

## **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.

Director General  
NMA  
P.O.Box 1090  
Tel: 011661-57-79  
FAX 00251-11-6625292  
E-mail [nmsa@ethionet.et](mailto:nmsa@ethionet.et)  
Addis Ababa

# አህፅሮት

## እ.ኤ.አ ፌብሩዋሪ 2009

እ.ኤ.አ በፌብሩዋሪ 2009 በመጀመሪያ አስርተ ቀናት የነበረው የአየር ሁኔታ በአጠቃላይ የመካከለኛውና ምዕራብ ኦሮሚያ፣ የምስራቅ አማራ፣ የደቡብ ብሔር ብሔረሰቦችና ህዝቦች ክልል፣ የጋምቤላና የቤንሻንጉል ጉሙዝ አንዳንድ ቦታዎች ቀላል ዝናብ ያገኙ ሲሆን ይህም የዝናብ ሁኔታ ለበልግ የማሳ ዝግጅት እና ለአጠቃላይ የእርሻ እንቅስቃሴ ጠቀሜታ እንደነበረው ይታመናል። በሌላ በኩል በተቀሩት የሀገሪቱ የስምጥ ሸለቆና የምስራቅ ደጋማ ቦታዎችና የአማራ አንዳንድ ቦታዎች ላይ በአብዛኛው የደመና ሽፋን የነበረ ሲሆን ይህም ሁኔታ የመሬቱ እና የተክሎች የትነት መጠን በመቀነስ የአፈር እርጥበት ድርቀትን በመቀነስ ረገድ አስተዋፅዖ እንደነበረው ይታመናል። በተጨማሪ በምዕራብ አማራ እና በደቡብ ኦሮሚያ ደጋማ ቦታዎች ላይ አነስተኛ ዝናብ እንደነበር ለማወቅ ተችሏል። ይህም ሁኔታ በደቡብ ኦሮሚያ ለሚካሄደው የበልግ ወቅት የማሳ ዝግጅት እና ለአጠቃላይ የእርሻው እንቅስቃሴ አዎንታዊ ተፅዕኖ ነበረው።

እ.ኤ.አ በፌብሩዋሪ 2009 በሁለተኛው አስርተ ቀናት የነበረው የዝናብ ሁኔታ በምዕራብና ደቡብ ኦሮሚያ፣ በምዕራብ አማራ፣ በጋምቤላና በደቡብ ብሔር ብሔረሰቦችና ህዝቦች ክልል በተለያዩ ቦታዎች የተገኘው መጠነኛ ዝናብ የበልግ እርሻ እንቅስቃሴያቸውን ቀድሞ ለሚጀምሩ አካባቢዎች ለቋሚ ሰብሎች ማሳ ዝግጅት በጎ ጎን እንደነበረው የታመናል። በሌላ በኩል በደቡብ ምስራቅ፣ በሰሜን ምስራቅና የሰሜን ምዕራብ ቆላማ ስፍራዎች ታይቶ ከነበረው የቀን ከፍተኛ ሙቀት መጨመር አኳያ ቀደም ብሎ ከነበረው ደረቅ ሁኔታ ጋር ተያይዞ በመጠጥና የግጦሽ ሳር አቅርቦት ላይ አሉታዊ ተፅዕኖ እንደነበረው ይገመታል።

እ.ኤ.አ በፌብሩዋሪ 2009 በሶስተኛው አስርተ ቀናት የነበረው የዝናብ ሁኔታ በአገሪቷ ደቡብ ምዕራብና ሰሜን ምስራቅ አካባቢዎች ላይ የተስፋፋ ዝናብ ሲሰጠው የቆዩት የሚቲዎሮሎጂ ክስተቶች እስከ ማርች የመጀመሪያዎቹ አስር ቀናት አጋማሽ ድረስ ከሞላ ጎደል በተመሳሳይ መልኩ ቀጥሏል። ይህም ሁኔታ ለበልግ የእርሻ ስራ እንቅስቃሴ፣ ለአርብቶ አደሩና ከፊል አርብቶ አደሩ ለመጠጥ ውሃ እና ለግጦሽ ሳር እንዲሁም በአካባቢ ለሚበቅሉ ቋሚ ተክሎች የተሻለ አስተዋፅዖ እንደሚኖራቸው ሲጠበቅ በሌላ መልኩ በመጨረሻዎቹ አስር ቀናት በደቡብ ምዕራብ ኢትዮጵያ አካባቢዎች የተሻለ ዝናብ የሚያገኙ ሲሆን ይህም ለአካባቢው የበልግ የእርሻ

