

## Marine Object Protection toward the Development and Management of Zoning Coastal Areas: A Case Study in Balikpapan as the Candidate of New Capital City

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### Abstract

The maritime security term covers issues related to national security, economic development, human security, and marine environment. Areas that are monitored and protected include oceans and territorial waters, regional seas, rivers and ports. Maritime security strategies aim to track down and respond to all crimes to happen at sea. Marine national vital objects have a very strategic role in national development. It can help to improve resilience and the capacity of stakeholders in their areas to cope with surprises. This may be accomplished by being proactive in the development of prevention, preparedness, response and recovery strategies to deal with known, uncertain and unknown hazards.

The security of vital national objects is a priority to anticipate potential threats, especially in Balikpapan, East Borneo areas. The research method used was descriptive qualitative with a phenomenological approach and SWOT analysis. The results show that the variables found inhibiting factors related to the human resources and facilities. As a theoretical criticism in this study, the existence of policy in determining infrastructure vital object which became the operational basis for securing vital objects, especially in the new capital city. It is due to the strong interests of stakeholders related to defense, economics, and environment. So, in conclusion this study promotes the implementation of policy in securing vital objects in order to move the capital to the East Borneo area.

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### Introduction

Indonesia is the largest archipelago in the world, located in a strategic position at the crossroads of the Indian and Pacific oceans. This location both imposes an obligation to protect vital sea lines of communication (SLOC) and presents an opportunity to utilize the abundant marine resources at Indonesia's disposal. In recent years, Indonesia has re-conceptualized its identity as a maritime nation whose livelihood both derives from and depends upon the sea, evidenced by President Jokowi's global maritime fulcrum and sea policy proposals.

Security and order issues are increasingly becoming a strategic step for both personal interests, groups, private government, this is evident from the dimensions of threats and disruption to security and order over time progressively evolving with varying risks and impacts. Maritime should be viewed as an object that contains covers many areas of life in which between one and interrelated with other fields. In the "maritime" there are many areas that can be developed such as the legal, cultural, social, engineering and marine fisheries and of course itself.

The maritime security term covers issues related to national security, economic development, human security, and marine environment concerns. Areas that are monitored and protected include oceans and territorial waters, regional seas, rivers and ports (Buerger 2015). Maritime security strategies aim to track down and respond to all crimes to happen at sea. Some of the interest that are

protected through the maritime security strategy include; overall security and peace, rule of law, external border control, maritime infrastructure (ports and harbors, coastal protection, underwater pipes and cables, offshore platforms and scientific equipment), common natural resources and environmental health (Zandee 2016).

In other hand, responsible risk governance of maritime global critical infrastructure requires a broadened perspective to creatively manage risks in increasingly complex, stresses systems such as national vital objects there are Government Institution, State Private Enterprise and Public Sector have a very strategic role in national development. The existence of the national vital objects security is necessary to prevent before the occurrence of Illegal actions that can cause harm to the State or other public facilities that could have an impact on the human and the surrounding environment.

An increasing variety of problems in maritime areas create significant governance challenges for policy makers in Indonesia (Rochwulaningsih et al 2019), especially the issue of moving the new capital city from Jakarta to East Borneo. However, due to geographical constraints of the proximity to critical hinterland infrastructure, the high concentration of economic activities and the ecological importance should be considered. The new capital city are vulnerable to natural, technological, and human hazards .

The new capital city can be analysed as a system involving natural, infrastructure, transportation, management, and institutional systems with multiple and overlapping circles of stakeholders from local, regional, and global scale. It includes private and non governmental organisations as well as civil society. For example, an explosion in an industrial area refineries and petrochemical-pertagas facilities, a cyber attack on marine electronic systems, and illegal fishing. It reveals potential risk governance deficits, including of insufficient awareness to new threats, inadequacy of early warning systems, and the difficulty of dealing with dispersed responsibilities among stakeholders with diverging interests. Some of these deficits have already been addressed by the landmark effort known as the Cooperative Mechanism (DRPI 2011). The national vital object has an important role the life of the nation and the country is well reviewed from aspects of the economy, politics, social, culture defense and security.

