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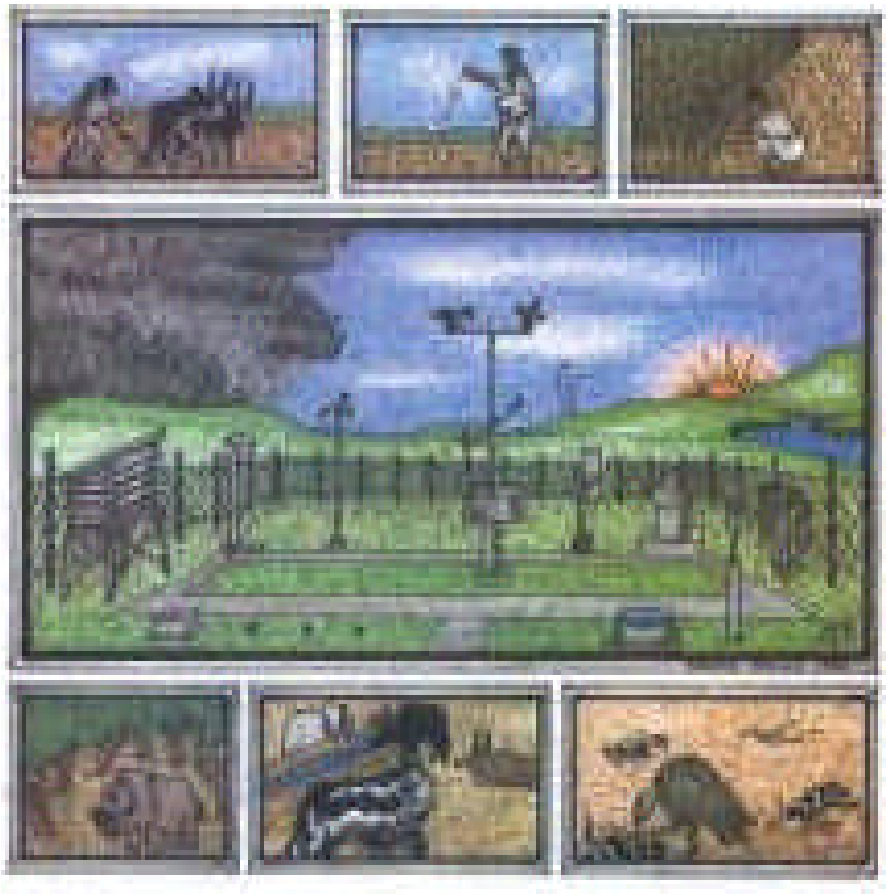

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FORE WARD

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
March 2005

During the first dekad of March 2005, the observed better rainfall activity up to 32.7 mm in one to four rainy days over eastern Amhara like Mehal Meda, Kombolcha, Bati, and Majete could ease the persisted moisture deficient during the preceding dekads. Among the reporting stations Sodo and Hosaina exhibited 31.2 and 33.4 mm of heavy falls, respectively. From central Oromiya Bui and Eteya reported 43.2 and 51.7 mm of rainfall in one rainy day, respectively. Besides southern highlands like Dolo Mena and Kibre Mengist received falls up to 78.2 mm during the ten days period. As a result a decrease in extreme maximum temperature has been observed in some areas like Assosa, Dire Dawa, Chagni, Arba Minch, Mieso and Metehara as compared to that of the preceding dekad, thereby decreasing evapotranspiration to some extent in the areas. However, still a rise in extreme maximum temperatures by 2.25 - 4°C has been observed in some areas like Gode, Methehara and Pawe as compared to that of the long term average. In general the above mentioned rainfall condition could have significant contribution for land preparation and sowing activities in some areas of central and parts of eastern Oromiya, most parts of SNNPR and parts of eastern Amhara.

