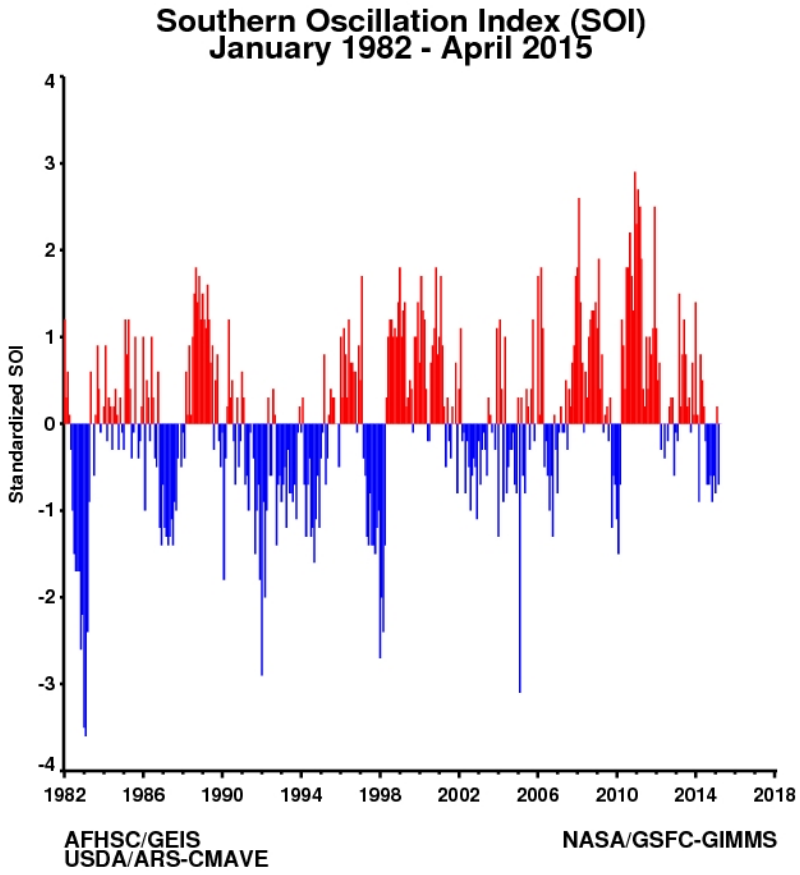
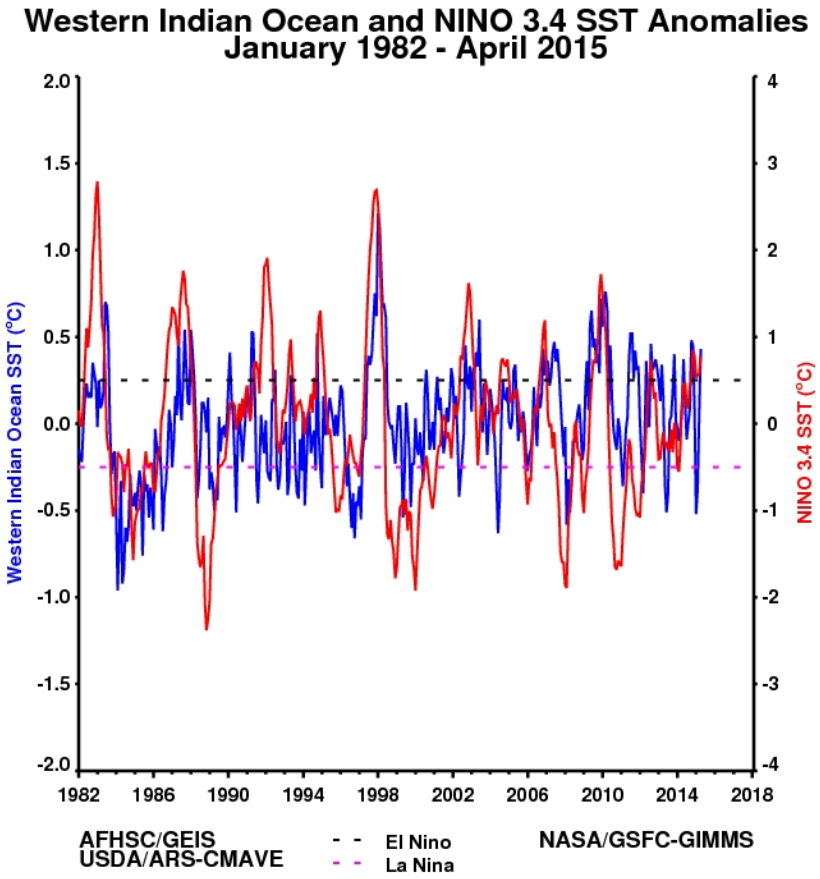
This section of the report will provide a rolling three month update on a monthly basis of the state of the climatic and ecological indicators used in monitoring areas at risk to RVF activity. These indicators include, global SST anomalies patterns, Equatorial Western Indian Ocean (WIO) and Eastern Pacific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

