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SUCCESS STORY TO ERADICATE THE MARINE POLLUTION IN INTERNATIONAL STRAIT OR STRAIT FOR INTERNATIONAL TRADE

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Abstract

Marine pollution has a significant impact on the waters of the coastal states, especially in the strait routes used for international trade. The traffic density of large ships which is not proportional to the wide geographical conditions, makes the Strait of Malacca a potential area that is prone to high marine pollution. This article aims to examine the use of the Marine Electronic Highway in the Malacca Strait and the success story which is applied to the territorial waters of other countries that have the same conditions. The results of the study show that in the Dover strait region, the French and British Governments are collaborating by investing in infrastructure to regulate the navigation of these areas. Meanwhile, at The Torres Straits, the Australian Government implemented a Pilotage policy by requiring ships passing through to pay a maintenance fee of 3% for the conservation of the waterways and security zones. However, the Indonesian and Malaysian governments had to negotiate beforehand to determine the delimitation of their respective maritime boundaries in Malacca Straits.

Keywords : *Marine Pollution; Malacca Strait; Pilotage*

Abstrak

Polusi laut membawa dampak signifikan bagi wilayah perairan negara pantai terutama pada jalur selat yang digunakan untuk perdagangan Internasional. Kepadatan lalu lintas kapal-kapal besar yang tidak sebanding dengan luas kondisi geografis, membuat Selat Malaka berpotensi menjadi wilayah yang rawan terjadi pencemaran laut yang tinggi. Artikel ini bertujuan untuk mengkaji penggunaan Marine Electronic Highway di Selat Malaka dan Sukses story yang diterapkan pada wilayah perairan negara lain yang mempunayi kondisi sama. Hasil studi menunjukkan bahwa pada wilayah Dover strait, Pemerintah Perancis dan Inggris bekerja sama dengan berinvestasi pada infrastruktur guna mengatur pada navigasi pelayaran daerah tersebut. Sedangkan pada The Torres strait, Pemerintah Australia menerapkan kebijakan Pilotage dengan mewajibkan kapal yang melintas untuk membayar biaya pemeliharaan sebesar 3% guna pelestarian zona perairan dan keamanan. Namun sebelumnya, pemerintah RI dan Malaysia harus berunding menetapkan delimitasi batas maritime masing-masing di Selat Malaka.

Kata Kunci : *Polusi Laut; Selat Malaka; Pilotage*

A. Introduction

Marine pollution is the one of sensitive issues in international law . This matters are essential concerned by almost nations , especially for the country which has a maritime boundary that overlaps with another countries. The Marine pollutions are occurred due to

human activities which results in the destruction of biological resources and marine ecosystem. The Triggers of marine pollution are exacerbated by misconceptions about the inexhaustible marine resources and the principle of free use of sea lane. The United Nations Convention on the Law of the Sea (UNCLOS) article 192 states that "States must protect and preserve the marine environment". The kind of marine environmental pollution that commonly occurs are damage to the marine environment caused by ship oil spills. Petroleum pollution caused by ships generally caused by oil spills from vessel, either originating from the ship's own fuel tank or the ship due to its dirty oil disposal process contained in the engine room and oil as cargo.

The Shipping Zones and marine trade are broad economic practices across national borders or in other words it can be called international shipping and international trade. Given that 40% of world trade access utilizes the sea as a crossing route, Indonesia's strategic location on the international trade route cannot be underestimated, because almost the half of the world's shipping fleets pass through the Strait of Malacca and around 50,000 'big merchant' ships pass through this strait every year.[1] The strait can literally be said to be a narrow part of the sea flanked by two or more land masses. Land can be land that is entirely part of the territory of one country or involves more than one country. The strait also connects two or more oceans which are geographically larger than the passage of the strait itself.

Review on the geographical aspects, the Malacca Strait is the territory of the country, namely Indonesia, Singapore, and Thailand, which are parts of the sea area, additional zone and economic zone of these countries. So that each of the countries that pass through the Strait of Malacca will be called the part of the sea which is called peace passage and transit passage. The Strait of Malacca is the main option in oil cargo trade and passenger transport connecting the Indo-European region and a number of other Asian countries. According to scientific research that conducted by the Japan International Transport Institute in 2020, ships that will pass through the Strait of Malacca will increase by 50%.[2] Even today, more than 60,000 ships pass through the strait. [3]The Strait of Malacca has become a very reliable zone for a number of countries in East Asia such as Japan, China and South Korea, especially in the cargo trade and the transport of energy imported from the Middle East Region .The level of water traffic

