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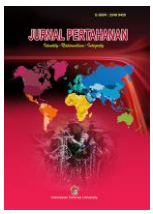

ESTABLISHMENT OF LOMBOK STRAIT TRAFFIC SEPARATION SCHEME AND ITS IMPACTS ON MARITIME SECURITY

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Abstract

The Lombok Strait, which is part of the Indonesian Archipelagic Sea Lane II, has been established as a Traffic Separation Scheme, based on several considerations such as safety of navigation and preservation of the natural environment. This study aimed to explore the process of establishing the Lombok Strait Traffic Separation Scheme and to analyze its impacts on Indonesia's maritime security in the area. It was a qualitative study, using a case study approach. The data obtained from the literature study came from several scientific articles and government documents, interviews with several informants, and direct observations of the object under study. This study found that there were direct impacts of the establishment on the government institutions related to the management and execution of the Traffic Separation Scheme, on the adequacy of infrastructure related to the supervision and control of the Traffic Separation Scheme, and in the long term, there will be various potential impacts in form of several threats to Indonesia's maritime security, such as piracy, armed robbery, sea accidents, smuggling, pollution, and terrorism.

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INTRODUCTION

Indonesia is the biggest archipelagic country in the world, that consists of 17,506 islands and an area of more than 7.7 million km^2, of which two-third is water area of more than 5.8 million km^2, with a coastline of more than 81,000 km long (Fadli, Ismah, & Munir, 2021). Indonesia is located between two continents, namely Asia and Australia, and also between two oceans, namely the Indian Ocean and the Pacific Ocean. With the strategic position, Indonesia's sea area is part of the world's sea transportation routes and is also a crossroads for ships from the west part of the world that want to go east and ships from the east part of the world that want to go west (Fadli et al., 2021). Indonesia has a very wide territorial sea area because it includes the inland sea area, which connects the very many islands.

With such a wide sea area, to regulate the passage of ships that want to pass the country, Indonesia has established the Indonesian Archipelagic Sea Lane (IASL), or in Indonesian is called *Alur Laut*

Kepulauan Indonesia (ALKI). There are three IASL, namely: IASL I, through the South China Sea, Karimata Strait, Sunda Strait to the Indian Ocean. IASL II, through the Celebes Sea, Makassar Strait, Lombok Strait to the Indian Ocean, and IASL III, through the Maluku Sea, the Seram Sea, which in the south has three branches to the Sawu Sea to the Indian Ocean, to the Arafura Sea to the Indian Ocean and east of Timor Island towards the Indian Ocean (Hidayat, Soemantri, & Poernomo, 2019). Thus, shipping lanes for foreign ships can pass through the Indonesian territorial waters without having to ask for permission from the Indonesian side, but they must remain sailing within the lanes.

However, within the scope of the lanes, there are relatively narrow straits, as in IASL II there is the Lombok Strait. With the increasing traffic density of larger and faster ships, it poses a real threat to navigational safety. To overcome the problem, then in that areas, a Traffic Separation Schemes (TSS) was established. TSS is designed to regulate traffic by separating traffic flows that are moving in opposite directions (Pietrzykowski & Magaj, 2016). Meanwhile, the definition of TSS in the Hydrographic Dictionary is the arrangement of shipping lanes aimed at separating opposing traffic flows in an appropriate manner and by establishing traffic lanes, which are used to manage traffic in busy areas, narrow shipping lanes, or around headlands (Desmonda & Idris, 2020). TSS can also be interpreted as a scheme for separating the shipping lanes of shipping vessels in opposite directions in busy and narrow shipping lanes (Mamahit, 2020). The application of TSS is intended to reduce the meeting of ships face to face due to overtaking, which separates opposing traffic flows into lanes with a dividing line/separation zone in the middle, which is usually 12 miles long, and 3 miles to 6 miles wide (Fadli et al., 2021). TSS is a traffic management route system in which the International Maritime Organization (IMO) regulations apply, which is a traffic lane indicating the general direction of traffic flow in the scheme (Pietrzykowski & Magaj, 2016).

The Lombok Strait, which is geographically located between the islands of Bali and Lombok (see Figure 1), is an important route because of its high use by shipping vessels, both from within Indonesia and from abroad. This strait is a waterway located in the southern part of Indonesia and is part of IASL II (Rustam, 2018). Due to various considerations, including the factor of shipping safety and the preservation of the natural environment, the Government of Indonesia (GOI) considers that a strategic step is required for the shipping lane that passes through this strait. One of the concrete steps taken by the GOI is to submit a proposal to determine TSS in the Lombok Strait to the IMO (Fadli et al., 2021). As the country that owns the area, according to the international regulations, Indonesia as an archipelagic country has the right to determine the TSS which is one part of the route steps to maintain the safety of ships sailing through narrow sea waters within IASL (Desmonda & Idris, 2020). Through a valid process, finally, the GOI has officially established the Lombok Strait TSS, and it is officially applied for all users of the lane since June 2020 (Mamahit, 2020).