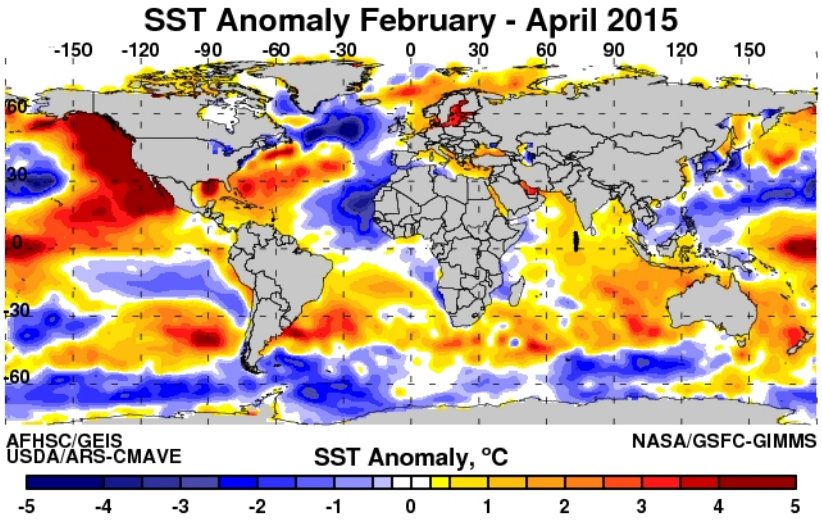
April 2015

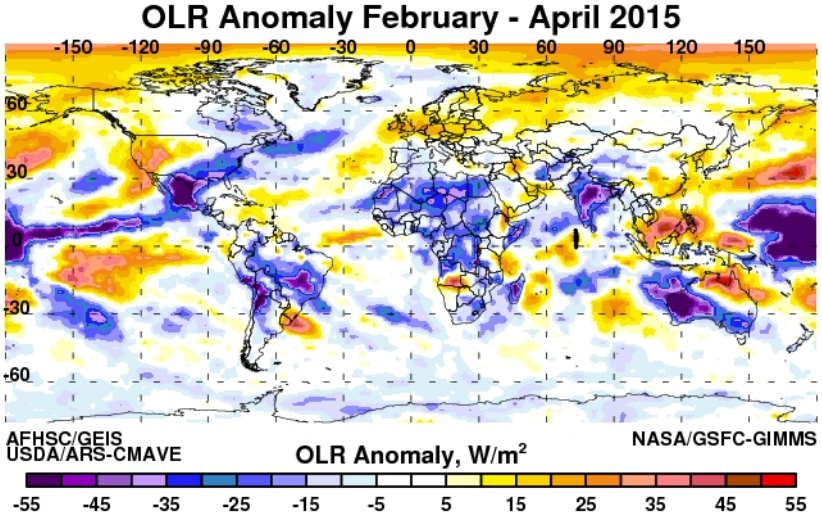
1. SOI and SST Indices





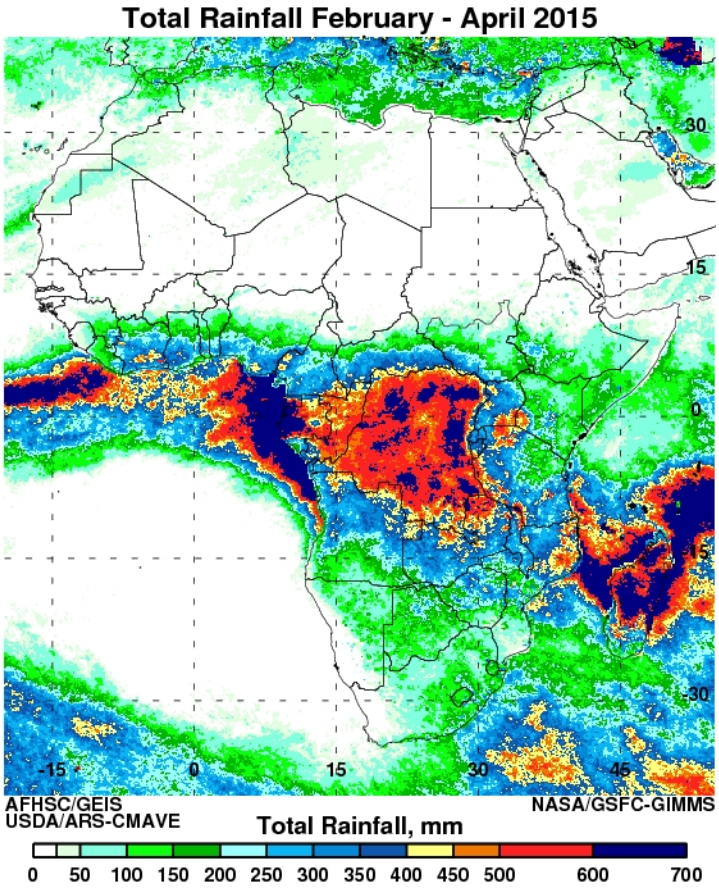
The SOI index is at a normal value of 0.0 in April from a negative value in March at -0.7 which would suggest normal conditions. However, monthly SST anomalies in NINO 3.4 and NINO 4 monitoring regions have increased with values of +0.78°C and 1.23°C respectively in April. The western Indian Ocean basin has also warmed substantially, the WIO SST index was 0.43°C in April from 0.07°C in March indicating significant warmer than normal conditions over this ocean basin. The recent persistent above-average sea surface temperatures (SST) (below) in the central equatorial Pacific region indicate that weak to moderate El Niño conditions are present. This is reflected by the recent enhanced consistent ocean-atmosphere coupling and the eastward shift of convection to the central and eastern equatorial Pacific. Convection was enhanced over the central equatorial Pacific to the Date Line over the last 3 months as shown by OLR departures below. Currently a majority of model forecasts predict El Niño conditions (90% chance) will continue through the Northern Hemisphere