

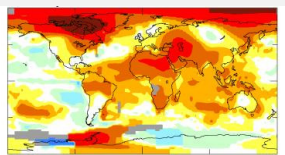
Climate over Sri Lanka during 2010

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January 2011

2010 Tied For Earth's Warmest Year on Record

Scientists with the National Oceanic and Atmospheric Administration confirmed that 2010 is tied with 2005 as the warmest year of the global surface temperature record, beginning in 1880. The next warmest years are 1998, 2002, 2003, 2006 and 2007, which are all statistically tied for third warmest year.



January-November 2010
surface air temperature
anomaly in GISS analysis (Map
courtesy GISS)

(www.ens-newswire.com)

Summary

Satellite Derived Monthly Rainfall

Rainfall over Sri Lanka was above-normal during 2010 in an overall sense and there were important spatial, seasonal and even intra-seasonal contrasts. Heavy rainfall drenched the island both in Yala (April- September) and the first half of the Maha (specifically in November and December) Seasons. Contrasting rainfall dominated in April, May, November, and December. The first quarter of the year (January-March) prevailed with quite dry conditions and exceptionally in October too.

Observed Rainfall and Temperature

The ground observed data shows consistency with the satellite observations for rainfall. The South-Western region (Colombo, Gampaha, Kegalle, and Ratnapura) were much wetter than normal. The hill country (Badulla, Nuwara Eliya, Ratnapura) and the Western districts Colombo, Galle and Puttalam) showed below average temperature.

Quarterly Rainfall Anomaly

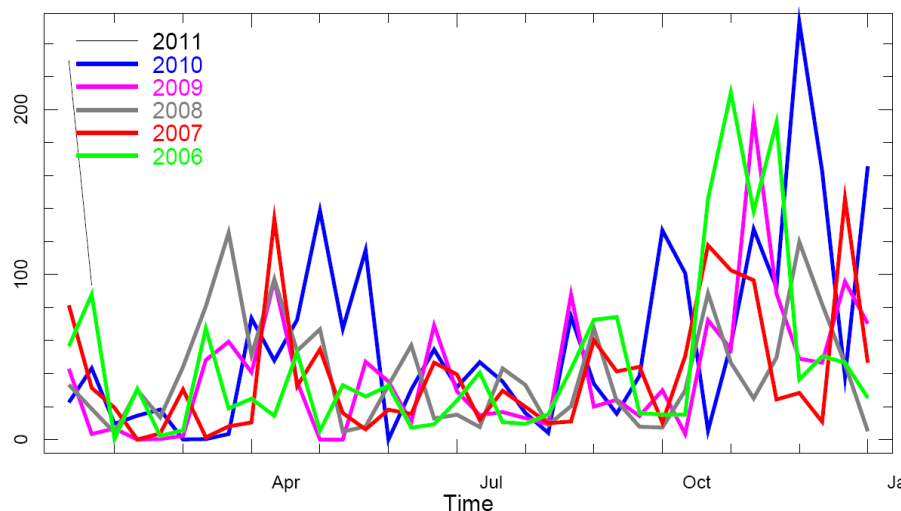
First quarter (JFM) has shown below normal condition almost for the entire Sri Lanka while all other quarters (AMJ, JAS, and OND) above average in most cases dominated by OND what it normally does in the initial stage of the *Maha* Season.

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1. Climate Summary in 2010

a) Satellite Derived Rainfall Estimates



Data from NOAA

Figure 1: The average rainfall every dekad (approximately 10-days) over Sri Lanka during 2010 (blue line) is compared with the average rainfall during 2009, 2008, 2007, 2006 and 2005. The over Sri Lanka is estimated from satellite data and ground based observations. The satellite estimates underestimate rainfall by 10-20% but this affect is uniform across the island and across seasons.