እንቅስቃሴ አዎንታዊ ተፅዕኖ የነበረው ሲሆን በምስራቅ የአገሪቱ ክፍሎች ላይ ዝናቡ በመጠንና በስርጭት ቀስ በቀስ የመዳከም አዝማሚያ በአካባቢው ለሚኖሩ አርብቶ አደሮች እና ከፊል አርብቶ አደሮች የጎላ ጉዳት እንዳልነበረው ይገመታል።

በአጠቃላይ መልኩ ሲታይ በፌብሪዋሪ ወር የነበረው የዝናብ መጠን እንብዛም የተጠናከረ መልክ ባይኖረውም በምዕራብ የሀገሪቱ አጋማሽ ላይ ግን ዝናቡ ተከታታይነት ያለውና በመጠንና በቦታ ሽፋን ረገድ ጥሩ ገፅታ እንደነበረው ተስተውሏል። ይህም ለበልግ እርሻ እንቅስቃሴ ማለትም ለዘርና ለማሳ ዝግጅት እንዲሁም ለቋሚ ተክሎችና ለአርብቶ አደሩና ለከፊል አርብቶ አደሩ ለመጠጥ ውሃ አቅርቦት እና ለግጦሽ ሳር ልምላሜ አዎንታዊ ተፅዕኖ የነበረው ሲሆን ይህም ለበልግ አብቃይ አካባቢዎች ለወቅቱ ዝናብ መደበኛውን ፈር ተክትሎ መጣሉ ለበልግ እርሻ እንቅስቃሴ በጎ ጎን መኖሩ ከመረጃ ዘጋቢ ጣቢያዎቻችን ለማወቅ ተችሏል። በአጠቃላይ መልኩ ሲታይ የፌብሪዋሪ ዝናብ በአብዛኛው አማራ ኦሮሚያ እና የደቡብ ብሔር ብሔረሰቦችና ህዝቦች ክልል ለበርካታ ቀናት ዝናብ ሲያገኙ የቆዩ ሲሆን በሰሜን ምስራቅ አማራ በምዕራብ ኦሮሚያና አጎራባች የደቡብ ብሔር ብሔረሰቦች ክልል አንዳንድ ቦታዎች ላይ ከባድ ዝናብ የተመዘገበ መሆኑን ከዝናብ መረጃዎች ለማወቅ ተችሏል ሆኖም ግን በአዝርዕትና በሰው ላይ ያደረሰው ጉዳት አልነበረም። በወሩ መጨረሻ ቀናት ውስጥም ከደቡብ ምዕራብ እስከ ሰሜን ምስራቅ የሚገኙትን የበልግ አብቃይ አካባቢዎች የተስፋፋ ሲሆን ይህም ለበልግ እርሻ እንቅስቃሴ በጎ ጎን እንደነበረው ታውቋል። ከዚህም ሌላ በወሩ ውስጥ የተሻለ የዝናብ መጠን ስርጭት በምዕራብ ኦሮሚያ በደቡብ ብሔር ብሔረሰቦች ክልል በምስራቅ አማራ አካባቢዎች ሰሆኑ የዝናብ መጠንና ስርጭት ይነስ እንጂ የደቡብ እና የሰሜን ሶማሌ የምስራቅ ኦሮሚያና የምዕራብ አማራ አካባቢዎችም ለተወሰነ ቀናት ዝናብ አግኝተዋል ይህም ለበልግ ወቅት የእርሻ ሥራ እንቅስቃሴ ለአርብቶ አደሩና ለከፊል አርብቶ አደሩ በጎ ጎን እንደነበረው ተስተውሏል።

