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Maritime Development Strategy And Policy Formulation Within The Framework Of Increasing National Investment

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Abstract – Efforts in maritime development cannot be separated from developments in the strategic environment which includes the supporting economic environment both at the regional, national, and even global levels. The focus of the current national government is to develop the maritime sector in dire need of adequate analysis of the dynamics of the strategic environment. The purpose of this research is to obtain a map of the opportunities and threats of the maritime sector in Indonesia and to obtain the formulation of maritime development strategies and policies within the framework of national investment development. The analytical method in this study uses SWOT analysis. This analysis is a method for describing conditions and evaluating a strategic problem based on internal and external factors, namely Strengths, Weaknesses, Opportunities, and Threats. Data collection techniques in this study were through desk studies and institutional surveys of several related agencies. In addition, interviews were conducted to deepen the substance and content. The results obtained by this study are the Formulation of a National Maritime Development Strategy and Policy which includes (1) Revitalization of the marine economic sector which has been running so far, (2) Development of a new marine economic sector, marine biotechnology, deep sea water industry, (3) Policy for the development of new economic growth clusters based on innovative and environmentally friendly industries, and (4) Strengthening and developing sea highways. This policy strategy is needed in efforts to strengthen and develop maritime connectivity including the development of a fleet of passenger and freight ships, ports, shipbuilding, and ship repair industries.

Keywords – Maritime Development Strategy, SWOT analysis, Investment and Improvement

I. INTRODUCTION

Efforts in maritime development cannot be separated from developments in the strategic environment which includes the supporting economic environment both at the regional, national, and even global levels. The focus of the current government which wants to develop the maritime sector requires an adequate analysis of the dynamics of the strategic environment. This is important because if maritime development is not properly mapped based on its position in the environment it faces, then the development will be false and misdirected. Therefore, it needs to be realized through maritime development based on increased investment (Ahmadi & Herdiawan, 2019).

Indonesia has great potential to become the world's maritime axis, but it seems that this potential has not yet been optimally developed. This is because maritime development has not been carried out in an integrated manner with its strategic environments. Therefore, integrated maritime development needs to be done to support sustainable economic growth and encourage an increase in existing maritime potential such as sea transportation, the shipbuilding industry, and its maintenance, construction, and operation of ports (Bandono et al, 2019).

Theoretically, the strategic environment is divided into several mutually integrated parts, namely national resilience which concerns vision, mission, main programs, and so on (Ahmadi et al, 2017). Aspects of the domestic or domestic environment, foreign environment, and national military or defense environment, if related to maritime development, currently the development of the maritime sector has become an agenda in the first part (National Resilience) but has not received

attention for other sections (Herdiawan & Ahmadis, 2019). As previously explained, maritime development needs to develop an integrated strategic environment between its parts. In addition, it is also necessary to pay attention to the dynamics that occur in domestic and foreign environments. Therefore, the urgency of maritime resilience is necessary to develop a maritime development policy strategy within the framework of increasing investment national.

Based on these problems, the objectives to be achieved from this research are:

(1) How to map the opportunities and threats of the maritime sector in Indonesia based on the dynamics of the domestic and global environment and

(2) How to formulate a maritime development policy strategy within the national investment development framework.

The purpose of this research is to obtain a map of the opportunities and threats of the maritime sector in Indonesia and to obtain the formulation of maritime development strategies and policies within the framework of national investment development. This is very necessary because strategic and global dynamics and developments in the domestic environment are very influential in national maritime conditions (Nugroho et al, 2019). The systematics of this study is Part 1 which discusses Background, Part 2 Materials, and Methods, Part 3 concerning Results and Discussion, and Part 4 Conclusions and Managerial Implications.

II. Materials And Methods

2.1. Data Types and Sources

The type of data used is secondary data. Sources of data are obtained from related agencies that have legitimacy. These agencies are the National Development Planning Agency/Ministry of National Development Planning, the Coordinating Ministry for the Economy, the Central Bureau of Statistics, the Coordinating Ministry for Maritime Affairs, Bank Indonesia, and other institutions that have legitimacy. The data needed are some literature on both sectoral and national and regional policies, the National Long-Term Development Plan (RPJPN), the National Medium-Term Development Plan (RPJMN), the latest National Spatial Planning (RTRWN), and literature other.

