

NATIONAL METEOROLOGICAL AGENCY

JJIGA BRANCH OFFICE

CLIMATE OUTLOOK KIREMT 2011

Long Mean Rainfall distribution of Kiremt Season

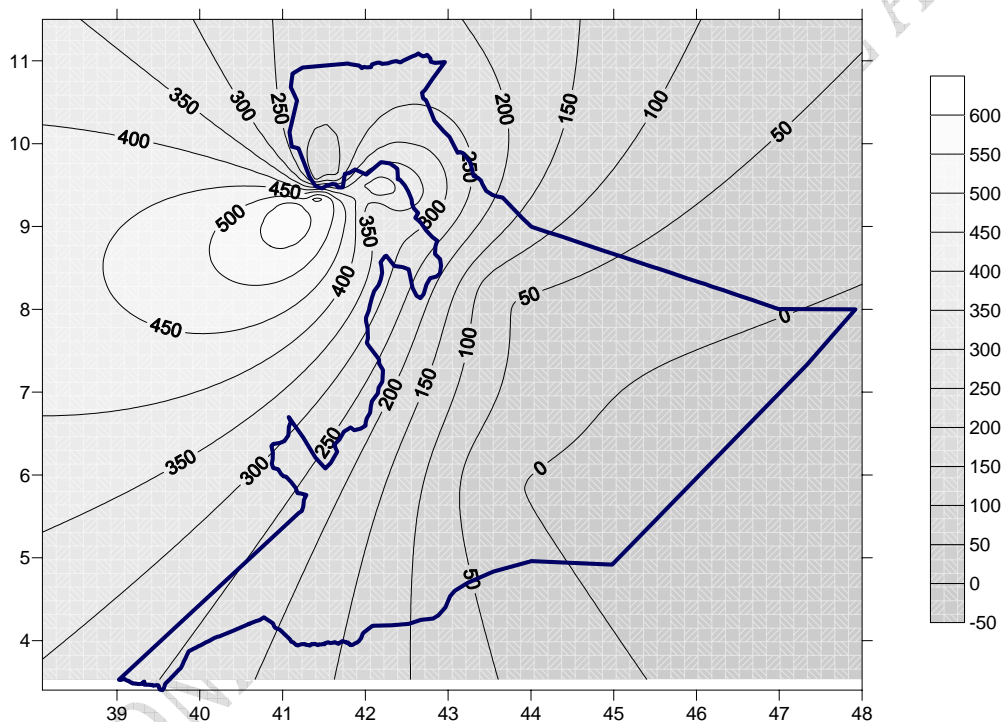


Fig. 1

June 2011

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Analysis and Forecast Team

Climate outlook Kiremt 2011

Introduction

Kiremt (June- September) is the main rainy season in Ethiopia and it is very important for food security because most of the food is planted during this season. In our region northern Somali, eastern Oromiya, Dire Dawa council Harar regional state receive their maximum rainfall for agricultural production during kiremt season. While kiremt season is climatologically wetter than normal, but these region receive its maximum rainfall during Belg season.

There are varies regional and global weather systems that affect the Kiremt season. These systems include the Inter Tropical Convergence Zone (ITCZ), the Mascarian high pressure in the Southern Indian Ocean, the Helena High Pressure Zone in the Atlantic, the Congo air boundary, the Monsoon depression and Monsoon trough, the Monsoon Clusters and the Tropical Easterly Jet. ITCZ is the best weather system for most parts of Ethiopia; when it moves north and south in tropics following the change of seasons. The ITCZ reaches southern Ethiopia at the beginning of the Belg season and moves northward bringing rainfall with it. At the end of August, the ITCZ begins to return southward ending the Kiremt precipitation that corresponds with the maturation of crops. Most Ethiopian rainfall, with the exception of the south and southeastern parts of the country, is caused by the ITCZ.

Onset and Cessation

Onset of the Kiremt season in eastern Oromiya, Harari region, DireDawa council and some northern Somali region is mostly on July 5 and 10; in the tip of northern Somali the season begins on July 15 and 20. But in some climate variability in regional and global situations the will begin in the last week of June.