During the second dekad of March 2005, most parts of the country received normal to above normal rainfall. Among the reporting stations some stations (About 21) exhibited 30-65.3 mm of heavy falls in one rainy day. However, in accordance with adverse conditions report with the exception of some areas like Gebre Guracha there was no significant negative impact on the on going season's agricultural activities over much of Belg growing areas. Generally the observed normal to above normal rainfall over much of the country could favour Belg crops over Belg growing areas. Besides, it could have positive contribution for land preparation and sowing activities for long season crops like sorghum and maize in most parts of long cycle growing areas. With regard to air temperature, there was relatively a decrease in maximum temperature in most parts of the country. Nevertheless a rise in maximum temperature has been observed in some areas like Assayita, Metahara, Pawe, Dubti and Dire Dawa by 2, 3.3, 3.4, 3.5 and 4.6 °C respectively as compared to that of the long term mean during the dekad under review.

During the third dekad of March 2005, the observed below normal rainfall over most parts of Belg growing areas could have negative impact on crops water requirements of the recently sown Belg crops. Pursuant to crop phenological report some areas like Dolo Mena reported slight wilting due to water stress. Besides, it could affect sowing activities in areas where sowing activities are under question like Kulumsa, Kibre Mengist, Mega, Hosiana, Tepi, Sekoru, Wenago, Yirga Chefe, Kochere, Srinka and Mieso. The recently sown maize crop was at emergence stage over western and parts of eastern Oromiya including north-eastern SNNPR. Sowing of cereals like barley and sorghum was underway in some areas of eastern Amhara and western Oromiya. With regard to extreme maximum temperatures Arba Minch, Metehara, Elidar, Gode, Assayta, Pawe, Mankush, Dubti and Metema exhibited 35.2, 36.0, 38.5, 39.1, 39.5, 41.0, 41.5, 41.6 and 42.5 °C of extreme maximum temperatures, respectively. Moreover there was a rise in maximum temperature in some areas like Metehara, Gode, Assayta and Dubti by 1.41, 1.9, 2.16 and 5.07°C, respectively.

Generally there was an improvement in moisture status during the fist and second dekad of the month. As a result sowing of long cycle crops like maize and sorghum was underway in most places. Nevertheless, due to the observed deficient rainfall condition during the third dekad of March in most parts of the country crops suffered from water stress in some areas of eastern Oromiya (Dolo Mena) and few area of eastern Amhara (Kutaber). On the other hand Most of the major crops of Belg like Barley and Peas which were sown during the month of January 2005 were at the stage of shooting and flowering with a good field conditions over some areas of eastern Amhara like Guguftu and Tebasit. A rise in extreme maximum temperatures observed during the third dekad of March in some lowland areas could enhance evapotranspiration thereby affecting the vegetation condition of the areas. In addition to this little rainfall with extended sunny outbreak would favour the out break of pests.

