E1-32 Analysis of remotely sensed data on ocean colour of waters around Sri Lanka

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Remotely sensed data on ocean colour of waters that surround Sri Lanka, received from the Coastal Zone Colour Scanner (the satellite in the Nimbus series), is analysed. Ocean colour is an indicator of sea surface chlorophyll (chl) concentration. An ocean colour sensor received emerging radiance (radiant flux per unit area per unit solid angle) from the sea surface after modification by the intervening atmospheric path. Empirical relationships have been established that link changes in radiance with changes in concentration of chloropyll in the water. An algorithm developed at NASA is used to retrieve surface chlorophyll concentrations of sea waters arround Sri Lanka. Raw data on relatively cloud free days during 1978 - 1986 within the area of latitudes between 4.5N - 11N and longitudes between 78E - 85E are processed to produce chlorophyll maps. The days with heavy clouds were left unprocessed as they do not give any chlorophyll information after atmospheric corrections.

Composite averages of surface chlorophyll for each month are also made. The oceanic waters between Gulf of Mannar and Palk Strait show high chlorophyll concentrations throughout the year.

However, these high values may represent other suspended particles and dissolved organic mater besides chlorophyll, since this region is very shallow (<110m - case 2 waters). Analyses show that there are upwelling regions with higher chlorophyll concentrations (> 0.5 mg $chlm^{-3}$) along the southern coast after the south-west monsoon period. High chlorophyll concentrations indicate high productivity. Therefore, these regions need extensive studies of measurements of primary production and also continuous monitoring of fish catches during and after the south-west monsoon period.

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