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1 Ni Putu Intan Purnami et al. "Tinjauan Hukum Laut Internasional Terkait Pencemaran Lingkungan Akibat Tumpahan Minyak di Wilayah Tumpang Tindih ZEE Tumpang Tindih antar Indonesia dan Malaysia", *Kertha Negara : Journal Ilmu Hukum*, Vol. 06, No. 05, November 2018 : Fakultas Hukum Udayana

2 T Izaki, "'A Study of Evaluation of navigation Safety at the Straits of Malacca and Singapore,'" *in The International Symposium on Safety and Protection of Marine Environment in the Straits of Malacca and Singapore*, Kuala Lumpur, 2007, p. 34

3 Pulung W.H. Hananto. "Current Developments of Legal Instruments to Prevent and Control of Pollution In The Straits of Malacca", *Administrative Law & Governance Journal*, Vol 2, Issue 4, November 2019, p. 723

density in the Malacca Strait is inversely proportional to its geographical conditions. The narrow, shallow and crowded position of the Malacca Strait poses a great risk to giant ships whose loads exceed 19 meters in size passing through there. This is exacerbated by the Malacca Strait area having a shallowness point of less than 23 m and changes in ocean currents reaching 3 miles with changes in speed that are not certain.[4] Thus, it can cause an accident hazard which not only harms ship owners but also causes marine pollution which has implications for ecological damage and socio-economic life of the people of coastal countries around.

In line with the eradicate of marine pollution in international strait or strait for international trade that aimed to enhance safe navigation and protect the marine environment, seven facilities have been installed in the straits. These facilities are Vessels Traffic System (VTS), Radar System, Electronic Navigation Charts (ENCs), Differential Global Positioning System (DGPS) Broadcast Service, Mandatory Ship Reporting System (STRAITREP), Ship Routeing System, Global Maritime Distress Safety System (GMDSS), Geography Information System (GIS)-based Environmental Database and Oil Spill Trajectory Model along the Straits of Malacca.[5] Apart from instalment of facilities, certain regulations and requirement also has been commenced by the littoral states. Among them are the TSS, STRAITREP and Under Keel Clearance (UKC). UKC refers to the requirement of distance between the seabed and vessel's keel. As discussed earlier, shallow waters of the straits make it dangerous for vessels of over 200,000 tonnes to navigate in the straits. The TTEG unanimously agreed that the maximum UKC is 3.5 meters and adopted by the IMO through its IMO Assembly[6].

In order to provide risk mitigation in preventing the worsening level of ecological degradation in the Malacca Strait waters, a number of policy solutions have been proposed to protect and control marine pollution. In order to respond this issue, an demonstration project called as The Marine Electronic Highway (MEH) with restricted traffic and marked the strait as Special Sensitive Marine Areas (PSSA) initiated by International Maritime Organization and The three of Littoral states (Indonesia, Malaysia and Singapore) on 2006. Considering the importance of the Malacca Strait existence as a one of the straits for international trade route, this article will examine the application of the Marine Electronic Highway or E-Navigation as a

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4 Ibid

5 Wan Siti Adibah Wan Dahalan, Zinatul Ashiqin Zainol, Noor Inayah Yaa'kub & Noridayu Md Kassim, "Corporate Social Responsibility (CSR) From Shipping Companies in the Straits of Malacca and Singapore", *International Journal of Business and Society*, Vol. 13, No. 2, 2012, pp. 197 – 208

6 Mohd Hazmi Bin Mohd Rusli, "Protecting Vital Sea Lines Of Communication: A Study Of The Proposed Designation of The Straits of Malacca and Singapore as A Particularly Sensitive Sea Area", *Ocean & Coastal Management,* Vol. 57, March 2012, 2012, pp 79-94

solution to controlling pollution levels in the Malacca Strait, by adopting success stories with a number of strait in similar condition.

B. Method

This article applies a normative research method, with examines and assess secondary data derived by extensive review some relevant literature. The approach used in this paper includes a conceptual approach, a regulatory approach, historical approach and a comparative approach by examining best practice in cases in other countries. Then the data will be analyzed qualitatively in order to find solutions toward the arises issue on this research.