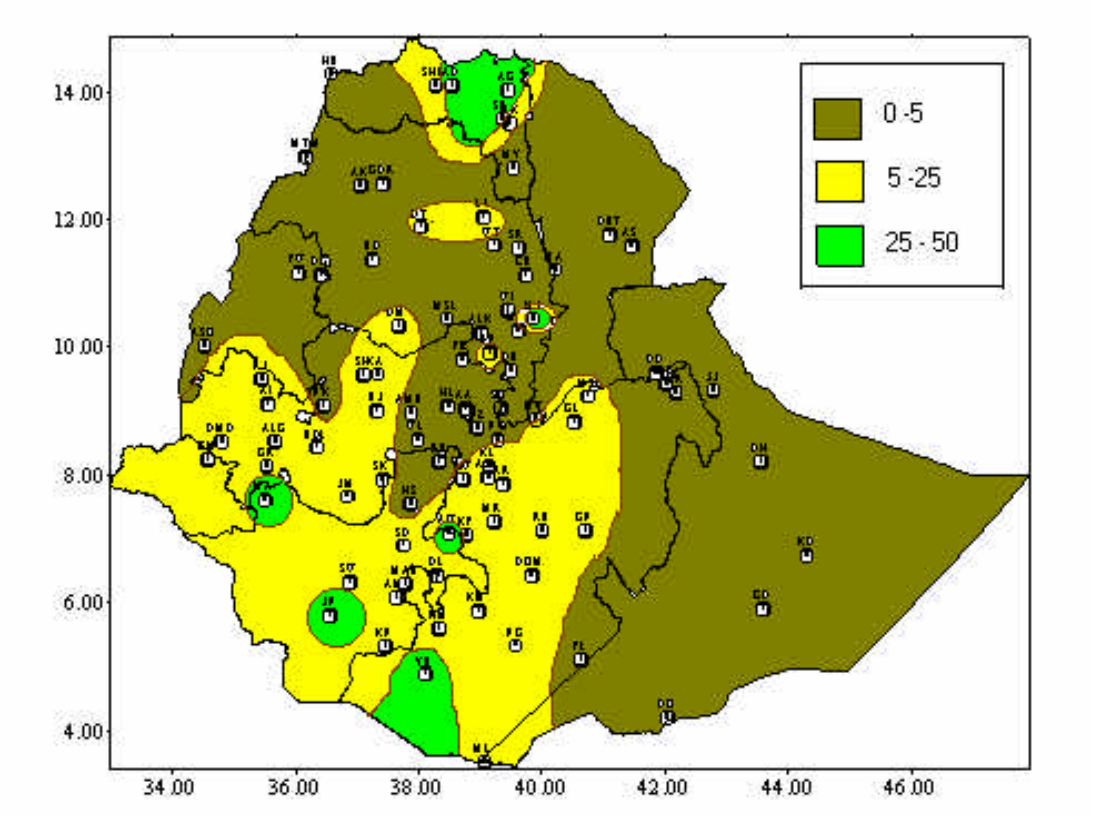


Fig 1. Rainfall distribution in mm (21-31 March, 2005)

1. WEATHER ASSESSMENT

1.1 21-31 March, 2005

1.1.1 Rainfall amount (Fig.1)

Parts of central and eastern Tigray including pocket areas of eastern Anhara, SNNP and southern Oromiya received 25 -50 mm of rain fall. Parts of eastern and central Tigray, western, parts of eastern and southern Oromiya, most parts of SNNPR and Gambela received 5-25 mm of rainfall. There was little or no rainfall for the rest of the country.

