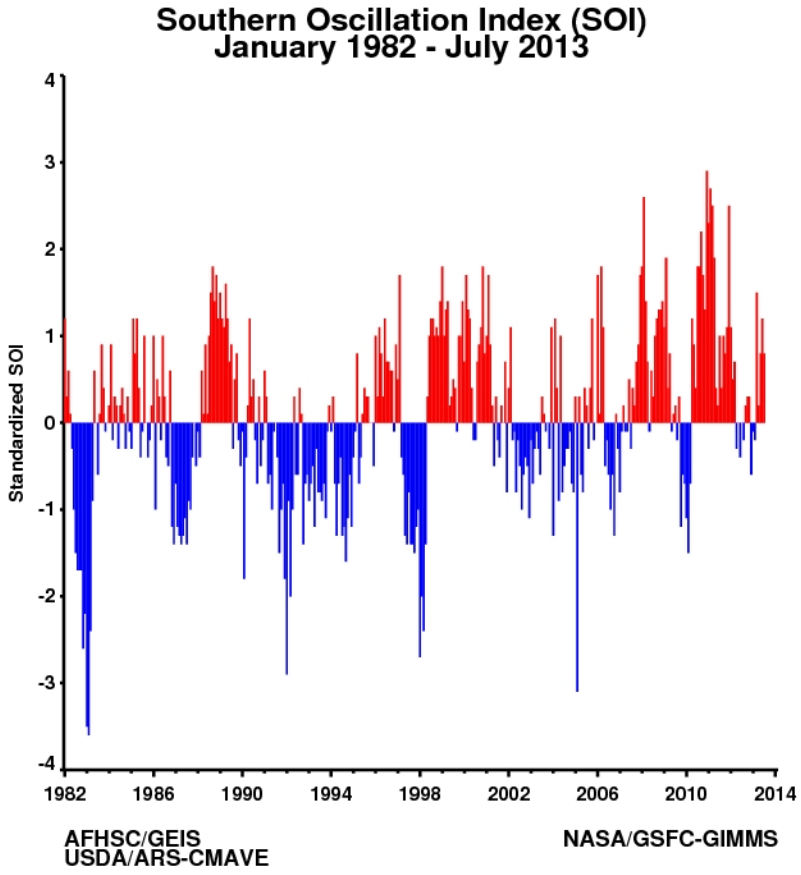
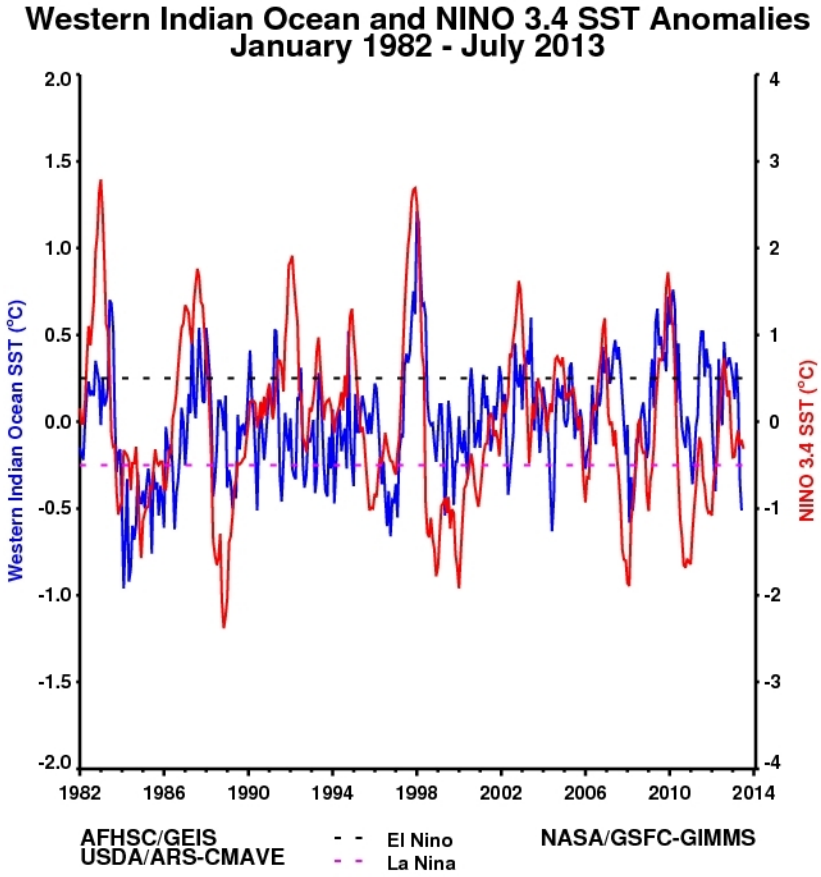
This section of the report will provide a rolling three month update on a monthly basis of the state of the climatic and ecological indicators used in monitoring areas at risk to RVF activity. These indicators include, global SST anomalies patterns, Equatorial Western Indian Ocean (WIO) and Eastern Pacific Ocean (EPO: NINO 3.4) SST anomalies, Southern Oscillation Index (SOI) and Outgoing Longwave Radiation (OLR) anomalies, Rainfall and anomalies, Normalized Difference Vegetation index anomalies and RVF risk map for Africa and the Arabian Peninsula.

