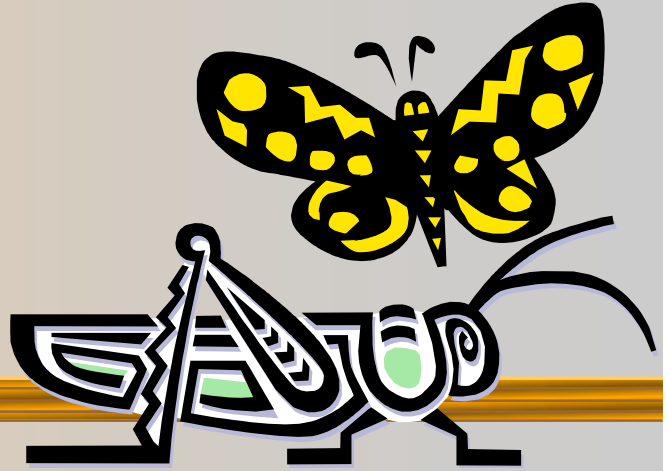


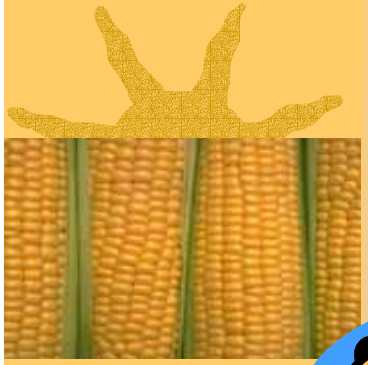


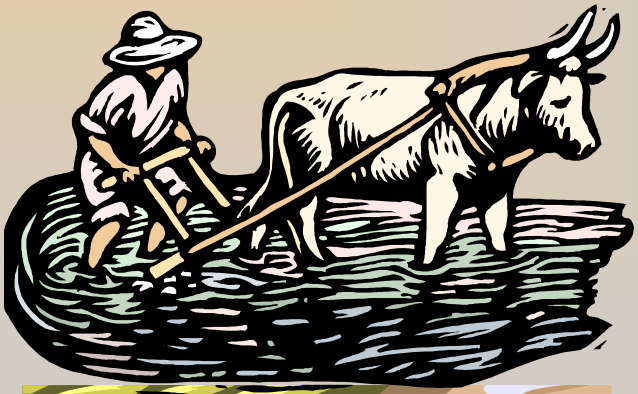
AGROMETEOROLOGICAL ASSESSMENT OF BEGA 2006/07

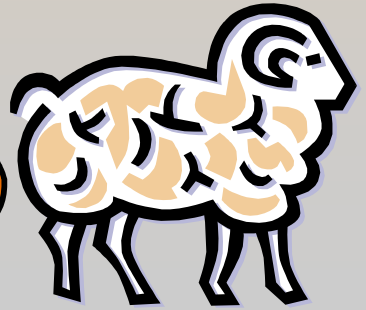
BY

AGROMETEOROLOGICAL TEAM

FEBRUARY 1, 2007






INTRODUCTION

MAJOR AGRICULTURAL ACTIVITIES OF BEGA SEASON

- Harvest and post harvest activities are the major practices over most parts of Meher growing areas.

- It is a cropping time for southern and southeastern lowlands of agro pastoral areas.

Introd Contd…….

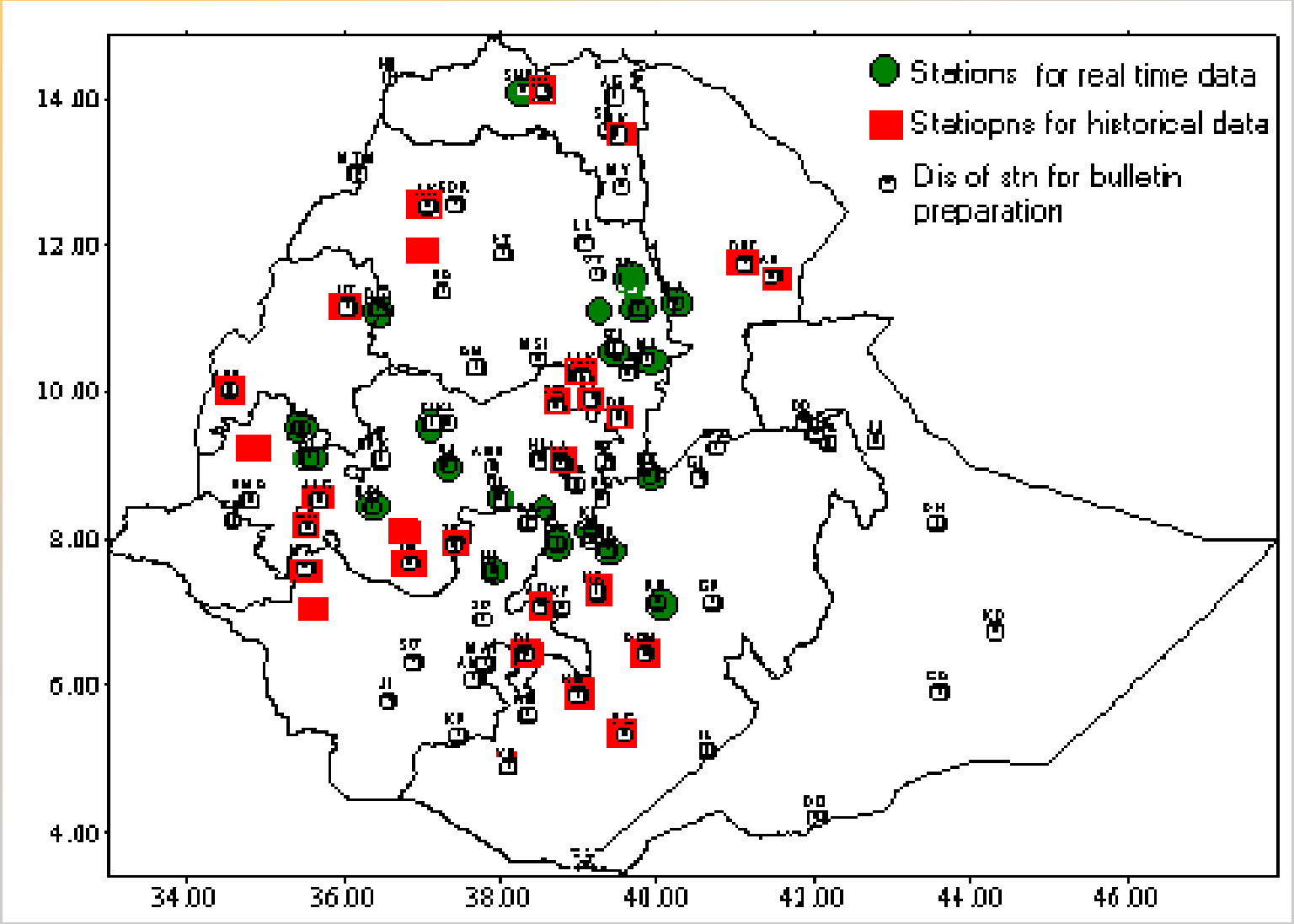
- It is time to perform water-harvesting activities for pastoral and agro pastoral areas of southern and southeastern lowlands.