2.2. Data collection technique

Data collection techniques in this study were through *desk studies* and institutional surveys of several related agencies. In addition, interviews were conducted to deepen substance and content (Nugroho et al, 2020). This activity was carried out to obtain accurate and valid data obtained through discussions/surveys with several experts and practitioners in the maritime field to sharpen the analysis and deepen the study.

2.3. Data analysis method

The analytical method in this study uses SWOT analysis. This analysis is a method for describing conditions and evaluating a strategic problem based on internal (internal) and external (external) factors, namely *Strengths, Weaknesses, Opportunities,* and *Threats.* (Setiadji et al, 2019) . This method is the method most often used in business evaluation methods to find strategies to be implemented. SWOT analysis is a classic strategic planning instrument (Susilo et al, 2020). Using a framework of strengths and weaknesses and external opportunities and threats, this instrument provides a simple way to estimate the best way to implement something strategy (Suharjo et al, 2019).

2.4. Research Thought Flow

In the future, Indonesia's maritime affairs are expected to become the mainstream *of* national development by utilizing marine ecosystems and all the resources contained therein on *a sustainable basis* for the unity, progress, and prosperity of the nation (Suharyo et al, 2017). This desire is described in 5 (five) objectives that must be achieved, namely:

(1) Building a network of facilities and infrastructure,

(2) Improving and strengthening human resources in the marine sector,

(3) Determine the territory of the Unitary State of the Republic of Indonesia, assets, and related matters within the framework of national defense,

(4) Building an integrated marine economy, and

(5) Reducing the impact of coastal disasters and marine pollution.

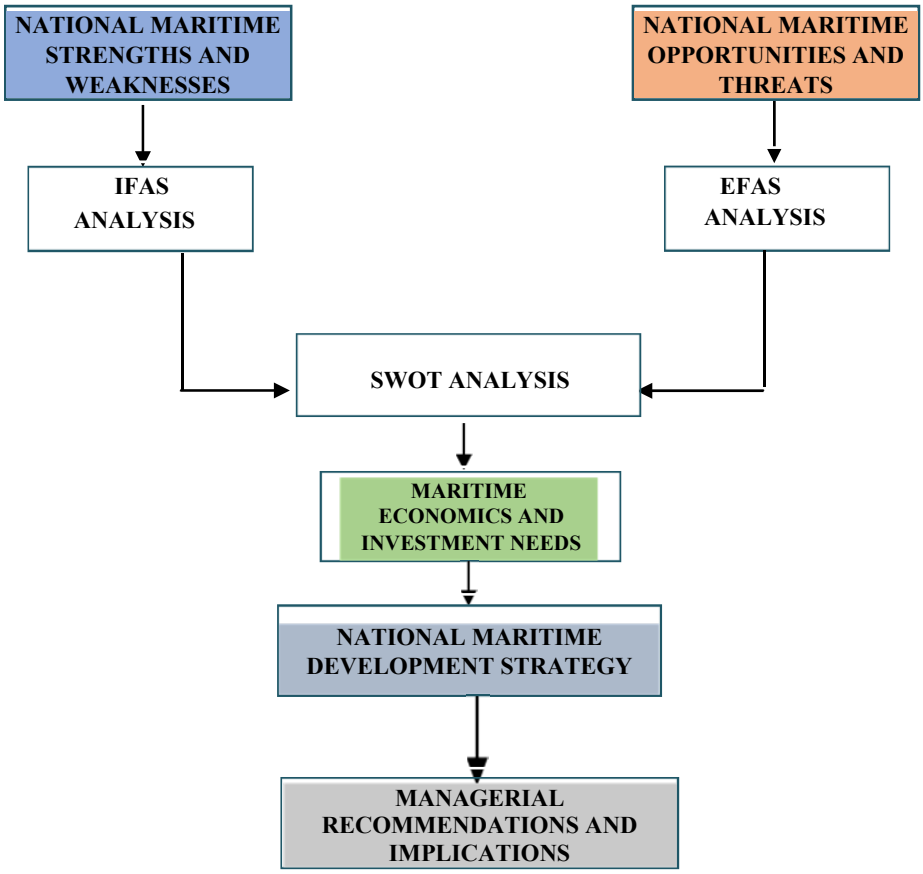

Figure 1. Thinking Framework

The framework of this study is presented in Figure 1. Based on Figure 1, the flow of thought in this study begins with analyzing internal and external conditions. The results of the internal analysis will produce *strengths and weaknesses* while the external analysis will produce *opportunities and threats.* Then, the results of the SWOT analysis will get an overview of the maritime development strategy.