summer 2015, and a greater than 80% chance that it will last through the rest of 2015. In some locations, certain impacts often associated with El Niño may appear during the Northern Hemisphere spring and early summer 2015 season.

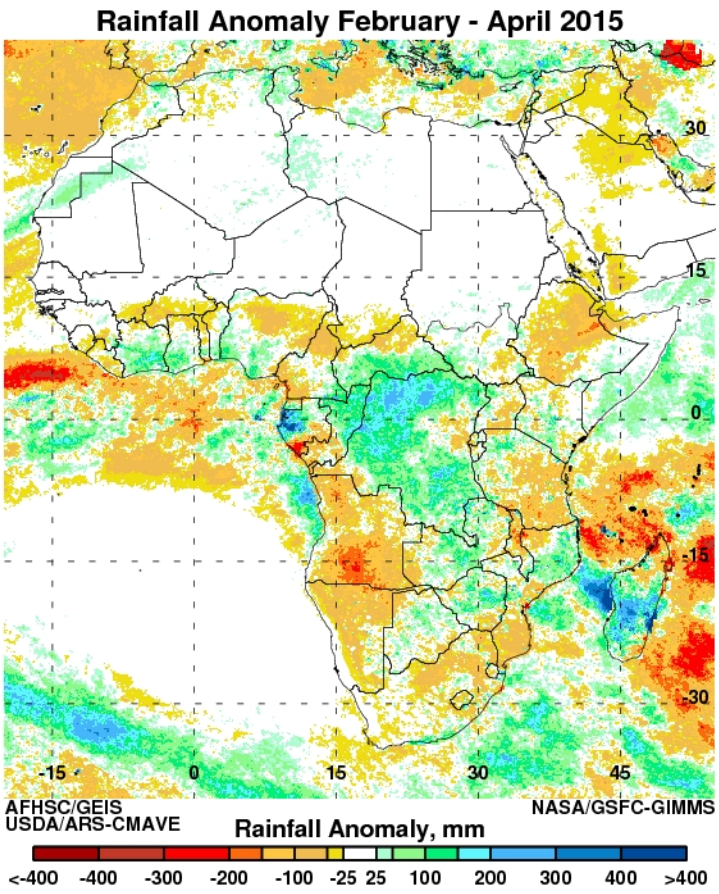




The central equatorial Pacific Ocean shows pronounced above normal seasonal SSTs (three month values: >+0.5°C to +5.0°C) except for the region from 30°S to 1°S (off the South American coast) with below-normal SSTs during the February 2015 to April 2015. The area of the western equatorial Indian Ocean that has been colder than normal in the last two months is now reduced the area close to East Africa coast up to 60°E. The greater Indian Ocean now shows a general pattern of warming with departures of ~ +1.5°C. Other regions of significant anomalies include the north Pacific Ocean, north Atlantic, equatorial Atlantic off the West African coast, the Pacific Ocean off the California coast, southwest Atlantic Ocean off Argentina and Brazil 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 current SST anomaly patterns can be observed in the pattern of global convective activity illustrated by the OLR departure patterns here. During the