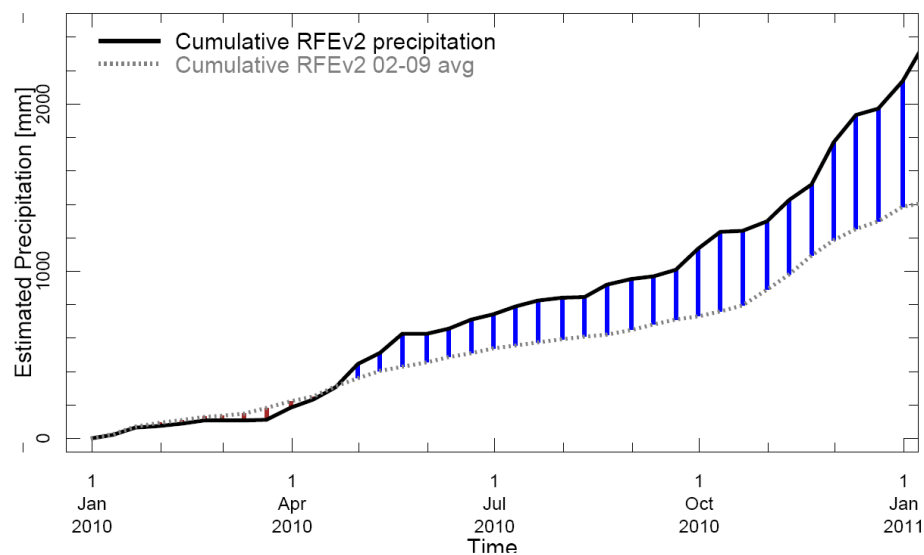


Figure 2: The cumulative rainfall over Sri Lanka starting in Jan 2010 until December 2010 in comparison with average of the previous 6 years. This graph shows that the total rainfall was near the 6 year average. RFE is an area averaged Rain Fall Estimate from satellite and ground based sources.

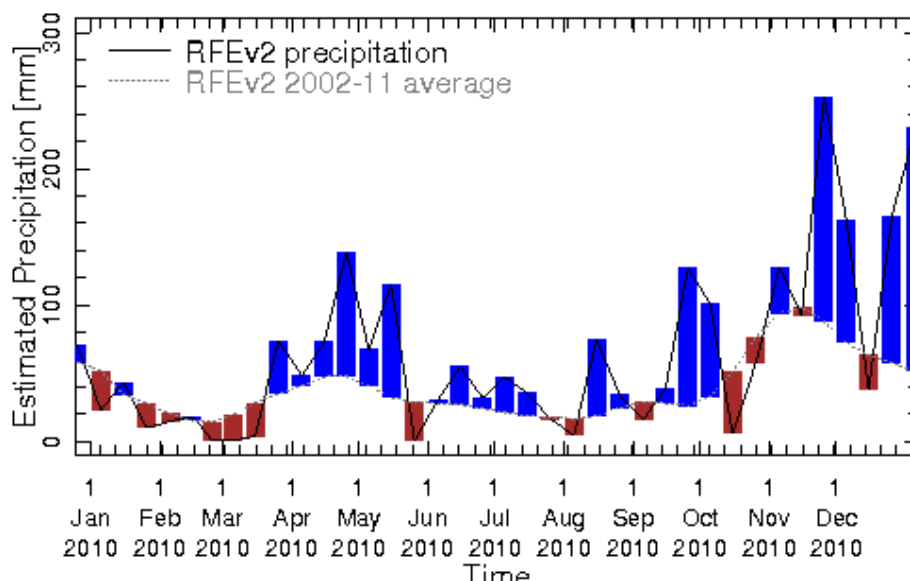
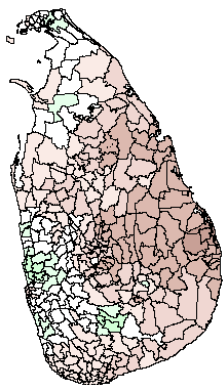
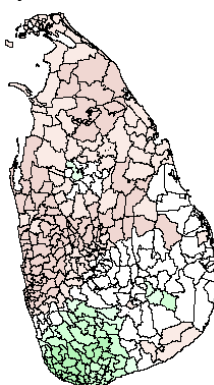


Figure 3: Rainfall for the past 5 years with above-average (compared to the last 8 years) hatched in blue and below normal in brown.