Figure 1. Geographical position of the Lombok Strait
Source: Rustam, 2018

This study is about the establishment of the Lombok Strait as a TSS and its impacts on maritime security in Indonesia. The establishment of the Lombok Strait as a TSS will be investigated regarding the

condition of the Lombok Strait before its designation as a TSS, further on some considerations why it is necessary to determine it as a TSS, and finally on the process and its establishment as a TSS. By examining these various issues, it is hoped that we can understand why the GOI has established the Lombok Strait as a TSS. Furthermore, this study will investigate the impacts of the establishment of the Lombok Strait as a TSS on maritime security in Indonesia, especially in the surrounding areas. By reviewing this, it is hoped that we will be able to understand what the positive impacts of the establishment are so that we can take benefit of these advantages, and vice versa what are the negative impacts of the establishment, so that we can prepare anticipatory actions to reduce or eliminate the negative impacts. Thus, this study focuses on the determination of the Lombok Strait as a TSS, with the period from the start of the submission process as a TSS, namely 2017, until the enactment of the establishment, which is in 2020, that is the time when the Decree of the Minister of Transportation of the Republic of Indonesia Number KM 129 of 2020 concerning the Establishment of the Route System in the Lombok Strait was issued.

In this study, the main theory used to analyze the study object is the theory of maritime security. There are several definitions of maritime security, one of which is that maritime security means an effort made with the aim of (i) maintaining shipping at sea so that it is free from all threats and disturbances; (ii) supporting and properly maintaining trade routes by sea; and (iii) maintaining the best possible governance of shipping at sea (Feldt, Roell, & Thiele, 2013). Thus, it can be seen that maritime security covers a very broad field, and to execute the effort it involves various parties, both from domestic and from international. There are various views regarding the scope of maritime security, however, in general, many parties agree that the elements of maritime security are: (i) peace and security that relevant in the maritime field, both international and national; (ii) state sovereignty regarding state waters; (iii) territorial integrity of the state and independence in carrying out political endeavors; (iv) security of transportation routes by sea; (v) protection of maritime security from various forms and types of crimes at sea; (vi) security of natural resources at sea, access to resources at sea and the seabed; (vii) protection of the natural environment of maritime areas; and (viii) the safety of all actors working at sea including seafarers and fishermen (Feldt et al., 2013).

Studies on TSS have been carried out by various previous researchers, both from international and from within Indonesia. In the international context, there have been several studies, including studies on TSS in the Baltic (Rojek & Wawruch, 2007), TSS associated with the ship domain (Pietrzykowski & Magaj, 2016), and ship compliance in the TSS in the Gulf of Panama and its implications for whale life (Guzman, Hinojosa, & Kaiser, 2020). Various researchers from Indonesia have also conducted various studies, such as the study of TSS in the Bintuni Bay Water Area (Mulyadi, Nugroho, Sambodho, & Pratiwi, 2018), the TSS model in the Sunda Strait in realizing regional resilience (Sobaruddin, Armawi, & Martono, 2017), analysis of the Indonesian government's policy in submitting TSS in the Sunda Strait and Lombok Strait (Fadli et al., 2021), the effect of the presence of the Indonesian Navy patrol boats in the Lombok Strait (Ariwibowo, Ismurdianto, & Wibowo, 2019), and TSS in the Strait Lombok as an international policy (Mamahit, 2020).

From the above explanation, it can be concluded that this study has similarities with those studies because all of them analyze TSS. However, it can be seen that this study also has differences from those studies, because this study specifically analyzes the determination of the Lombok Strait TSS after it was implemented for the TSS users and its impacts on the maritime security in Indonesia.

METHODS

Research Design

This study is qualitative research, and according to Creswell (2009), qualitative research is an effort to seek and understand the meaning of certain individuals or groups on social or human issues, and the research process is carried out by asking certain information or procedures to the subjects or informants. This type of research was chosen because the Researcher wanted to see naturally what happened in the Lombok Strait as a TSS from the information gathered from the participants involved in the establishment process. To achieve this goal, this research used a case study approach, in which the Researcher examined carefully various programs, activities, processes, or one or more actors related to the object under study, while this case was studied by limiting both time and activities (Creswell, 2009). In this study, the Researcher explored in-depth the establishment process of the Lombok Strait as a TSS, in the time when the GOI submitted the TSS proposal to the IMO until the official decision of the TSS to be applied to the shipping lane's users.

This study utilized the method of content analysis in carrying out the analysis of the data obtained. As for what is meant by content analysis, according to Bartelson, is a technique to describe objectively, systematically, and quantitatively the manifestation of communication (Moleong, 2002).

Data Collection and Analysis

In this study, the data used was primary data obtained from interviews with several informants related to the object of this research, and field observations conducted on the users of the shipping lane, as well as the shipping lane and the area around the Lombok Strait. This study also utilized the secondary data obtained from the GOI institutional documents related to the object of this research as well as the data that had been collected by previous researchers. The data analysis used an inductive approach by building something from specific things to general themes, and then the Researcher interpreted the meaning of the data.

In conducting data analysis and analysis of the object of research, the Researcher carried out the following steps: (i) the data obtained were analyzed using content analysis; (ii) the results of the data analysis were presented based on their themes and categories; (iii) the results were then interpreted; (iv) further analysis of the object of research was carried out using maritime security theory and supported by the maritime security view that had been formulated in the Indonesian state defense strategy.

