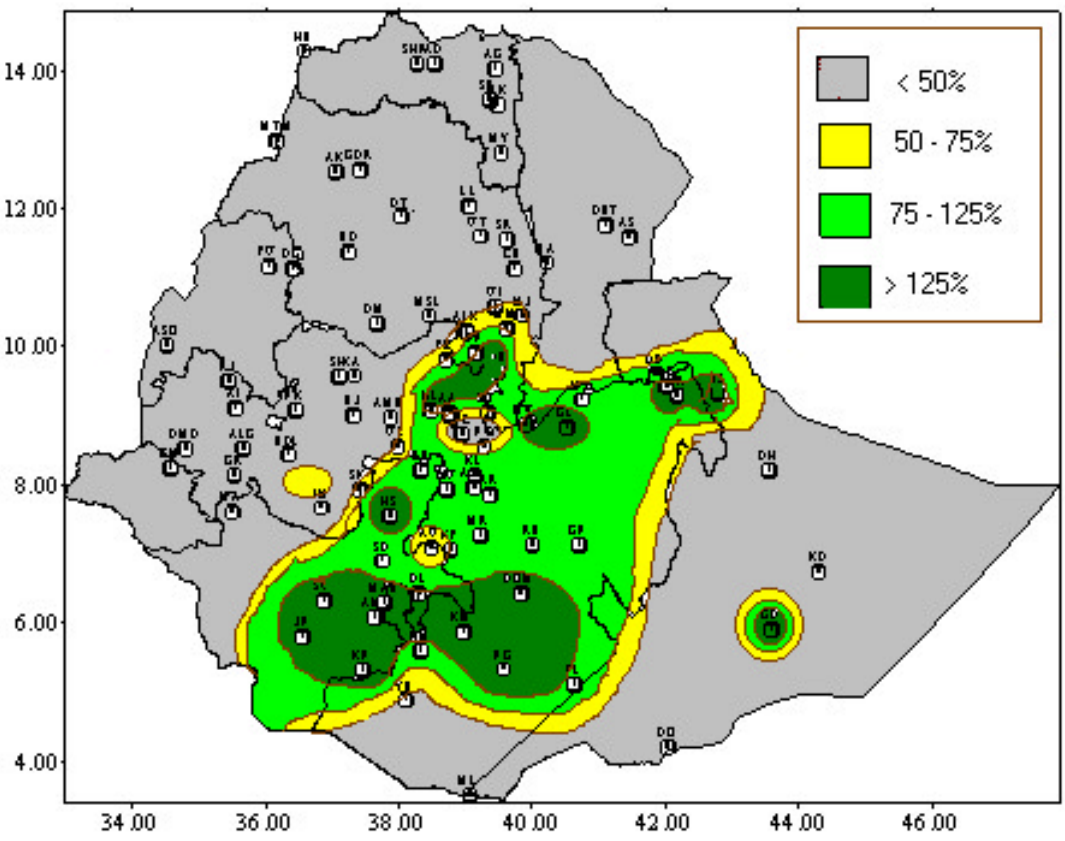


Fig. 2 Percent of normal rainfall distribution (21-28 February, 2006)

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)

Central, parts of eastern and southern Oromya much of SNNPR and Pocket areas of northern and southern Somali exhibited normal to above normal rainfall. The rest parts of the country received below too much below normal rainfall.