- The weather situation could favour the out break of pests if there is favorable environment, susceptible host and the pest itself (disease triangle).

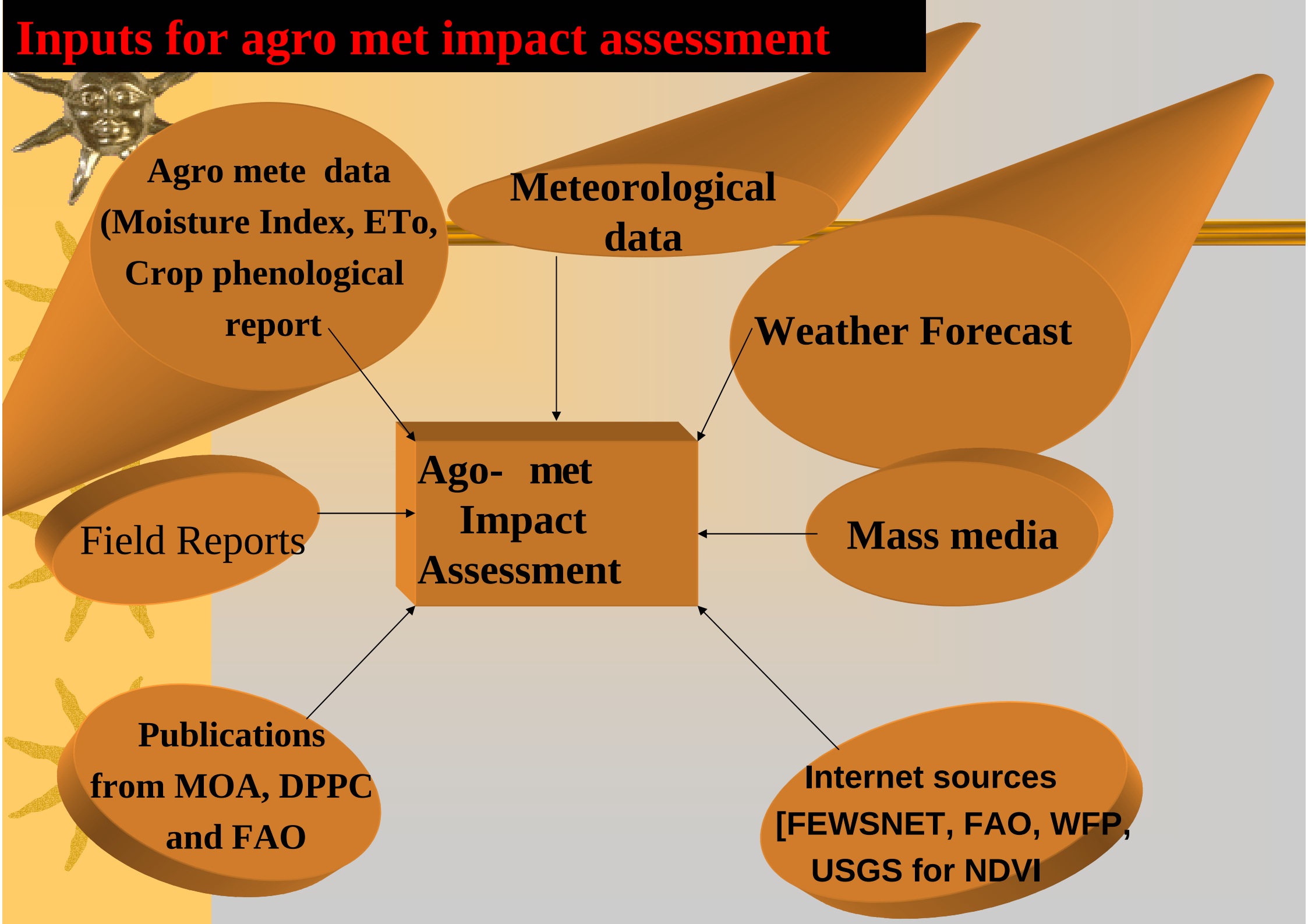
Introd Contd……

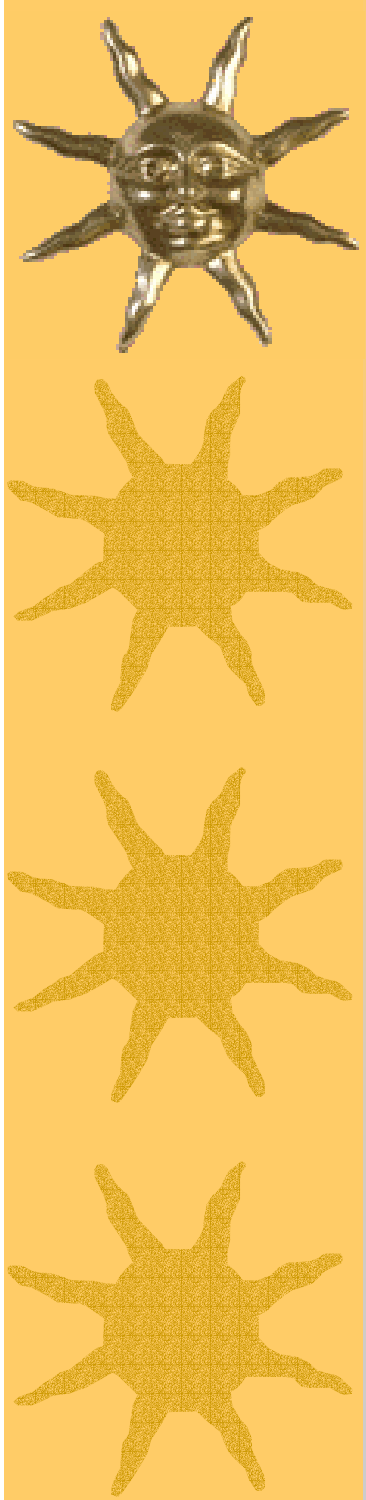
- The dry and windy Bega's weather situation is favorable for the occurrence and spread of fire.
- There is a possibility of frost hazard during the season, mainly over northeastern, central, eastern and southern highlands

Distribution of the stations for agro meteorological advisory services (bulletin preparation)