RESULTS AND DISCUSSION

Condition of the Lombok Strait

The Lombok Strait, which is located between the islands of Bali and Lombok, connects the Flores Sea in the north with the Indian Ocean in the south. Its geographical location is at coordinates 115° 37"-116° 02" East and 8° 20"- 8° 50" South (Desmonda & Idris, 2020). This strait is located at the southern end of IASL II and is the narrowest strait in the lane. The entrance from the north to the strait is through Gili Trawangan Island, Gili Meno Island, and Gili Ayer Island on the northwest coast of Lombok Island, while the south entrance to the strait is through Nusa Penida Island (Desmonda & Idris, 2020).

The Lombok Strait has relatively favorable hydrographic characteristics, which of course is a beneficial factor for users who pass through it. For large ships moving between the Australian continent and Southeast Asia or East Asia, this shipping lane is the best choice (Fadli et al., 2021). With a minimum lane width of 11.5 nautical miles from the Lombok Strait and a depth of more than 250 meters, this shipping lane is very safe for supertankers and large ships. Many large ships that have difficulties crossing the Malacca Strait, preferring to go through this shipping lane, so that every year, the total weight

supported by the Lombok Strait reaches 36 million metric tons (Fadli et al., 2021). Based on the field observations, it is found that the Lombok Strait is suitable for the route of small and large ships because the Lombok Strait connects the Indian Ocean and the South China Sea (Yanti, Aviolita, & Marsetio, 2020). Another advantage of the Lombok Strait when compared to other straits in Indonesia is that it has a wide lane and no island barriers, so many large ships prefer to pass through the Lombok Strait (Fadli et al., 2021).

The geographical conditions of the area around the Lombok Strait are also unique. The Lombok Strait is located within a coral triangle that is rich in marine biodiversity that must be protected because this area contains many well-known and rare marine species that are sensitive to the impacts of marine transportation activities (Yanti et al., 2020). This area is also included in the Coral Triangle Initiative on Coral Reefs, Fisheries, and Food Security (CTI-CFF) because it has the largest number of corals in the world. This area is also a habitat for rare and endangered marine species (Desmonda & Idris, 2020).

The hydrographic conditions of the Lombok Strait are that this strait has a width of about 30 km in the north and the center. In the southern part which is the exit to the Indian Ocean, the width of the strait narrows to about 18 kilometers due to the presence of Nusa Penida Island with the deepest part only about 250 meters (Purba & Utami, 2006). However, with this depth, it can be said that this strait is deeper than the Malacca Strait, which only has a depth of 200 meters, so the Lombok Strait is suitable for use by large ships to pass through (Desmonda & Idris, 2020).

With its hydrographic characteristics and the surrounding area which is a world-class tourist destination, it is not surprising that Lombok Strait is the water with the third-highest shipping traffic density in Indonesia, after the Straits of Malacca and Makassar. The average annual voyage in the strait amounts to 29,841 trips, which is about 82 ships per day. From the number, the percentages are 34.17 percent fast boats, 29.28 percent ferries, 10.31 percent merchant vessels, 9.81 percent fishing vessels, 5.4 percent passenger ships, while other types of vessels (i.e., tourist ships,