III. Results And Discussion

3.1. Existing Conditions of the Marine Economy

As the largest maritime and archipelagic country in the world whose sea area includes ZEEI (5.8 million km2) covering 75 percent of its total area, consisting of 17,504 islands (only 13,466 have been named and registered with the United Nations), and is surrounded by 95,181 km of coastline (the second longest after Canada), the achievement of the results of the KP development is still far from the marine potential that Indonesia has, aka far from optimal. As is known, the sea area of the State of Indonesia which covers about 70% of the total area of Indonesia has not been utilized optimally. For example, (a) fishery potential has not been utilized optimally from the allowed catch of 7.94 million tons/year, and there are still foreign fishing vessels illegally *entering* Indonesian waters; (b) the potential for mining resources in the great seas but does not yet have the sufficient regulatory basis for their utilization, (c) the potential for *biodiversity* for the economic utilization *of bio prospects* and marine tourism) is not yet optimal, (d) the potential for the sea as a transportation medium has not been utilized optimally for connectivity, (e) the people of coastal areas and small islands are still poor and have not been touched much in basic services and basic needs as well as economic opportunities.

The contribution of the maritime-based economy to the national economy has grown but in a percentage below the

national economic growth which in the last decade has reached between 4.63%-6.49%. With a GDP that has reached more than IDR 8,241 trillion, Indonesia has an important role in the world economy, however, the role of the maritime-based economy only accounts for around 22.42%. The role of the maritime economy in the structure of the Indonesian economy is not well developed when compared to Indonesia's maritime potential as the largest archipelagic country in the world. These marine economic activities have not developed properly due to national policy factors that are not in favor of the development of the marine economic sector, causing Indonesia's economic structure to be biased towards land-based activities. Among the indicators showing underdeveloped marine economic activity include low investment which has an impact on slow maritime/marine-based economic growth. Contribution to the marine sector in the structure economy Indonesia is dominated by sector mining and energy 9.13%, the maritime industry 4.67%, fisheries 2.79%, marine tourism 1.52%, sea transportation 1.48%, marine services 1.32% and marine buildings 1.01% respectively.

3.2. Opportunities and Threats of the Maritime Sector in Indonesia

The mapping of opportunities and threats to the maritime sector in Indonesia consists of, that opportunities that can be exploited for the benefit of domestic development can be seen from the marine potential that exists in the territory of Indonesia. Indonesia's coastal and marine areas contain enormous and varied natural wealth, both in the form of renewable natural resources (such as fisheries, coral reefs, mangrove forests, seaweed, and biotechnology products); non-renewable natural resources (such as oil and gas, tin, iron ore, bauxite, and other minerals); marine energy (such as tides, waves, wind, and *Ocean Thermal Energy Conversion (OTEC)* as well as marine environmental services for marine tourism, sea transportation, and sources of biodiversity and plasma cum.

Likewise, related threats to the maritime sector originate from internal and external, where there is internal inequality, especially in eastern Indonesia which is experiencing very slow growth, hampered infrastructure development, portraits of poverty, and other problems. The threats come from external sources, including border disputes between Indonesia and Malaysia, between Indonesia and the Philippines, between Indonesia and Singapore, and between Indonesia and the People's Republic of China. In addition, there is a lack of law enforcement and oversight of defense and security in border areas.

3.3. Maritime Economics and Investment Needs

The Indonesian state, which consists of 70% of its territory, is the sea. However, the current economic structure does not yet describe the potential and strength of maritime potential as a natural resource. In addition, the Indonesian government has so far failed to pay attention to and take sides with the maritime sector as a national identity. For centuries, it has had a cultural and historical role that has shaped Indonesia as an archipelago. The sea has been proven to be an integral part of the life of the Indonesian people but has not been given the role it should play. Thus the vision that Indonesia is a maritime country has not been achieved because Indonesia has not been able to control, manage and obtain its welfare from marine resources and sea functions. This situation can be seen from the value of the *Incremental Capital Output Ratio (ICOR)* as presented in Table 1.