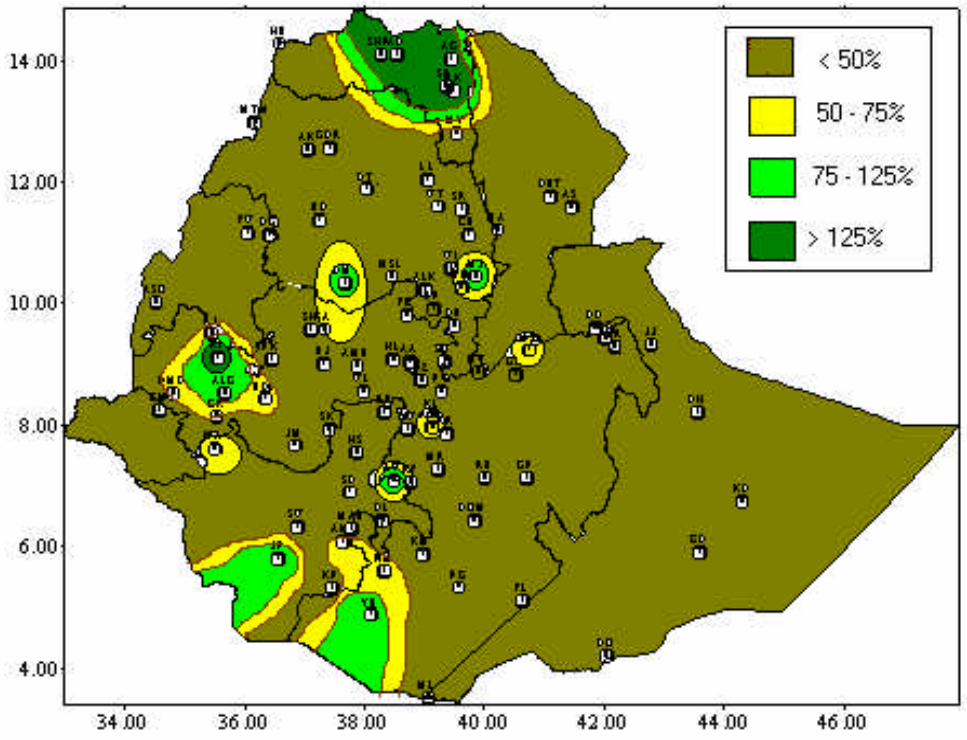


Fig. 2 Percent of normal rainfall (21-31 March, 2005)

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 central and parts of eastern Tigray, Few areas of western and southern Oromiya, pocket areas of central and eastern Amhara and pocket areas of southwestern and northeastern SNNPR the rest and most parts of the country exhibited below normal rainfall during the third dekad of March 2005.