## **SUMMARY**

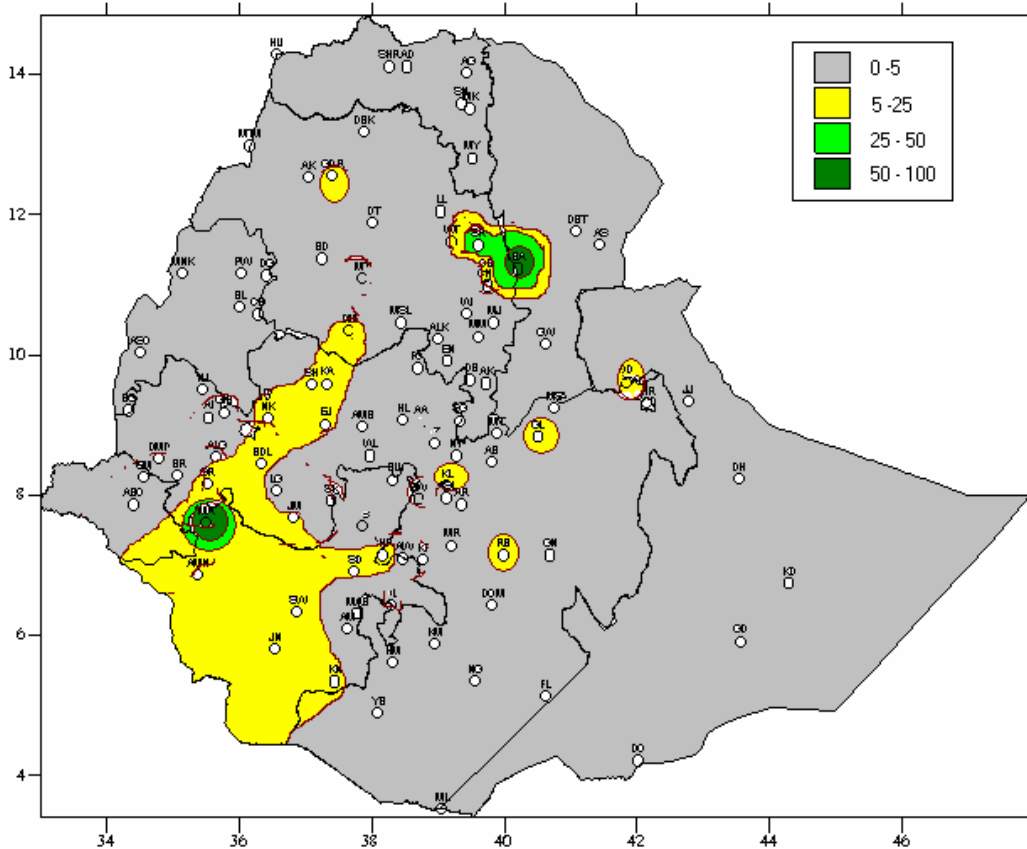
### **February 2009**

During the first dekad of February 2009, light rain prevailed over pocket areas of central and western Oromia, eastern Amhara, SNNPR, Gambela and Benshangul Gumuz, this little rainfall might have a positive impact for land preparation and agricultural activities over Belg benefiting areas, on the hand, an increase in cloud coverage over few places of the rift valley, eastern highlands and eastern Amhara might have favored recharging of moisture in the atmosphere which might decrease evapo-transpiration that favored perennial crops. In addition to this, high lands of western Amhara and southern Oromiya received little amount of rainfall, which favored land preparation and agricultural activities over southern Oromiya.

During the second dekad of February 2009, the observed rain over western and southern Oromia, western Amhara, Gambella and SNNPR might have favored for Belg agricultural activities where normally started earlier as well as perennial crops. Moreover, the observed small rains over northeast, eastern and central Ethiopia might have favored Belg land preparation. On the other hand, the observed day time extreme air temperature rise for consecutive days over mid and lowland areas of the country that might have caused the rate of evapo-transpiration to increase, hence, the condition might have caused moisture stress on availability of pasture and water over pastoral and agro-pastoral areas.

During the third dekad of February 2009, the extended rain bearing systems over southern and northeastern portions of the country. Hence, the situation expected to favor Belg agricultural activities, perennial crops and availability of pasture and water over pastoral and agro pastoral areas.

In general the month of February 2009, the rainfall activities over most Belg growing areas of the country favored land preparation. While over western and southwestern parts of Belg growing areas the rainfall activities were conducive for Belg agricultural activities as well as for perennial crops. Belg rain-benefiting areas of southwestern and northeastern portions of the country recorded sufficient rain, which favored for Belg agricultural activities as well as availability of drinking water and pasture. Although, limited amount of rainfall was observed over parts of southern and northern Somalia, eastern Oromiya and western Amhara the rainfall activity favored Belg agricultural activities, availability of pasture and drinking water.



