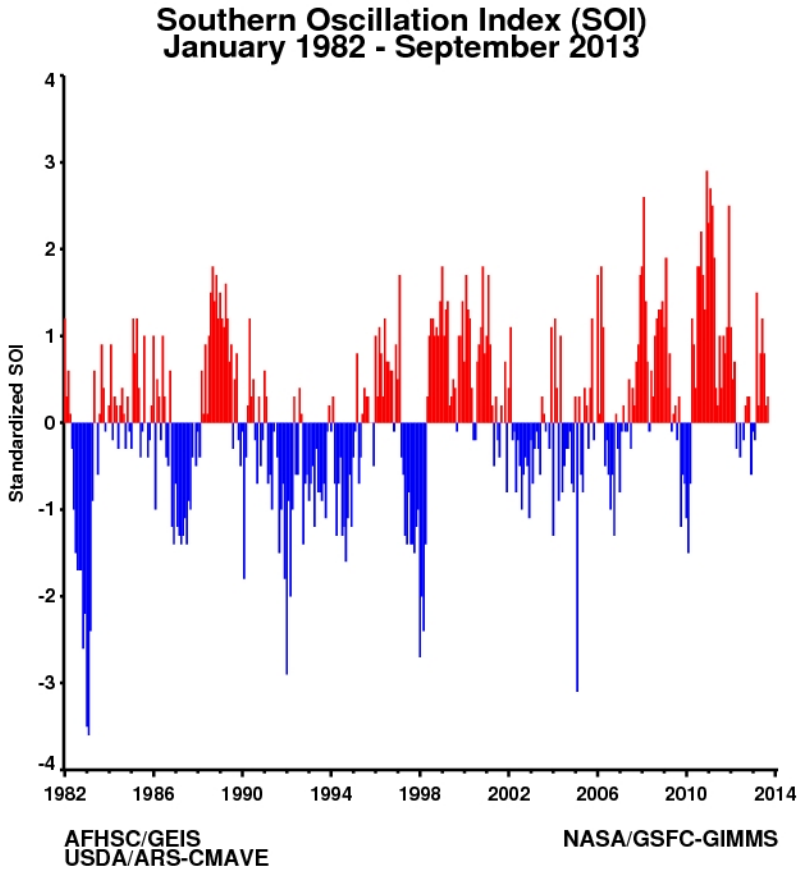
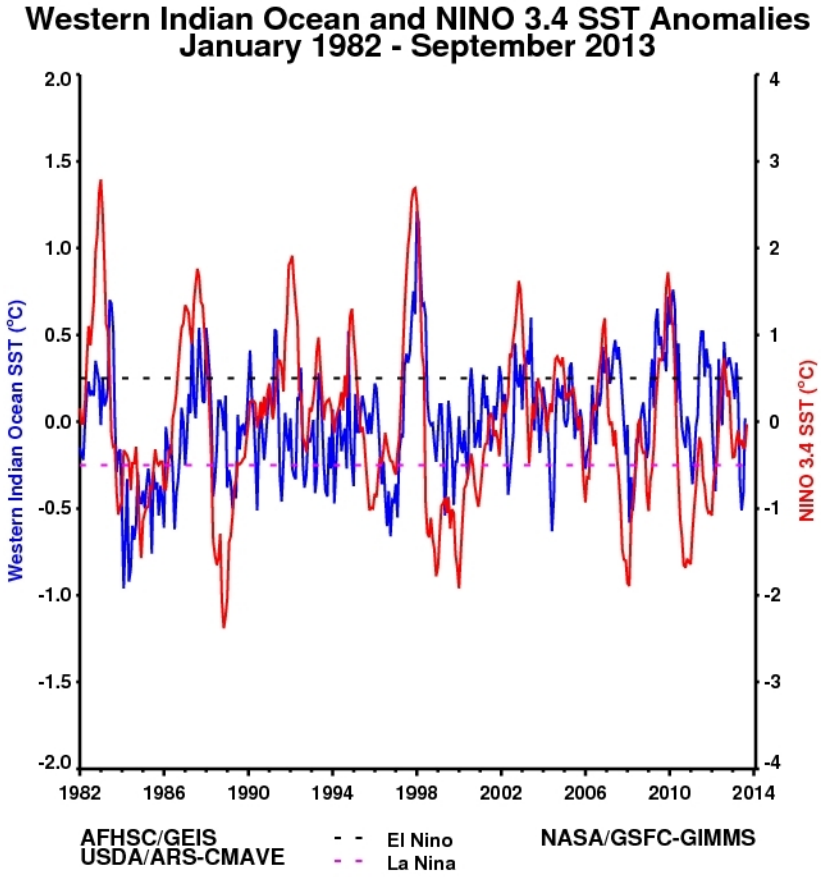
This section of the report will provide a rolling three month update on a monthly basis of the state of the climatic and ecological indicators used in monitoring areas at risk to RVF activity. These indicators include, global SST anomalies patterns, Equatorial Western Indian Ocean (WIO) and Eastern Pacific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