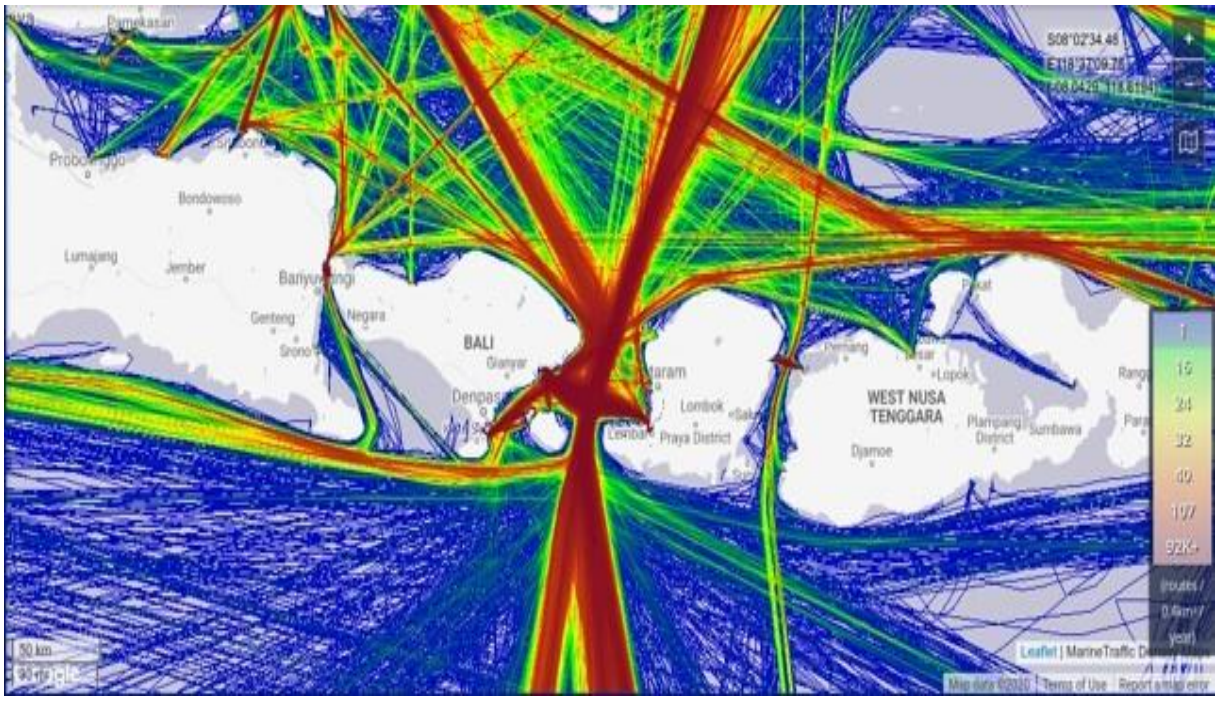

Figure 2. Ship traffic density in the Lombok Strait
Source: Octavian et al., 2020

Table 1. Incidents in the Lombok Strait period 2003-2017

Year	Types of ship	Types of incidents	Locations
2003	Ferry Ro-Ro KMP. Wimala Dharma	Sinking	Padangbai
2011	Ferry Ro-Ro KMP. Perdana Nusantara	Striking the wharf	Lembar
	Passenger ship KM. Sri Murah Rejeki	Sinking, 11 casualties	Nusa Penida, Bali
2012	Cargo ship KM. Lintas Timur	Fire	Anchorage area, Lembar Port
2013	Cargo ship MV. Agnes	Grounding	Lombok, Lembar
	Cargo ship KM. Ombak Biru	Drifting	North of Gili Trawangan
	Passenger ship KMP. Mulyadi	Grounding	Padangbai, Bali
	Passenger ship KMP. PBK Muryati	Grounding	Access channel of Padangbai Port
2014	Passenger ship KMP. Munawar	Sinking, 3 casualties	Lombok
	KM. Gelis Rauh	Fire	Nusa Penida
2015	Cargo ship KM. Wahana IV	Fire	10 nm from Senggigi Port
2016	Passenger ship KMP. Wihan Bahari	Grounding	Gili Nanggu Area, Lombok
2017	LPG Tanker KMP. Sita Giri Nusa	Grounding	Gili Layar, Sekotong, Lombok

Source: Desmonda & Idris, 2020

offshore support ships, and military ships) accounted for about 13.27 percent (Octavian, Trismadi, & Lestari, 2020). For foreign ships that pass through this strait, every day there are 52 ships so that in a month the average reaches around 1,400 ships (Fadli et al., 2021). Meanwhile, large ships crossing this strait can carry the cargo of up to 500,000 tons (Desmonda & Idris, 2020). The description of the density of shipping through this strait can be seen in Figure 2. With the density of shipping traffic, both domestic and international shipping, accidents at sea are also common. The data obtained on incidents from 2003 to 2017, there were 14 incidents in the Lombok Strait, the types of which were grounding, collision, sinking, and fire (see Table 1).

The Reasons for the Establishment of the Lombok Strait as a TSS

There are various underlying reasons why the Government of Indonesia considers it necessary to establish the Lombok Strait as a TSS. First is the consideration of shipping safety, both for foreign ships and domestic ships. The Lombok Strait is an international shipping lane that is included in IASL II and has heavy ship traffic density (Keputusan Menteri Perhubungan Republik Indonesia, 2020). The high shipping density is due to the presence of tourist areas in the vicinity. A total of 36,773 ships of various types and sizes pass through the Lombok Strait every year (Fadli et al., 2021). By establishing this strait as a TSS, it is hoped that the expectations of various parties will be realized, namely: (i)

significantly reduce the number of ships facing each other to improve navigational safety, by separating the traffic flows of opposing ships in the area; (ii) significantly reduce the risk of ship grounding, unintentionally when crossing the channel or by accident, by preventing ships from passing through the coral reef atoll areas; (iii) significantly reduce the risk of collisions between ships by establishing a precaution area; (iv) ensure on an ongoing basis that passing ships follow a route that is completely free from certain hydrographic hazards (Pushidrosal Indonesia, n.d.).

The second reason is to preserve the natural environment of the Lombok Strait and the surrounding areas. Around this strait, there is the Gili Matra Water Park and the Nusa Peninda Marine Resources Conservation Area (Keputusan Menteri Perhubungan Republik Indonesia, 2020). This strait area does require special protection because it has ecological, socio-economic potential, and is an area that is vulnerable to damage caused by maritime activities (Fadli et al., 2021). With the existence of this conservation area, the designated TSS will function as Associated Protective Measures (APMs) in the waters of the islands (Fadli et al., 2021). Great attention is also required to environmental pollution including accidental and intentional pollution (e. g. ship operational release) including physical damage to marine habitats or organisms (Desmonda & Idris, 2020).

The third reason is to improve Indonesia's reputation in the eyes of the international community. By establishing the Lombok Strait as a TSS, it is hoped that it will increase Indonesia's credibility as a maritime country, especially since Indonesia has declared its intention to become a World Maritime Conundrum to the international community because it seriously and significantly seeks to improve shipping safety for the international community (Fadli et al., 2021). Indeed, the establishment of the TSS in the Lombok Strait is a form of Indonesia's commitment to shipping safety and the protection of the maritime environment, as well as to improve supervision of ships passing through IASL II, where the strait is a vital and strategic sea transportation route for international shipping (Mamahit, 2020).