Table 1. ICOR Coefficient Values in the Maritime Sector

No.	Marine Field	ICOR Index Value
1.	Fishery	4.41
2.	Mining	4.81
3.	Maritime Industry (petroleum refining, LNG and other maritime industries)	4.49
4.	Sea Freight	4.77
5.	Marine Tourism	4.12
6.	Marine Building	5.12
7.	Other Marine Services.	4.44

According to Reza (20 20) explains when compared with the calculations table Input-Output 2005 so for the category 172 sector so the value of the ICOR coefficient of marine and maritime-based economic activities is relatively less efficient so needs a developed policy economy side on the maritime sector. From Table 1 one could see that score of ICOR

Lowest occur on field tourist nautical with a score index ICOR big 3.02. It means Maritime tourism is the most efficient and has the most risk and the smallest investment when compared to fields other. If seen from the contribution to the national GDP, the tourism sector nautical contributed a significant increase. When viewed from the value ICOR which is big 3.02 so field this very possible for developed more carry-on due to the growth of this field of approx 15% so needs a level of investigation which needed around 5% of GDP. As for the oil, gas, and mineral sector, it has a higher ICOR Index value big 3.7, which means having a greater level of risk in terms of planting investigation.

Furthermore, Nugroho et al (2020) explained that the field building Maritime Affairs has the largest ICOR index value when compared with the field the other is 4.02. In line with the World Bank (2014) the value average ICOR Indonesia as big 3.6 so the number obtained from field building marine which much bigger. This means that prioritizing investment policy in the field of marine buildings including ports still less efficient. Nevertheless, the characteristics of an archipelagic state should be permanent and provide support given the huge impact on the economy, especially for the society which is in islands isolated and later will drive growth economy based maritime. The temporary sector fishery sea and brackish ones have a score index ICOR 3.31 which means have efficiency which pretty good so that opportunity gets priority for development to remember the fisheries sector is very important in generating community economic activity coast and lower middle income.

3.4. Marine Economic Growth Performance

Macroeconomic performance based on Gross Domestic Product data at constant 2000 prices shows that in the 2005-2013 period the business fields in the marine sector had high economic growth (1) fisheries (2) sea transportation (3) river and lake transportation and crossings, and (4) refining oil earth. Temporarily for field efforts mining oil and natural gas and liquefied natural gas (LNG) processing experienced negative growth.

These conditions indicate that the economic growth of fisheries in the period 20 16 -20 20 ranged from 5.07% -6.96%. Sea transport economic growth ranged from 5.05% to 8.75% and river, lake, and ferry transportation economic growth in the same period ranged from 3.94% -6.97%. Meanwhile, based on data from the Financial Notes and the 20 21 State Budget, it can be seen that national economic growth in the 20 17 -20 21 periods grew by an average of 5.9 percent per year. Thus, it can be seen that the fisheries and ferry transport sectors have grown above economic growth nationally.

Table 2. Gross Maritime Domestic Product at Current Prices by Business Sector Included in the Maritime Sector in 2019 - 2022 (Rp billion)

Business field	2019	2020	2021	20 22 *)
Fishery	245,488	288,917	317,092	259,489
Oil Mining and Natural gas	509,783	384,516	369,354	288,366
Petroleum Refining	176,258	192,940	219,595	163,262
Liquefied Natural Gas (LNG)	114,905	131,250	142,772	120,332
Sea Freight	36,075	39,307	39,907	30,799
River, Lake, and Transportation Crossing	13.137	14,267	14.185	11.171
National GDP	**1,095,646**	**1,051,197**	**1,102,905**	**873,419**

*) 3rd quarter, 20 22

When viewed based on GDP based on current prices, it can be seen that in the 2014-2017 period the average fisheries GDP reached Rp. 277.747 billion per year. Next, the GDP for oil and gas mining averages Rp. 388.005 billion per year. The GDP of oil refineries averages Rp. 188.014 billion per year. Liquefied Natural Gas (LNG) GDP averages Rp. 127.315 billion per year. The average GDP of sea transport reaches Rp. 36.522 billion per year and the average GDP of river, lake, and crossing transportation reaches Rp. 13.190 billion per year. The complete development of marine GDP by the business sector can be seen in Table 2.

Based on Table 2 it can also be seen that the average contribution of fisheries to the total national GDP has only reached 2.35%. The amount of this value comes from the contribution of the fisheries sector itself which reaches 0.63%, the oil and gas mining sector reaches 0.87%, the petroleum refining sector reaches 0.42%, the Liquefied Natural Gas (LNG) sector reaches 0.29%, the sea transportation sector reaches 0.09% and river, lake and crossing transportation reached 0.03%. Analysis of economic growth from GDP in the fisheries and marine sector shows that sectors in the maritime sector are not able to grow optimally because their utilization is still not as expected, where only the fisheries and sea transportation grew relatively high, exceeding the average value, while other sectors grew less. This shows that the state's commitment to the field of maritime affairs and fisheries has not been carried out either economically or in resource development man.

