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Abstract

Having reputations as two of the world's most critical straits for international shipping activities, the problem of vessel-source pollution has always been endemic in the Straits of Malacca and Singapore. With the projected steady increase of navigational traffic through the Straits of Malacca and Singapore each year, this situation would eventually create more intricate situations for the littoral States of the Straits, namely Malaysia, Indonesia and Singapore especially in maintaining the marine environment of the Straits from vessel-source pollution. Therefore, this article ventures into possible shipping control mechanisms available to the littoral States, namely measures provided by the IMO and any other potential unilateral measures that the littoral States could resort to. The potential legal and political effects arising out of the implementation of these proposed measures are also examined and deliberated.

Keywords

Balancing, tensions, between, shipping, marine, environmental, protection, straits, malacca, singapore, Have, straits, reached, environmental, tipping, point

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Balancing the Tensions between Shipping and Marine Environmental Protection in the Straits of Malacca and Singapore: Have the Straits Reached an Environmental Tipping Point?

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Abstract: Having reputations as two of the world's most critical straits for international shipping activities, the problem of vessel-source pollution has always been endemic in the Straits of Malacca and Singapore. With the projected steady increase of navigational traffic through the Straits of Malacca and Singapore each year, this situation would eventually create more intricate situations for the littoral States of the Straits, namely Malaysia, Indonesia and Singapore especially in maintaining the marine environment of the Straits from vessel-source pollution. Therefore, this article ventures into possible shipping control mechanisms available to the littoral States, namely measures provided by the IMO and any other potential unilateral measures that the littoral States could resort to. The potential legal and political effects arising out of the implementation of these proposed measures are also examined and deliberated.

Keywords: International Environmental Law, Straits of Malacca and Singapore, Law of the Sea

Introduction

THE STRAITS OF Malacca and Singapore are two of the most important shipping lanes in the world that facilitates international trade.¹ These waterways were traversed by more than 70,000 vessels in 2007.² With the emerging economies of East Asian giants namely China, Japan and South Korea, both the Straits of Malacca and Singapore will continue to increase in their significance as tanker pipelines connecting the oil producers in the Middle East with their East Asian consumers.³ If the current trend continues, it is predicted that by 2020, the Straits would be navigated by approximately 150,000 vessels yearly, a double of what they are burdened with now.⁴ Another report by the

¹ Mary George, *Legal Regime of the Straits of Malacca and Singapore* (LexisNexis Malaysia Sdn Bhd, 2008), 16-17.

² Wally Mandryk, 'Lloyd's Marine Intelligence Unit: Strategic Importance of Trade & Shipping in the Straits of Malacca and Singapore' (Paper presented at the Symposium on Safety and Protection of the Marine Environment in the Straits of Malacca and Singapore, Kuala Lumpur, Malaysia, 2008).

³ Chia Lin Sien, 'Alternative Routes for Oil Tankers: A Financial, Technical and Economic Analysis' in Hamzah Ahmad (ed), *The Straits of Malacca: International Co-operation in Trade, Funding & Navigational Safety* (Pelanduk Publications, 1998), 103-104.

⁴ Robert Beckman, 'The Establishment of Cooperative Mechanism for the Straits of Malacca and Singapore under Article 43 of the United Nations Convention on the Law of the Sea' in Aldo Chircop, Ted L. McDorman and Susan J. Rolston (eds), *The Future of Ocean Regime-Building-Essays in Tribute to Douglas M. Johnston* (Martinus Nijhoff Publishers, 2009), 234-235.

Maritime Institute of Malaysia (MIMA) revealed that by the year 2024, the navigational traffic in the Straits of Malacca and Singapore would be around 122, 640 transits annually.⁵

The Straits of Malacca and Singapore are not entirely safe for navigation. The waters of the Straits are rather shallow, and the water level varies with the changing of the tides.⁶ More often than not, the seabed also shifts, creating serious risks of groundings.⁷ The Straits narrow at different points along their length with the narrowest point in the Strait of Singapore being only 3.2 kilometres in breadth hence making navigation in the Straits more intricate.⁸ Accidents and maritime collisions in the Straits of Malacca and Singapore are also influenced by other factors such as the heavy density of traffic, poor visibility during squalls, numerous shoals and banks that often change in location along the waterways, confusing crossing patterns by small domestic craft and several wrecks in certain localities along the Straits.⁹

Oil spill are typical with shipping activities, be it through operational or accidental discharges.¹⁰ Due to heavy shipping activities, it was recorded that coral reef development in the Strait of Malacca is among the lowest in this region.¹¹ Mangrove ecosystem along the Strait of Malacca, especially in the south-western corner of the Malaysian state of Johor is being threatened by constant soil erosion as a result of high navigational density plying the waterway.¹² Besides oil spill, shipping activities discharge other types of harmful and unwarranted wastes through expulsion of marine debris, disposal of sewage, spills of hazardous and noxious chemicals and substances, noise emissions and air pollution.¹³ This condition is further aggravated by the fact that the littoral States' powers to impose environmental protection measures in these waterways are limited by application of accepted international regulations.¹⁴ Their hands and legs are bonded based on the fact that they cannot act unilaterally on matters pertaining to maritime traffic regulation and protection of the marine environment of the Straits.¹⁵

⁵ HM Ibrahim and Mansoureh. Sh, 'Analysis of Carrying Capacity and Critical Governance Strategies for the Straits of Malacca' (Paper presented at the 6th MIMA International Conference on the Straits of Malacca "Chartering the Future", Kuala Lumpur, Malaysia, 2009).