The Lombok Strait TSS Establishment Process

TSS is a traffic management route system regulated by IMO. The official definition of TSS can be seen in the IMO Colreg 1972 Rule 10 issued by the IMO, where TSS is defined as the rule of traffic that goes opposite or almost opposite through zones or segregation lanes, traffic lanes, etc. Thus, it can be said that the TSS is the dividing line between the navigational boundaries of all ships and the territorial waters of national jurisdictions. However, because the area to be determined is part of the Indonesian territorial sea, according to the IMO rules, Indonesia needs to submit a TSS proposal to the IMO, through the Sub-Committee on Navigation, Communications and Search and Rescue (NCSR) (Yanti et al., 2020). With the considerations described in the previous section, as well as the mechanism established by the IMO, in 2017, the Government of Indonesia first submitted a proposal on the establishment of the Lombok Strait TSS to the IMO NCSR (Desmonda & Idris, 2020).

The Indonesian proposal was then presented directly by the Indonesian delegation at the Cooperative Mechanism Meeting, held at the 10th Session of the Cooperation Forum (CF) in Kota Kinabalu, Malaysia on 2-3 October 2017, which was attended by three coastal countries (Singapore, Malaysia, and Indonesia), the several IMO Member States, and several international shipping stakeholders (Yanti et al., 2020). Then in the IMO session of the 5th NCSR session, which was held on 19-23 February 2018, at the IMO Head Office in London, the Indonesian proposal was submitted and discussed as Agenda Item 3

at the forum (Ronaboyd, Puspoayu, Nugroho, & Hikmah, 2019).

At the 6th IMO Sub-Committee NCSR session held at the IMO Headquarters in London, on 16-25 January 2019, the NCSR agreed to establish a new TSS in the Sunda Strait (NCSR 6/3/3) which is within with IASL I and in the Lombok Strait (NCSR 6/3/4) which is within IASL II (Desmonda & Idris, 2020). And after that, the NCSR agreed to schedule the acceptance and approval of the TSS in Indonesia at the next IMO meeting (Mamahit, 2020). Finally, at the 110th session of the IMO on June 10, 2019, the Lombok Strait TSS was officially approved for adoption by the IMO, and it came into effect in June 2020 (Yanti et al., 2020).

The Establishment of the Lombok Strait TSS

Based on the approval of the session participants in the IMO Forum, the Government of the Republic of Indonesia immediately followed up, among others, by issuing a decision decree related to this matter. The regulation on matters relating to the TSS can be seen in the Decree of the Minister of Transportation of the Republic of Indonesia Number KM 129 of 2020 concerning the Establishment of the Route System in the Lombok Strait. The document explains that three elements are regulated related to the routing system in the Lombok Strait, namely: (i) Traffic Separation Scheme; (ii) Inshore Traffic Zone; and (iii) Precautionary Areas (Keputusan Menteri Perhubungan Republik Indonesia, 2020).

The first provision is regarding the Lombok Strait TSS, which consists of three separation zones (see Figure 3), each of which is 0.5 nautical miles wide, which separates the channel into two, so that sailing ships can still pass in the same direction in the separated lane. Sailing ships must continue to pass within the established lane. Ships entering the TSS from the north and heading south will move on the west side of the TSS, while ships entering the TSS from the south must maintain their ship's position on the east side of the TSS. The coordinates of each zone and ship traffic lanes can be seen in Table 2.

