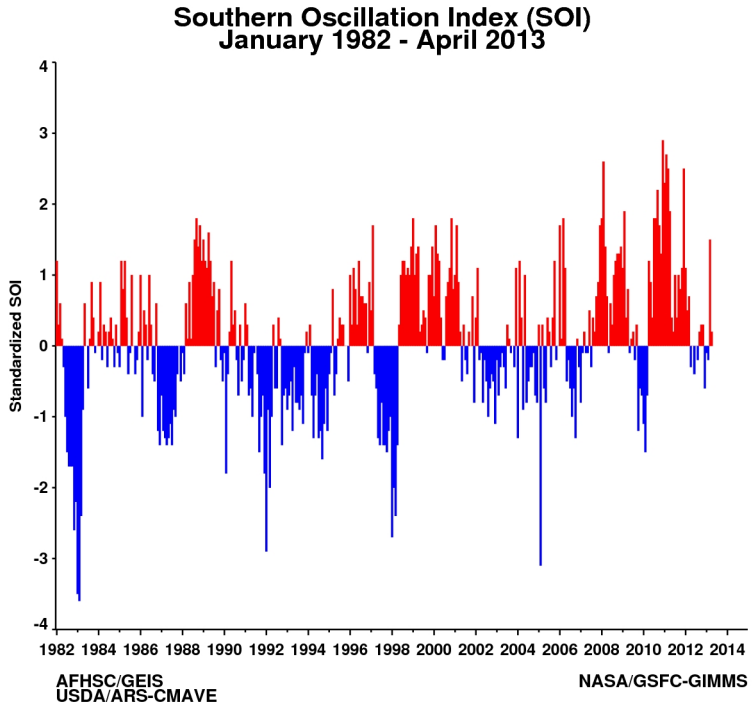
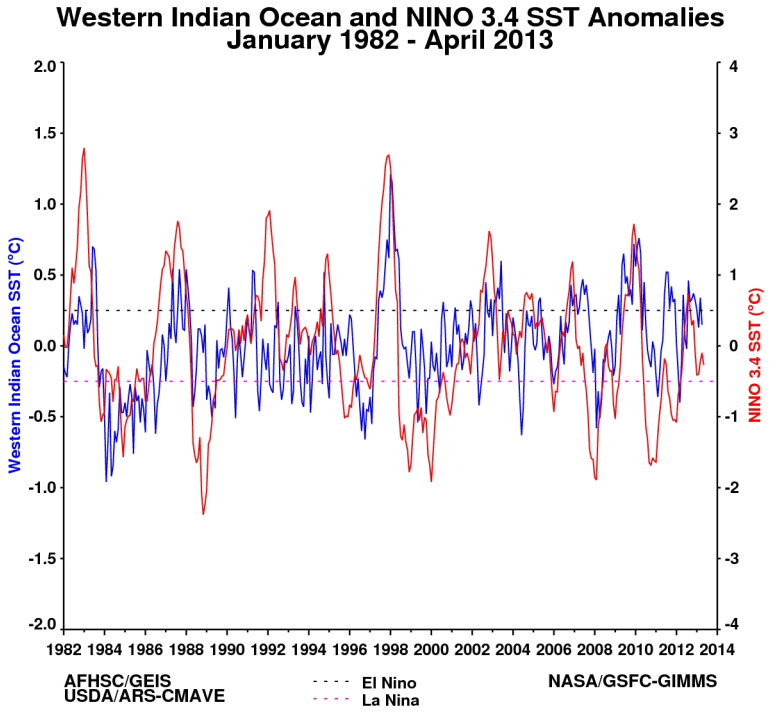
This section of the report will provide a rolling three month update on a monthly basis of the state of the climatic and ecological indicators used in monitoring areas at risk to RVF activity. These indicators include, global SST anomalies patterns, Equatorial Western Indian Ocean (WIO) and Eastern Pacific 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.