As a maritime state, Indonesia should pay attention to defense sector as the front line in maintaining state sovereignty and national security. Like this confirmed by Salim who stated “ Geography is the bone of Strategy “ (Salim 2014, 6). The statement is in accordance with Indonesia’s strategic geographical conditions, which is located between two continents and two oceans, and more than 70% of Indonesian territory dominantly by waters.

Presidential Decree number 63 the year 2004 is a policy of securing national vital object that applies to all national vital objects in Indonesia, including marine vital objects in Balikpapan, East PT Pertamina (Persero) Among them are PT Pertamina Refinery Unit V, PT Pertagas Niaga, PT Pertamina Transcontinental and relevant agencies related to the security process that is Port Authority of Balikpapan City, East Borneo. Securing the national vital object in the city of Balikpapan is urgent because in there are often conflicts that are usually triggered by environmental pollution, such as pipe leaks and oil spill (happened in 2018).

The national vital objects safeguards need to be developed with a coordination system that includes the roles and duties of each of the stakeholders. The system is very necessary for the prevention of security disorders the national vital objects can be carried out quickly and effectively to reduce the impact caused by eliminating threats and terror to the presence and activity of the national vital objects that can affect the human and the surrounding environment.

One of the components in building and upholding maritime sovereignty is maritime security. As Budiman (2016) states that the most important principle in terms of maritime security, namely the conditions maritime defense and security. Using a blueprint policy of maritime security then the potential resources can be used to develop the new capital city of Balikpapan. One of the biggest reasons the new capital transferred to East Borneo is the lack of natural disasters in the new capital areas. However, it should be understood that the sea is a difficult area to control, and the threat will always be there if not handled and prevention. The new capital area was passed by ALKI II and become vulnerable area with increased potential maritime security threats. However, Mujiono and

Sagena (2020) shows that there are some opportunities for international cooperation if the project of the new capital city is implemented. It definitely generates enormous investment and includes money, technology, internet, and workforces.

This study discusses securing or protecting the survival of critical infrastructure and mineral resources. Concerning its implementation, there must be a clear relationship between the national protection design versus the critical regional infrastructure protection design and the mineral resource protection plan. It identifies the threats and priority areas for Indonesia in the maritime security domain as a first step in an overall assessment of capability requirements and gaps. As a result, the government of Indonesia has put into place regulatory, administrative, legal and material changes that will put the country on a path to better managing and governing its vast maritime spaces. However, matching such changes with long-term, sustained action, resources, and metrics for progress remains a key challenge for Indonesia policymakers.

## **Method**

The method used in this study is descriptive qualitative, phenomenology and SWOT analysis. SWOT analysis is an analysis method used to evaluate the “strengths”, “weaknesses”, “opportunities”, and “threats” involved in an organization, a plan, a project, a person or a business activity. In this qualitative and descriptive study, firstly the position of SWOT analysis in the strategic management process is explained, secondly the components of SWOT analysis is examined. Data collection is obtained from observations, documentation, interview and joint /triangulation (Sugiyono 2007). This study uses primary sources in the form of interviewees which have involved relevant informants, including Head of Balikpapan Port Authority as a competent subject in the field port security. Pertamina and Pertamina as an object in the field of infrastructure protection and mineral resources protection plan.

## **Managing Coastal Zoning in the New Capital City**

Based on Article 5 of Presidential Decree No. 63 of 2004 explaining the characteristics of national vital objects as follows: a. Threats and disturbance to them Threats and disturbances to them c. Threats and transitions to it disrupt the administration of state government. Presidential Decree No. 63/2004 explains how to regulate security standards for each national important object must meet the quality or capability standards determined by the State Apparatus of the Republic of Indonesia and regulate the security audit system periodically.

National vital object security explains that vital objects are areas, locations, buildings, installations, and businesses that are strategic because of the disruption of the national vital objects is very influential in the people's interest and national interests. The arrangement on securing the national vital object is aimed at minimizing and even preventing the impact of interference and threats to national vital objects that can lead to humanitarian disasters, disruption of government, security, and defense of the country and the most avoided is the destruction of national development results.