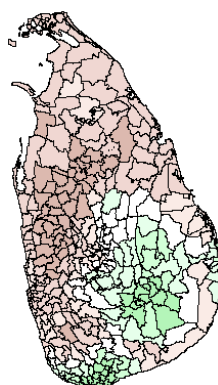
January



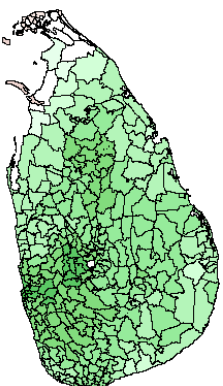
February



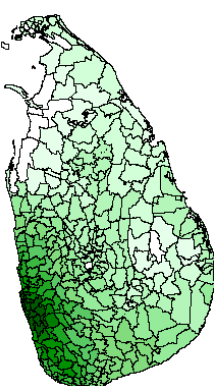
March



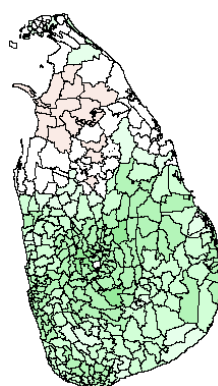
April



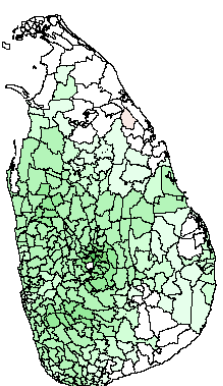
May



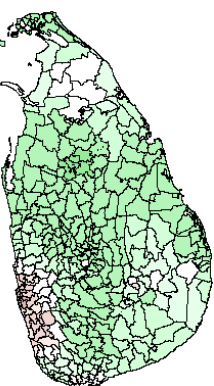
June



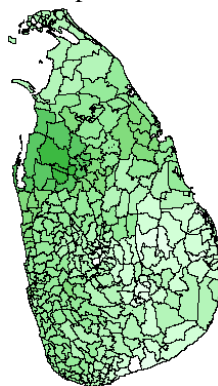
July



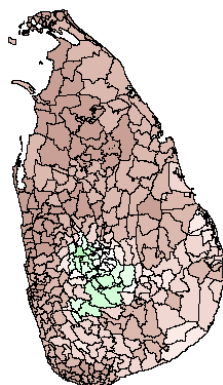
August



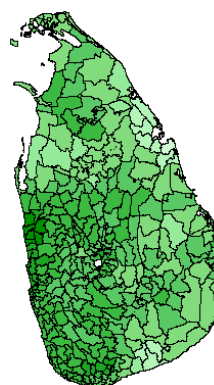
September



October



November



December

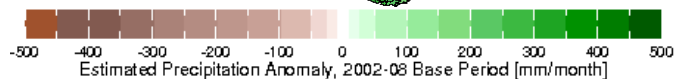
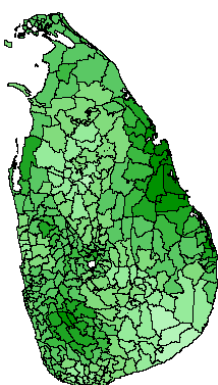


Figure 4: Monthly Anomalies of Rainfall in mm/month during 2010 from January to December from average rainfall during the 2002-2008 base period.