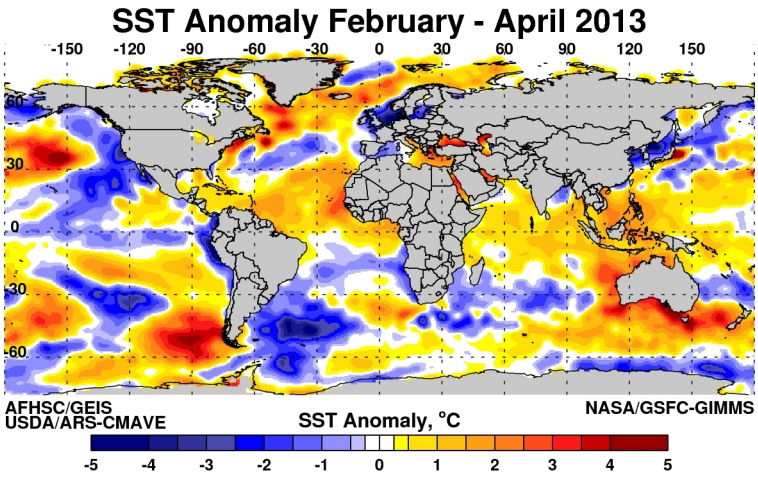
April 2013

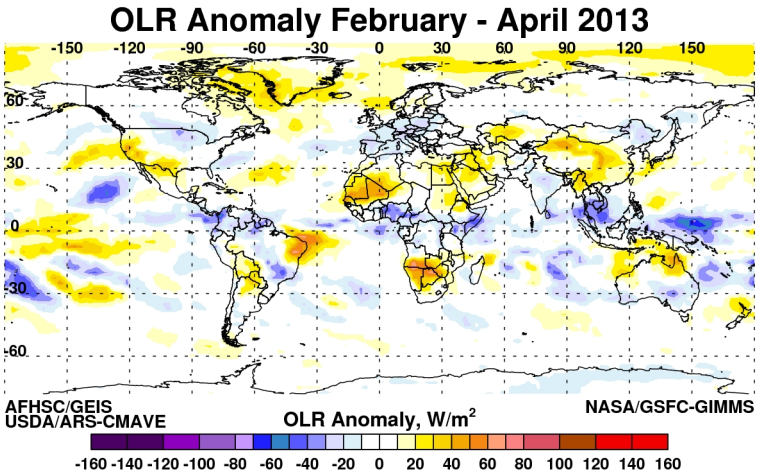
1. SOI and SST Indices



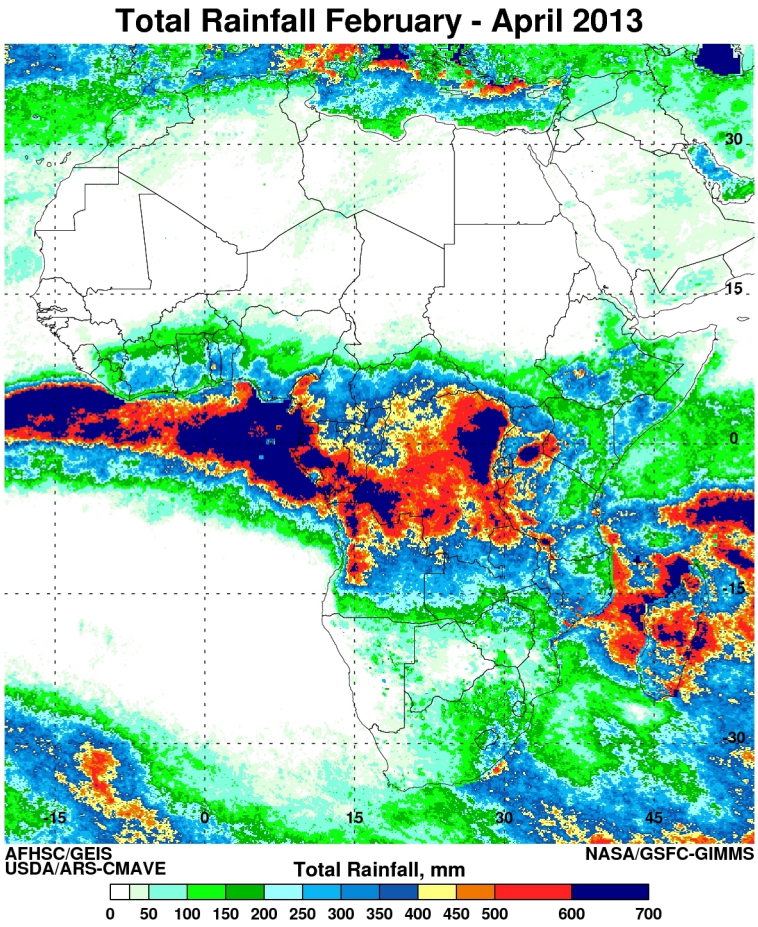


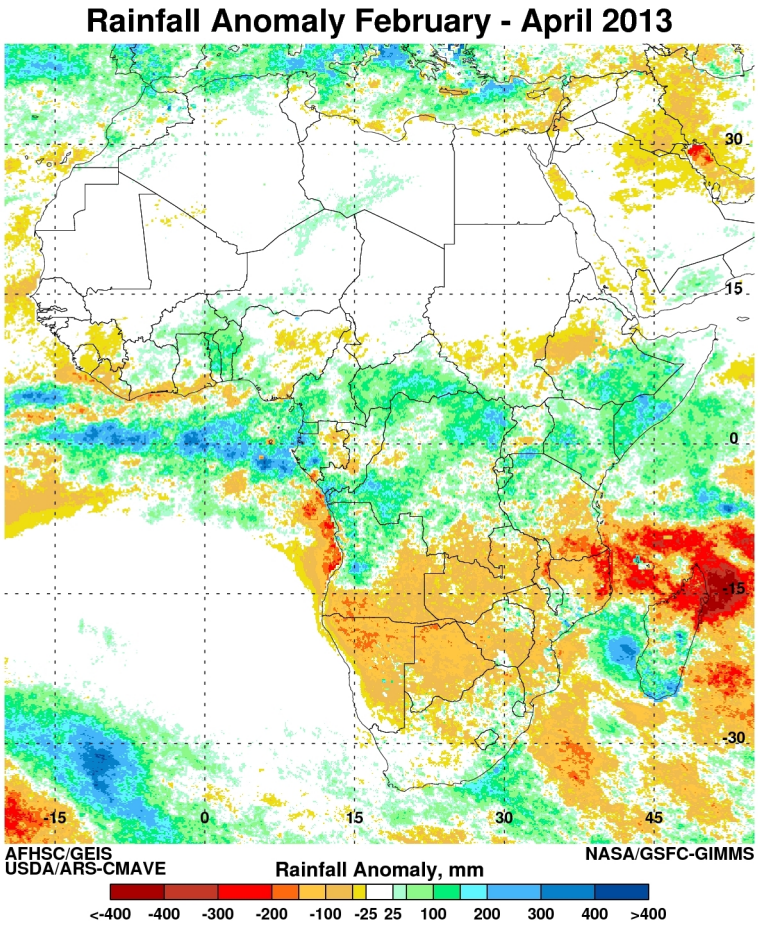
The SOI index shows near normal conditions with an index value of 0.1 in April. This has been a pattern that was exhibited by the SOI since the beginning of the year. The SST anomalies in the **NINO3.4 SST** region are near normal. In contract **WIO SST** anomalies have maintained positive values of ~ 0.35 since early in the year indicating basin wide warming in the WIO region. All the atmospheric and oceanic indicators are in convergence with persistence of neutral ENSO conditions but with the warm WIO SSTs indicating the potential for continued elevated rainfall in parts of East Africa. The latest statistical and coupled model forecasts and taking into forecast Niño-3.4 SSTs project ENSO-neutral conditions to persist through the Northern Hemisphere fall.





