ABSTRACT

As the economic backbone lines in Indonesia, pantura java is getting cargo increased from year to year. Export and import activities even utilize this lane approximately 38.5% of the total national export and import activities, the so dominant role of this lane results in the concentration of national logistic mobility in this lane. Another thing incurred due to this condition is road maintenance costs increase, pollution increase, a number of accidents, and the costs of subsidies for vehicle fuel. One alternative that can be done to reduce the impact is to execute of short sea shipping. The transfer of cargo from land route to the sea route is done in several scenarios, i.e: 40%, 50%, 60%, 70%. By using the method of Benefit-Cost Analysis, where the benefit is the difference of the total cost of the cargo explicit and implicit on land route at a condition before and after the execution of short sea shipping, and the cost is the total cost of explicitly on sea route. Thus obtained the number of vessels that changes every year is different for each condition. With the scenario the number of vessels remains the same, thus obtained modal Container ship with a size of 1000 TEU and the minimum number is 3 to achieve a decent BCR value which is 2.82. With the implementation of short sea shipping, it can reduce the number of accidents with average of 54% per year, a 3% decrease in the number of deaths, a 46% decrease in the amount of carbon emissions, reduction in road maintenance costs by 7% and the subsidy cost reduction of 31%.

Key words: Benefit-Cost Analysis, Short sea shipping, Container ships.