A national vital object is strategic as referred must meet the features as follows; (1) resulting in a daily staple need; (2) threat and disruption in a disaster against humanity and development; (3) threat and disruption in the national transportation and communications chaos; (4) threat and disruption resulted in the disruption of hosting the state government. As the government center, the capital city can be interpreted as the center of state power because the policy and instruction control maritime center. It is a big concern to find out how to improve potential maritime security threats in this new nation's capital area, remembering that the government needs to provide more attention to policy formulation maritime security governance in the mother region this new state city.

Infrastructure resilience is the ability to reduce the magnitude and or duration of disruptive events (Buerger 2015). The effectiveness of a resilient infrastructure or enterprise depends upon its ability to anticipate, absorb, adapt to, and/or rapidly recover from a potentially disruptive event. To address similar questions and challenges in critical infrastructures, the risk-based framework has been

the tool of choice for engineers and organizations to study threat-impact relationships. The potential for an unwanted outcome resulting from an incident, event, or occurrence, as determined by its likelihood and the associated consequences. Risk is influenced by the nature and magnitude of threat or hazard, the vulnerabilities from the threat and hazard, and the consequences that could result.

The risk from an extreme event results from the interaction of hazards (which includes hazardous and/or extreme events) with the vulnerability and exposure of human and natural systems. Changes in both the nature and magnitude of hazards and socioeconomic processes are drivers of hazards, exposure, vulnerability, and hence risk. Quantitative estimates of risk assessments are obtained using the Probabilistic Risk Assessment (PRA) Framework to estimate the risk by computing real numbers to determine what is the likelihood of occurrence of hazard and the magnitude of the possible adverse consequences. Consequences are expressed numerically and their likelihoods are expressed as probabilities or frequencies.

Risk management strategies used in the context of these conventional approaches have also inherited their bottom-up strategies. Thus, individual components such as structural elements within infrastructure systems have been designed to withstand known threats up to acceptable thresholds with the desire to prevent system failure. However, with increasing complexity and interdependency within and across infrastructure systems, bottom-up approaches may become non-optimal in terms of maintaining overall system functionality, and hence cost- and time-prohibitive exercises at best, or impractical and infeasible at worst.

The resilience paradigm, first and foremost, attempts to preserve essential functionality and services at the system level. Thus, almost by definition, resilience approaches tend to be top-down. Engineering design, operations, and maintenance may aspire to make a building or a bridge resilient, while urban planners and city governments may want to make an entire city resilient. Thus, the definition of a system can vary in terms of scale and complexity, but resilience is still attempted at system levels. In supporting the capital of the country naturally, there are strategies in order to manage coastal zoning in the candidate of the new capital.

### ***Intelligence Strategy***

Strategic intelligence is the knowledge that encompasses the ability, weakness, or insecurity, and possible way of acting a country or nation (Platt 1957). Furthermore, the main form of strategies intelligence can be distinguished into basic description form and Fundamental Research (Advanced research). Current Report Form or report form on developments that are happening (actual) (Kent 2015). Meanwhile, there are three strategies for investigation, security, and fundraising. (a) Maritime investigation strategies, including Marine security activities, target detection, and identification, can forward reports quickly; (b) Security strategies, including preventing and tackling strategies of any insecurity, the strategy prevents any business that can harm personnel, materials, documents, and marine activities/operations; (c) The raising strategy, including strategy, affects the attitudes and behaviors of certain parties to create a favorable climate for the interests of state defense in the ocean, strategies nurturing and enhancing the national potential to realize the power of the territorial land. The expected strategy condition is professional personnel, supported by human resources who are capable of their duties and responsibilities and equipped with good working support equipment, to overcome all constraints. If the hopes of securing the national vital objects can be achieved, thus will contribute significantly to the strategy in implementing the national vital objects security. Especially those in the area of the workplace such as in the city of Balikpapan.