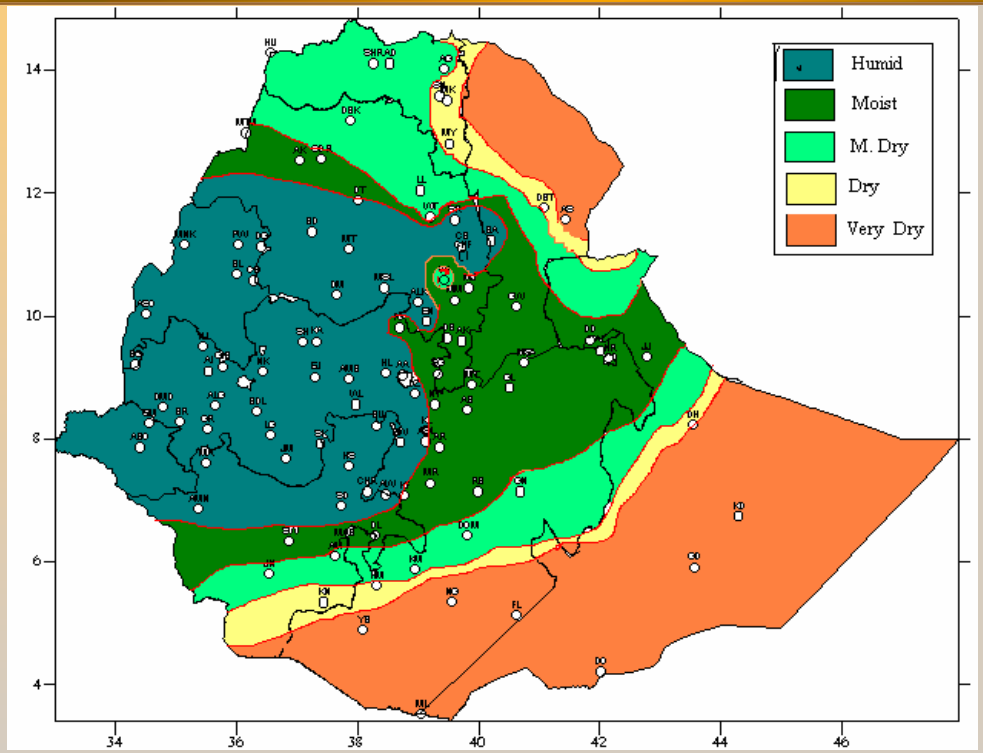
Inputs for agro met impact assessment





DISCUSSION

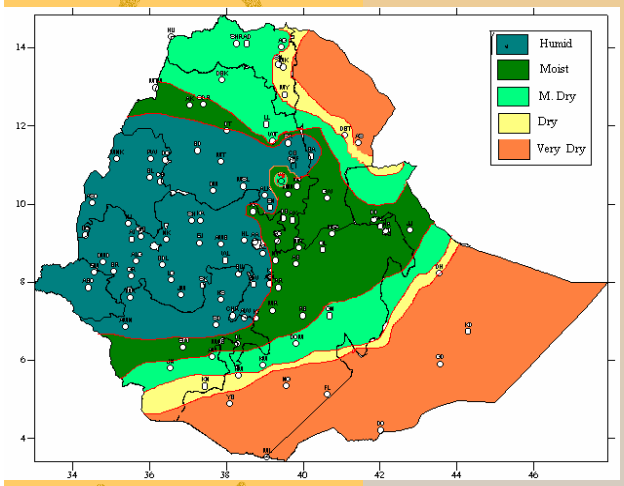
MOISTURE STATUS FOR SEPTEMBER 2006 AND IT'S IMPACT ON AGRICULTURE



MS Sep 2006

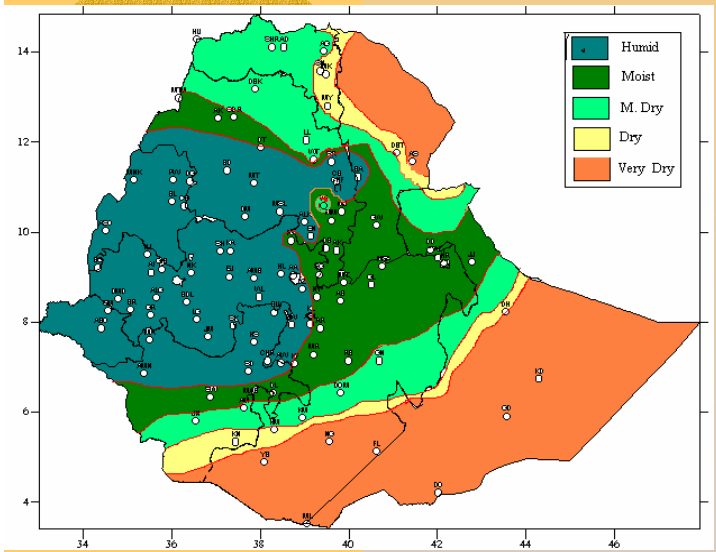
- The observed humid to moist moisture status in most parts of Meher growing areas during the month favored crops which were at different crop phenological stages.

Impact on agriculture Sept Contd……



- However some areas from western (Gimbi,Alge, Gore, Bedelle, LimuGenet, Shambu)northwestern (DebreTabor,Mankush, Chagni) eastern (Alemya, Harar) northeastern (Bati,Majete) received heavyfall ranging from (30-80)mm. As a result Bedelle, Kara Kore ,Dire Dawa, and Degha Bur reported crop damage and property loss.

Impact on agriculture Sept Contd……



MS Sep 2006

- The observed erratic rainfall distribution favored the outbreak of pest and disease like Armyworm and *Sorghum Chaffer* in some areas of SNNPR(Amhara, Burji and Konso) and in northeastern lowlands, respectively.

- Generally with the exception of the observed adverse condition like hail damage, water logging, flooding as well as excess moisture on crop fields, the over all situation was favorable for season's agricultural activities.

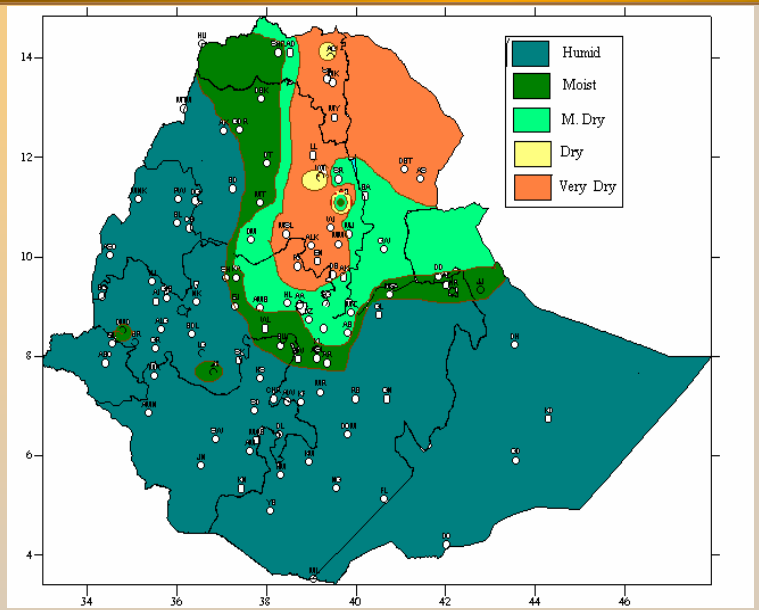
Impact on agriculture Sept Contd……

- Besides, the observed unseasonable rainfall situation over some areas of southern Ethiopia as of the second dekad of September had significant contribution for the availability of pasture and drinking water.

Temperature

- No significant temperature anomaly has been observed during the month of September 2006

MOISTURE STATUS FOR OCTOBER 2006 AND IT'S IMPACT ON AGRICULTURE



MS OCT 2006

Impact on agriculture….

- Nevertheless, the observed heavy falls (30-74mm in one rainy day) particularly during the third dekad of October resulted in crop damage and livestock losses. Besides, this condition could have a negative impact on crops which are ready to harvest by shattering the seeds and hindering harvest and post harvest activities.

Impact on agriculture October….

