



*Interpreting early March-May seasonal forecasts for the Eastern Horn of Africa*

**Background**

- The March to May season is the major rainfall period for pastoral and agricultural areas of northern Kenya, southern Ethiopia, and most of Somalia, accounting for 50-60 percent of annual rainfall in many parts of the sub-region (Figure 1). These rains are also critical for the secondary *Belg* season in Ethiopia.
- During January, FEWS NET's East Africa analysis typically considers three seasonal rainfall outlooks: the IRI Multi-Model Probability Forecast, the ECMWF Seasonal forecast, and the NOAA Canonical Correlation Analysis forecast. As of January 2012, all three forecasts have low skill for the March-May period, meaning that they suggest equal probabilities of below-normal, normal, and above-normal rainfall.

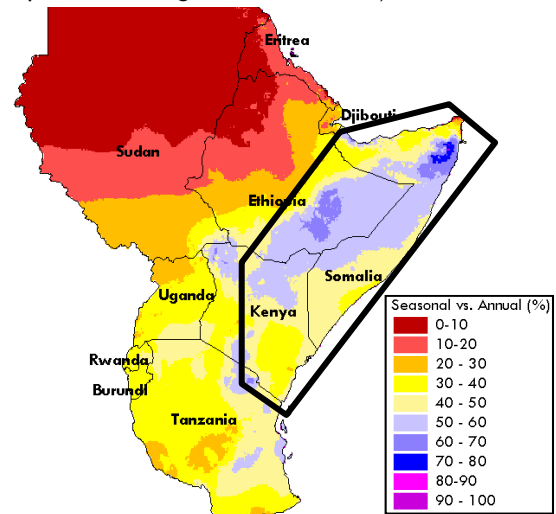
**Drivers of March-May rainfall in the eastern Horn**

- A La Niña is a phenomenon characterized by cooler than usual sea surface temperatures (SSTs) in the eastern Pacific. It is associated with both positive and negative rainfall anomalies in different parts of the world. A mild/moderate La Niña is currently ongoing and official forecasts from NOAA's Climate Prediction Center expect a continuation of La Niña through the March-May period. In past years, the La Niña effect has had a substantial impact on the October-December rains in East Africa. **However, historically, the La Niña effect on the March-May season has been very weak.**
- Recent analysis by USGS has identified a relationship between the behavior of sea surface temperatures and rainfall in the western Pacific and rainfall performance in East Africa. The western Pacific is currently exhibiting a sea surface temperature and rainfall pattern which is similar to patterns experienced during the drought years of 1984, 2000, 2004, 2007, 2008, 2009, and 2011. This analysis suggests that if these conditions persist, eastern Kenya, southern Somalia, and southeastern Ethiopia may experience dry conditions.
- Tropical cyclones over the southern Indian Ocean may delay the onset of the March-May rains and sea surface temperatures in the Indian Ocean are also likely to be a significant driver of rainfall during the March-May period.

**Current assumptions for FEWS NET Outlook Analysis**

- FEWS NET's forecast analysis for the region's eastern sector, considering seasonal rainfall outlooks, the recent USGS analysis, cyclone activity in the Indian Ocean, and current SSTs/rainfall in the western Pacific, suggests that in the most-likely scenario March-May rainfall will be average. However, there is moderate probability of below-normal rainfall during this period. There may also be a delay in the onset of the rains. Forecast analysis for the region's western sector suggests average to above-average rainfall in the region's high potential agricultural areas.
- FEWS NET will regularly update its forecast analysis over the coming months, incorporating new monitoring information and the outcomes of the late February Greater Horn of Africa Climate Outlook Forum.
- **Given extreme food insecurity during 2011 and the possibility of a poor March-May season in the eastern Horn of Africa, humanitarian partners should prepare contingency plans that could quickly address any disruptions to crop/livestock production and household food access that may occur.**

**Figure 1.** Average March-May rainfall as a percentage of average annual rainfall (*Polygon* represents the region's eastern sector)



Source: FEWS NET/NOAA/USGS