### ***Defence Strategy***

In terms of securing the national vital objects area around the city of Balikpapan and surrounding waterways based on the existing condition. In general, the combination of professional personnel and the readiness of the work/handling equipment to carry out the patrol activities are considered quite optimal. It is hoped that the national vital objects security is taken over by outside parties and other private safeguards, as it relates to national Vital objects. As a result, strategies are expected to be

implemented using the K3I Strategy (command, control, communication, and information) and the underwater sabotage strategy. Connection in carrying out the national vital objects security activities in the area around the waters of Balikpapan. This strategy can reduce or minimize actions or activities that could be threats, disruptions, barriers, and challenges to the national interest in the money by the sea that impacts the impact of the coastal zoning region (Miller & Auyong 1991).

### ***Security Strategy***

In general, the security strategy that has been carried out by safeguards made by security personnel needs to be re-upgraded in the form of the sea safety patrol. Given the condition that occurs due to the presence of spills and leaks of pipes or oil refineries for some occasions. By observing the physical condition of the patrol facility by considering the natural aspect of the wave condition and current in case of emergency.

Related to the security of the national vital objects under Act No. 34 year 2004 Article 7 paragraph 2 B number 5 that Indonesian Navy has to secure the strategic the national vital objects. Under Presidential decree No. 63 the year 2004, it can be said that there is a cooperation between Indonesian Navy and Indonesian National Police and agencies related to the security of the national vital objects. The security of the national vital objects conducted by the Indonesian Navy and Indonesian National Police is included in the category of special Non-permanent security operations. The national vital objects managed by PT Pertamina still has an act of theft, although the number is structurally structural. The act of theft is done by irresponsible people.

### ***Aspects of a Support Strategy***

To support unit operations in implementing security duty of national vital object around the water areas conducted in Pertamina surroundings carried out the development and management of coastal zoning areas which in the form of a grand design and strategy in the form of system development, logistics, command, government control, communication, ship, tool field handling and technological aspects. Such conditions must be improved continuously so that it can be realized adequate support strategy in carrying out security duty of National Vital Object managed by PT Pertamina and the surrounding area in Balikpapan waters. Regarding longevity and the continuation of a security operation which support strategy is improved must be able to support implementation needs operational activities carried out by National Vital Object security personnel managed by PT Pertamina.

Since Pertamina Balikpapan's location is very near to the public road, such access can be easily accessed reach out by intruders to sabotage. So Pertamina must be supervised deeply, identify by patrolling as well as with CCTV or other assistive devices or technology that can support to protect securing needs of National Vital Object (Pertamina). The location of Refinery V is stretched along Pertamina dock so it needs to be protected by carrying out security and patrol ships routinely planned with pay attention to the area considered critical/susceptible, both with the Navy, Polair, and KPLP. So, whatever form of threats can be detected as soon as possible and the effects can be minimized if something happened. Pertamina can immediately report the incident to related parties to take action and localize the area and its impact. In connection with the Port Authority of Balikpapan suggest to create inbound path from Balikpapan port to the Capital City to support the new capital city as the means for logistic debarkation and embarkation including infrastructure materials for new capital city's development, therefore determination of sea tolls is also needed as entry access the area with a range of 7,27 miles.

### **SWOT Analysis**

Based on the SWOT theory, it explains that the strength aspect consists of: (a) support and coordination with internal security management; (b) coordination with instances related and other stakeholders. Meanwhile, for weakness consists of (a) the results of the research on the area access security system have not been supported by the air patrol, then drones are needed as a form of

patrolling the air lane as an area security access. Due to patrol is conducted by drones, mobility control will be more effective, easily monitored and distance surveillance is also broader; (b) Based on the results of research that guard posts in the area of PT. Pertamina (Persero) in the Unit V Refinery Area, especially the Refined Fuel Oil (BBM) Terminal and the Entry Access Area, which is equipped with CCTV camera facilities. Their placements are according to in-and-out distribution activities of the Refined Fuel Oil. However, on the corner of Dock III, there is still a lack of CCTV placements in monitoring the arrival of tankers from the Balikpapan bay; (c) Protection tools. Protection tools which are finger point installation referred to oncoming vehicles can be detected safely and recorded; (d) Communication equipment (HT/ Telephone) to control and convey a message/information quickly to the leader. Communication tools used include HT and telephone. Bearing in mind not all security members have or use the tool; (d) Detection tools (metal detector, search mirror / manual detection tool). The search mirror detection tool works as a manual detection tool and sensing danger/threat (such as a bomb). Metal detector functions as a tool metal detection (sharp weapons/fire arms) which is indicated by someone and enters the area.