C. Discussion

1. Marine Electronic Highway (MEH) or E-Navigation in the Straits of Malacca

In 1996, three bodies namely the Global Environment Facility (GEF), United Nations Development Programme (UNDP) and IMO Regional Programme for the Prevention and Management of Marine Pollution in the East Asian Seas (MPP-EAS) expressed their concern on the need to enhance information technology system in the Strait of Malacca and Singapore to deal with navigational safety and marine pollution in the Straits of Malacca. A study had been conducted by International Finance Corporation (IFC) in 1997 on the possibilities to install the MEH in the straits. Pursuant to the outcome of the study MPP-EAS prepared the Project Preparation and Development Facility Block B Application for grants up to US$350,000. This application was reviewed and endorsed by Malaysia and Indonesia and submitted to GEF.

The MEH project took its first steps on 7 November 2000 where meetings between IMO and littoral states was initiated to establish country organizational framework to prepare for the first Project Steering Committee Meeting and to recruit project personnel. In the subsequent year, agreement was signed on 12 March 2001 between the World Bank and IMO to implement the Block B Grant and this is the starting point of the accomplishment of MEH project.[7]

The Marine Electronic Highway was specifically arranged into two kind of stages, namely demonstration project and full-scale project. The demonstration stage aim to cover the part of Mallaca strait. especially the water zone of The Traffic Separation Scheme. This stage is represented to illustrate the data regarding to the strait environmental condition , for example the nature and extent of environmentally sensitive areas can be accessed by the relevant authorities using a common database; how new or revised routing instructions or prohibit-ed

[7] Chua Thia-Eng, "Marine Pollution Prevention and Management in The East Asian Seas: A Paradigm Shift in Concept, Approach and Methodology", *Marine Pollution Bulletin*, Vol. 39, Nos. 1-12, 1999, pp 80-88,

areas can be broadcast to ships taking part in the demonstration and how Mariners can receive other environmental information such as real-time tidal observations, tidal streams, sea conditions and wind, in ECDIS via MIOs.[8] The first phase of MEH was started on 7 November 2000, it showed by the meeting between IMO and littoral states. This summit was initiated to establish country organizational framework in order to set up the plan for the first phase with pointed the Project Steering Committee and hired project human resource. In the subsequent year, agreement was signed on 12 March 2001 between the World Bank and IMO to implement the Block B Grant and this is the starting point of the accomplishment of MEH project.[9] Then this phase would be follow up into next step called as full-scale project which concerned to cover and accommodate the whole sea area including the territorial sea on the coastal state. In other word ,the objectives of MEH is to bring marine information technology network in regional stage that will be connected via The ENCs-ECDIS (Electronic chart display and Information systems). Its system goals intend to make effective and efficient mechanism on detect illegally violation and discharge oily wasted or another dumping by vessel in Malacca strait .

The ENCs-ECDIS are equipped on the most of vessel machine. The signal of MEH will be sent to ENCs and ECDIS system to give a report about the marine situation , while the vessel pass on Malacca Strait. The infrastructure of MEH system has installed between Peninsula Malaysia and Sumatera with approximately reach 1000 km length and 300 km wide at north-west entrance gate. It also established southeast gateway between Province of Riau in Indonesian Archipelago and Singapore. The instruments are consist of physical infrastructure, hardware and software processes and resources focusing on navigational safety and marine pollution prevention.[10]

The instruments used in the Marine electronic Highway system consist of seven different technologies and services applied to this project, viz : Automatic Identification System (AIS), Electronic Chart Display and Information Systems (ECDIS), Integrated Bridge Systems /Integrated Navigation Systems (IBS/INS), Automatic Radar Plotting Aids (ARPA), Radio

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[8] M. Hafizi Said & AH Saharudin . The Marine Electronic Highway Project in Straits of Malacca and Singapore: Observation on the Present Development. International Journal on Marine Navigation and Safety of Sea Transportation Vol 3 Number 3 2009 p. 301

[9] Chua Thia-Eng, "Marine Pollution Prevention and Management in The East Asian Seas: A Paradigm Shift in Concept, Approach and Methodology", *Marine Pollution Bulletin*, Vol. 39, Nos. 1-12, 1999, pp 80-88,

[10] Koji Sekimizu, Jean-Claude Sainlos, & James N. Paw, "The Marine Electronic Highway in the Straits of Malacca and Singapore - An Innovative Project for the Management of Highly Congested and Confined Waters", Tropical Coasts, Vol. 8, July 2001, pp. 24- 31

Navigation, Long Range Identification and Tracking (LRIT) systems, Vessel Traffic Services (VTS) and the Global Maritime Distress and Safety System (GMDSS).[11]

The MEH instruments are classified into several particular functions. The two of instruments are concerned to maritime safety, management and protection of marine environment. This section is split into minor categories that acknowledge on four parts, namely environmental monitoring , protection and management, emergency response and risk or loss assessment. Two components of MEH are maritime safety and the management and protection of marine environment. From this component, three categories are recognised under the maritime safety namely navigational safety, precision navigation and emergency response. Meanwhile under the management and protection of marine environment are divided into four categories i.e. environmental monitoring, protection and management, emergency response and risk or damage assessment.