b) Observed Rainfall and temperature

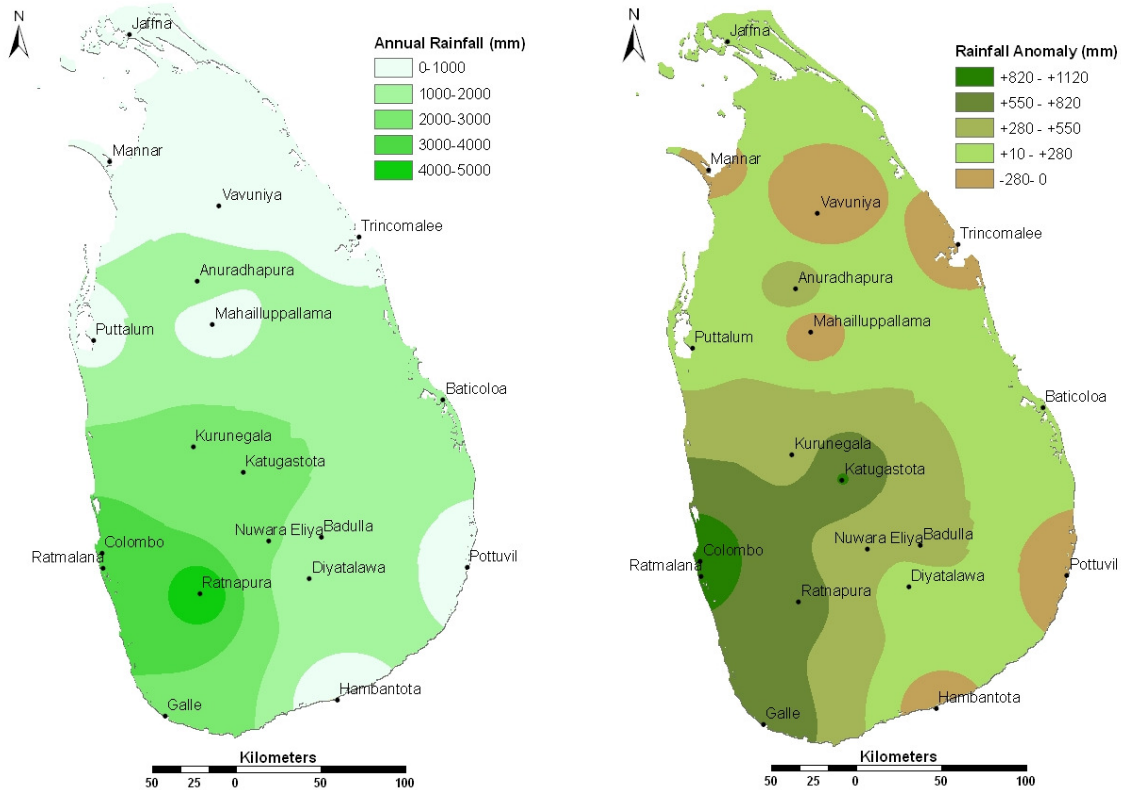


Figure 5: Observed annual rainfall over 2010 (left) and its departure from the long term (1980-2008) average (right).

