

Variation of Phytoplankton Biomass in the East China Sea Based on MODIS Data

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Abstract : The East China Sea is one of four main seas in China, where there are many fishery resources. Some important fishing grounds, such as Zhoushan fishing ground important to society. But the eco-environment is destroyed seriously due to the rapid developing of industry and economy these years. In this paper, about twenty-year satellite data from MODIS and the statistical information of marine environment from the China marine environmental quality bulletin were applied to do the research. The chlorophyll-a concentration data from MODIS were dealt with in the East China Sea and then used to analyze the features and variations of plankton biomass in recent years. The statistics method was used to obtain their spatial and temporal features. The plankton biomass in the Yangtze River estuary and the Taizhou region were highest. The high phytoplankton biomass usually appeared between the 88th day to the 240th day (end-March - August). In the peak time of phytoplankton blooms, the Taizhou islands was the earliest, and the South China Sea was the latest. The intensity and period of phytoplankton blooms were connected with the global climate change. This work give us confidence to use satellite data to do more researches about the China Sea, and it also provides some help for us to know about the eco-environmental variation of the East China Sea and regional effect from global climate change.

Keywords : the East China Sea, phytoplankton biomass, temporal and spatial variation, phytoplankton bloom

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