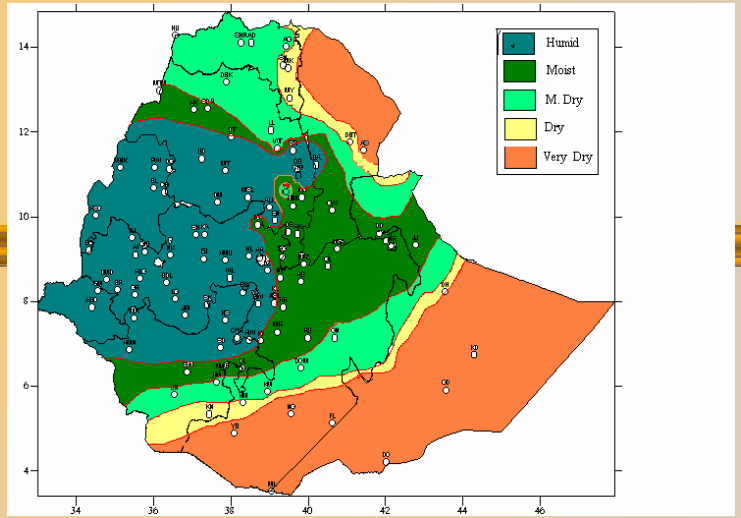
- Harvest and post harvest activities were under way in some areas of central, western and northeastern parts of the country.

- Some areas reported crop damage during the month under review for instance, Bilate,Bahirdar, Alge, Bedelle, Jinka, Abomsa, Ginager reported annual (Maize,Bean pea, teff,and lentil) and perennial crop (trees).

Impact on agriculture October….

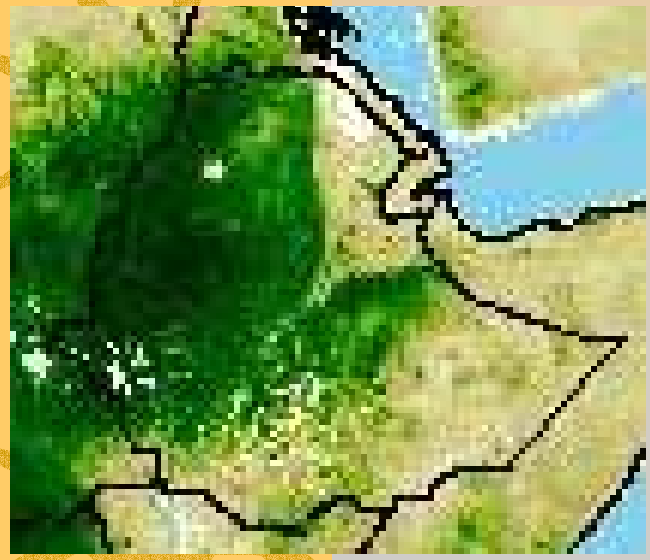
- Regarding pastoral and agro pastoral areas the observed heavy fall over highlands especially towards the end of the month caused overflow of Wabi Shebele river thereby, resulting crop damage and livestock losses in areas around riverbanks.

NDVI PICTURE FOR OCTOBER 2006



Moisture Status September 2006

Normal to above normal rainfall has been observed over most parts of southern half of the country during the second dekad of October.



1-10 October 2006

11-20 October 2006

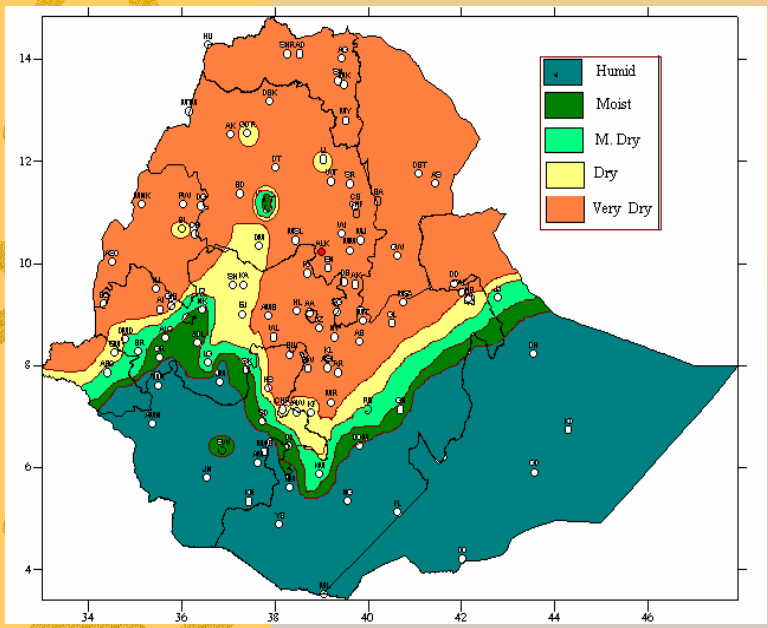
21-31 October 2006

Source: United States Geological Survey (USGS)

Temperature(October 2006)

- Some areas of central(Debre Birhan, Fitche), and north-eastern (Wegel Tena, Amba Mariam) highlands exhibited extreme minimum temperature less than 5^{o} C.

MOISTURE STATUS FOR NOVEMBER 2006



Impact on agriculture Nov.

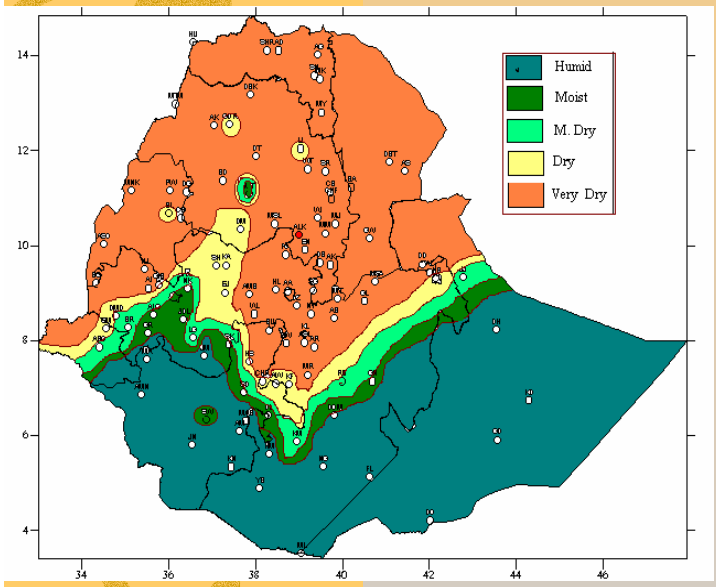
- Harvest and post harvest activities were active in most parts of the country as per normal condition.

- The observed normal to above normal rainfall over some areas of SNNP, Somali, western Oromia favored the availability of pasture and drinking water over south and southeastern parts of the country

Impact on agriculture Nov.Contd….

- Besides heavy falls (30- 46 mm in one rainy day) over areas of western, southwestern and southern Oromia resulted in crop damge (Teff) in some areas like Bedelle, Sekoru and Mota .