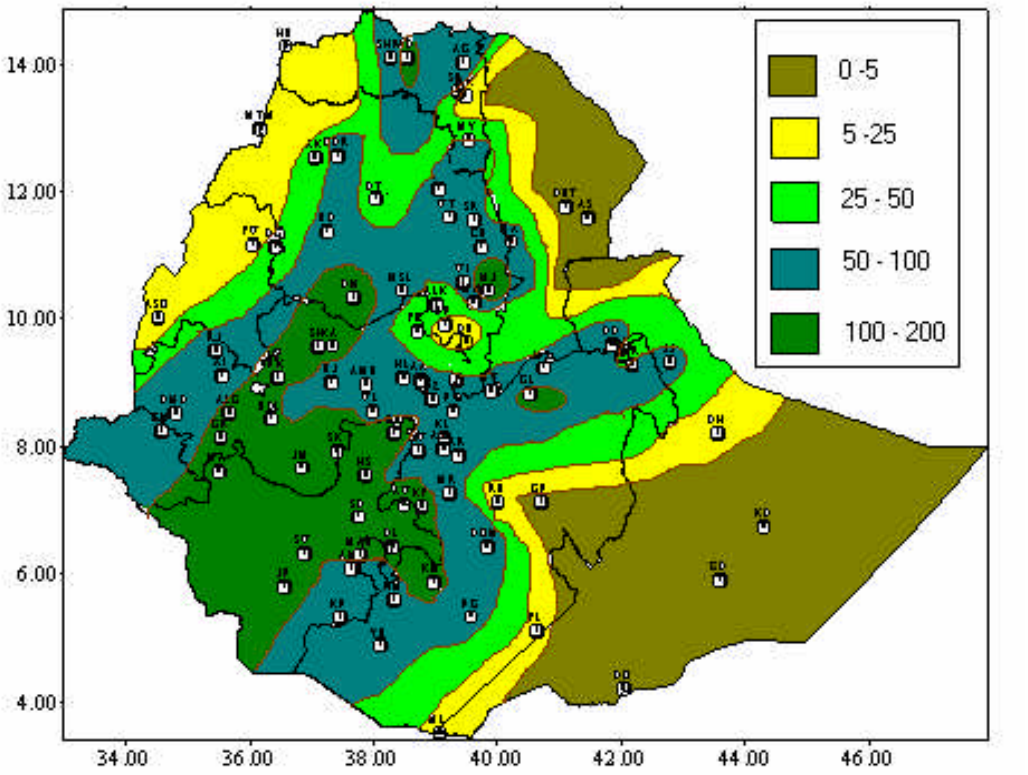


Fig. 3 Rainfall Distribution in mm for the month of March, 2005

1.2 March, 2005

1.2.1 Rainfall Amount (Fig.3)

Eastern and central Tigray, parts of central and eastern Amhara, most parts of Oromiya, southeastern Benishangul -Gumuz, SNNPR, Gambela received falls greater than 50 mm. Parts of western parts of central Tigray, northern, parts of eastern Benishangul -Gumuz, southeastern and parts of western Amhara, highlands of Somali, parts of eastern and southern Oromiya experienced 25 - 50 mm of rainfall. Western Tigray, parts of central Afar, western Amhara, western half of Benishangul -Gumuz, southeastern and parts of eastern Oromiya received 5-25mmof rainfall.

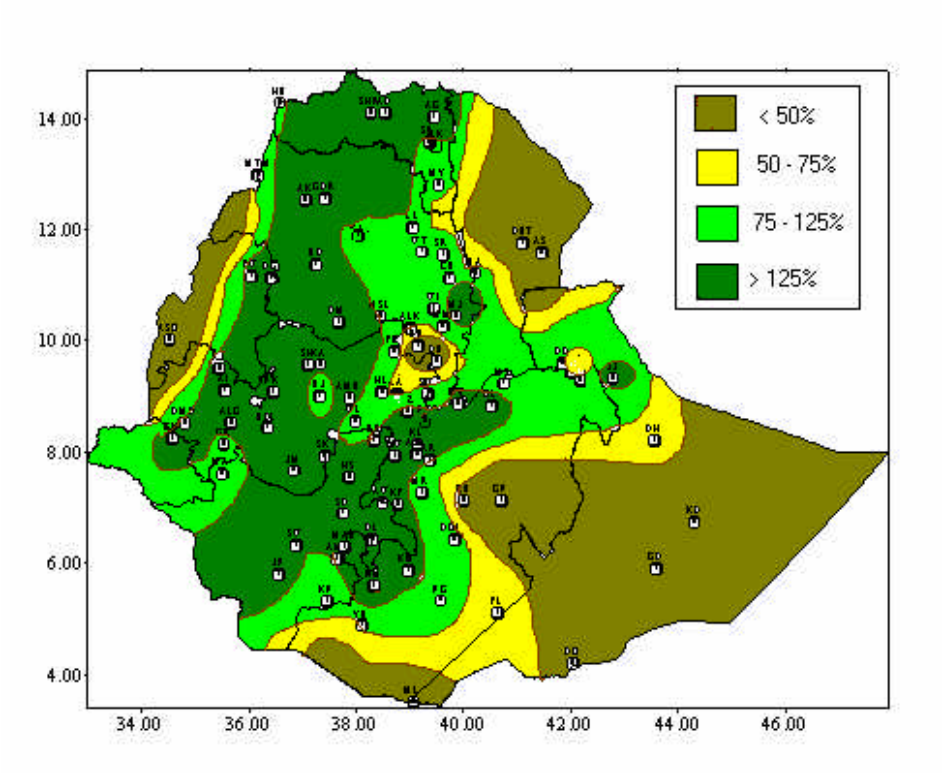


Fig. 4 Percent of Normal Rainfall for the month of March, 2005

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 the country received normal to above normal rainfall.

1.3 TEMPERATURE ANOMALY

A rise in extreme maximum temperature by 2-5 °C has been observed over some areas of northwestern, southeastern and northeastern lowlands including Rift Valley areas as compared to that of the long term average during the month under review.

2. WEATHER OUTLOOK

2.1 For the first dekad of April 2005

In the coming Ten days, prevailing dry and sunny weather condition will continue over the most parts of the country. However there will be an incursion of moisture over eastern Ethiopia towards the second half the decade. Hence, Rift valley and its adjoining areas of central and eastern Oromya, SNNPR, Southern and Southeastern Oromya as well as Somali and eastern Amhara will get Rainfall at the end of the decade; however the amount is expected to be below normal. The remaining parts of Amhara, Tigray, Afar, Benshangul-Gumuz, Gambella and western Oromya are anticipated to be under dry and sunny weather condition.

