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## Time Series Analysis Of Primary Productivity Along The East Coast Of India Using Oceansat-2 Ocean Colour Monitor (O cm)

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**Abstract.** Primary Productivity is the ultimate source of energy for all organisms in an ecosystem. It is associated with the food production and the global carbon cycle. Sensors on remote platforms (satellites) are capable of estimating the Chlorophyll-*a* concentration in surface waters by measurement of spectral changes of the upwelling light. From these data, which connected with other remotely sensed data, it is possible to use algorithms to estimate the primary production. In this paper, an initial attempt is made to estimate the Primary Productivity along the east coast of India.

Vertically Generalized Productivity Model (VGPM) which is a depth (euphotic depth) integrated model is used for the estimation. The common input variables or geophysical parameters used for the model are chlorophyll-*a* concentration (chl-*a*), vertically diffuse attenuation coefficient (Kd-490), Photosynthetically Available Radiation (PAR), and Sea Surface Temperature (SST). The chlorophyll-*a* and Kd-490 parameters were estimated using Oceansat-2 OCM data whereas PAR and SST were taken from MODIS-aqua data. Oceansat-2 Ocean Colour Monitor (OCM) data for the year 2013 is used in the analysis to compute the primary productivity using the weekly (8-day) data products of all the parameters as mentioned above. These products were inter compared with the MODIS Weekly (8-day) Primary Productivity products which were estimated at a global scale using the modified Vertically Generalized Productivity Model (VGPM) with which uses the exponential function of Sea surface temperature (SST).

[Conference Paper](#) (PDF, 884 KB)

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