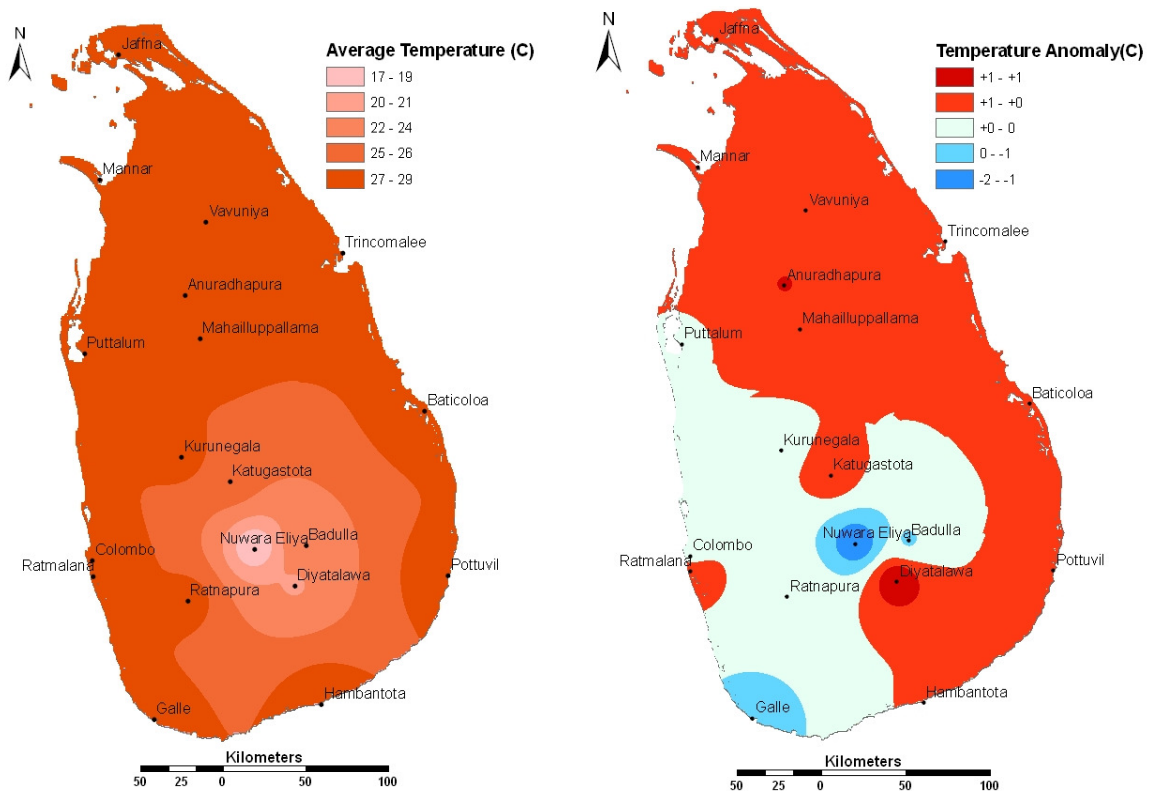
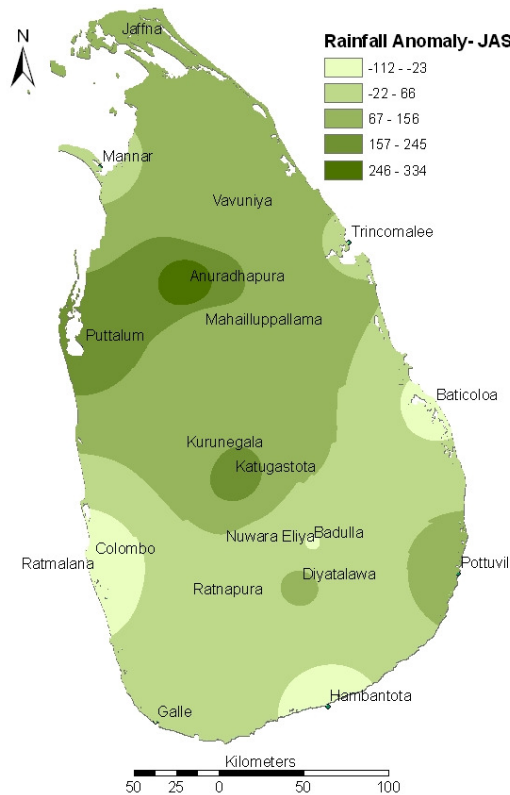