The current development of MEH systems had nearly accomplished for straits of Malacca, after eleven years struggled. The evidence was manifested by handover the Batam MEH system from IMO Secretary General, Mr. Koji Sekimizu to Indonesian Government that represented by the Directorate General of Sea Transportation on August 2012. This occasion were attended and witnessed by several stakeholders including The Ministry of marine and Fisheries, Local Government of Batam Region, The Marine Department of Malaysia, The maritime and port authority of Singapore Ministry of Land, Transport and Maritime Affairs of the Republic of Korea, the International Hydrographic Organization, Nippon Maritime Center and the shipping industry.

However, in the implementation of MEH are faced any obstacles mainly related to the gap of quality in infrastructure technology between the littoral states. Singapore and Malaysia have already use the highest technology namely ORACLE 10g as application platform on VTS (Vessel Traffic System), but Indonesia has not operated same platform yet. Whereas, the identical database software make an significant impact to achieve the desires functionally. The precision of navigation system in ENC production and navigation strategy would carry comprehensive impact on The MEH procedure. Thus, some of urgent steps are need expedite and ensure the goals of MEH inter alia First Cooperation between Coastal state and users state and then the sustainability of Project Financing.

[11] Wan Siti Adibah Wan Dahalan, Zinatul A. Zainol, Jady Zaidi Hassim, & Chia Huey Ting, "E-Navigation in the Straits of Malacca and Singapore", *International Journal of Computer Theory and Engineering*, Vol. 5, No. 3, 2013, pp 388-390

2. Torres Strait: Straits as Particularly Sensitive Sea Areas (PSSA) and Compulsory Pilotage

Torres Strait located between Papua New Guinea and the Cape York Peninsular in northern Australia. The waters are shallow and there are many islands, islets, reefs and shoals that are dangerous for navigation. Moreover, the water tide of the strait is unpredictable. The first PSSA was designated along the Australian Great Barrier Reefs in 1990 and was extended to its Torres Strait in 2005.[12]

The concern of IMO on distinctive protection against PSSA is based on unique ecological conditions on certain area which susceptible to environmental quality degradation due to human's doing with socio-economic motivates, natural disaster, biological and historical condition. That several terms are need to acquired some region to be PSSA. If one of region is accepted and fulfilled condition as PSSA, as the results any certain benchmarks will be applied and enforced to control marine environment in relevant area. Such measure includes areas to be avoided (ATBA), mandatory ship reporting or mandatory ship routing systems, no anchorage areas, establishment of vessel traffic services and other IMO-approved routing measure.[13]

For the sake of protection their marine environment in Torres Straits, The Australian Government had initiated and implemented an radically policy which is called as compulsory pilotage scheme on October 2006. This policy was emphasized for the certain law enforcement towards any vessel which transiting the straits on following period the vessels get into an Australian ports. The pilotage regime are ignited challenged by several user states against The Australian Government. The user states have claimed that practice are inconsistences and violate with the concept of the right of transit passage on a strait for international sailing inside UNCLOS. Nevertheless, Regarding to article 43 of UNCLOS is clearly stipulated that user state have to responsibilities to cooperate to maintain navigation safety and protecting marine environment. This legal basis make the Australian Government increasingly confidences to uphold the compulsory pilotage permission. Accordingly, every user states who passes on the Torres Strait get an responsibilities to cooperate with Australia as Littoral state and directly binding against compulsory pilotage policy for safety navigation and protect marine environment.

This case is being a hot issue in several discussion by any scholars and International Organization for build the scheme of pilotage policy and PSSA in The Strait of Malacca region. However, there are no coastal states has proposed this concept personally or collectively

[12] Jeanine B. Womble, "Freedom of Navigation, Environmental Protection, and Compulsory Pilotage in Straits Used for International Navigation", *Naval Law Review*, Vol. 61, 2012, pp 134-15

[13] Raul (Pete) Pedrozo, "Encroachment on Navigational Freedoms, International Law Studies", *US Naval War College*, Vol. 84, Issue 1, 2008, pp 85-96

against IMO to resolve the marine pollution issues in the straits of Malacca until current days. Considering the current of phenomena that Strait Malacca hold a vital and strategic position in International Trade.