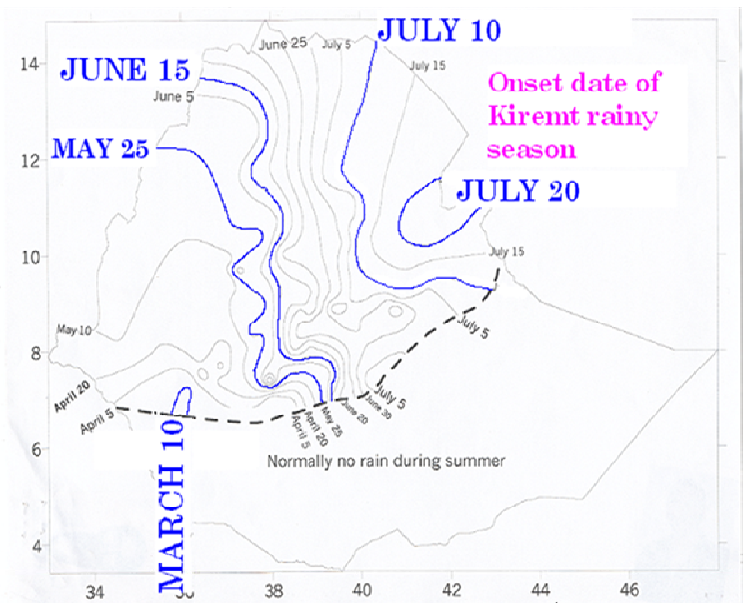


Fig. 2

Climate outlook Kiremt 2011

- May SST (Sea Surface Temperature) patterns show a fairly strong relationship with the SST patterns of the following summer and fall seasons, and thus should serve as useful precursors to the trend of SST in the subsequent seasons.
- SST patterns observed in January, February and March are poor predictors of the SST patterns to follow in the summer and fall seasons. Nevertheless, April SST has marginal value as a predictor—a value clearly lower than that of May.

Tercile Rainfall probability of the coming Kiremt season

Kiremt climate outlook is based on regional and global SST variability and atmospheric situations. On the other hand pre- season conditions and the forecasted SST changes with atmospheric situations will be compared to the past most similar years (analogue years) by using NINO 3.4 SST standardized Kiremt rainfall anomalies, climatologically base period: 1970- 2010. So we choose the best analogue years 1974, 1989, 1999, 2000 and 2008. These years receive normal and above normal rainfall during the season.

So we concluded that:

- Current and expected global episodes leads to weak La Nina to near-neutral
- Regional features will have positive impacts both from Indian and Atlantic Oceans
- Onset of the season will be normal onset over the substantial parts of the region
- Seasonal rainfall variability will be relatively low
- Overall rainfall performance:
 - Mostly normal tending to above normal over Kiremt-rain-benefiting regions
 - Also there will be favorable conditions over southern parts of the region
- Extreme events: there is high probability for the occurrence of heavy falls
- Cessation of the season follows normal pattern
- Areas need due attention are flood prone parts of the region
- Occurrence of drought will less likely

Kiremt 2011 Tercile Rainfall probability

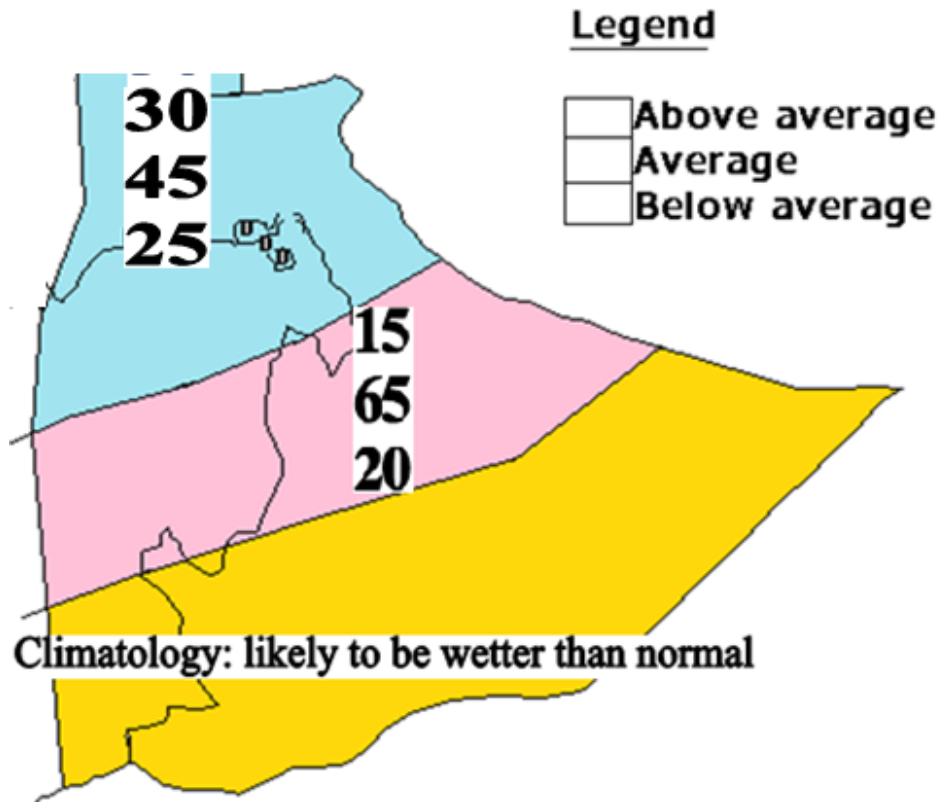


Fig. 4

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|-----------|---|
| 15 | • The probability of rainfall will exceeding from average by 15 % |
| 65 | • The probability of rainfall will be average of 65 % |
| 20 | • The probability of rainfall will less from the average by 20 % |