

The spatiotemporal distribution of chlorophyll-a along the Northwest Africa Atlantic: Using Modis Aqua imagery integrated into a GIS

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Abstract:

Monthly chlorophyll-a (Chl-a) concentrations and sea surface temperature (SST) derived from MODIS Aqua Sensor data for 2003–2009 have been analyzed to describe seasonal and inter-annual variability of surface Chl-a in The Northwestern African coast of the Atlantic Ocean which is the richest coasts in exploitable biological resources. Its shelf is characterized by upwelling of the deep waters that assures a contribution in nutrients that encourage photosynthesis in the superficial waters and so on for the production of the whole trophic food chain. In this study, a significant and negative correlation is observed between surface temperature and biological production (chlorophyll “a”) in the period of upwelled water of the Northwestern African coast of the Atlantic.

Keywords: chlorophyll-a, the sea surface temperature (SST), GIS, MODIS Aqua Sensor.