2.2 For the month of April 2005

In the coming month of April Southern parts of Somali, Borena zone of Oromiya, SNNPR and Gambela are expected to have close to normal rainfall. Besides, eastern Tigray, eastern Amhara and the remaining most part of Ormya as well as Afar and northern part of Somali will have a chance of near normal rainfall; however below normal rainfall will be expected over some places of the aforementioned areas. Western portion of Tigray and Amhara as well as Benshngul-Gumuz are anticipated to get below normal rainfall

3. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE

3.1 VEGETATION CONDITION AND IMPACT ON AGRICULTURE

The improvement moisture condition particularly during the fist and second dekad of the month favored season's agricultural activities like land preparation and sowing activities in most parts of Belg growing and long cycle growing areas as well. As a result sowing of long cycle crops like maize and sorghum was underway in most places. Nevertheless, due to the observed deficient rainfall condition during the third dekad of March in most parts of the country crops suffered from water stress in some areas of eastern Oromiya (Dolo Mena) and few areas of eastern Amhara (Kutaber). On the other hand Most of the major crops of Belg like Barley and Peas which were sown during the month of January 2005 were at the stage of shooting and flowering with a good field conditions over some areas of eastern Amhara like Guguftu and Tebasit. With regard to air temperature, a rise in extreme maximum temperature observed during the third dekad of March in some lowland areas could enhance evapotranspiration thereby affecting the vegetation condition of the areas. In addition to this little rainfall with extended sunny outbreak would favour the out break of pests.

3.2 EXPECTED WEATHER IMPACTS ON AGRICULTURE DURING THE COMING MONTH

The anticipated close to normal rainfall over southern parts of Somali, Borena zone of Oromiya, SNNPR and Gambela would favor pasture and drinking water particularly over pastoral areas of Somali and Borena. Moreover it would have significant positive contribution for Belg crops in SNNPR. The expected a chance of near normal rainfall over eastern Tigray and Amhara including most parts of Oromiya would favour season's agricultural activities to some extent. On the other hand the expected below normal rainfall over some places of the aforementioned areas would result in water stress on Belg crops. Thus attention should be given for proper water harvesting techniques in order to minimize the effect of moisture stress in the above mention deficient areas.

Table 1 Climatic and Agro-Climatic elements of different stations for the month of March 2005

