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**Co-variability of sea surface chlorophyll-a and sea surface temperature derived from MODIS in the southwest monsoon period in 2004**

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Remote sensing ocean colour and sea surface temperature (SST) data for 2004 from MODIS (Moderate-resolution Imaging Spectroradiometer) are analyzed to study the co-variability between the two parameters during the southwest monsoon period between May – September. The data from MODIS were mapped using seadas software within an area of latitudes between 2.0N - 13.5N and longitudes between 72.5E - 88E. The days with heavy clouds were excluded. The southwest monsoon period for the region is roughly defined as from May to September. Daily chlorophyll and SST maps were used to make composites for each month. There were between 10 – 15 daily files for each of the months from May to September. The chlorophyll concentration variability was in the range of 0.01 – 10.0 mg m<sup>-3</sup> (higher values in the coastal waters) and the sea surface temperature variability was between 25 – 32 °C in the waters surrounding the island.

The chlorophyll-a maps show high productive waters of over 2 mg m<sup>-3</sup> concentration in most of the southern and western coastal ocean during the months of July and August. The sea surface temperature drops by 2 to 3 degrees (centigrade) in coastal ocean waters in the south where high chlorophyll concentrations are detected. Observation of chlorophyll and SST maps indicate strong correlation (over 70 % of negative correlation) between the two parameters in the southern coastal ocean region. This may be due to the upwelling phenomenon that occurs in the coastal waters. Upwelling brings cooler nutrient rich waters to the surface enhancing the production of chlorophyll near the surface waters. These high chlorophyll areas lead to high fish production.