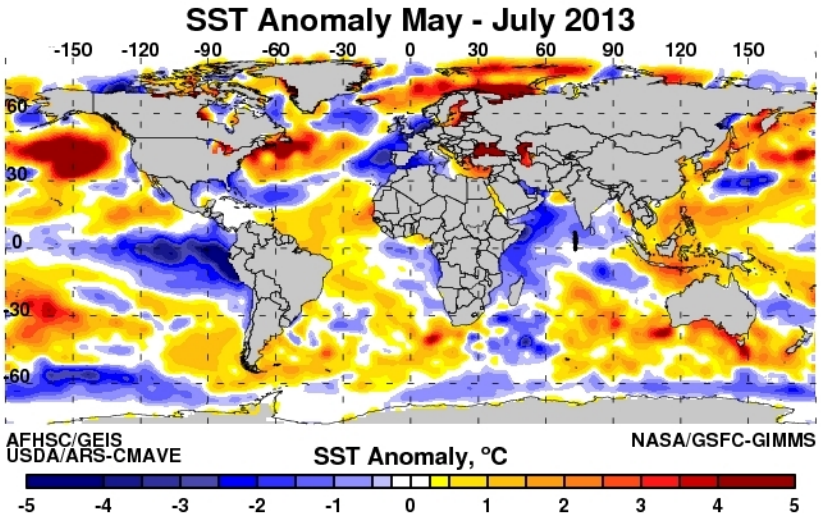
July 2013

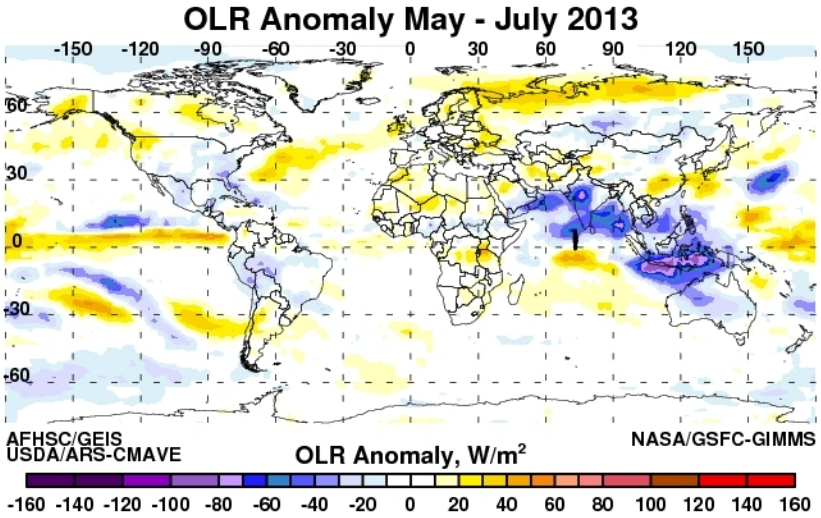
1. SOI and SST Indices



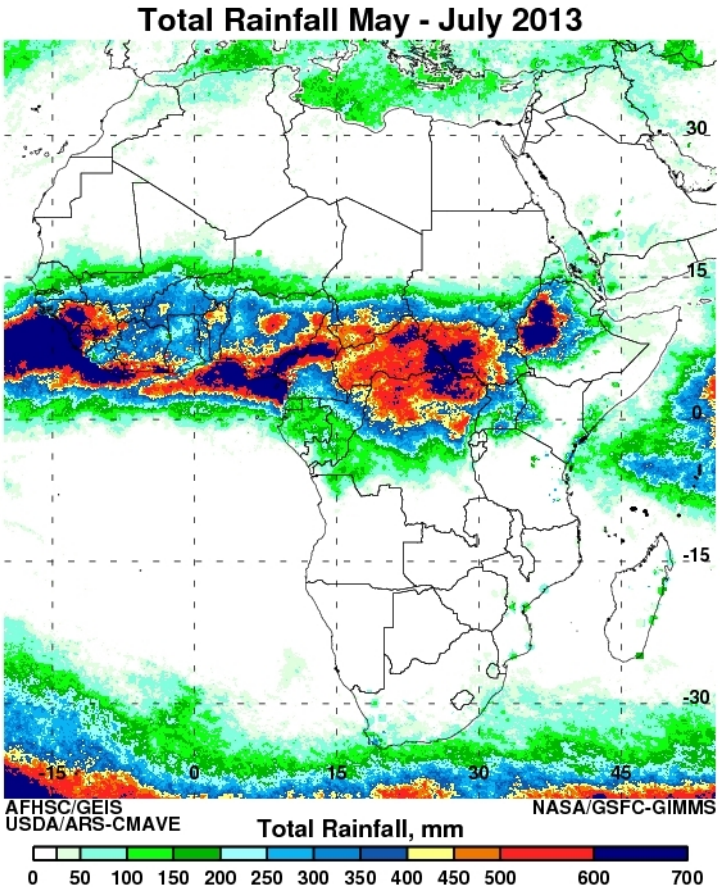


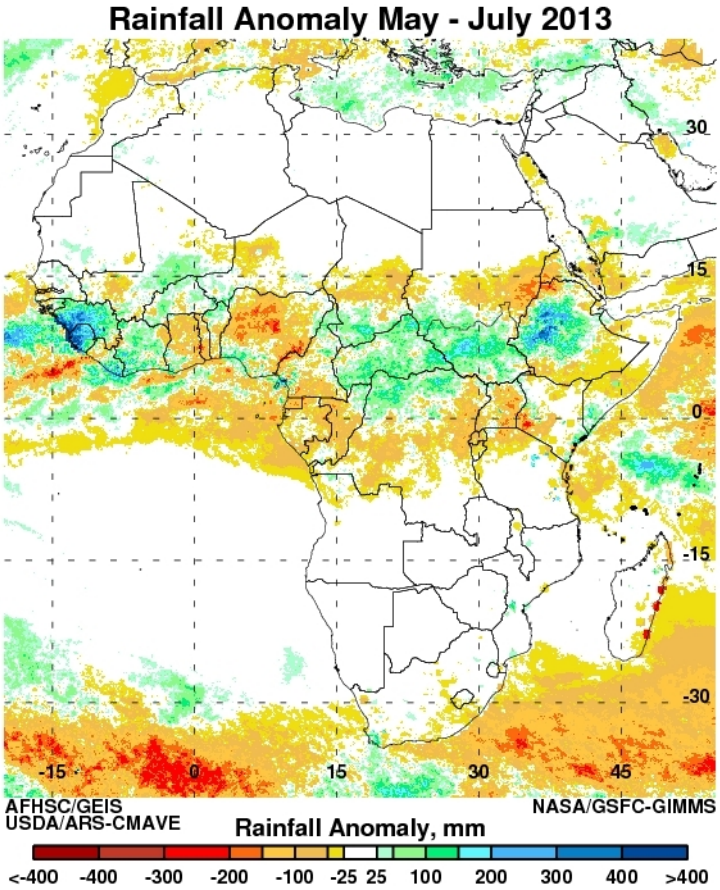
The SOI index shows near normal conditions with an index value of 0.8 in June. This has been a pattern that was exhibited by the SOI since the beginning of the year. On the other hand, the July monthly SST anomalies in the **NINO3.4 SST** region are slightly below average at -0.4°C. **WIO SST** anomalies continue decrease with a value of -0.6°C indicating a continued basin wide cooling in the WIO region as the season changes. All the atmospheric and oceanic indicators are in convergence with persistence of neutral ENSO conditions, however due to the recent emergence of negative SST anomalies in the eastern Pacific, a number of models (statistical) predict weak La Niña conditions (Niño-3.4 less than -0.5°C). The latest statistical and coupled model forecasts favor continued ENSO-neutral with 60% chance or greater through the Northern Hemisphere summer 2013.