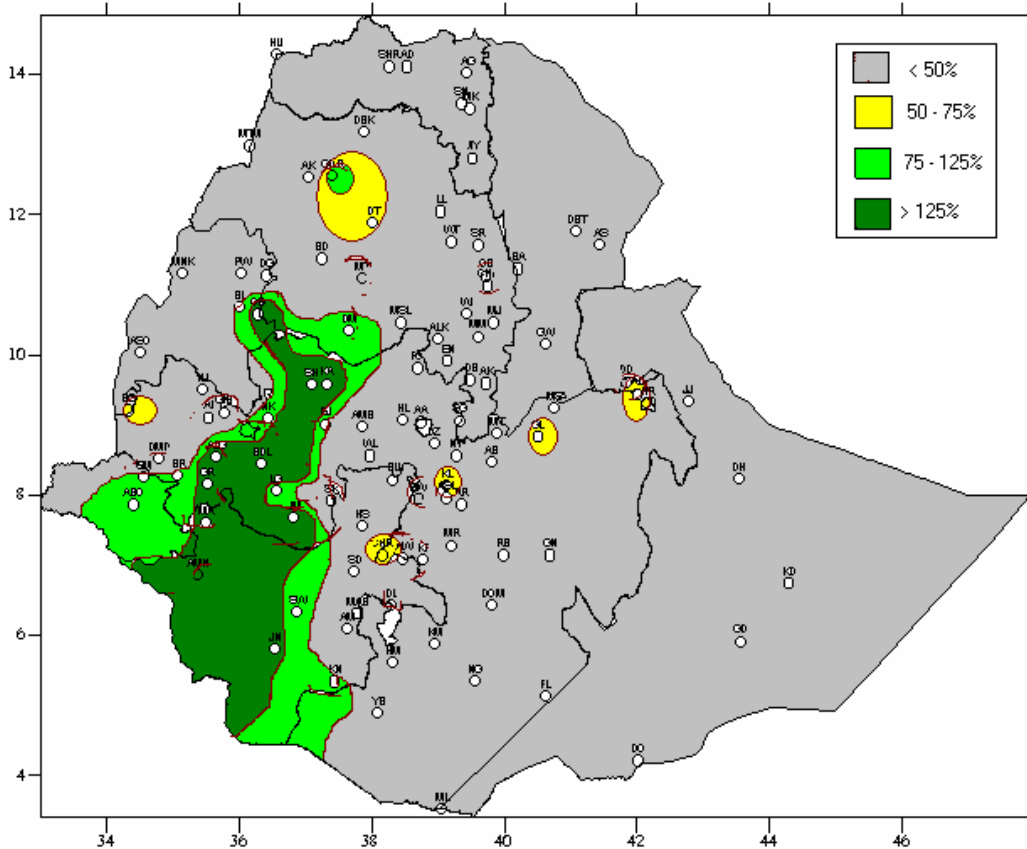
**Fig 1 Rainfall distribution in mm (21-28 February, 2009)**

## **1. WEATHER ASSESSMENT**

### **1.1 21-28 February 2009**

#### **1.1.1 RAINFALL AMOUNT (Fig.1)**

Pocket areas of western SNNPR and eastern Amhara received 50-100 mm rainfall. Pocket areas of western SNNPR and eastern Amhara received 25-50 mm rainfall. Most part of SNNPR, part of western and pocket areas of central and eastern Oromia, part of eastern Gambela and pocket areas of northern, southern and eastern Amhara received 5-25 mm rainfall. The rest parts of the country exhibited little or no rain fall.