The third component is opportunities which consist of (a) the increased awareness of employees in national vital object areas in Balikpapan about the importance of security and storage area order and oil, gas, and refined fuel oil distribution; (b) Policy leader (service manager security) in building security facilities, guard schedule arrangements and choose the squad commander. The last component is threats. People who live around the area in general already get used to the area. The condition is feared to exist people who make use of or exploited by someone who knows the opportunity to intrude on behalf of the local society.

### **Zoning Management of Coastal Areas**

National Strategic Area is an area which spatial planning is prioritized because its influence is very important on a national level, in terms of sovereignty state, national defense and security, economic, social, cultural, and/or the environment, as well as including areas that have been designated as world heritages and utilization of natural resources and/or advanced technology. Directions for the use of territorial waters of the National Strategic Area is arranged on National Strategic Area Zoning Plan (RZ KSN), which is a mandate of Law No. 32 of 2014 about marine as described in Article 44-45 and attachment X PP No. 32 2019 concerning Sea Spatial Planning (RTRL) (Law Number 32 2014 about Marine).

Under the results of the analysis of data/information sourced from various development policy in the marine field, the results have been obtained, that at Sasamba currently has potentials, plans and existing activities included in essential impact and national scale category, which are: Balikpapan Port Area, TNI base and development plan and its activities, Kariangau Industrial Estates, shipping lines, gas pipelines and undersea cables for the benefit of mining and energy development, the existence of endemic biota (dugongs and dolphins), protected marine biota habitat location and the issue of moving National Capital Indonesia to East Borneo.

The existence of various activities that currently exist as well as various activities that will be carried out for the next 20 years, if not harmonized and synchronized, will be able to trigger the emersion of complex and dynamic sea space utilization issues. As a result, i.e. increased damage to the ecosystem and the marine environment, disturbed seafaring and port activities, marine space for the sustainability of fishing grounds and the purposes of national vital objects, and so on. To reduce and break down to that matters, presenting the government as a regulator is obliged according to Law No. 32 of 2014 about Marine to do marine space management planning, in the form of RZ KSN.

### **Conclusions**

Policy recommendations are the next step that should be done in the policy analysis process, after knowing how the problem happened, do a calculation for the future, and then give a recommendation policy towards what becomes a problem in the case, so Policy recommendations aim to answer and

resolve problems exists. Related to technical security regulations of vital objects, settings and regulations related to internal security by the company, security planning, standards and security procedures, security personnel qualifications, security technology, a system of association and coordination with instances, self-supported security cooperation with the community and stakeholders, supervision and control, periodical evaluations, as well as security system improvements. In conjunction with security personnel's increased ability, it is necessary for Police to gradually improve the number of personnel to be assigned to support the security system of National Vital Objects on PT Pertamina (Persero). The involvement of the Indonesian Police, TNI, and Port Authority must be synchronized with their duties and authorities. Whereas to improve the ability of security personnel of National Vital Objects, special education and training can be organized for security system needs of National Vital Objects and preventative occurrence to the incidence of oil spills that can become pollutants for the coastal region if at any time happens.

Security system policy of national vital object in Balikpapan needs to be re-optimized concerning the associated relocation of the new capital city with development and infrastructure management following established standards, as well as probing from aspects prone to the threat of disruption that can have an impact with national security. In correlation to the coastal zones, utilization of the National Strategy Area water space should also pay attention to conservational factors such as environmental supportability and coastal areas susceptibility that could become potential burdens there. Besides that, in principle, the unity of the ecosystem, Besides, Balikpapan Bay is a single entity ecosystem, it is inseparable in administrative areas of the national strategy area so that unified planning is needed. Utilization of water space should be paid attention to environmental supportability and coastal areas susceptibility that could become potential burdens in National Strategy Area.

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