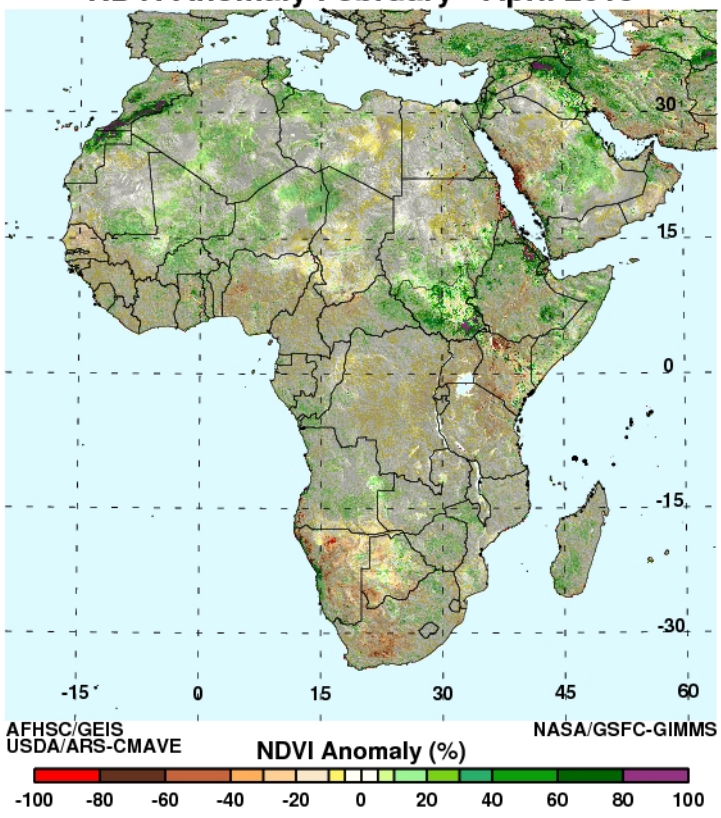
February 2014 to April 2015 period, drier-than-average conditions (>+35W/M2) have emerged over the western Pacific Ocean covering the Indonesian basin and northern Australia. The continuing severe drought in western US (Californian) is well defined and pronounced. Enhanced cooler than average conditions (-50W/M2) are observed over central to eastern equatorial Pacific and just east of the the Date Line. This band extends norther through Mexico into southern and eastern US. Convective conditions continue to persist over India between 70&degE and 90&degE, western Africa extending into east Africa, central South America covering most of the Amazon Basin. These patterns of depressed and enhanced convective activity coincide well with the patterns of SST departures and reveal certain impacts often associated with El Niño. Monthly and weekly anomalies can be found here. Rainfall and associated anomalies (below) for Africa from February 2014 to April 2015 show rainfall over the entire sub-Saharan region south of 5°N with a maxima along equator. Areas of above normal rainfall (+50 to 300mm) are limited coastal West Africa, the entire Congo basin and parts of Kenya.





Cumulative NDVI anomalies for Africa for February 2014 to April 2015 still show persistent positive anomalies concentrated eastern Sudan, South Sudan, northern Ethiopia and Eritrea even though the patterns are not spatially coherent. The RVF risk map below was derived from thresholding NDVI anomaly data to detect areas persistent of above normal NDVI. Periods of widespread and prolonged heavy rainfall lead to flooding of dambos and anomalous green up in vegetation, creating ideal ecological conditions for the emergence RVF vectors. For the period February 2014 to April 2015, the RVF persistence model does not identify any areas where ecological conditions would support the emergence of RVF vectors. Therefore there is no risk of ecologically coupled RVF activity. However given the above normal rainfall conditions currently being is East Africa and especially Kenya, authorities should vigilant about the outbreak of numerous vector and water-borne diseases.

NDVI Anomaly February - April 2015



RVF Potential April 2015