**Fig.2 Percent of normal rainfall (21-29 February, 2009)**

**Explanatory notes for the legend:**

**<50 -- Much below normal**

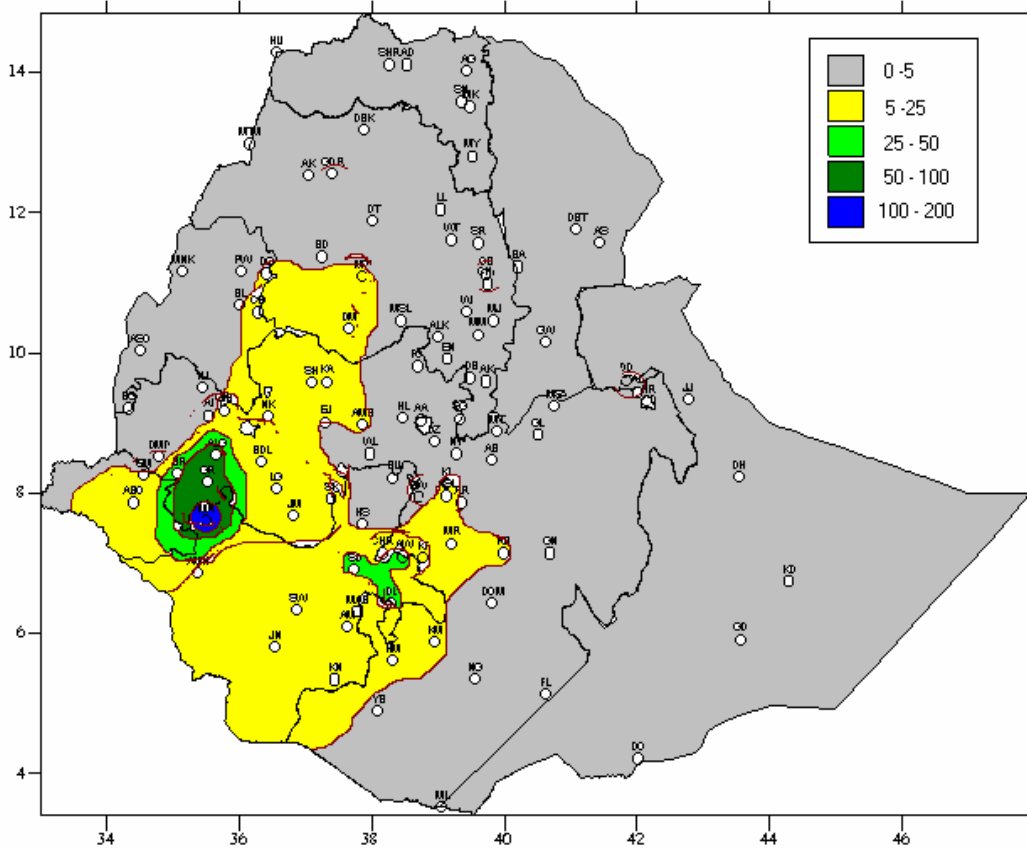
**50—75% -- below normal**

**75—125% --- Normal**

**>125% ---- Above normal**

### **1.1.2 RAINFALL ANOMALY (Fig. 2)**

Western half of SNNPR, eastern half of Gambella, part of western and southern Oromia, part of southern and pocket area of northern Amhara and pocket areas of eastern Benshangul –Gumuz received normal to above normal rainfall. The rest parts of the country experienced below normal to much below normal rainfall.

