NEW APPROACH FOR IDENTIFICATION OF POTENTIAL FISHING ZONES: A CASE STUDY OF BAY OF BENGAL, INDIA

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The research paper deals with the identification of potential fishing zones using IRS P4 (Oceansat) OCM data applied on a part Krishna estuarine region of East Coast of India located in Andhra Pradesh State. With the availability of Ocean Color Monitor (OCM) data it has become a powerful potential tool for identification of fishing zones, significantly, in meeting the increased needs of fisherman as remote sensing data provides synoptic and oceanic measurements in evaluating the abundance and availability of fish population. The fishing zones can be identified through the interpretation of satellite digital data by measuring and mapping the ocean temperature, colour and phytoplankton. The change in ocean colour from blue to green serves as an indicator of increasing plankton abundance. The green color is associated with the presence of plankton area with high biological productivity indicated by high chlorophyll biomass. Normalized Difference Vegetation Index (NDVI) which is mainly used for land applications is now used on water surface to map showing the zones of chlorophyll concentrations. These zones can be said to attract fish. The positive value of NDVI is an indication of the presence of phytoplankton and pigment concentration, which is the primary link in the food chain to fishes. Therefore NDVI is used to map the potential fishing zones on ARC/INFO GIS platform. This study is a fundamental research in utilizing the latest technology of remote sensing and GIS to explore the marine resources for mapping potential fishing zones (PFZs). From the analysis of the result, it is recommended that NDVI can be utilized as an indicator for the presence of fish. This concept can be established further by carrying out detailed research on the spectral signatures of relevant water related features. The full paper presents the detailed procedure and various maps illustrating the case study with all results.