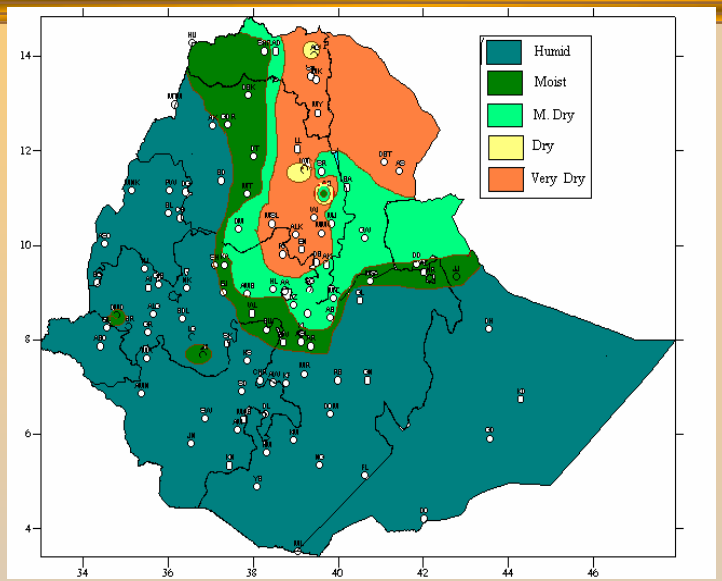
Impact on agriculture Nov.Contd….



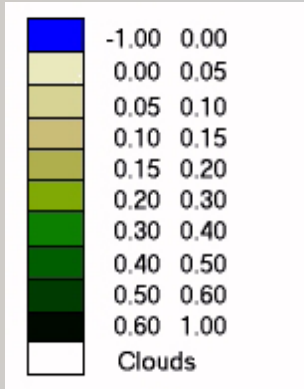
- On the other hand the wet condition could have positive contribution in areas where crops which were at different phenological stages. Besides, the situation could favour the availability of pasture and drinking water.

- Regarding the situation of southern and southeastern pastoral and agro pastoral areas, the cumulative moisture condition was sufficient in the aforementioned areas in terms of the availability of pasture and drinking water.

NOVEMBER 2006 NDVI



Moisture status of October 2006



1-10 Nov 2006 11-20 Nov 2006 21-31 Nov 2006

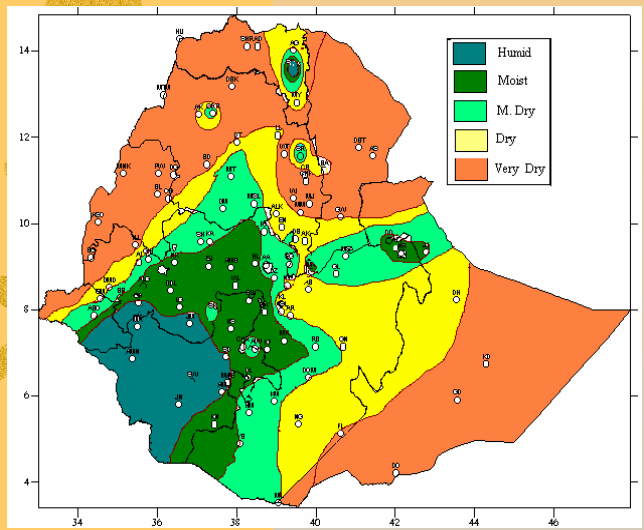
Source: United States Geological Survey (USGS)

Temperature (November)

- Some areas of central and northeastern highlands experienced extreme minimum temperature less than 5^{o}C for 2-7 consecutive days which can cause crop damage in terms of optimal temperature requirement of the plant.

- Moreover, some areas like Debre Brhan, and Alemya exhibited extreme minimum temperature lowering up to –2.5^{o}C for 1-2 consecutive days during the month.

MOISTURE STATUS FOR DECEMBER 2006



Impact on agriculture

➢The observed dry and windy Bega weather condition facilitated the ongoing harvest and post harvest activities in most parts of the country where the activities are under question during the month.

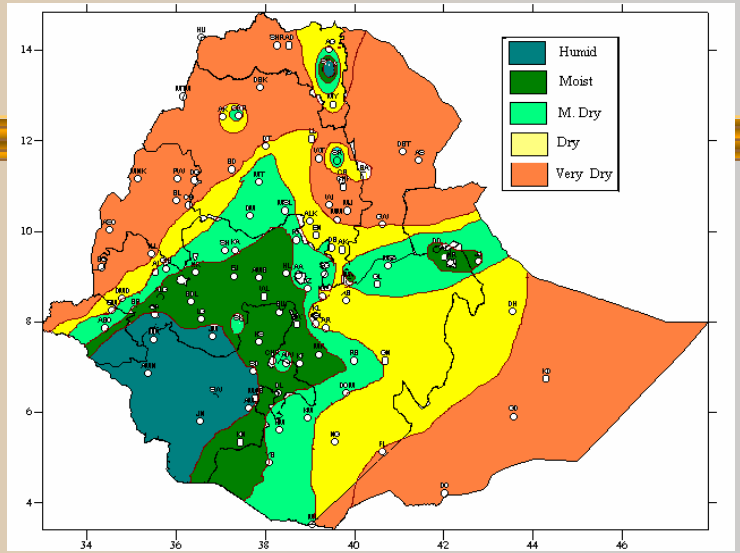
➢On the other hand, the observed heavy fall accompanied with strong wind particularly during the first half of the second dekad of the month, resulted in crop damage in some pocket areas.

Impact on agriculture December Cont.…

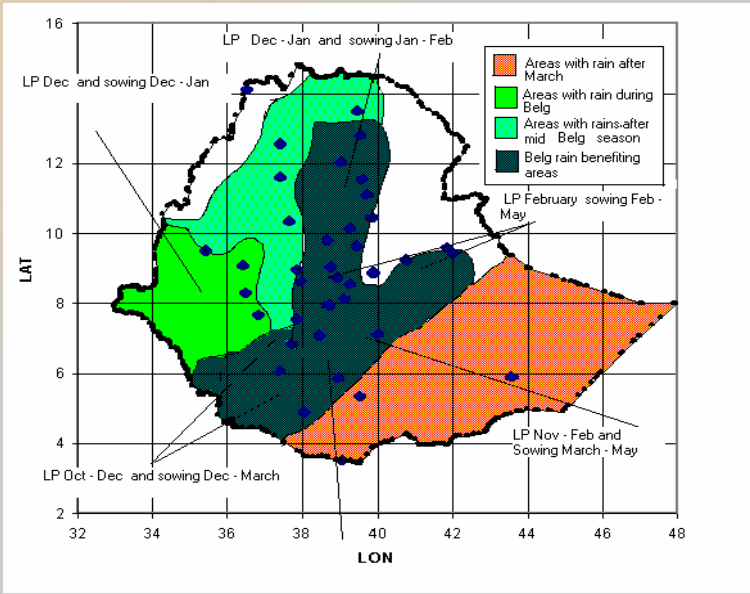
- Pursuant to the crop phenological report, Bedelle reported Coffee and Teff crop Damge due to heavy fall , Ginager reported crop damge and Bilate reported perennial crop damage including irrigated Tobacco damage due to hailstorm accompanied with strong wind.

Impact on agriculture December Cont….

- The observed moist to humid moisture condition over much of SNNPR, southern Gambela,central and parts of western Oromia had a positive impact on annual crops which were not attaining maturity stage and perennial plants as well.