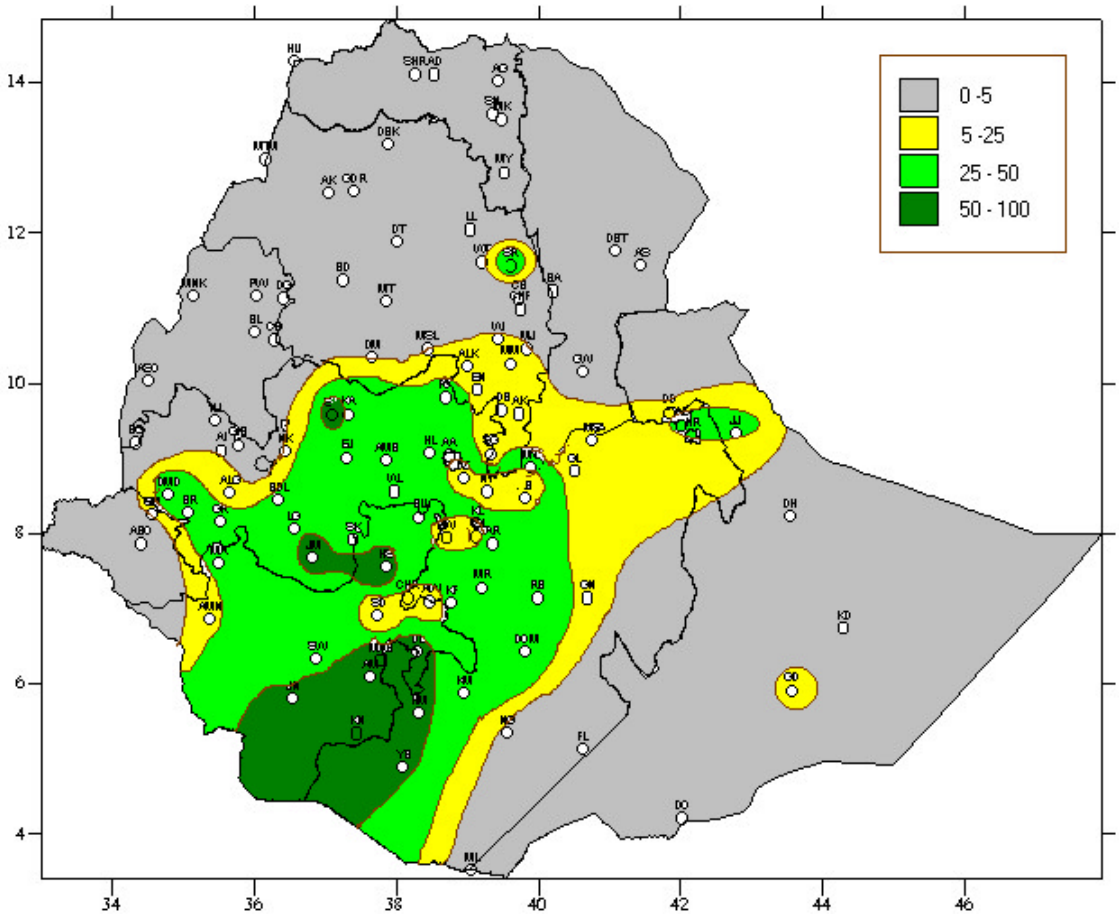


Fig. 3 Rainfall distribution in mm for the month of February 2006

1.2 February 2006

1.2.1 Rainfall distribution (Fig.3)

Pocket areas of western and central Oromya, northern southern and parts of eastern SNNPR and southwestern Oromya received 50-100mm of rainfall. Parts of western and southern including most parts of central Oromya, most parts of SNNPR and pocket areas of northern Somali experienced 25-50 mm of rainfall. Few areas of western and southern including most parts of eastern Oromya, few areas of northern SNNPR and pocket areas of eastern Amhara, southern and northern Somali exhibited 5 – 25 mm. There was little or no rainfall for the rest parts of the country.

