MAPPING OF EL NINO/SOUTHERN OSCILLATION (ENSO) INDEX ESTIMATION BASED ON THE SATELLITE DERIVED DATA IN SULU SEA

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ABSTRACT : The El Nino Southern Oscillation (ENSO) is the most prominent phenomena that gives a huge effect on the world ocean, especially in Tropical Pacific Ocean. However, monitoring on the impact of ENSO to marine ecosystem are usually being study at the eastern Pacific ocean, while the impact of ENSO at western part of Pacific Ocean are less explored. In previous research, the ENSO indexes were determine by various parameters such as, sea surface temperature (SST), sea surface height (SSH), wind speed and many more. Unfortunately, those ENSO index were presented via time based data or time series. So, this may lead to less holistic of monitoring on the impact of ENSO to the ocean part. Moreover, Sulu Sea also categorized as one of the coral triangle region under the Coral Triangle Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF) which contain dense marine ecosystem. However, due to the political and security issues, it limits the in-situ acquisition for scientific study. This is not the issue for satellite remote sensing observation as this method allows exploration on this inaccessible region at promising accuracy in space and time. The aim for this study is to map (spatially) the ENSO distribution in Sulu Sea based on the ENSO Index estimates by the satellite derive data. Besides, this paper will focusing on SST, SSH, precipitation, wind speed, and chlorophyll-a data from various satellite as the parameters involved in determining the estimation of ENSO Index using multiple regression method.