MS December2006



Belg Growing areas

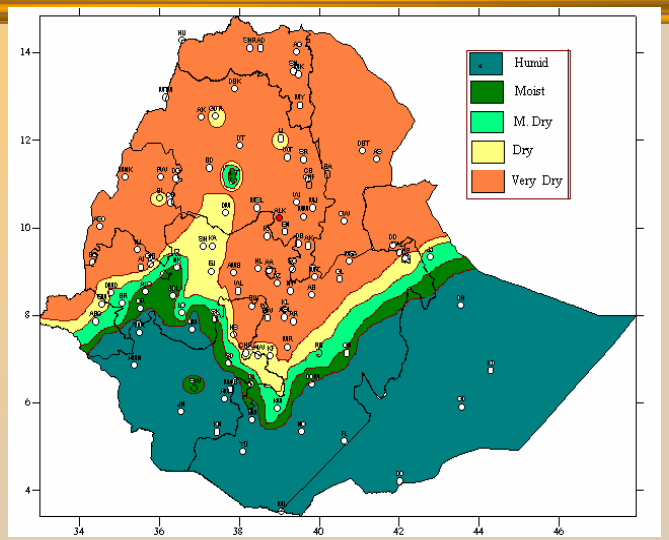
Impact on agriculture December Cont.…

- However, it could have a negative impact on harvest and post harvest activities in some areas where the activities were under question during the month under consideration.

Temperature(December)

- Some areas of northern (Mekele) eastern highlands (Alemya),central (Debre Zeit, Fitche, Mehal Meda, Debre Brhan, Kofelle), northeastern (WegelTena) exhibited extreme minimum temperature less than 5^{O} C. Besides, Mehal Meda exhibited extreme minimum temperature below 0^{O} C lowering up to -0.8 ^{O} C during the month.

NDVI FOR THE FIRST, SECOND AND THIRD DEKAD OF DECEMBER 2006



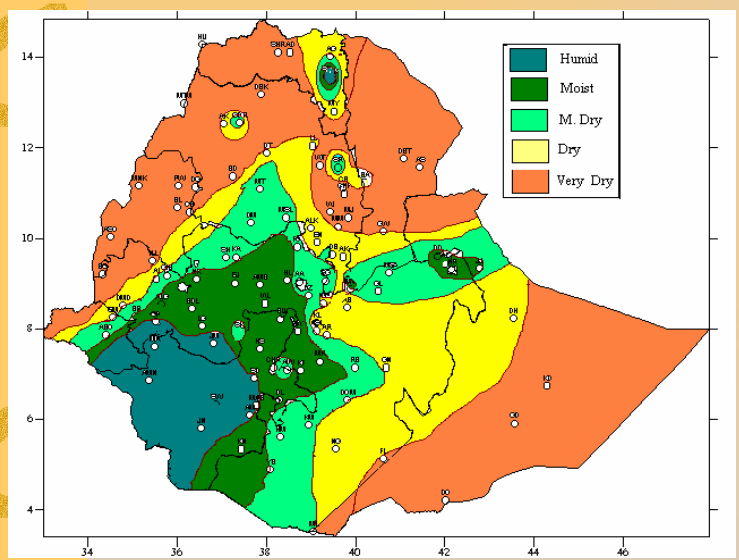
MS of November 2006

1-10 Dec 2006

11-20 Dec 2006

21-31 Dec 2006

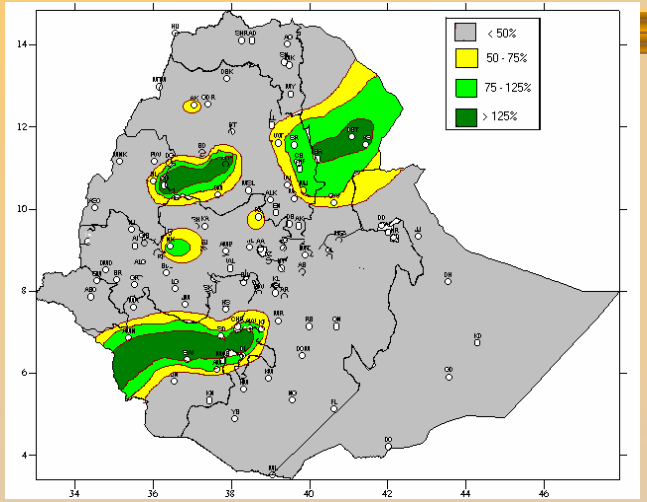
NDVI for the first deckad of January 2007



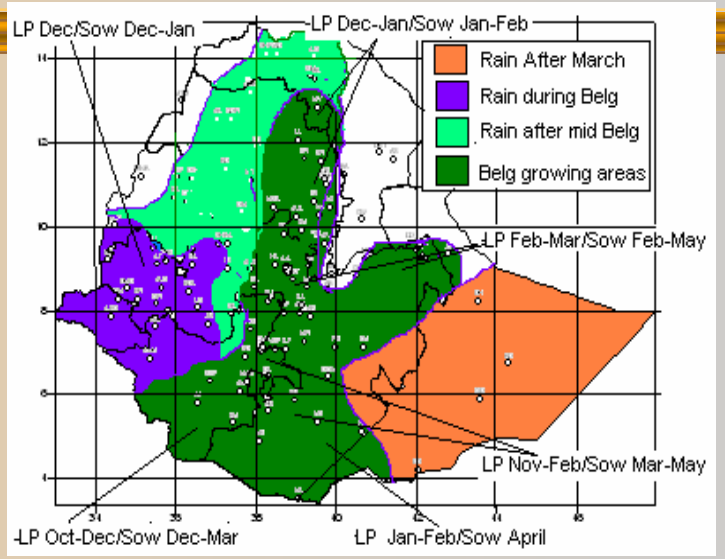
MS for Dec 2006

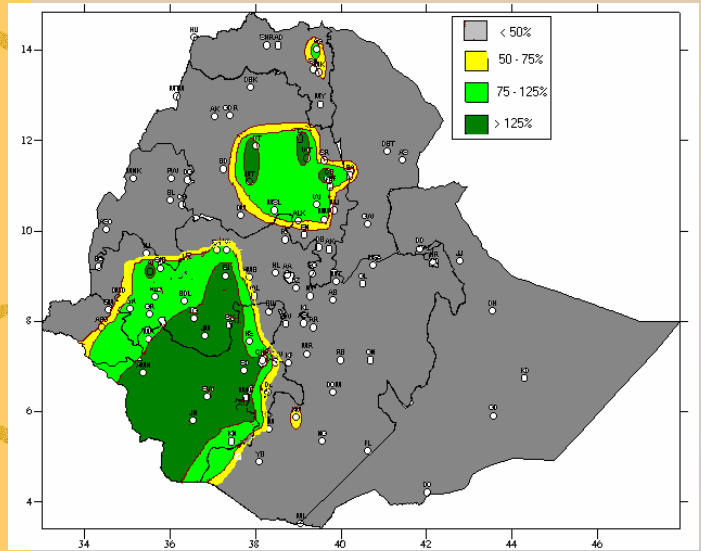
1 10 January 2007

1- 10 and 11- 20 January 2007



Jan 1 – 10, 2007





Jan 11 – 20, 2007

NDVI for Jan 2nd dekad

Impact on agriculture

- During the first dekad of January, Bega's dry weather condition persisted over most parts of the country. However, rainfall up to 32 mm and little moisture has been observed over some areas of northeastern parts of the country and over western half of SNNPR respectively . Thus this condition could have positive contribution for early season Belg agricultural activities particularly land preparation in some areas of the above mentioned areas.

