



## Ecological Risk Assessment and Environmental Impact Analysis of Oil Spill in Asia Pacific Water

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### Abstract

This study coming from concerns about the deterioration of waters conditions in Asia Pacific due to contamination by oil spills which impact by the activity of the transportation and development industries that utilize water as a means of traffic and the world's shipping lanes in Asia Pacific. The objective of the study is to develop a model of oil particles movement in the Asia Pacific Ocean with a combination of Japan and Indonesia climate condition and by combining aspects of two different country cultures to obtain a prediction result that can be used together for the Asia Pacific region. By combining quantitative and qualitative analysis approaches to primary and secondary data collected through literature study, system development laboratory and risk simulation using NOAA USA satellite, and field study visits to several ecological systems in pacific Asia waters were produced. The information in the research is in the form of final prediction of moving oil particles in Asia Pacific waters by using Gnome Software supported by NOAA USA satellite data as its analytical framework. The research contributes to the accurate simulation of risk assessment model that can be applied in universities or industry and government especially related to the development of maritime conservation in Indonesia and the world.

Keywords: Risk Assessment, Oil Spill, Modeling on Ecology.

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### 1. Introduction

Asia Pacific Water (APW) is a water that has potential both economically and ecologically. These potentials are in line with the various investments in the area. The Asia

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