	Stations	Region	A/ rainfall	Normal	%of Normal	ETo mm/day	Monthly ETo	Moisture status
1	Adigrat	TIGRAI	67.4	31.3	215.3	4.26	127.8	M
2	Adwa		100.5	14.6	688.4	8.02	240.6	MD
3	Mekele		15.6	26.2	59.5	6.38	191.4	VD
4	Michew		51.2	58.7	87.2	3.85	115.5	MD
5	Senkata		61.4	61.1	100.5	NA	NA	NA
6	Shire		61.9	1.3	4761.5	NA	NA	NA
1	Dubti	AFAR	0	10.6	0.0	NA	NA	NA
	Algea	AMHARA	105.6	68.3	154.6	NA	NA	NA
1	Bahirdar		85.6	12.2	701.6	5.8	174	MD
2	Bati		82.3	67.3	122.3	4.22	126.6	M
3	Bullen		70.9	13.3	533.1	4.62	138.6	M
4	Chagni		55.6	14.8	375.7	4.97	149.1	MD
5	Chefa		72.9	230.7	31.6	NA	NA	NA
6	Combolcha		67	80	83.8	4.21	126.3	M
7	D.Birhan		17.9	57.6	31.1	NA	NA	NA
8	D.Markos		110.6	48.1	229.9	4.64	139.2	M
9	D.Tabor		34.1	35.9	95.0	NA	NA	NA
10	Dangla		92	58.3	157.8	4.09	122.7	M
11	Enwary		18.3	54.1	33.8	NA	NA	NA
12	Gonder		60.8	12.7	478.7	5.03	150.9	MD
13	Lalibela		62.6	52.4	119.5	NA	NA	NA
14	M.Meda		63.9	72.6	88.0	NA	NA	NA
15	Majete		145.3	72.4	200.7	4.29	128.7	H
16	Metema		6.3	6.6	95.5	NA	NA	NA
17	Mota		50.4	28.7	175.6	NA	NA	NA
18	S.Gebeya		43.9	47	93.4	4.37	131.1	MD
19	Sirinka		99	91.6	108.1	4.22	126.6	M
20	Woreilu		67	69.5	96.4	NA	NA	NA
21	Wegeltena		57.6	60.6	95.0	4.32	129.6	MD
1	Aira	OROMIYA	62	9.3	666.7	4.33	129.9	MD
2	Alemaya		39.9	75.3	53.0	4.31	129.3	MD
3	Bedelle		112.2	76.9	145.9	4.52	135.6	M
4	Begi		23.5	41	57.3	NA	NA	NA
5	Bui		147.6	67.9	217.4	5.13	153.9	M
6	D.Mena		86.9	84	103.5	6.27	188.1	MD
7	D.Zeit		95.3	44.9	212.2	5.38	161.4	M
8	Ejaji		58.7	71.5	82.1	4.9	147	MD
9	Fitche		73	62.9	116.1	4.03	120.9	M
10	Gelemso		136.8	73.7	185.6	4.54	136.2	H
11	Gimbi		115.6	22.7	509.3	NA	NA	NA
12	Gore		110.8	96.1	115.3	NA	NA	NA
13	H.Mariyam		96.3	74	130.1	NA	NA	NA
14	Jimma		193.8	92.9	208.6	4.45	133.5	H
15	K.Mengist		141.2	85.5	165.1	4.37	131.1	H

17	**Kulumsa**		80.8	82.7	97.7	NA	NA	NA
18	**Limugenet**		125.9	85.9	146.6	NA	NA	NA
19	**Masha**		134.9	143.5	94.0	NA	NA	NA
20	**Meisso**		85.5	74.6	114.6	5.22	156.6	M
21	**Metehara**		51	39.1	130.4	5.85	175.5	MD
22	**Nazreth**		90.1	42.8	210.5	5.85	175.5	M
23	**Neghele**		72.6	61.1	118.8	5.78	173.4	MD
24	**Nedjo**		52.2	37.7	138.5	4.25	127.5	MD
25	**Nekemte**		131.2	65.1	201.5	4.63	138.9	M
26	**Robe(Bale)**		23.7	50	47.4	5.75	172.5	D
27	**Sekoru**		118.6	90.9	130.5	4.2	126	M
28	**Shambu**		103.2	66.4	155.4	NA	NA	NA
29	**Woliso**		58.2	64.1	90.8	NA	NA	NA
30	**Yabello**		58.1	77.1	75.4	NA	NA	NA
31	**Zeway**		83.9	53.2	157.7	NA	NA	NA
1	**D.habur**	**SOMALI**	16.8	26.3	63.9	5.72	171.6	VD
2	**Gode**		0	16.5	0.0	7.75	232.5	VD
3	**Jijiga**		72.1	52	138.7	5.07	152.1	MD
1	**A.Minch**	**SNNPR**	62.9	67.1	93.7	4.72	141.6	MD
2	**Awassa**		121	65	186.2	4.78	143.4	M
3	**Hosaina**		166.9	96.8	172.4	4.22	126.6	H
4	**Jinka**		162.4	99	164.0	4.24	127.2	H
5	**Konso**		81.8	93.8s		5.35	160.5	M
6	**M.Abay**		116	50.9	227.9	NA	NA	NA
7	**Sodo**		186.9	94.4	198.0	4.61	138.3	H
1	**Pawe**	**B/GUMUZ**	18.1	5.8	312.1	4.6	138	D
2	**Assossa**		9.0	22.4	40.2	5.88	176.4	VD
1	**A.A.Obs.**	**A.A**	55.5	70.4	78.8	NA	NA	NA
2	**A.A.Bole**		32.5	64.2	50.6	NA	NA	NA
1	**Diredawa**	**D.D**	77.5	65.9	117.6	5.16	154.8	M
1	**Harar**	**Harai**	71.7	65.2	110.0	4.37	131.1	M

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.