Impact on agri Cntd….

- Regarding extreme minimum temperature most parts of central highlands eastern and northeastern highlands experienced extreme minimum temperature less than 5^0C for 2-8 consecutive days. Moreover DebreBrhan exhibited extreme minimum temperature below 0^0C lowering up to -3^0C

Impact cont..

- During the second dekad of January the observed better moisture condition and cloud cover could favor early Belg season's agricultural activities such as land preparation, particularly in areas like South Tigray, northeastern Amhara including most parts of SNNPR where Belg activities start earlier as compared to that of the rest parts of Belg growing areas.

Impact cont..

- Regarding extreme minimum temperature, there was a significant improvement of extreme minimum temperature i.e. rise in amount in most parts of frost prone areas. Thus this condition could have a positive impact on normal growth and development of plants.

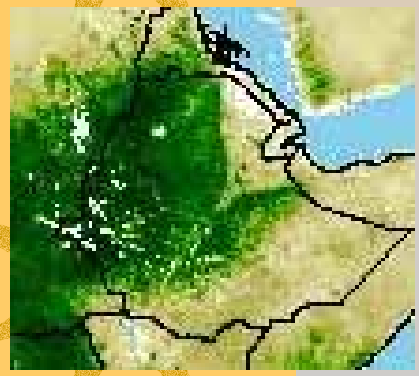
Comparison of last year's NDVI pictures with the year 2006

3rd Sept 2005

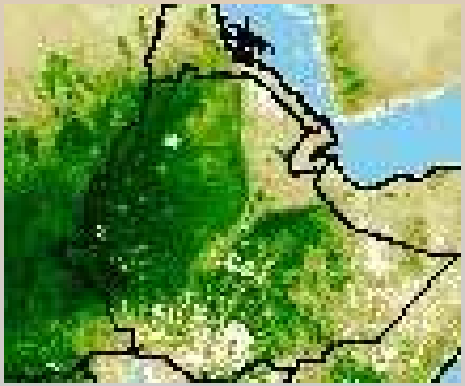
3rd Oct 2005

3rd Nov 2005

3rd Dec 2005



3rd Sept 2006

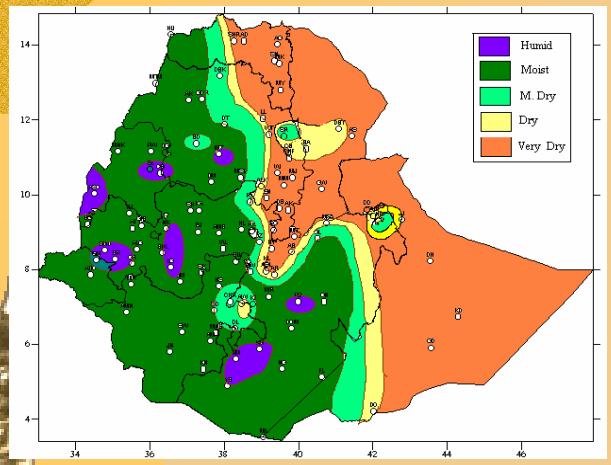


3rd Oct 2006

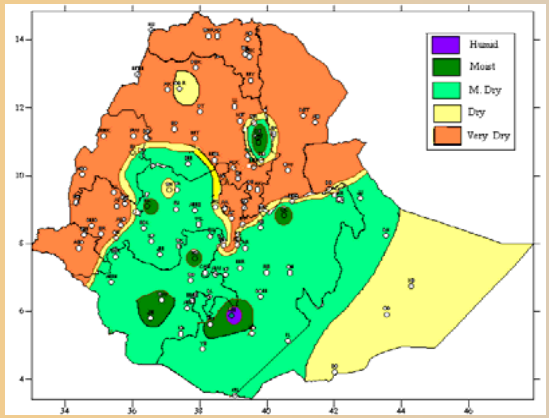
3rd Nov 2006

3rd Dec 2006

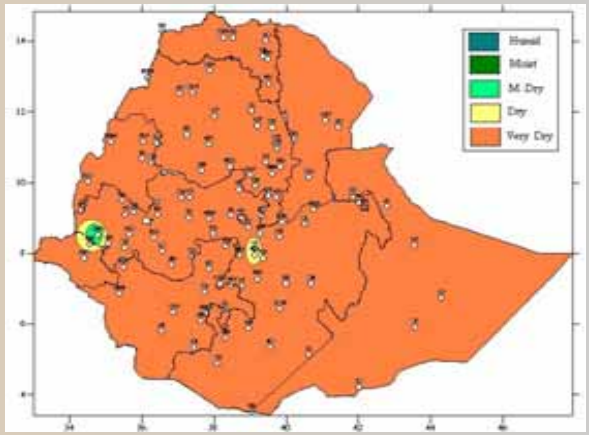
Comparison of last year's moisture conditions with the year 2006