Based on the above data, related to GDP growth in the marine sector requires investment and policy support through regulations that encourage business actors to be interested in investing in the maritime-based economy. The development perspective must be changed by integrating sea and land-based economic activities into an archipelago economic unit. These policies must be followed by concrete steps to improve the legal aspects through the improvement of laws and regulations in the maritime sector. The existence of alignments with the maritime economy based on the people's economy is urgent in developing the economy. The development of Indonesia's economic structure is always encouraged to provide support for the development of maritime potential which is relatively lagging, it is also directed at providing capabilities to state institutions through clean and authoritative *ocean governance* as well as integration with the private sector which can encourage a conducive business climate for overall economic growth sustainable.

3.5. Maritime Development Strategy and Policy Formulation within the Framework of Increasing National Investment

The results of the SWOT analysis show that related to opportunities and threats where the strategic dynamics of maritime policy are based on the construction and realization of Indonesia's maritime state not only covering the economic dimension but also in the fields of defense and security, environment, science and knowledge, innovation and technology, as well as socio-culture and institutional. In essence, the economic dimension includes four groups of development policies and programs. The maritime development policy strategy is:

(1) Revitalization of existing marine economic *sectors*. The need to strengthen these policies is carried out such as capture fisheries, aquaculture, mining and energy (ESDM), marine tourism, sea transportation, and maritime industry and services. Revitalization in question is an effort to increase the productivity, efficiency, competitiveness, equity (*inclusiveness*), and sustainability of the marine economic sectors.

(2) Development of new marine economic sectors. The need for strategic policies such as the marine biotechnology industry, the *deep sea water industry*, and aquaculture in deep sea or offshore *aquaculture* as practiced in Japan, Norway, and the United States. Furthermore, there is the production of renewable energy from the sea (tidal, waves, *biofuel* from sea algae, and *OTEC* / *Ocean Thermal Energy Conversion*) and other non-conventional marine resources. Development of new centers of economic growth based on innovation and a friendly environment.

(3) The need for policies to develop new centers (*clusters*) of innovative and environmentally friendly industrial-based economic growth in coastal areas along ALKI (Indonesian Archipelagic Sea Channels), small islands, and border areas to enhance Indonesia's role as nation manufacturers and suppliers of goods and products in the global supply chain system (*the Global Supply Chain).*

(4) Strengthening and developing sea highways. This policy strategy is needed in efforts to strengthen and develop maritime connectivity, commonly called the sea highway, which includes the development of a fleet of passenger and freight ships, ports, shipbuilding, and repair industry boats.

IV. CONCLUSION

Based on the results and discussion above, the conclusions that can be drawn from the results of this study are:

(1) The potential of Indonesia's maritime sector is very large but still cannot be utilized optimally,

(2) The government has established various policies for the development and development of the maritime sector and is

still weak in the consistency and priority of the implementation of these programs,

(3) As a country with growing economic power, the sustainability of Indonesia's progress will increasingly depend on trade and sea transportation and the availability of energy,

(4) When the exploitation of marine and underwater resources and building a strong maritime industry is a priority in regional investment development,

(5) Maritime development by prioritizing strategic issues or strategic environmental dynamics is necessary so that the concept of Indonesian maritime development will be beneficial both for the national (national interest), regional and even international scope, and

(6) Maritime development is indeed quite broad because it consists of various sectors ranging from marine resources, and security, to tourism. For this reason, the development of the marine economy in this coastal village must be carried out by all parties.

V. MANAGERIAL IMPLICATIONS

Based on the conclusions obtained, policy recommendations can be suggested as managerial implications of this research, namely that in developing maritime Indonesia within the framework of increasing national investment, the government needs to carry out;

(1) Maritime-oriented development,

(2) Developing connectivity through strengthening maritime logistics and economy,

(3) Economic Development (*prosperity approach/belt*) and maritime defense (*security approach/belt*),

(4) Mastery related to national and maritime authority,

(5) Implementation of various policy strategies in stages and consistently,

(6) Develop a maritime roadmap to facilitate monitoring and evaluation, and

(7) Development reorientation towards maritime development by achieving more progressive investment.

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VI. DISCLOSURE OF CONFLICT OF INTEREST

The authors declared no potential conflicts of interest concerning the research, authorship, and/or publication of this article.

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