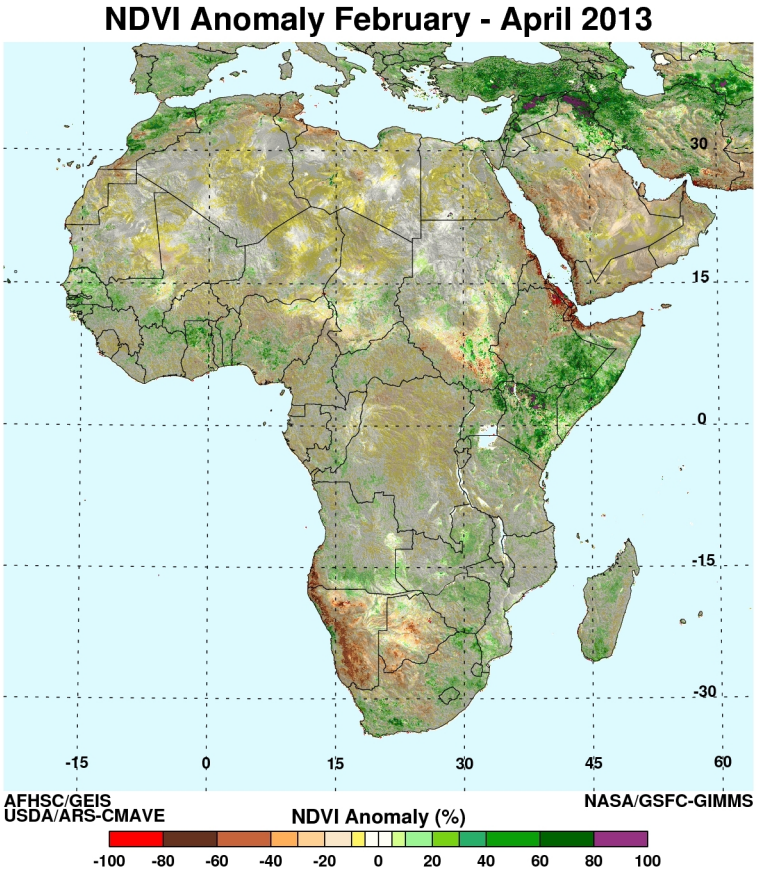
The eastern equatorial Pacific Ocean shows normal to below normal SST in the region from 90°W to 160°W during the February – April period. The spread of SST shows a pattern that is typical of ENSO-cold conditions. In contrast the entire western equatorial Pacific and the equatorial Indian Ocean show the persistence of above normal SST (0.5°C to 2.0°C). Other regions of significant anomalies include the southern Atlantic off Argentina and north Pacific which show significant negative anomalies on the order of -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 February-April, enhanced drier-than-average conditions are observed over western US, northeast Brazil and southern Africa which show significant positive OLR anomalies. Enhanced convective activity is centered over Southeast Asia and East Africa. 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 the equatorial belt. Significant rainfall anomalies have occurred in the RVF endemic regions of East Africa (Kenya and Somalia) cumulatively ~ 200mm over the last three months. As would be expected the southern Africa region is experiencing severe rainfall shortfalls with an average deficit of ~ 150mm over the last three months.





Cumulative NDVI anomalies for Africa for February – April 2013 show positive NDVI anomalies over East

Africa especial Kenya, Somalia and southern Ethiopia following above normal rainfall from over the last two months. The patterns of positive NDVI anomalies are in agreement with the above normal rainfall and negative OLR departures shown above. 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 February to April 2013 the RVF persistence model identifies focal regions in northern Kenya, eastern Sudan and southern Mauritania where ecological conditions would support the emergence of RVF vectors. These are where enhanced surveillance is advised.



RVF Potential February - April 2013