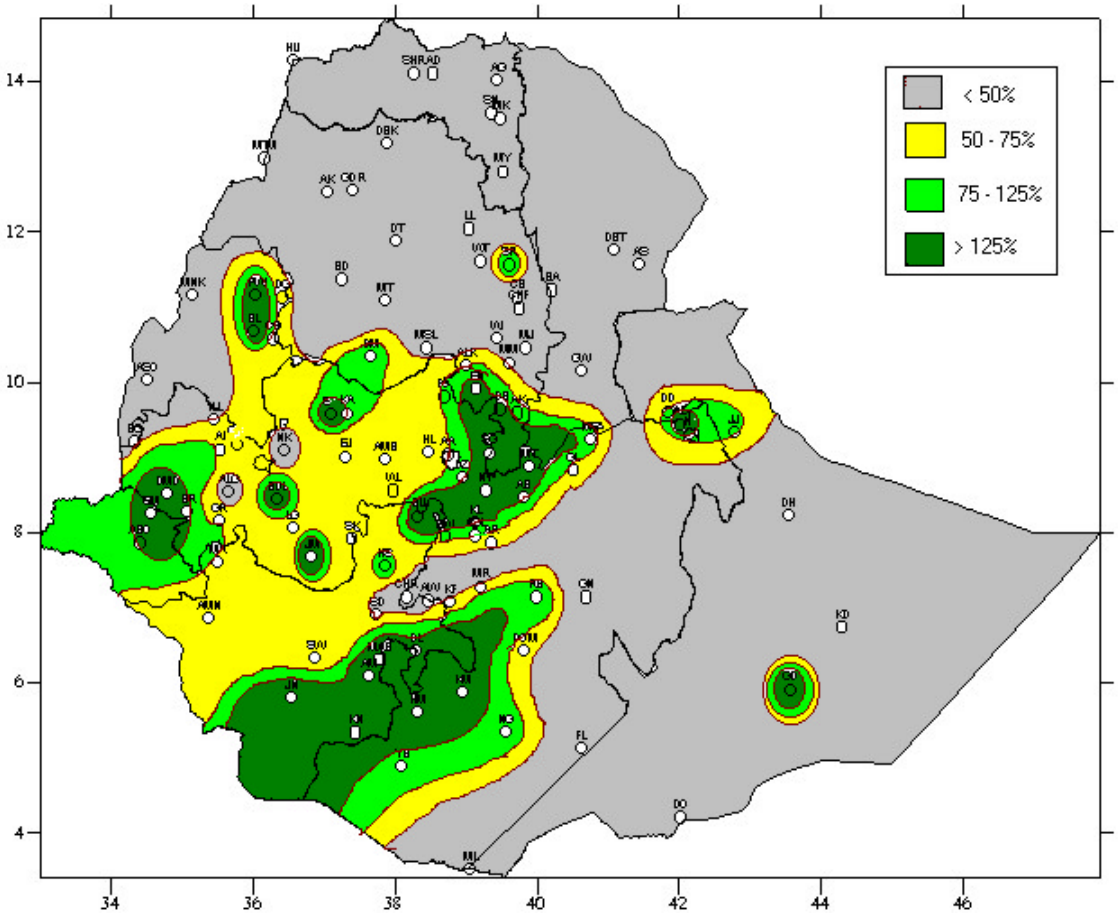


Fig. 4 Percent of Normal Rainfall distribution for the month of February 2006

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)

Pocket areas of eastern Amhara, northern Benhangul-Gumuz, few areas western, central and eastern Oromya, pocket areas of northern and southern Somali, southern and parts of eastern SNNPR and southwestern Oromya received normal to above normal rainfall. The rest parts of the country exhibited below to much below normal rainfall

1.3 TEMPERATURE ANOMALY

Metehara, Assayta, Gode, Dubti, Gambela, Mankush, Metema Pawe and Semera exhibited extreme maximum temperature greater than 35°C repeatedly during the month under review.

2. WEATHER OUTLOOK

2.1 For the first dekad of March 2006

For the coming ten days, the seasonal rain-bearing systems are expected to weaken over various parts of the nation. In general, SNNPR and southern Oromiya are likely to have a near normal rainfall. Moreover, eastern Amhara, central and eastern Oromiya as well as northern Somali will get below normal rains. On the other hand, much of western and northern Ethiopia will be under dry and sunny weather condition. Despite the fact occasional rains at few places.

2.2 For the month of March 2006

In the coming March, near normal rains are likely to prevail across SNNPR, western and western margin of southern Oromya and some places of central Ethiopia. Whereas the monthly rain will be weak over southern half of Somali and the neighboring areas of southern Oromya. Hence, many places of the aforementioned areas will get below normal rains with low probability of getting well spatial and temporal rainfall coverage's along the seasonally rain-getting portions of the country. On the other hand, much of west, northwest and north Ethiopia will enjoy mainly sunny and dry weather despite occasional rains at few places.

3. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE

3.1 VEGETATION CONDITION AND IMPACT ON AGRICULTURE\

The rainfall condition observed as of the second dekad of the month particularly over Belg growing areas of central, south and southwestern Ethiopia including south and southeastern lowlands might have significant contribution mainly for land preparation. Besides it could be helpful to start sowing activity in some isolated areas of Belg growing areas. On the other hand as the anticipated weather condition, it has been a dry spell over south Tigray and eastern Amhara (Mehal Meda, Wegel Tena) including central Oromiya like Arsi Robe, Meraro, Kofele and Ziway in areas where the early season's agricultural activities start earlier under normal circumstance and in areas where sowing activity is under question. Thus, the persisted moisture stress in the aforementioned stressed areas could have significant negative impact on season's agricultural activities.

3.2 EXPECTED WEATHER IMPACT ON AGRICULTURE DURING THE COMING DEKAD

The anticipated near normal rainfall over SNNPR and the adjoining areas of southern and western Oromiya would have significant contribution for land preparation and sowing activities in central (Ziway, Kulumsa and Robe), southern Oromiya (Yabelo and Moyale for land preparation while to start sowing activity for Kibre Mengist and Mega) and some areas of SNNPR like Hosaina, Aman, Sekoru, Wenago, Hadiya, Welayta, Gemu Gofa, South Omo, Dawuro, Gurage, Silte, Bench and Keficho. On the contrary the expected below normal rains with erratic distribution eastern Oromiya, eastern Amhara adjoining areas of southern Afar and Tigray would exacerbate the persisted deficient condition particularly in south Tigray and eastern Amhara during the preceding dekads. In case of eastern Oromiya like Alemaya, Mieso and Gelemso the expected deficient moisture condition would affect early season's Belg agricultural activities in the areas. Therefore attention should be given for areas where receiving deficient rainfall as of the on-set of the season like South Tigray and eastern Amhara. Besides, appropriate water harvesting techniques and other alternate moisture stress coping mechanism should be designed in areas where deficient and erratic rainfall is anticipated.

Table 1. Climatic and Agro-Climatic elements of different stations for the month of February 2006