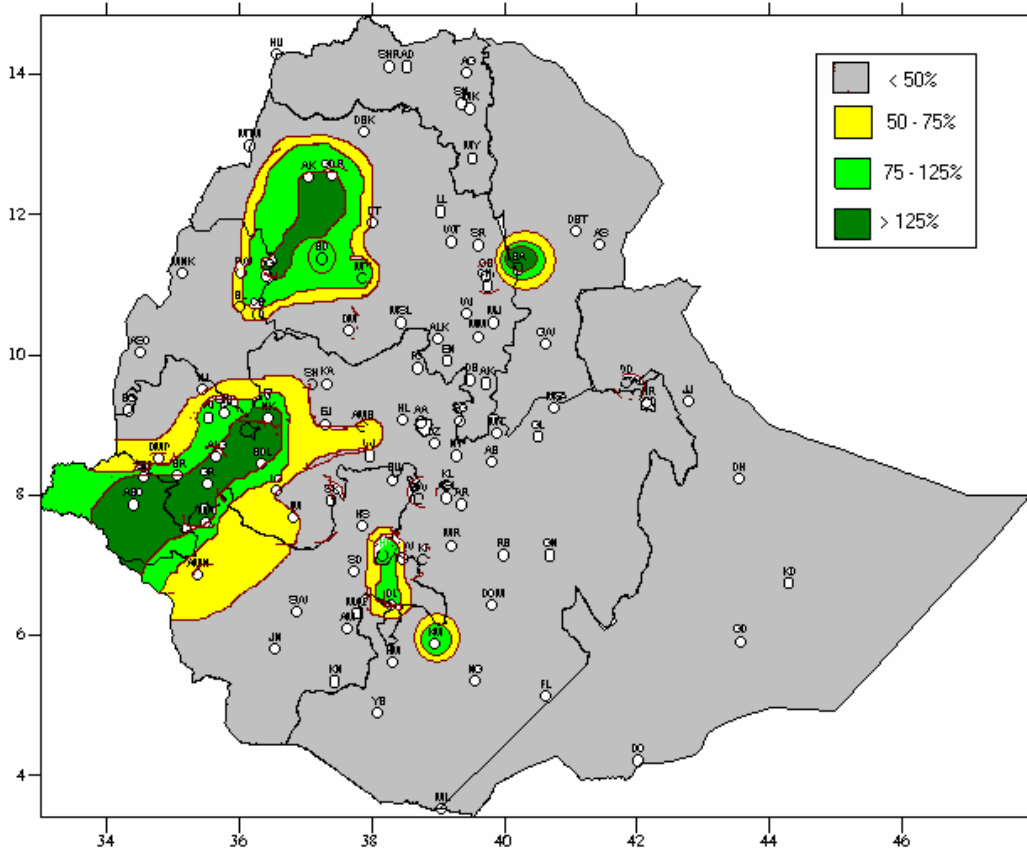


**Fig 3 Rainfall distribution in mm for the month of February 2009**

### 1.3 February, 2009

#### 1.1.3 Rainfall distribution (Fig.3)

Pocket area of western SNNPR received 100-200 mm rainfall. Pocket area of western Oromia received 50-100 mm rainfall. Parts of western Oromia, eastern Gambela and pocket area of eastern SNNPR received 25-50 mm rainfall. Most of SNNPR, Gambela, and parts of western and southern Oromia, southern Amhara and eastern Benshangul-Gumuz received 5-25 mm rainfall. The rest parts of the country exhibited little or no rainfall.



**Fig.4 Percent of normal rainfall for the month of February 2009**

**Explanatory notes for the legend:**

- <50 -- Much below normal**
- 50—75% -- below normal**
- 75—125% --- Normal**
- >125% ---- Above normal**

Gambela, parts of western and pocket area of Oromia, pocket area of eastern SNNPR, part of western and pocket area of eastern Amhara and pocket areas of eastern Benshangul-Gumuz experienced normal to above normal rainfall. The rest parts of the country exhibited below normal to much below normal rainfall.

**1.1.4 TEMPERATURE ANOMALY**

During the month some stations recorded extreme maximum temperature greater than 35 °C, among them Humera, Metema. Gambela, Mankush, Gewane reported 41.6,41.5, 41.0,40.4 and 40.0 °C, respectively. On the other hand some stations reported extreme minimum temperature below 5°C, among those stations Kofelle, Debre Berhan, Kulumsa, Arsi robe, Alemaya, Mekele, BaleRobe , Bui and Debre Zeit exhibited extreme minimum temperature as low as 2.2, 3.0, 3.5, 3.5, 3.5, 3.6, 4.0, 4.5 and 4.6 C, respectively this situation has a negative impact for normal growth and development of plants.



### **3. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE**

#### **3.1 VEGETATION CONDITION AND IMPACT ON AGRICULTURE**

In the month of February 2009, the rainfall activities over most Belg growing areas of the country favored land preparation. While over western and southwestern parts of Belg growing areas the rainfall activities were conducive for Belg agricultural activities as well as for perennial crops. Belg rain-benefiting areas of southwestern and northeastern portions of the country recorded sufficient rain, which favored for Belg agricultural activities as well as availability of drinking water and pasture. Although, limited amount of rainfall was observed over parts of southern and northern Somalia, eastern Oromiya and western Amhara the rainfall activity favored Belg agricultural activities, availability of pasture and drinking water.

#### **3.2 EXPECTED WEATHER IMPACT ON AGRICULTURE DURING THE COMING DEKAD**

Belg rain bearing meteorological phenomena will more or less increase in the dekad over most Belg growing areas of the country. The condition will favor Belg agricultural activities, pasture and water availability over postural and agro postural areas. The expected rain will follow normal pattern in amount and distribution over most parts of Belg growing areas especially over southwestern and northern portions of the county, as a result will favor Belg agricultural activities.