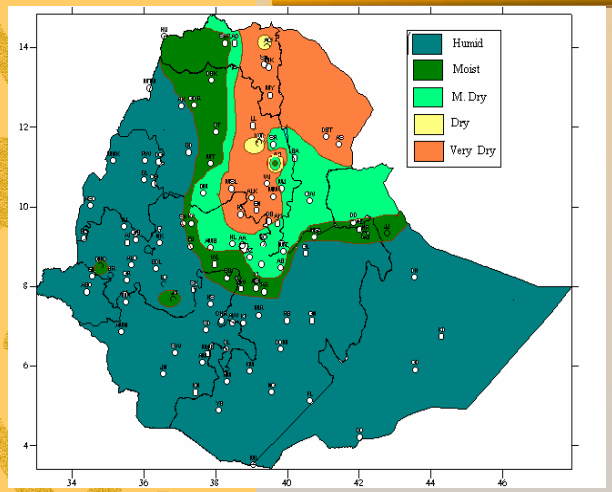
October 2005



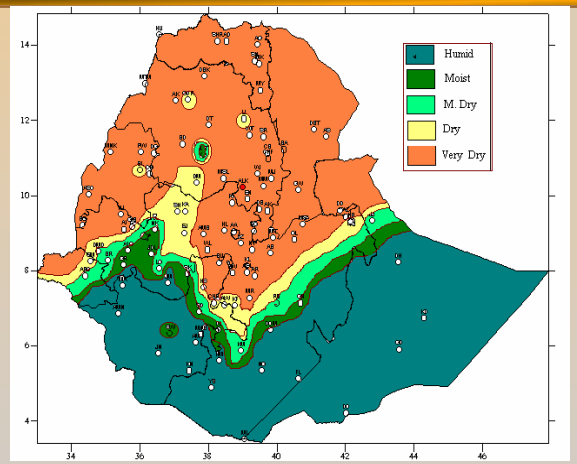
November 2005



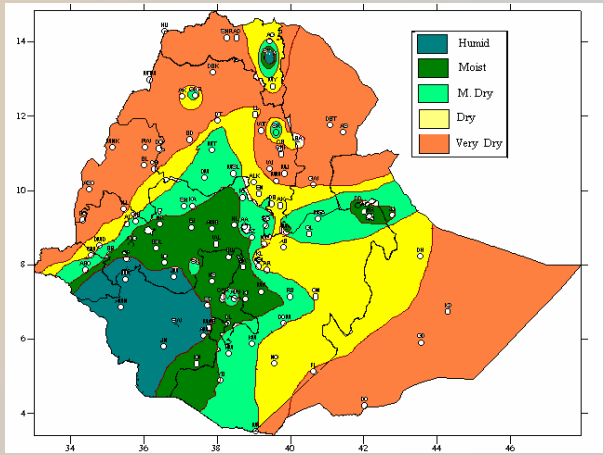
December 2005



October 2006



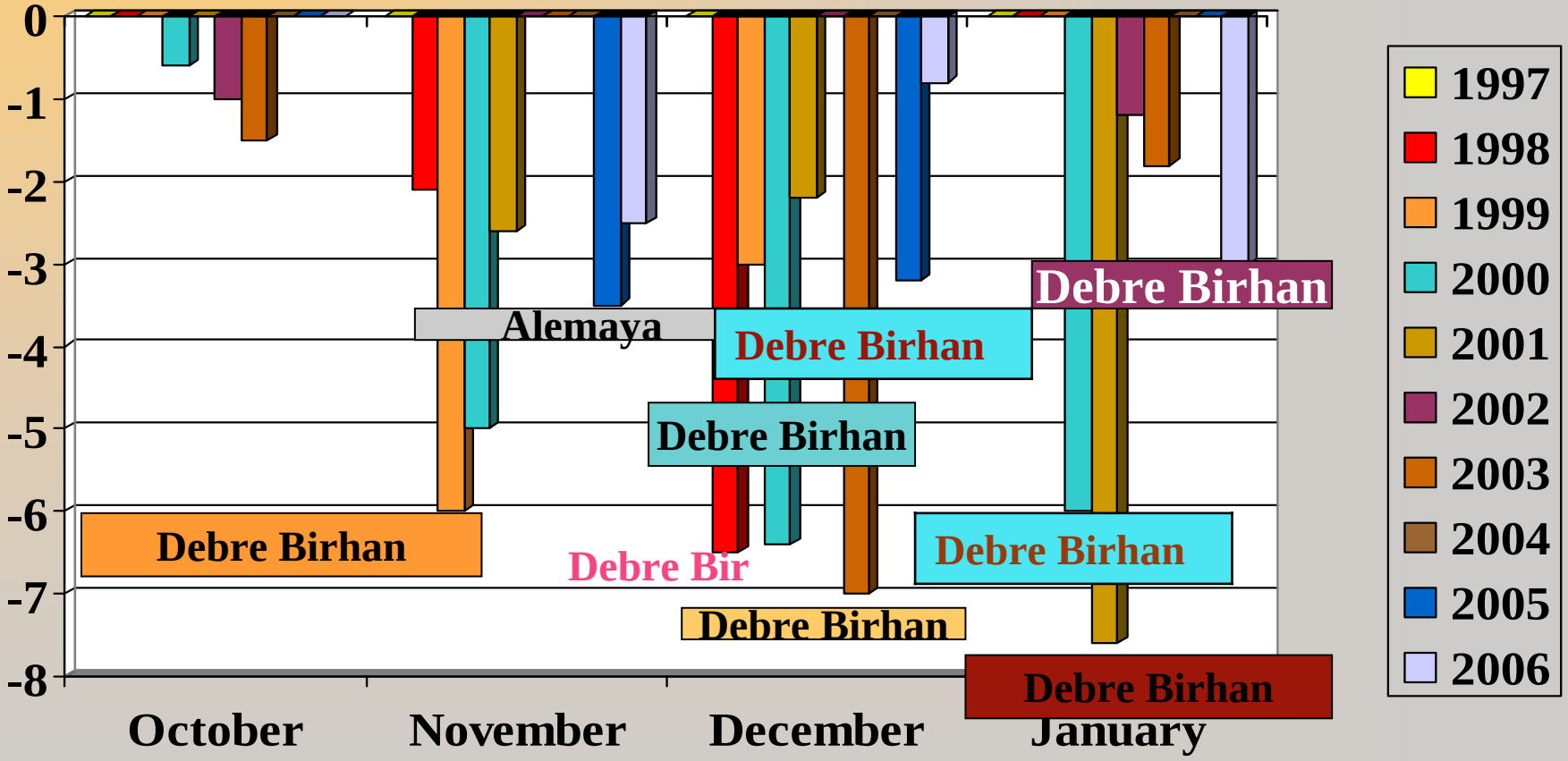
November 2006



December 2006

Deyr rains have failed in all Deyr receiving zones in the Somali region during the year 2005 while better rainfall condition has been observed over the areas during the year 2006 particularly during the months of October and November.

Comparison of extreme minimum temperatures for different years



Conclusion

- From the above agro climatic analysis we can confirmed that the overall crop condition over most parts of Meher growing areas was in a good shape thereby the expected performance of yield would be better as compared to the previous years.

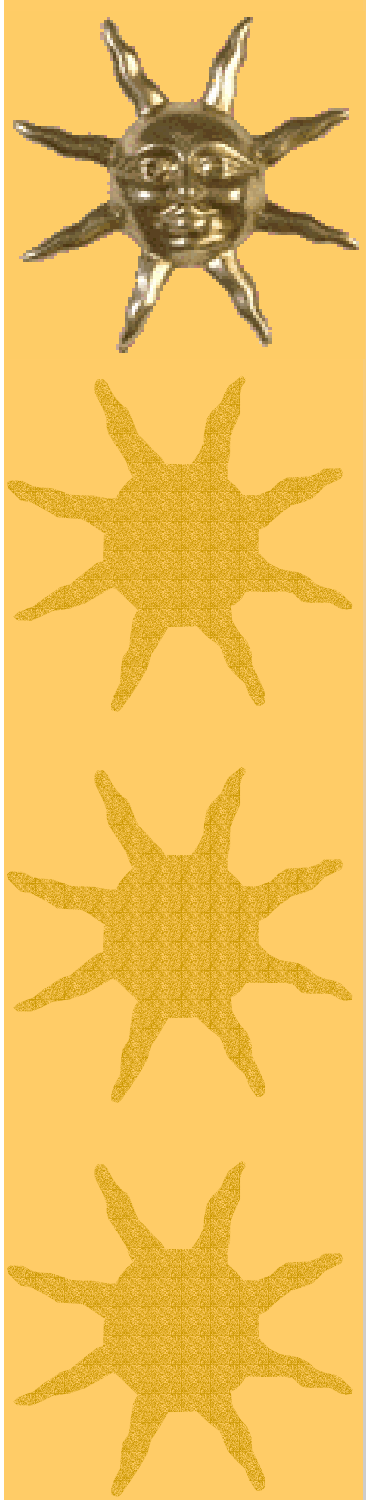
Conclusion Cont….

Pasture and drinking water conditions in southern and southeastern parts of Ethiopia

- As indicated in the above agro climatic analysis and the NDVI picture the condition of pasture and drinking water was in a good performance in most parts of pastoral and agro pastoral areas of southern and southeastern Ethiopia.

Conclusion Cont….

- With regard to the extreme minimum temperature there was no significant drop of extreme minimum temperature as compared to that of the pervious i.e. last ten years air temperature data (1998, 1999, 2000, 2001,2003 and 2005).



THANK YOU