

## Intisari

### **Pengaruh ENSO dan IOD Terhadap Variabilitas Suhu Permukaan Laut dan Klorofil-a Pada Zona Potensi Penangkapan Tuna Albakora (*Thunnus alalunga*, Bonnaterre 1788) di Samudra Hindia Bagian Tenggara**

Kondisi oseanografi Samudra Hindia sangat kompleks karena dipengaruhi angin monsun, angin pasat, dan anomali iklim *Indian Ocean Dipole* (IOD) dan *El Niño-Southern Oscillation* (ENSO). Kondisi ini dapat memengaruhi hasil tangkapan tuna albakora. Penelitian ini bertujuan untuk mengetahui variasi bulanan suhu permukaan laut (SPL) dan konsentrasi klorofil-a serta pengaruh IOD dan ENSO terhadap kedua parameter oseanografi tersebut pada zona potensi penangkapan ikan tuna albakora (*Thunnus alalunga* Bonnaterre 1788) di Samudra Hindia bagian tenggara. Data yang dianalisis adalah data penangkapan tuna albakora dari Loka Riset Perikanan Tuna dan data penginderaan jauh klorofil-a dan SPL dari Aqua MODIS periode 2006-2019. Hasil penelitian menunjukkan variabilitas SPL di Samudra Hindia bagian tenggara relatif lebih rendah pada periode Monsun Tenggara (Juni–Agustus) hingga Monsun Peralihan 2 (September–November), dibandingkan pada periode Monsun Barat Laut (Desember–Februari) hingga Monsun Peralihan 1 (Maret–Mei). Sementara klorofil-a memiliki pola yang berbanding terbalik dengan SPL. Fenomena IOD lebih memengaruhi variasi *interannual* SPL dan klorofil-a di Lokasi penelitian dibandingkan ENSO. Namun demikian, indeks ENSO relatif berkorelasi positif dengan hasil tangkapan tuna albakora dibandingkan indeks IOD.

Kata kunci: tuna albakora, ENSO, IOD, klorofil-a, Samudra Hindia

*Abstract*

**The Influence of ENSO and IOD on Sea Surface Temperature Variability and Chlorophyll-a Concentration in the Potential Catching Zone of Albacore Tuna (*Thunnus alalunga*, Bonnaterre 1788) in the Southeastern Indian Ocean**

The Indian Ocean's oceanographic conditions are complicated due to the influence of monsoon winds, trade winds, and the climate anomalies of the Indian Ocean Dipole (IOD) and El Niño-Southern Oscillation (ENSO). The objective of the study is to determine the monthly variations in chlorophyll-a concentrations and sea surface temperature (SST) in the potential fishing zone of albacore tuna (*Thunnus alalunga* Bonnaterre 1788) in the southeastern Indian Ocean, as well as the impact of IOD and ENSO on these oceanographic parameters. The data to be analyzed includes the catch data of albacora tuna from *Loka Riset Perikanan Tuna* and remote sensing data of chlorophyll-a and SST from Aqua MODIS for the period 2006-2019. The results indicated that the relative variability of SST in the southeastern Indian Ocean was lower during the Southeast Monsoon period (June–August) and the Transitional Monsoon 2 (September–November) than during the Northwest Monsoon (December–February) and Transitional Monsoon 1 (March–May). While chlorophyll-a exhibits an inverse pattern with respect to SST. The interannual variation of SST and chlorophyll-a at the study area is more significantly influenced by IOD than by ENSO. Nevertheless, the ENSO index is more favorable in terms of albacore catch than the IOD index.

Keywords: albacore tuna, ENSO, IOD, chlorophyll-a, Indian Ocean