Intisari

Pendugaan Zona Potensi Penangkapan Ikan Cakalang di Laut Flores Menggunakan Data Penginderaan Jauh

Cakalang (*Katsuwonus pelamis*) merupakan salah satu jenis ikan pelagis besar bernilai ekonomi tinggi. Selain menjadi bahan konsumsi dalam negeri, cakalang juga menjadi komoditas ekspor. Cakalang menjadi target utama nelayan pancing dan pukat cincin di Laut Flores. Penelitian ini bertujuan untuk menduga zona potensi penangkapan ikan cakalang di Laut Flores menggunakan data penginderaan jauh dan mengetahui pengaruh ENSO terhadap kondisi permukaan laut zona potensi penangkapan ikan cakalang di Laut Flores. Penelitian ini menggunakan data penginderaan jauh klorofil-a, SPL, dan angin dengan rentang waktu dari tahun 2003 sampai 2018. Data tersebut dianalisis menggunakan program *Interactive Data Language*. Hasil penelitian menunjukkan ZPPI cakalang selama Monsun Barat Laut diduga terdistribusi di seluruh Laut Flores, kecuali di perairan pantai Pulau Sulawesi bagian selatan dan Kepulauan Nusa Tenggara serta Laut Flores bagian barat laut. ZPPI cakalang selama Monsun Peralihan I diduga terkonsentrasi di Laut Flores bagian barat dan selatan. ZPPI cakalang selama Monsun Tenggara diduga terkonsentrasi di Laut Flores bagian selatan dan perairan Pulau Selayar bagian timur laut. ZPPI cakalang selama Monsun Peralihan II diduga masih terkonsentrasi di Laut Flores bagian selatan dan perairan Pulau Selayar bagian timur laut dengan koordinat yang lebih luas. Peristiwa El Niño 2006 dan 2009 menyebabkan ZPPI cakalang menjadi lebih sempit pada Monsun Barat Laut, Monsun Tenggara, dan Monsun Peralihan II. Namun, ZPPI cakalang pada tahun 2009 lebih luas dibandingkan tahun 2006 karena distribusi spasial *upwelling* tidak sekuat tahun 2006. Sedangkan El Niño 2015 menyebabkan ZPPI cakalang menjadi lebih sempit pada semua musim. Peristiwa La Niña 2007 dan 2010 menyebabkan ZPPI cakalang menjadi lebih sempit pada Monsun Barat Laut, Monsun Peralihan I dan Monsun Peralihan II. Namun, ZPPI cakalang pada tahun 2010 lebih sempit dibandingkan tahun 2007 karena konsentrasi klorofil-a rendah < 0.15 mgm^{-3} mendominasi Laut Flores di sepanjang tahun.

Kata kunci: cakalang, El Niño, La Niña, Laut Flores, penginderaan jauh

Abstract

Prediction of Potential Fishing Zone of Skipjack Tuna in the Flores Sea Using Remotely Sensed Data

Skipjack tuna (*Katsuwonus pelamis*) is a large pelagic fish with high economic value. Besides being a domestic consumption material, skipjack tuna is also an export commodity. Skipjack tuna is the main target of fishers and purse seine in the Flores Sea. This study aims to determine the potential fishing zone of skipjack tuna in the Flores Sea using remote sensing data and to elucidate the effect of ENSO on the sea surface condition of the potential fishing zone of skipjack tuna in the Flores Sea. This study analyzed satellite-derived chlorophyll-a, SPL, and wind data from 2003 to 2018 using the Interactive Data Language program. The results show that the potential fishing zone of skipjack tuna during the Northwest Monsoon is thought to be distributed throughout the Flores Sea, except in the coastal waters nearby the southern Sulawesi and Nusa Tenggara as well as the northwestern Flores Sea. The potential fishing zone during the Transitional Monsoon I is hypothesized to be located in the western and southern Flores Sea. The potential fishing zone of skipjack tuna during the Southeast Monsoon is hypothesized to be concentrated in the southern Flores Sea and northeastern Selayar Island. Meanwhile, the potential fishing zone of skipjack tuna during the Transitional Monsoon II might be still distributed in the southern Flores Sea and northeastern Selayar Island with wider coordinates. The El Niño 2006 and 2009 events have narrowed the potential fishing zone of skipjack tuna during the Northwest Monsoon, Southeast Monsoon, and Transitional Monsoon II. However, the potential fishing zone of skipjack tuna during 2009 is wider than in 2006 because the spatial distribution of upwelling is not as strong as 2006. Whereas the El Niño 2015 has caused narrowing of potential fishing zone of skipjack tuna during all seasons. The La Niña 2007 and 2010 events have induced the narrowing potential fishing zone of skipjack tuna during the Northwest Monsoon, Transitional Monsoon I, and Transitional Monsoon II. However, the potential fishing zone of skipjack tuna during 2010 is narrower than 2007 because the low chlorophyll-a concentration < 0.15 mgm^{-3} dominates the Flores Sea throughout the year.

Keywords: skipjack tuna, El Niño, La Niña, Flores Sea, remote sensing