	Stations	Region	A/ rainfall	Normal	%of Normal	Eto mm/day	Monthly Eto	Moisture status
1	**Adigrat**	**TIGRAI**	0	10.9	0.0	3.89	108.92	VD
2	**Adwa**		0	2.2	0.0	NA	NA	NA
3	**Mekele**		0	6.5	0.0	5.63	157.64	VD
4	**Michew**		0	25.1	0.0	3.54	99.12	VD
5	**Senkata**		0	24.5	0.0	NA	NA	NA
6	**Shire**		0	0.5	0.0	5.08	142.24	VD
1	**Assayta**	**AFAR**	NA	NA	NA	6.04	187.24	NA
2	**Dubti**		3.2	17	18.8	6.17	172.76	VD
3	**Semera**		0	NA	NA	NA	NA	NA
1	**A. Ketema**	**AMHARA**	13	NA	NA	3.99	111.72	D
2	**Bahirdar**		0	1.8	0.0	4.59	128.52	VD
3	**Bati**		3.5	36.8	9.5	3.73	104.44	VD
4	**Bullen**		2.8	0.3	933.3	4.38	122.64	VD
5	**Combolcha**		0	37.4	0.0	3.92	109.76	VD
6	**Chefa**		0	NA	NA	4.44	124.32	VD
7	**D.Birhan**		10	5.6	178.6	NA	NA	NA
8	**D.Markos**		20.7	17.6	117.6	NA	NA	NA
9	**D.Tabor**		1.4	8.5	16.5	NA	NA	NA
10	**Dangla**		0	0.5	0.0	2.95	82.6	VD
11	**Enwary**		17.9	12.6	142.1	5.35	149.8	D
12	**Gonder**		0	4.8	0.0	4.79	134.12	VD
13	**M.Meda**		9	28.4	31.7	NA	NA	NA
14	**Majete**		10.7	54.4	19.7	3.95	110.6	VD
15	**Metema**		0	NA	NA	5.3	148.4	VD
16	**Motta**		2.2	NA	NA	4.57	127.96	VD
17	**Lalibela**		1	13.2	7.6	4.18	117.04	VD
18	**S. Gebeya**		13	24.4	53.3	4.02	112.56	D
19	**Shewa Robit**		22.9	NA	NA	NA	NA	NA
20	**Sirinka**		35.6	27.4	129.9	3.81	106.68	MD
21	**Wegeltena**		0.3	23	1.3	4.18	117.04	VD
22	**Wereilu**		3.9	30.4	12.8	4.8	134.4	VD
1	**Arsi Robe**	**OROMIYA**	28.5	NA	NA	NA	NA	NA
2	**Abomsa**		38.8	52	74.6	3.9	109.2	MD
3	**Aira**		7.4	9.1	81.3	NA	NA	NA
4	**Alemaya**		35.9	24.1	149.0	4.48	125.44	MD
5	**Alge**		7.9	18	43.9	NA	NA	NA
6	**Bedelle**		39	27.9	139.8	NA	NA	NA
7	**Begi**		0	6.8	0.0	NA	NA	NA
8	**Bui**		33.7	24.6	137.0	NA	NA	NA
9	**Chira**		19.9	55.7	35.7	NA	NA	NA
10	**D.Dollo**		31.7	17.5	181.1	3.95	110.6	MD
11	**D.Mena**		27.6	40.4	68.3	NA	NA	NA
12	**D.Zeit**		62.1	25.3	245.5	NA	NA	NA
13	**Fitche**		29.7	34.1	87.1	3.96	110.88	MD
14	**Gelemso**		12.3	34.5	35.7	4.82	134.96	VD
15	**Gimbi**		4.4	7.7	57.1	4.64	129.92	VD
16	**Gore**		30.1	37.5	80.3	4.31	120.68	D
17	**H. Mariam**		29.5	13.5	218.5	NA	NA	NA
18	**Jimma**		77.1	47.1	163.7	3.62	101.36	M
19	**K.Mengist**		30.3	21.4	141.6	3.94	110.32	MD
20	**Kachise**		27.5	27.3	100.7	4.33	121.24	D

21	**Kulumsa**		16	10.8	148.1	4.76	133.28	D
22	**Lumugenet**		19.5	36.6	53.3	4.04	113.12	D
23	**Mekane Selam**		0	NA	NA	NA	NA	NA
24	**Meisso**		23.9	27.1	88.2	5.06	141.68	D
25	**Metehara**		70.9	30.5	232.5	5.47	153.16	MD
26	**Moyale**		2.9	21.8	13.3	5.87	164.36	VD
27	**Nazreth**		88.4	31.6	279.7	3.74	104.72	M
28	**Neghele**		24.3	21.6	112.5	6.01	168.28	D
29	**Nedjo**		2.3	12.7	18.1	3.68	103.04	VD
30	**Nekemte**		4.8	15.7	30.6	3.94	110.32	VD
31	**Robe(Bale)**		33.1	31.5	105.1	4.43	124.04	MD
32	**Sekoru**		26	49	53.1	4.05	113.4	D
33	**Shambu**		50.2	27.2	184.6	4.3	120.4	MD
34	**Yabello**		50	42.5	117.6	5.35	149.8	MD
35	**Ziway**		15.8	41.7	37.9	5.02	140.56	D
1	**Jijiga**	**SOMALI**	28.8	25.1	114.7	4.5	126	D
2	**Gode**		11.4	4.8	237.5	NA	NA	NA
1	**A.Minch**	**SNNPR**	83.9	31.9	263.0	4.42	123.76	M
2	**Awassa**		9	59	15.3	4.4	123.2	VD
3	**Hosaina**		53.9	49.2	109.6	4.22	118.16	MD
4	**Jinka**		90.4	47.1	191.9	4.26	119.28	M
5	**Konso**		66.8	39.8	167.8	5.54	155.12	MD
6	**M.Abay**		57.6	32.3	NA	5.18	145.04	MD
7	**Mankush**		0	NA	NA	NA	NA	NA
8	**Sawla**		NA	NA	NA	4.5	126	NA
9	**Sodo**		13.2	43.7	30.2	NA	NA	NA
1	**Assosa**	**B/GUMUZ**	0	4.2	0.0	5.6	156.8	VD
2	**Pawe**		11.2	1.7	658.8	4.05	113.4	VD
3	**Chagni**		0.5	7	7.1	4.75	133	VD
1	**Gambela**	**Gambela**	4.4	2.8	157.1	NA	NA	NA
1	**A.A.Obs.**	**A.A**	11.2	36	31.1	NA	NA	NA
2	**A.A. Bole**		36.6	37.6	97.3	5.08	142.24	MD
1	**Diredawa**	**D.D**	0	32.6	0.0	4.54	127.12	VD
1	**Harar**	**Harai**	5.3	11.8	44.9	4.19	117.32	VD

