



## Dynamics of Indian Scad Fish (*Decapterus Spp*) Catching Linked with Temperature Variation Due to Enso Phenomenon (*El-Nino Southern Oscillation*) in Bali Strait

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**Abstract:**The variation in water temperature is influenced by several factors, one of which is the ENSO (El Nino Southern Oscillation). ENSO is a phenomenon of climate changing which has the impact on the irregularities / anomalies towards the sea surface temperature (SST) significantly (far from normal circumstances). Besides the impact on the SST variation, ENSO also affected the amount of fish catching. The materials of the research are obtained by using the catch per unit effort (CPUE) of Indian Scad Fish from Muncar Fishery Port in every month. The average data of sea surface temperature (SST) is derived from the level 3 Aqua-Modis satellite in order to get the trend and anomalies of monthly temperature. Also, the CPUE of Indian Scad Fish and SST anomaly index in SOI (Southern Oscillation Index) is collected in every month from NOAA Nino 3.4. All data of the research is the monthly average data of Bali Strait condition which is recorded from 2002 up to 2015. The results of the research showed that the temperature variation in Bali Strait had increased in 2005, 2009, 2010, 2013, and 2014, while in 2004, 2006, 2007, 2008, 2011, 2012 and 2015 the temperature tend to be decreased. When an El Niño occurred, the SST in Bali Strait has decreased by about  $25.11^{\circ}\text{C} - 25.55^{\circ}\text{C}$ . Meanwhile, when La-Nina occurred, the SST in Bali Strait has increased about  $20.51^{\circ}\text{C} - 31.70^{\circ}\text{C}$  based on the analysis of standardization. The comparison between surface temperatures with the fishing production of Indian Scad Fish (*Decapterus spp*) in Bali Strait showed a correlation such as the abundant resource of fish and a decent fish catching. However, it is not really suitable to catch the Indian Scad Fish between the period of January and June.

**Keywords:** Temperature, ENSO, Climate, Indian Scad Fish, Catches, Bali Strait.