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PATROL SHIPS ASSIGNMENT MODEL IN EASTERN AREA OF INDONESIA WATER USING SET COVERING Bumimoro-Morokrembangan, Surabaya 60187, Indonesia ABSTRACT Maintaining stability of the National jurisdiction security, particularly in the Indonesian eastern waters is one of the roles of Indonesian Navy which is implemented in the Maritime Security Operation (MSO) by assigning Navy Patrol Ships (PC).

In terms of capabilities and the number of Indonesian PC compared to the extensive area of the MSO sector, it is still considered to be not optimal, so the Navy needs to think and perform right calculations in the assignment of PC and choose Navy Bases as the initial position of MSO by PC. This study aims to create a set covering model in calculating the assignment of patrol ships to create a set covering model to calculate the assignment of patrol ships optimally by minimizing assigned patrol ships number however can still cover all patrol sectors.

This model also used the Analytic Network Process (ANP) approach to select the Naval base as the initial base for patrol ships in implementing MSO. Optimization results were to assign 12 patrol ships which could cover 18 patrol ships and 3 Naval bases from 9 bases that can be used as an initial base for PC in the implementation MSO. Keywords: Naval Maritime Security Operations (MSO), Set Covering, Analytic Network Process (ANP)

## INTERNET SOURCES:

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1% - <https://www.iss.europa.eu/content/eu-maritime-security-provider>

2% - <http://www.science.gov/topicpages/s/safety+assessment+tasks.html>

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