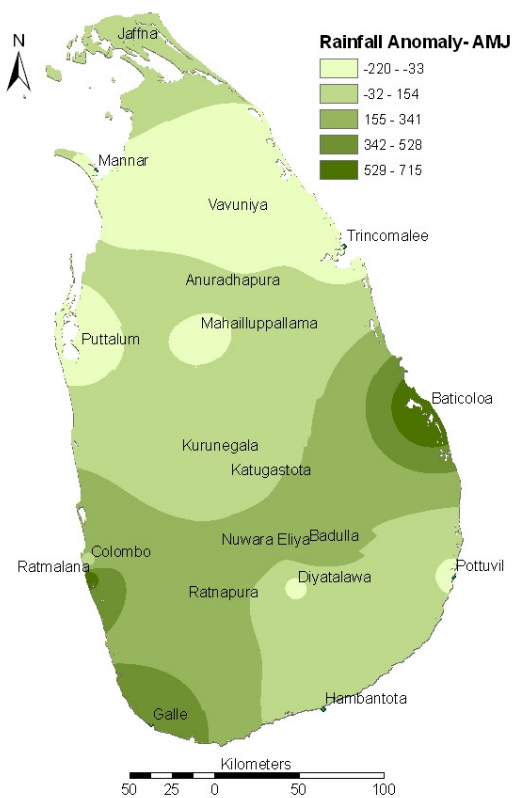
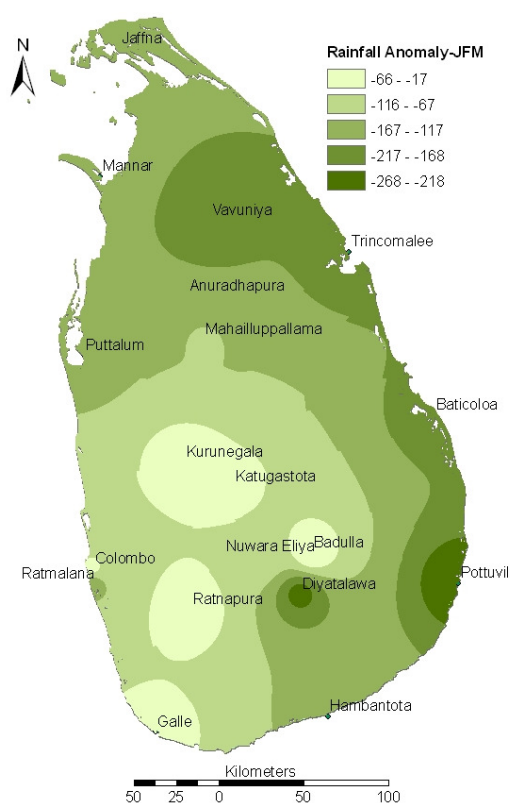