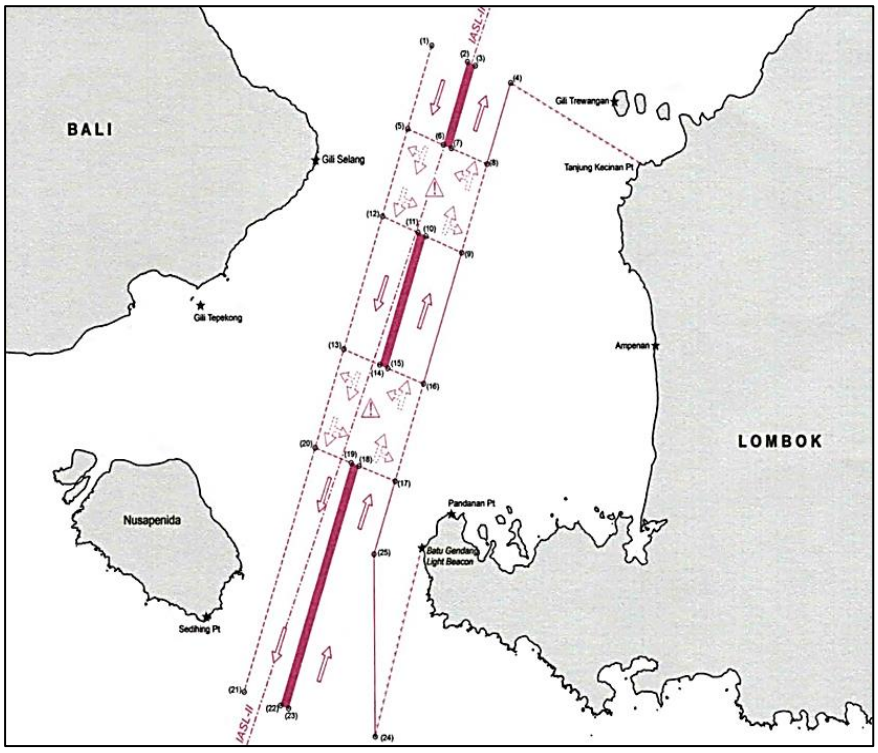

Figure 3. Chart of the Traffic Separation Scheme in Lombok Strait
Source: Keputusan Menteri Perhubungan Republik Indonesia, 2020

Table 2. List of coordinates of separation zones and traffic lanes of the Lombok Strait TSS

Separation zones and traffic lanes	Points	Coordinates
Separation Zone 1 (0.5 nautical miles wide)	2	08° 18'.73 S; 115° 52'.32 E
	3	08° 18'.94 S; 115° 52'.83 E
	6	08° 23'.24 S; 115° 50'.76 E
	7	08° 23'.43 S; 115° 51'.27 E
Traffic lane on the Northeast side	4	08° 19'.89 S; 115° 55'.09 E
	8	08° 24'.29 S; 115° 53'.56 E
Traffic lane on the Northwest side	1	08° 17'.84 S; 115° 50'.04 E
	5	08° 22'.37 S; 115° 48'.46 E
Separation Zone 2 (0.5 nautical miles wide)	10	08° 28’.21 S; 115° 49'.61 E
	11	08° 28'.01 S; 115° 49’.10 E
	14	08° 35'.21 S; 115° 46'.61 E
	15	08° 35’.40 S; 115° 47'.12 E
Traffic lane on the Southeast side	9	08° 29’.10 S; 115° 51'.90 E
	16	08° 36'.25 S; 115° 49’.42 E
Traffic lane on the Southwest side	12	08° 27’.12 S; 115° 46'.82 E
	13	08° 34'.36 S; 115° 44’.31 E
Separation Zone 3 (0.5 nautical miles wide)	18	08° 40'.71 S; 115° 45'.27 E
	19	08° 40'.53 S; 115° 44'.76 E
	22	08° 53'.73 S; 115° 40'.18 E
	23	08° 53'.89 S; 115° 40'.70 E
Traffic lanes on the Southeast side	17	08° 41'.53 S; 115° 47'.58 E
	24	08° 55'.41 S; 115° 46’.26 E
	25	08° 45'.50 S; 115° 46'.21 E
Traffic lane on the Southwest side	20	08° 39'.71 S; 115° 42'.45 E
	21	08° 52’.99 S; 115° 37'.85 E

Source: Keputusan Menteri Perhubungan Republik Indonesia, 2020

The second provision is regarding the inshore traffic zone, which is defined as an effort to regulate a route consisting of designated areas between the land boundary of the traffic separation scheme and the adjacent coast, to be used properly under the provisions of Regulation 10 (d) of the International Regulations for Preventing Collisions at Sea, 1972 (COLREGS). This zone is located between the sea lane dividing chart position 4 (four) to Ujung Tanjung Kecinan (08° 24'.21, 116° 03'.45 East) with a direction of 118° (one hundred and eighteen degrees), and the line drawn from position 24 (twenty-four) to the Stone Gendang Beacon Sign (08° 45'. 17 South, 115° 49'.27 East) with a direction of 16° (sixteen degrees) (Keputusan Menteri Perhubungan Republik Indonesia, 2020).

The third provision is regarding the Precautionary Area, where based on the provision it is explained that seafarers sailing in this area must raise awareness of the possibility of ferries crossing from Padang Bai to Gili Trawangan and/or to Lembar and or vice versa and all ships including ferries passing through the precautionary area must follow the recommended traffic directions as shown on the map. The position of this area can be seen in Figure 4, and the coordinates of the area can be seen in Table 3.