The eastern equatorial Pacific Ocean shows below normal SST in the region from 90°W to 160°W during the May – July period. The spread of SST shows a pattern that is typical of ENSO-cold conditions. In contrast the entire western equatorial Pacific shows the persistence of above normal SST (0.5°C to 2.0°C). The western equatorial Indian Ocean is now dominated by negative SST anomalies especially off the East African coast. Other regions of significant anomalies include the north Pacific Ocean, north Atlantic and south Indian Ocean off the southern Africa landmass which show significant positive and negative anomalies on the order of -/+1.0°C to -/+2.0 °C. Outgoing Longwave Radiation (OLR) anomalies are used here as a proxy for tropical deep convection (rainfall). Reduced convection is shown in yellow to light brown and brown shades and increased/intense convection is shown by shades of blue. Some impacts from the SST anomaly patterns can be observed in the pattern of tropical convective activity illustrated by the OLR departure patterns here. During May - July, enhanced drier-than-average conditions are observed over the equatorial eastern Pacific Ocean region with significant positive OLR anomalies. Enhanced convective activity continues to be prevalent over Southeast Asia. These patterns of depressed and enhanced convective activity coincide well with the pattern of SST departures. Monthly and weekly anomalies can be found here. Rainfall and associated anomalies (below) for Africa show above normal rainfall over concentrated over the equatorial belt with significant positive departures over southern Sudan and western Ethiopia at +200mm during the May - July period.





Cumulative NDVI anomalies for Africa for May – July 2013 show persistence of positive NDVI anomalies over East Africa especial Kenya, Somalia and southeastern Ethiopia in response to the above normal rainfall from over the last four months even though the rainfall season in some of the areas is over. The RVF risk map below was derived from thresholding NDVI anomaly data to detect areas persistent of above normal NDVI. Such periods of widespread and prolonged heavy rainfall lead to flooding of *dambos* and anomalous

green up in vegetation. This creates ideal ecological conditions for the emergence RVF vectors. For the period May – July 2013 the RVF persistence model continues to identify isolated areas in Rift Valley region of Kenya and northern Tanzania where ecological conditions would support the emergence of RVF vectors. However, the colder temperatures at this time would inhibit increase and survival of RVF mosquito vectors. The region to of focus at this time should Southern Sudan which has received ~700mm (+200mm) over the last three months.

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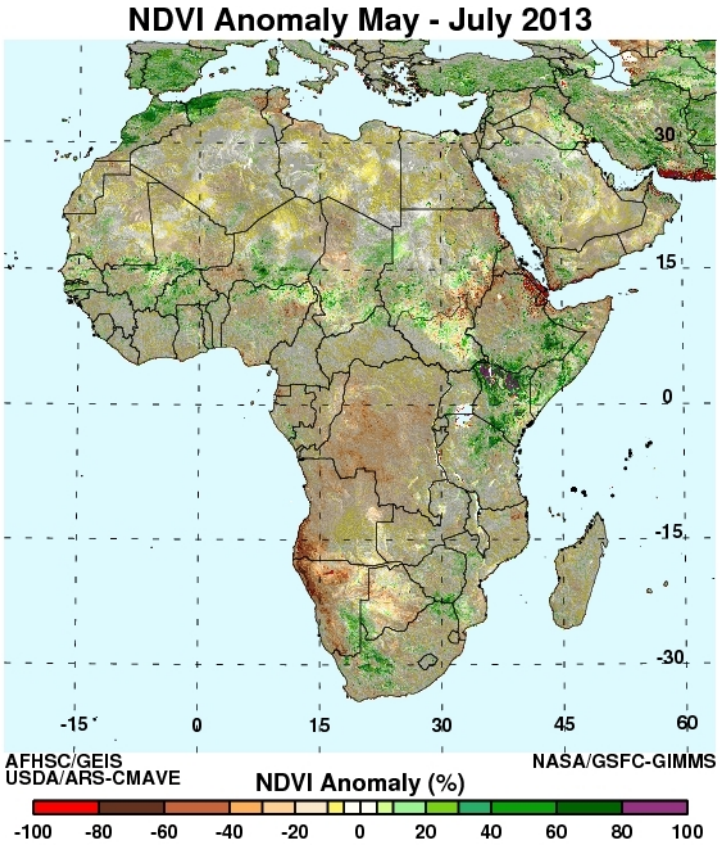

RVF Potential July 2013