Figure 6: Observed average temperature for 2010 (left) and its departure from the long term (1980-2008) average (right).

C) Quarterly Rainfall Anomaly in 2010



C)

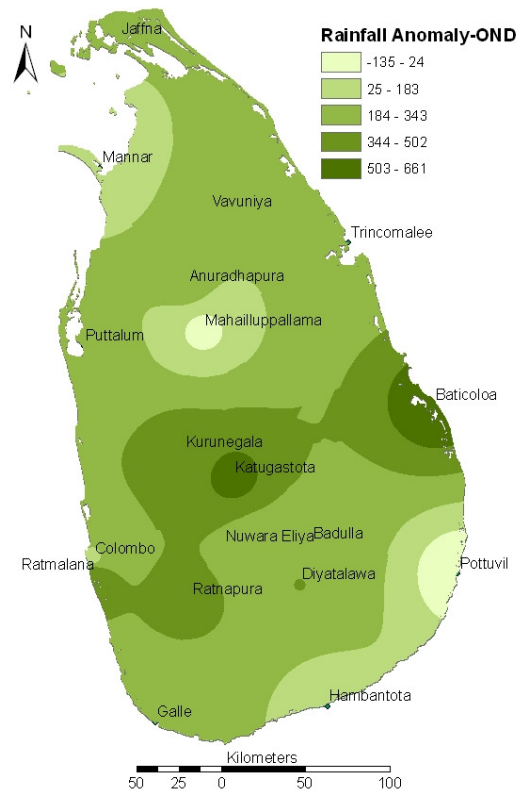
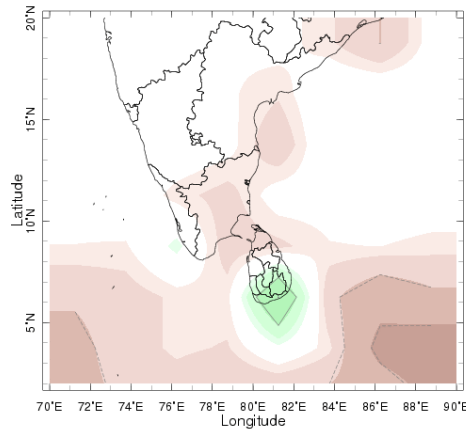
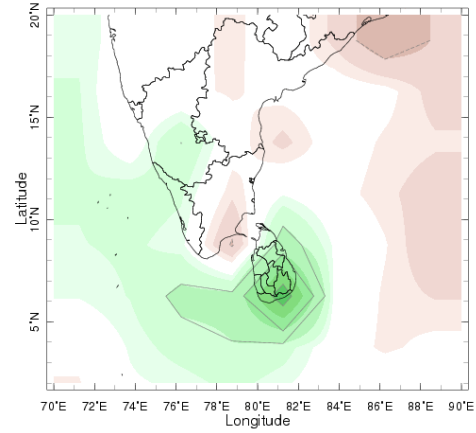