September 2013

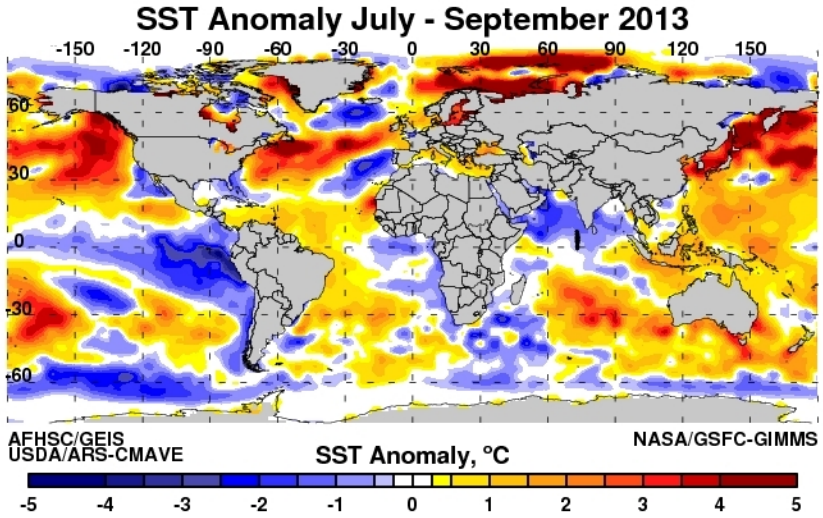
1. SOI and SST Indices

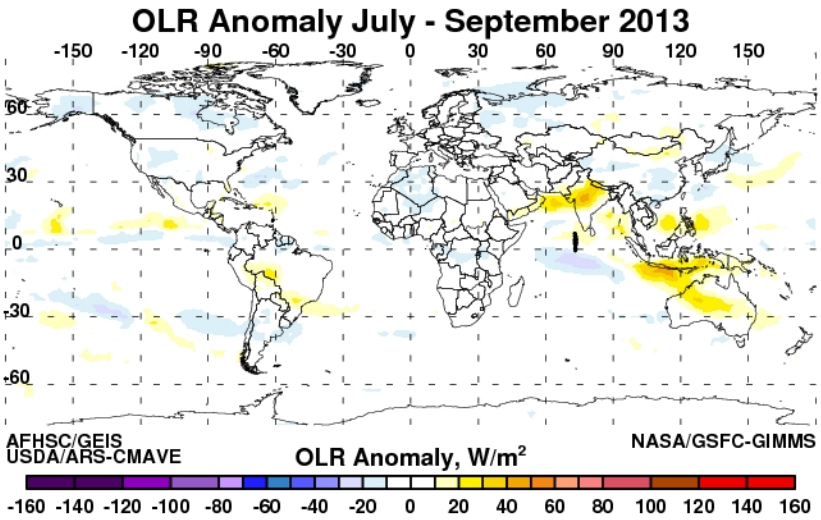




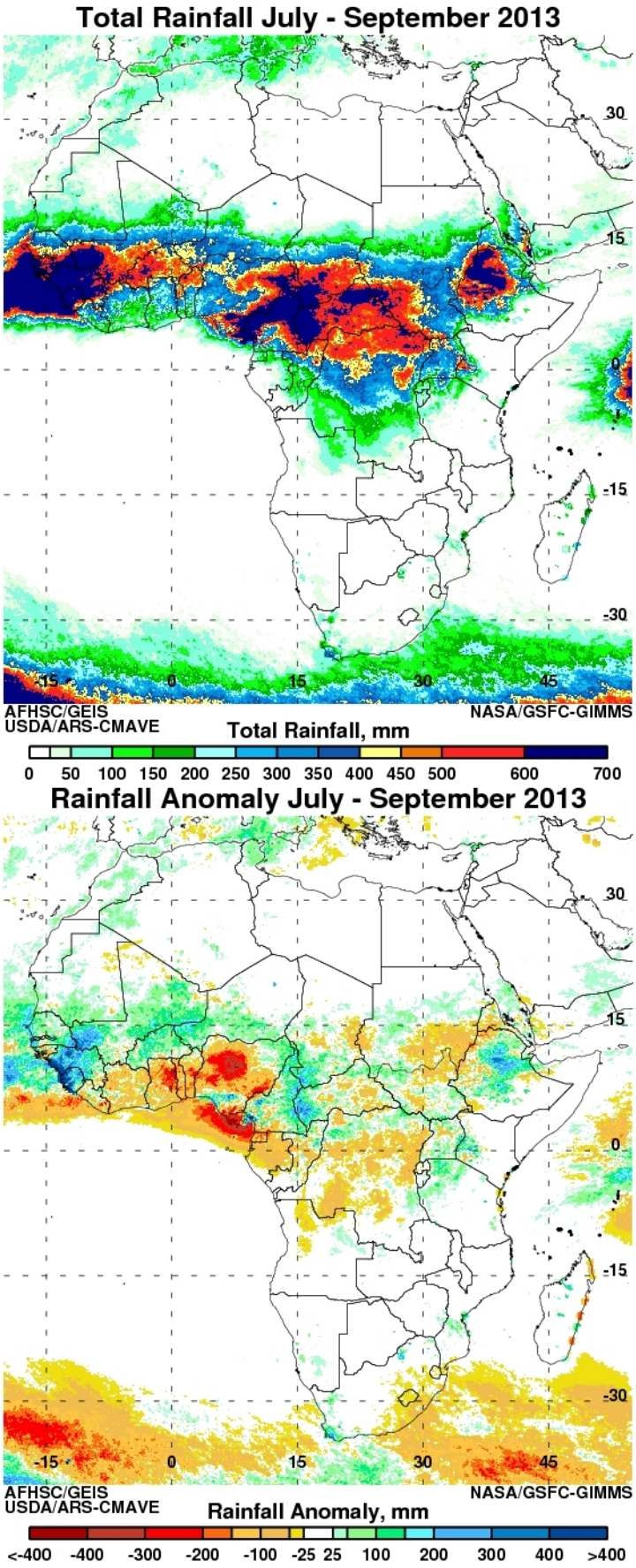
The SOI index value indicates near normal conditions with a value of 0.3 in September near the same level as August. This has been a pattern that was exhibited by the SOI since the beginning of the year.

Correspondingly, September monthly SST anomalies in the **NINO3.4 SST** region are also near-normal with a value of -0.03°C and **WIO SST** anomalies are also near-normal although the average spatial patterns over the last three months indicate some cooling in the northwestern part of the basin. At the moment, all the atmospheric and oceanic indicators are in convergence with persistence of neutral ENSO conditions. The [latest statistical and coupled model forecasts] indicate that ENSO-neutral (Niño-3.4 index between -0.5°C and 0.5°C) will persist into the Northern Hemisphere spring 2014.





The eastern equatorial Pacific Ocean shows below normal SST in the region from 90°W to 160°W [NINO1.2 region] during the July – September period. The spread of SST shows a pattern that is typical of the early development 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) for the last three months. The western equatorial Indian Ocean is now dominated by negative SST anomalies especially off the East African and Arabian 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 July-September, slightly drier-than-average conditions are observed over the equatorial eastern Pacific Ocean, northern India and Australia region with positive OLR anomalies. Convective activity continues to be prevalent over parts of East 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 to ~18^{o}N with significant positive departures over the Ethiopia Highlands and western Sahel on the order of +150 to +200mm during the July - September period.



Cumulative NDVI anomalies for Africa for July - September 2013 show residual positive NDVI anomalies over East Africa especially over Kenya and northern Tanzania, South Sudan and Somalia. A band of positive anomalies is widespread across the Sahel region in response to the above normal rainfall from over the 2-3 months. 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 July – September 2013 the RVF persistence model continues to identify isolated areas in Rift Valley region of Kenya, southern Sudan, Niger, Mali, southern Mauritania and Senegal where ecological conditions would support the emergence of RVF vectors. The region of focus at this time should be Southern Sudan and the above-normal rainfall and NDVI areas over the Sahel. Current OIE reports indicate RVF activity occuring in Mauritania and Senegal.