3. Success Story of the Management of Pollution in Other Straits

Besides knowing further about management of pollution in Strait of Malacca, it is important to further know regarding other strait. The Dover Strait and Torres Strait are chosen by the authors as comparative study , because these straits have similar characteristic and case with the Strait of Malacca. They are busiest international straits. They also have narrow part of strait. In this navigation route, it is existed an underwater sea tunnel which connect across Kent County of Southern England and Pas De Calais of French. This condition had ever filed to build same construction to link The Strait Malacca from Dumai, Riau Province pass Rupay Island to Malacca, Malaysia. While the Torrest strait based on our deep analysis , the situation have an similarity on boundary between The Straits Malacca and Singapore. Wherein there are many islands and islets exists in this water zone.

Dover Strait

The Dover Strait is one of the busiest international strait in the world. It is located between South of England and North of France in the West European region with maximum length of 32 kilometres and average depth of 30 metres. The Latitude of Strait of Dover is 50 º 59'49.94" N, meanwhile the Longitude is 1 º 30'35.12" E. It is linking the Atlantic Ocean and the North Sea. According to information from Department of Transport of United Kingdom website as of May 2014, it is about 400 commercial vessels sailing through this strait per day. It is a major route for oil tanker and chemical tanker.[14] This conditions are considering to be main concern between two littoral states especially safety and security

The littoral states of the Dover Strait are United Kingdom and France. This strait has long historical stories between two nations and Europe continent. It is a silent witness of England and France up-and-down relationship in centuries ago. However, economical interests of Strait of Dover have made England and France realized to achieve cooperation amongst the two to guard and safe Strait of Dover for international navigation purposes.

[14] David A. Anderson . Environmental economics and natural resource management. Routledge. 2013

Picture 1.1 Strait Around Great Britain[15]

The two governments had cooperated very closely regarding the Dover Strait. Recently, a mandatory traffic separation scheme exists throughout the strait. The scheme is mandatory because both UK and France are both parties are members of UNCLOS. The both parties were signed the agreement regarding to delimitation of the proportion of the continental shelf in The English Channel eastward 30 minutes from the Greenwich latitude in 1975. Then the two of littoral states continued their commitment by ratified the follow up treaties on sever years later. Nevertheless, both of Treaty were not regulated comprehensive issues. The substances was only concentrated in delimitation marine boundary between two littoral states, not accommodated cooperation in to overcome and avoid environment pollution until 1986.

The British and French Government signed the new treaties in order to construct and provide operation mechanism of the Channel fixed link trough private concessions in February 1986. This scope of deal aimed to build underwater sea tunnel to connect British and European mainland. Inside article 2 of treaty stated that the high contracting parties (UK and French) shall take the measures which are necessary to ensure that the construction and operation of the Fixed Link shall be consistent with their international obligations especially in regards of international law of the sea. One of the issues regarding this channel tunnel fixed link construction is pollution from sea-bed activities or activities in the area The crucial of issues that discussed on this treaty was regarding to the pollution and sea bed activity , during

[15] *Ibid.*

channel tunnel fixed link construction. But unfortunately, inside Article 10 of intergovernmental commission described that this treaty only provided a minimum concern on the maritime issue and the environment impact .

Two years later, The British Government and French government signed the treaty for delimitation on territorial sea boundary down the center of Strait of Dover with emphasized joint declaration to show a collective commitment both of parties regarding to passage trough the straits. This declaration represents the latest of a series of joint actions about navigation in the narrow congested waters between the English Channel and the southern North Sea where the four coastal states have all now extended the breadth of the territorial sea to 12 nautical miles[16]. Even, this agreement were not produced any results about safety guarantee on Navigation and enforcement toward marine pollution. To counter both of issue will be returned on each respective country's internal regulation. Until now, there is no particular authority to handle the marine pollution, except the agency who run by the private company to operates the channel tunnel.

The Management of passage line in The Straits of Dover, it is applied The Vessel Traffic Services (VTS). This system have deal and invested by The British and French Government to respond the marine pollution which occurred on The Case of Torrey Canyon. This case caused and essential damage in the ecology of dover's strait. Since July 1999, Every ships over 300 tones are need to report to The French Coastguard at the Southern point and Dover Coastguard in northern , while they are pass and sail proceed from north sea to south. IMO was design this stipulation under the scheme which abbreviated as CALDOVREP. The scope of Information service provided by the VTS are including navigational safety and assistance.