Figure 7: The quarterly (JFM, AMJ, JAS and OND) rainfall anomalies and their departures from the long term Average (1980-2008)

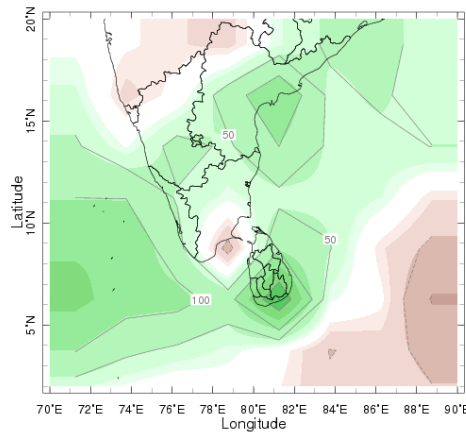
D) Quarterly Rainfall Anomaly in 2010



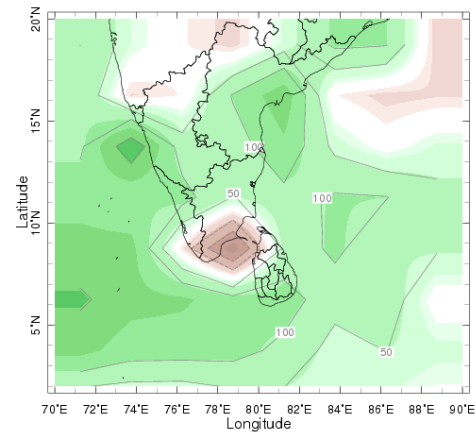
Jan-Mar 2010



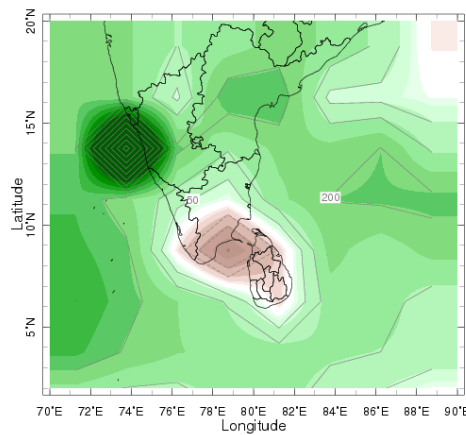
Feb-Apr 2010



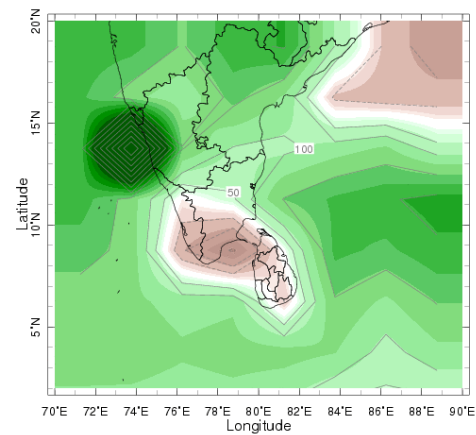
Mar-May 2010



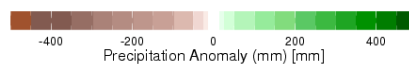
Apr-Jun 2010



May-Jul 2010



Jun-Aug 2010



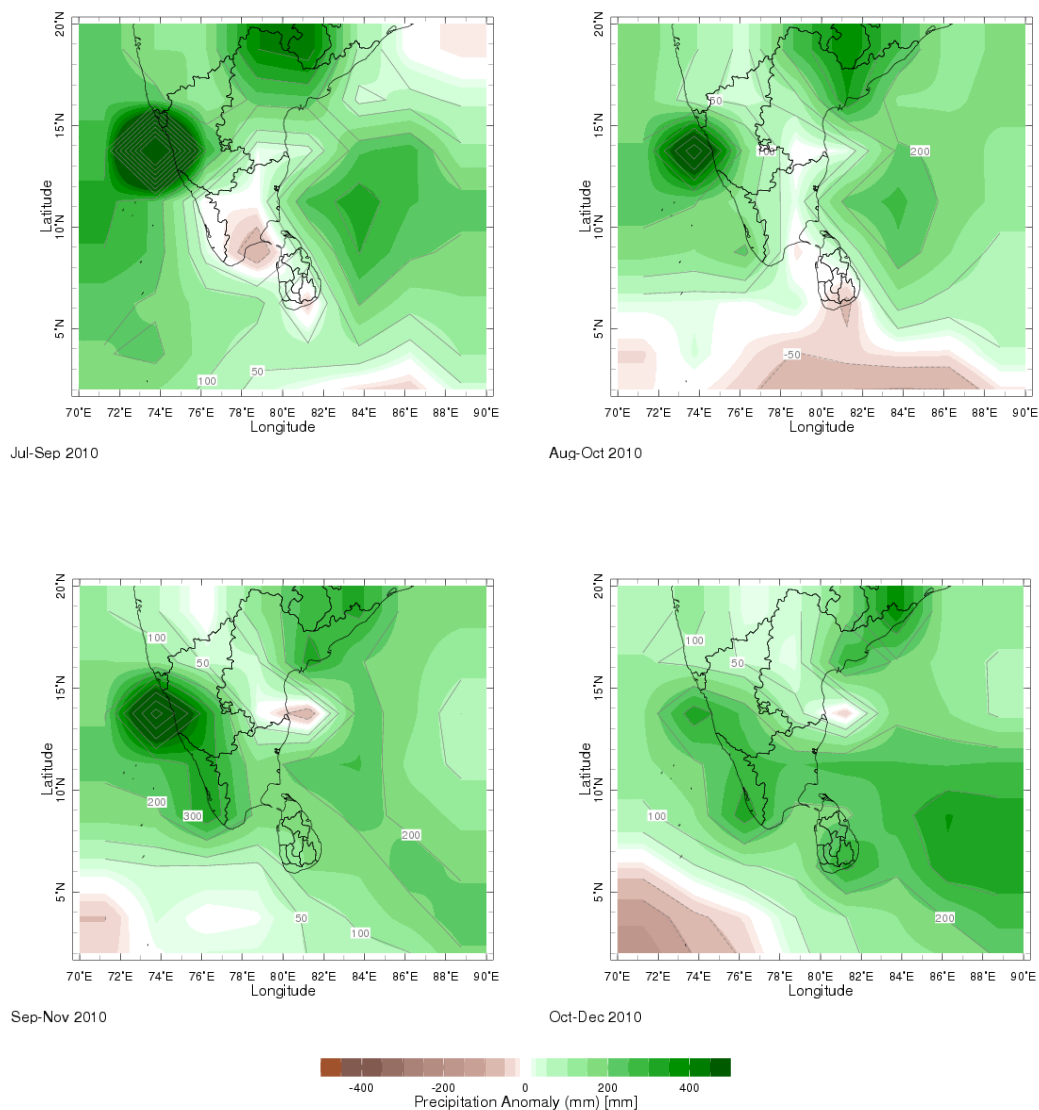


Figure 8: Seasonal Precipitation Anomaly in 2010 over Southern Peninsular India, Maldives and Sri Lanka. Data obtained is from NOAA CPC.