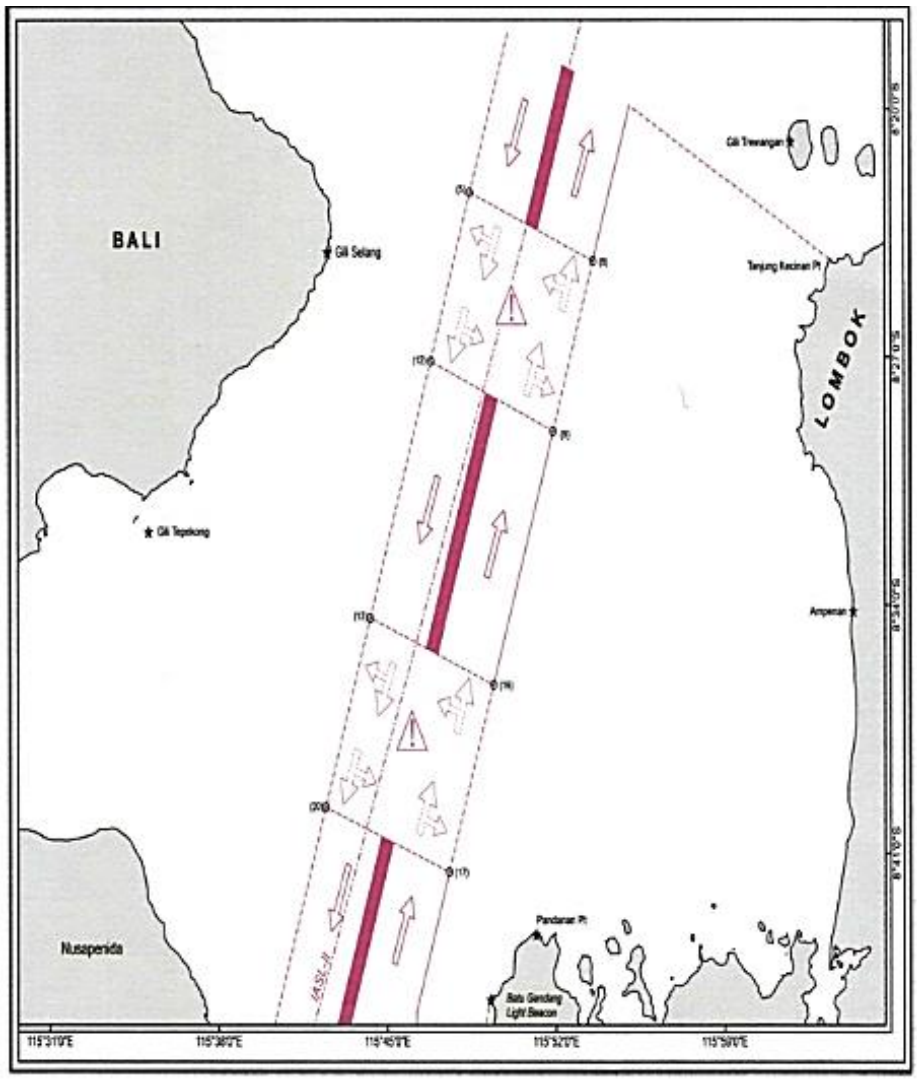

Figure 4. Chartlet of the Precautionary Areas in the Lombok Strait
Source: Keputusan Menteri Perhubungan Republik Indonesia, 2020

Table 3. Coordinates of the Precautionary Area in Lombok Strait

Points	Coordinates	Points	Coordinates
5	08° 22'.37 S, 115° 48'.46 E	13	08° 34'.36 S, 115° 44'.31 E
8	08° 24'.29 S, 115° 53'.56 E	16	08° 36'.25 S, 115° 49'.42 E
9	08° 29'.10 S, 115° 51'.90 E	17	08° 41'.53 S, 115° 47'.58 E
12	08° 27'.12 S, 115° 46'.82 E	20	08° 39'.71 S, 115° 42'.45 E

Source: Keputusan Menteri Perhubungan Republik Indonesia, 2020

Impacts of the Establishment of the Lombok Strait TSS on the Maritime Security

To analyze the impacts of the establishment of the Lombok Strait TSS, the benchmark that will be used is the goals and objectives of the Indonesian state defense strategy that had been set by the GOI. One of the strategic goals and objectives is the realization of maritime security in all Indonesian waters. To make this happen, the GOI deploys sea power in a task force that can reach the boundaries of the Indonesian Exclusive Economic Zone (IEEZ) effectively and can control the sea areas of the national jurisdiction, where the sea power is projected to control the use of the sea areas, trade and commerce at sea, as well as for deterrence, sea denial, defense diplomacy, and providing political influence (Kementerian Pertahanan Republik Indonesia, 2014).

With the establishment of the Lombok Strait TSS, it is hoped that security at sea in the area will be guaranteed as a result of always being ready for law enforcement officers at sea to carry out operations in the water areas. Institutionally, the parties involved in overseeing and securing the Lombok Strait TSS are the GOI institutions, namely the Directorate General of Sea Transportation through the Directorate of Marine and Coastal Guard Units, the Coordinating Ministry for Maritime Affairs, the Naval Hydrographic Centre, the Oceanographic Marine Security Agency, the Indonesian Navy, the Ministry of Foreign Affairs, the Ministry of Sea and Fisheries, and the Ministry of Environment and Forestry (Mamahit, 2020). With so many parties involved, internally, it is necessary to carry out very close coordination and cooperation between them, so that there will be no misunderstandings or unclear duties of each party. Thus there will be harmony and synergy in the implementation of tasks in the field between them. If this cannot be realized properly, there will be a negative impact on the handling of the Lombok Strait TSS, and this will be detrimental to the users of the shipping lane, and at the same time will reduce the reputation of the GOI in the eyes of the users of the shipping lane, both nationally and internationally. Several parties conclude that there is the potential for a more comprehensive maritime security agenda to take hold in Indonesia but that this will require continued strategic and policy focus on the maritime domain within the country, alongside an emphasis on partnership building both within the state and between the state and non-state actors.