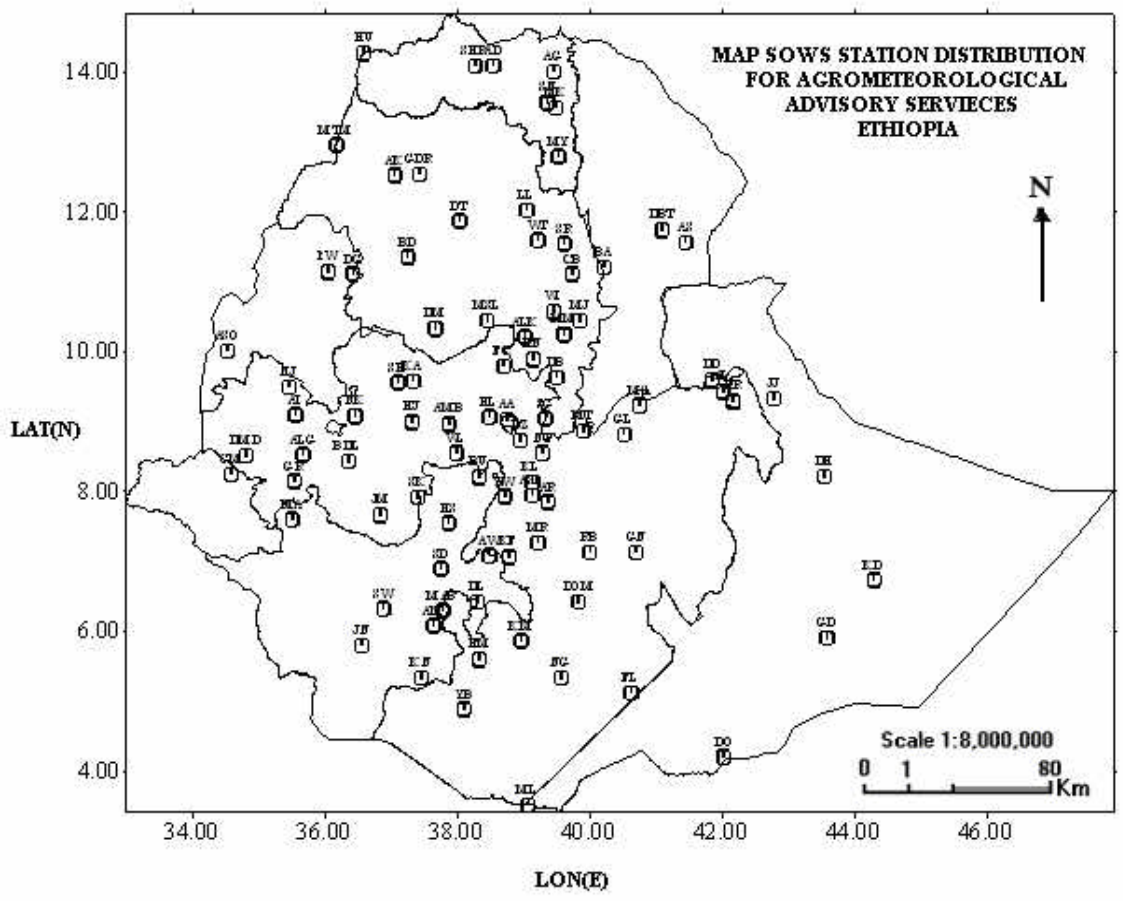
DEKAD: - First or second ten days or the remaining days of a month.

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