An Assessment of Physico-chemical Parameters of Seawater in Near Shore Environment within Chennia to Nagapattinam

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Determination of the physico-chemical parameters (Pressure, Temperature, pH, conductivity, Salinity, Turbidity, Oxygen, Density, Nitrite, Nitrate, Ammonium, Phosphate etc) of seawater is important in monitoring coastal environment. Depletion of organic or inorganic material that are found dissolved in seawater affect the near shore coastal environment. In the present study sea surface water samples were collected from Bay of Bengal (Chennai to Nagapattinam) during pre-monsoon and post-monsoon periods at varying depths at different locations to understand the variation in physico-chemical parameters. The nutrient analyses and the CTD data reveal a distinct variation in the physico-chemical parameters. Application of SURFER diagrams clearly indicates seasonal and spatial variations in the near coastal environment. The properties of the sea water are not homogenous both horizontally and vertically and it changes accordingly with depth during both the periods. The observed values of nutrients for the post monsoon period are high compared to that of the pre-monsoon period along the Tamil Nadu coast. The study shows that the variation in the temperature, salinity, light intensity and availability of nutrients in seawater highly influences the phytoplankton distribution which forms an important factor of the coastal food chain.