The direct impact that appears on Indonesia's maritime security is on the ability of the GOI to oversee the implementation or application of various established rules, as well as the ability to overcome various problems that will arise. To increase this capability, various efforts must be carried out, among others, by

strengthening shipping infrastructure and traffic control through Vessel Traffic Services (VTS) stations in the strait, strengthening shipping telecommunications services and Marine Safety Information (MSI) through coastal radio stations, using equipment ship identification or Automatic Identification System (AIS) class B on non-Solas ships, socialization the TSS to the users, public education, providing the latest electronic maps, and ensuring the operation of shipping safety supporting equipment for 24 hours every day (Mamahit, 2020).

The long-term impacts with the establishment of the Lombok Strait TSS can be in the form of maritime security disturbances in the region, which could potentially occur if proper anticipating efforts are not made. With the establishment of the TSS, users will feel more comfortable using the shipping lane, so that in the long term there will be a significant increase in shipping density. The impacts of this condition can also occur with the increasing number of facilities related to services for passing ships. Thus, the area will become more crowded, and this will also raise new problems in the field of maritime security, in the form of threats of various types, including piracy, armed robbery, sea accidents, smuggling, pollution, and terrorism.

A sea shipping lane that is crowded and has high economic value, will invite the threats of piracy and armed robbery. The target of this action is the ships and their cargo. This action can be continued with the sale of booty to a ransom request for the ships, cargos, crews, and passengers. Accidents are also a threat in themselves because they can disrupt ship traffic. Various types of sea accidents can occur, ranging from a single accident to involving more than one ship. Accidents can cause damage to ships and loss of lives or can trigger other events such as fires or spills of fuel or other hazardous substances into the waters.

Smuggling in the Lombok Strait can happen because of the many small ports, and the great attraction of the island of Bali and the island of Lombok, which is an international tourist destination. It is very attractive for illegal drug smugglers to sell their drugs to tourists who want to have fun. Other goods smuggling is consumer goods, which in the short term will harm the state because they do not pay the applicable customs taxes, thereby eliminating the potential for the state revenue. In the long term, smuggled goods will harm the domestic good producers because they have to compete with foreign goods that enter illegally. If smuggling is carried out on a large scale to meet the domestic market at a price lower than the price used by domestic producers, it can cause losses and even bankruptcy of the domestic businessmen. Regarding pollution, the Lombok Strait is an area that is rich in marine life. Ship accidents can cause pollution such as spilled fuel. Pollution can also occur due to the intentional disposal of ship waste into the waters. Ship activities such as ship anchoring, if done in the wrong place, can cause damage to coral reefs.

Terror acts can also threaten shipping actors, which in the short term will trigger an increase in shipping insurance costs, due to increased risk, and in the long term will reduce interest in sailing through the water. The Lombok Strait is part of IASL II, one end of which is in the waters near the southern Philippines, which is a conflict area and prone to acts of terror. The terrorists may use IASL II to reach the islands of Bali and Lombok to carry out acts of terror. The occurrence of acts of terror in one of the main areas of tourism can cause huge losses to the tourism industry which also affects the shipping industry, especially those that transport foreign tourists.

From the analysis that has been carried out above, it appears that this study has found various things related to the determination of the Lombok Strait TSS. This study specifically obtains more comprehensive data and information on the

background of the submission of the Lombok Strait TSS to the IMO and further matters related to the implementation of the determination for the users of the shipping lane. Furthermore, from the analysis carried out, it was also found that the impact of the determination of the TSS in both the short and long term, where the impact affects various stakeholders of the shipping lane, especially from the point of view of the Indonesia maritime security and the defense of the Indonesian state.

CONCLUSIONS, RECOMMENDATION, AND LIMITATION

The establishment of the Lombok Strait TSS, on one side, provides benefits in terms of economics, natural environment conservation, and shipping safety, in the other side, from the maritime security aspect also has an impact or logical consequences that in the short term have emerged. The impact is in the form of the need for close coordination and synergy among a large number of stakeholders. Some of the channel users also do not fully understand the procedures and mechanisms that have been established, so that continuous socialization and communication are needed between the regulators and supervisors of the TSS and the users of the shipping lane. Also due to the weak capability to supervise the TSS, additional support is needed in the form of Vessel Traffic Services (VTS), shipping telecommunication services, and Marine Safety Information (MSI) through coastal radio stations, equipment ship identification, or Automatic Identification System (AIS). The long-term impact of the establishment of the TSS is that there will be an increase in shipping density in the Lombok Strait, so that various threats can arise in various forms, such as piracy, armed robbery, sea accidents, smuggling, pollution, and terrorism. Thus, it is necessary to anticipate these threats with proper strategies related to increasing maritime security in the region.

This study was intended to analyze the establishment of the Lombok Strait TSS from only one perspective, namely maritime security, while other aspects are not discussed. Thus, it is recommended that further studies or research will be conducted to explore from other angles or aspects, navigational problems for ships passing through the TSS, as well as the impacts of the establishment of the TSS from the point of view of increasing trade and the economy of the TSS surrounding areas as well as from the point of view of preserving the natural environment around the TSS.

This study used a case study approach, so it had limitations in determining the problem under study, which must be limited both in terms of the issues discussed and the time. Thus, other issues related to maritime security in Indonesia cannot be explored further, because it requires several other research approaches to analyze the issues.

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