**Table 1. Climatic and Agro-Climatic elements of different stations for the month of February 2008**

Stations	Region	A/ rainfall	Normal	%of Normal	Eto mm/day	Monthly Eto	Moisture status	
Adigrat	TIGRAI	0.6	10	6.0	3.64	101.92	VD	
Mekele		0	8.8	0.0	6.02	168.56	VD	
Michew		5	25.2	19.8	3.61	101.08	D	
Senkata		1.2	26.9	4.5	NA	NA	NA	
Shire		0	0.3	0.0	4.92	137.76	VD	
Assayta	AFAR	NA	NA	NA	6.39	178.92	NA	
Dubti		NA	NA	NA	5.54	155.12	NA	
Gewane		NA	NA	NA	6.1	170.8	NA	
A. Ketema	AMHARA	2.6	20.5	12.7	NA	NA	NA	
Abomsa		0	52.1	0.0	4.71	131.88	VD	
Aykel		5.7	2.2	259.1	NA	NA	NA	
Bahirdar		0.8	1.8	44.4	2.63	73.64	VD	
Bati		81.8	41.7	196.2	4.02	112.56	M	
Bullen		0.7	0.3	233.3	3.78	105.84	VD	
Combolcha		11.4	37.3	30.6	3.76	105.28	D	
D.Birhan		0	18.6	0.0	4.21	117.88	VD	
D.Markos		12.4	17.6	70.5	4.45	124.6	D	
D.Tabor		3.6	6.5	55.4	NA	NA	NA	
Dangla		5.3	2.6	203.8	3.82	106.96	VD	
Gonder		14.3	7.9	181.0	4.8	134.4	D	
M.Meda		12.4	25.8	48.1	NA	NA	NA	
Majete		10.3	48.8	21.1	4.23	118.44	VD	
Metema		0	0	0.0	4.2	117.6	VD	
Motta		13.2	12.6	104.8	4.45	124.6	D	
Lalibela		2.8	12.6	22.2	4.35	121.8	VD	
S. Gebeya		0	24.3	0.0	4.24	118.72	VD	
Sirinka		7.9	61	13.0	4.04	113.12	VD	
Wereilu		3	30.4	9.9	4.16	116.48	VD	
Arsi Robe		OROMIYA	0	52.9	0.0	4.28	119.84	VD
Alemaya			5.3	24.1	22.0	NA	NA	NA
Alge	59.3		17.9	331.3	NA	NA	NA	
Ambo	23.1		36.6	63.1	NA	NA	NA	
Arjo	13.8		23.7	58.2	3.82	106.96	D	
Bedelle	43.2		21.3	202.8	NA	NA	NA	
Begi	3.2		11.6	27.6	NA	NA	NA	
Chira	44.5		56	79.5	NA	NA	NA	
D.Mena	2.3		34.6	6.6	NA	NA	NA	
D.Zeit	0		25.4	0.0	5.1	142.8	VD	
Fitche	2.7		33	8.2	3.58	100.24	VD	
Gelemso	6.2		34.5	18.0	4.86	136.08	VD	
Gimbi	15.3		4	382.5	NA	NA	NA	
Gore	59.2		37.5	157.9	3.8	106.4	M	
H. Mariam	4.5		25	18.0	3.47	97.16	VD	
Jimma	29.5		47	62.8	8.47	237.16	D	
K.Mengist	23		21.5	107.0	3.92	109.76	D	
Kachise	8.6		27.3	31.5	4.12	115.36	VD	
Koffele	28.4		57.1	49.7	3.85	107.8	MD	
Kulumsa	17.7		44.3	40.0	4.29	120.12	D	
Lumugenet	9.2		36.6	25.1	3.36	94.08	D	
Meisso	2.9		39.9	7.3	NA	NA	NA	
Metehara	0		30.6	0.0	5.2	145.6	VD	
Moyale	1.9		21.7	8.8	6.2	173.6	VD	
Nazreth	0		27.2	0.0	6.07	169.96	VD	
Neghele	0		21.5	0.0	3.84	107.52	VD	

<b>Nedjo</b>		1.3	5.2	25.0	3.65	102.2	VD
<b>Nekemte</b>		21.8	15.7	138.9	3.68	103.04	D
<b>Robe(Bale)</b>		8.4	31.5	26.7	3.86	108.08	VD
<b>Sekoru</b>		17.2	37.2	46.2	3.9	109.2	D
<b>Woliso</b>		1.6	30	5.3	5.78	161.84	VD
<b>Ziway</b>		NA	NA	NA	5.21	145.88	VD
<b>Jijiga</b>	<b>SOMALI</b>						
<b>Gode</b>		2.2	4.8	45.8	NA	NA	NA
<b>A.Minch</b>	<b>SNNPR</b>	4.2	31.8	13.2	4.75	133	VD
<b>Awassa</b>		9	58.9	15.3	4.6	128.8	VD
<b>Billate</b>		20	39.2	51.0	NA	NA	NA
<b>Dilla</b>		40.8	45.4	89.9	NA	NA	NA
<b>Hosaina</b>		4.8	51.6	9.3	4.25	119	VD
<b>Jinka</b>		20.3	47.2	43.0	4.04	113.12	D
<b>Konso</b>		16.3	39.8	41.0	5.76	161.28	D
<b>Masha</b>		137	52.9	259.0	3.04	85.12	H
<b>Sawla</b>		18.3	35.8	51.1	4.24	118.72	
<b>Assosa</b>	<b>B/GUMUZ</b>	0	4.2	0.0	NA	NA	NA
<b>Pawe</b>		0	1	0.0	4.54	127.12	VD
<b>Chagni</b>		6.8	7.1	95.8	4.17	116.76	VD
<b>Gambela</b>	<b>Gambela</b>	11.7	2.9	403.4	NA	NA	NA
<b>A.A.Obs.</b>	<b>A.A</b>	2.7	36	7.5	4.12	115.36	VD
<b>A.A. Bole</b>		0	37.6	0.0	5.27	147.56	VD
<b>Diredawa</b>	<b>D.D</b>	12.1	32.7	37.0	4.6	128.8	VD
<b>Harar</b>	<b>Harai</b>	2	11.8	16.9	4.55	127.4	VD

