

Intisari

Pemetaan Zona Potensi Penangkapan Ikan Cakalang (*Katsuwonus spp*) di Laut Maluku

Laut Maluku memiliki potensi sumber daya ikan yang besar karena merupakan lokasi migrasi ikan, khususnya cakalang (*Katsuwonus spp*). Namun, pemanfaatan sumber daya ikan di Laut Maluku diduga belum optimal karena kurangnya informasi mengenai zona potensi penangkapan ikan (ZPPI). Penelitian ini bertujuan untuk memetakan ZPPI Cakalang di Laut Maluku dengan menganalisis citra satelit klorofil-a, suhu permukaan laut (SPL), arah dan kecepatan angin dari tahun 2003 hingga 2021. Citra klorofil-a dan SPL diperoleh dari Aqua MODIS level 3 dengan resolusi spasial 4 km dan citra angin diperoleh dari ASCAT dengan resolusi spasial 25 km. Semua citra dianalisis secara bulanan menggunakan perangkat lunak ArcGIS dengan luaran berupa peta spasial. Hasil penelitian menunjukkan Laut Maluku memiliki ZPPI Cakalang yang relatif luas dan sebagian besar terkonsentrasi pada perairan sebelah timur Sulawesi Utara, barat Maluku Utara, dan Utara Maluku dengan titik koordinat 1°30'LU 123°24'BT-1°48'LS 127°30'BT. ZPPI Cakalang di Laut Maluku memiliki luas paling besar ketika Monsun Peralihan I (Maret-Mei), selanjutnya berkurang pada Mosum Tenggara (Juni-Agustus), Monsun Peralihan II (September-November), dan Monsun Barat Laut (Desember-Februari).

Kata kunci: cakalang, klorofil-a, suhu permukaan laut, ZPPI, Laut Maluku

Abstract

Mapping of the Potential Fishing Zones for Skipjack Tuna (*Katsuwonus spp*) in Maluku Sea

The Maluku Sea has enormous fish resource potential because it is a migratory route for fish, particularly cakalang (*Katsuwonus spp*). However, the exploitation of fish resources in the Maluku Sea is unlikely to be optimal due to the lack of information about the potential fishing grounds (PFG). The aim of this study is to generate a visual representation of the PFG for skipjack tuna in the Maluku Sea using satellite imagery of chlorophyll-a, sea surface temperature (SST), wind speed and direction collected from 2003 to 2021. Chlorophyll-a and SST data were obtained from the Aqua MODIS level 3 with a spatial resolution of 4 km. Wind data were obtained from the ASCAT with a spatial resolution of 25 km. The satellite images were processed using ArcGIS to generate monthly data, which was then visualized as spatial maps. The study's findings suggest that the Maluku Sea has a relatively large PFG for skipjack tuna, with most of the population concentrated in the waters east of North Sulawesi, west of North Maluku, and North Maluku, with coordinates of 1°30'N 123°24'E-1°48'S 127°30'E. The PFG for skipjack tuna in the Maluku Sea exhibits its greatest extent during the Transitional Monsoon I (March-May), gradually shrinking during the Southeast Monsoon (June-August), the Transitional Monsoon II (September-November), and the Northwest Monsoon (December-February).

Keywords: skipjack tuna, chlorophyll-a, SST, potential fishing ground, Maluku Sea