Torres Strait

The Strait of Torres is a strait which lies between Australia and Papua New Guinea (PNG). This strait is laid between northern coast of Australia and southern coast of PNG. The Strait link the Arafura Sea to the west and the Cora Sea to the east. It is one busiest international strait together with the Dover Strait and the Strait of Malacca.

Unlike Malaysia-Indonesia-Singapore (Strait of Malacca) and UK-French (Dover Strait), this strait has very unique characteristics. It has many islets and islands along with their beautiful and rich resources. Some islands have their islanders and aboriginal people. Number of population of the Torres Strait islander is 6901 as of 2011 (www.tsra.gov.au). Government of Australia and PNG do not want to move islanders and aboriginal people from their home or

[16] *Ibid.*

village, although the strait is international used and obligation. However, both countries want to enhance regional development around the strait.

Picture 1.2 The Torres Strait

To manage the Torres Strait to prevent, reduce and control marine pollution, Australia and Papua New Guinea have made agreement in the form of treaty concerning Sovereignty and Maritime Boundaries in the area between the two Countries, including the area known as Torres Strait, and Related Matters. This treaty was signed in Sydney, 18 December 1978 and has been entry into force since 15 February 1985. It defines the border between Australia and Papua New Guinea and provides a framework for the management of the common border area.

One of substances of this treaty is about freedoms of navigation and over flight. Article 7(2)a of the treaty mentions that each party shall take all necessary measures to ensure that, in the exercise of the freedoms of navigation and over flight accorded to its vessels and aircraft under paragraph 1 this article those vessels observe generally accepted international regulations, procedures and practices for safety at sea and for the prevention, reduction and control of pollution from ships.

The Torres Protected zone is the central point on this strait. Inside article 10 New Guinea and Australia treaty, This area is defined comprising all the land, sea ,seabed , airspace and subsoil within correlated by the line. The objectives of treaty, first point aim to covering the Protected Zone by determined the all sides boundaries. Secondly, giving protection and admit the traditional way of life and livelihood of the inhabitants.

In addition, main part of the Torres Strait is called the Torres Strait Protected Zone. According to Article 10 of the Australia-PNG Treaty 2010, a protected zone in the Torres Strait

is hereby established comprising all the land, sea, air space, sea-bed and subsoil within the area bounded by the line. The principal purpose of establishing the Protected Zone, and in determining its northern, southern, eastern and western boundaries, is to acknowledge and protect the traditional way of life and livelihood of the traditional inhabitants belong to movement and traditional fishing ground. Third, The foundation of The Protected Zone is to preserve and protect marine environment with assigned this area being Particular Sensitives Area (PSSA)) To further regulating in regards of prevention, reduction and controlling marine environment from pollution, Australia and Papua New Guinea shall take legislative and other measures to protect and preserve marine environment. This measure surely must consistent and comply to international law of the sea such UNCLOS 1982 and several IMO Conventions.

The establishment of The Protected Zone in The Torres Strait, it is brough strength-legal basis for Australia Government to apply and uphold the compulsory pilotage regime against every ships who passes on this territorial. As consequences of , the vessels who enter or transit to Australia's territorial water zone, they could charge by this mandatory within paying service fee. This Policy is not only addressed to bring subjective benefits for Australia government, but the transit vessel would get return from the fee. Event this regime has debated by another countries, cause its violate passage right in UNCLOS. The pilotage regime has granted permission from IMO in 2005.

D. Conclusion

Regime Compulsory Pilotage can be used for pollution assistance in the Malacca Strait area as a strait used for international trade routes. This regulatory model has proven to be effective in The Torres Strait, which are waters with heavy ship traffic such as the Malacca Strait and the Dover Strait. Through the pilotage approach, every ship crossing the Malacca Strait will be charged a service fee / insurance fee which is used for the conservation and maintenance of the Malacca Strait waters which enter the territorial territories of each coastal state. However, one important thing before this policy is implemented by means of the Government of The Republic of Indonesia together with the Government of the Kingdom of Malaysia must negotiate and determine the maritime boundaries of their respective territories in the Malacca Strait. This commitment should be followed up then with a joint declaration on traffic navigation and follow-up on marine pollution in the Malacca Strait area.

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