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 <sub>o</sub>	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 May 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 evapotranspiration of a disease free crop, growing under non-restricting soil conditions including soil water and fertility.

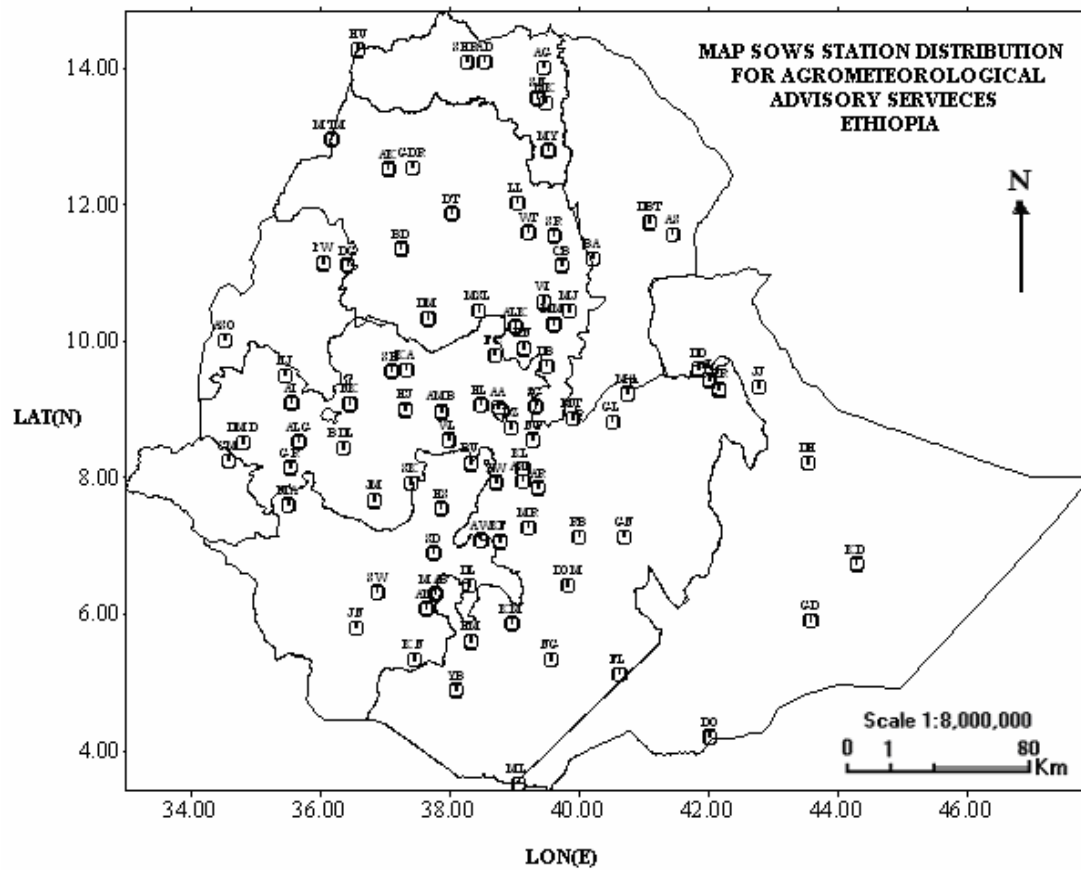
**DEKAD:** - First or second ten days or the remaining days of a month.

**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
Arba Minch	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		