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)	

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

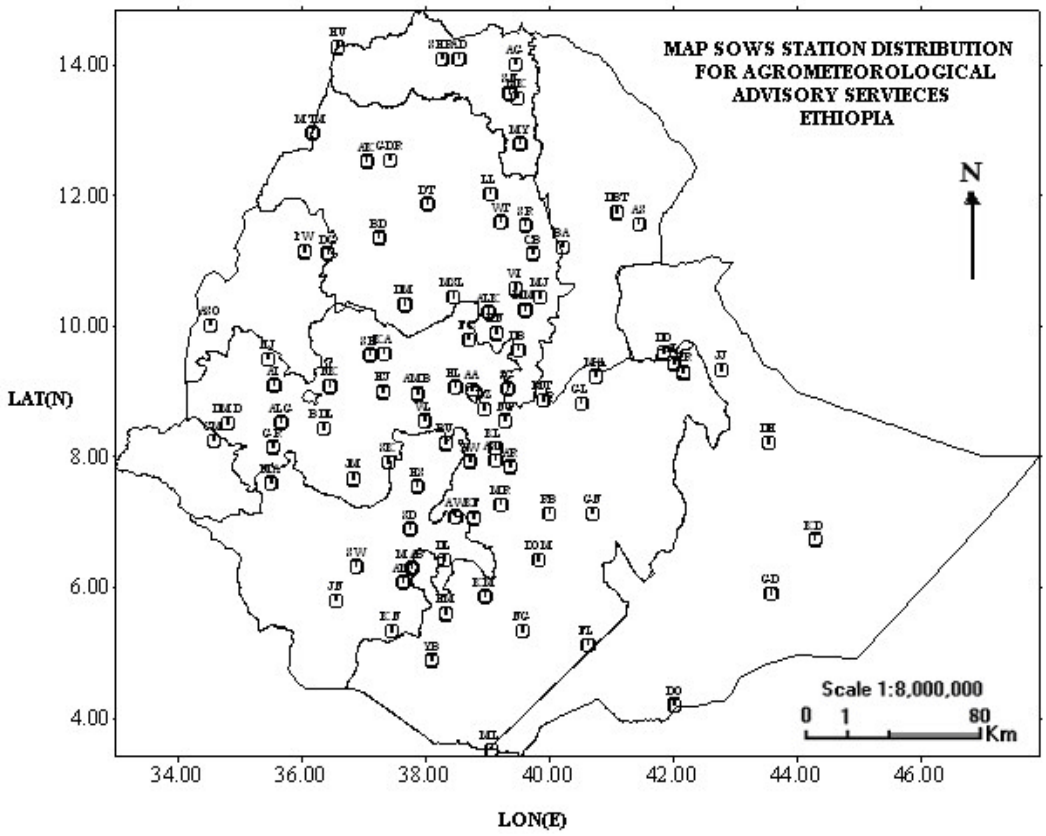
DEKAD: - First or second ten days or the remaining days of a month.

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
Arbaminch	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		