⁶ H.M Ibrahim, Hairil Anuar Husin and Deneswari Sivaguru, 'Physical, Ecological and Demographic Characteristics' in H.M Ibrahim and Hairil Anuar Husin (eds), *Profile of the Straits of Malacca: Malaysia's Perspective* (Maritime Institute of Malaysia, 2008), 40.

⁷ Jon M. Van Dyke, 'Transit Passage Through International Straits' in Aldo Chircop, Ted L. McDorman and Susan J. Rolston (eds), *The Future of Ocean Regime-Building: Essays in Tribute to Douglas M. Johnston* (Martinus Nijhoff Publishers, 2009), 220-221.

⁸ George, above n 1, 14-15.

⁹ Ibid.

¹⁰ Mohd Nizam Basiron, 'Anatomy of an Oil Spill' (2010) 17(3) *MIMA Bulletin*, 39.

¹¹ Amelia Emran, *The Regulation of Vessel-Source Pollution in the Straits of Malacca and Singapore* (Master of Maritime Studies (Research) Thesis, University of Wollongong, 2007), 14-16.

¹² Mohd Nizam Basiron, 'Sea-Based Sources of Marine Pollution' in H.M Ibrahim and Hairil Anuar Husin (eds), *Profile of the Straits of Malacca: Malaysia's Perspective* (Maritime Institute of Malaysia, 2008), 120-125.

¹³ Jo O'Brien, 'Impacts on Shipping' (16 June 2009) *Coast and Marine Publication* <<http://www.environment.gov.au/coasts/mbp/publications/south-east/pubs/impacts-shipping.pdf>>.

¹⁴ Robert Beckman, 'Transit Passage Regime in the Straits of Malacca: Issues for Consideration' (Paper presented at the Building A Comprehensive Security Environment in the Straits of Malacca, Kuala Lumpur, 2004), 244-249.

¹⁵ Straits states can take appropriate enforcement measures against recalcitrant vessels that have violated regulations formulated under Article 42(1) (a) & 42 (1) (b) and this violation has caused or threatening to cause major damage towards the marine environment of the straits. This is further reiterated in Article 233 (Part XII) of the LOSC.

Currently, there is an ongoing co-operative mechanism scheme between the littoral States and the User States in managing the issues on safety of navigation and the control of vessel-source pollution in the Straits.¹⁶ However, given the fact that the Straits are projected to accommodate constant increase of shipping traffic in the future, the current available environmental protection regime including the co-operative mechanism scheme may not be entirely sufficient to protect the marine environment of these shipping lanes. Besides, with more vessels plying the Straits, the question of safety and environmental concerns will become more acute for the littoral States bordering the Straits of Malacca and Singapore.¹⁷ If this situation continues, it may be difficult in the future to promote environmental sustainability in the waters of the Straits of Malacca and Singapore. As such, suggestions have been made to designate the Straits as a Particularly Sensitive Sea Areas (PSSA) to further protect and preserve the marine environment of the Straits.¹⁸

The Straits of Malacca and Singapore PSSA?

The International Maritime Organization (IMO) is the only international body responsible for PSSA designation. A PSSA is an area that needs special protection through action by IMO because of its significance for recognised ecological or socio-economic or scientific reasons and which may be vulnerable to damage by international maritime activities.¹⁹ An application to IMO for designation of a PSSA and the adoption of Associated Protective Measures (APMs), or any amendment(s) to them, may be submitted only by a Member Government of the IMO.²⁰ A co-ordinated proposal should be formulated where two or more Governments have a common interest in that particular area.²¹ Resolution A.982 (24) or its full name, *Revised Guidelines for the Identification and Designation of PSSAs*, states that:

An application for PSSA designation should contain a proposal for an APM or measures aimed at preventing, reducing or eliminating the threat or identified vulnerability. APMs for PSSAs are limited to actions that **are to be**, or **have been**, approved and adopted by IMO, for example, a routeing system such as an area to be avoided.²² (emphasis added)

Assuming that both Straits of Malacca and Singapore are to be designated as a PSSA, there are a few APMs that might be potentially suitable for imposition.

¹⁶ Joshua H Ho, 'Enhancing Safety, Security and Environmental Protection of the Straits of Malacca and Singapore: The Co-operative Mechanism' (2009) 40(2) *Ocean Development and International Law*, 233-247.

¹⁷ BA Hamzah, 'Straits of Malacca: Burden Sharing, Transit Passage & Sovereignty of Coastal State' (Paper presented at the International Symposium on Safety and Protection of the Marine Environment in the Straits of Malacca and Singapore, Kuala Lumpur, 2008), 77-83.

¹⁸ Jon M. Van Dyke, 'Transit Passage Through International Straits' in Aldo Chircop, Ted L. McDorman and Susan J. Rolston (eds), *The Future of Ocean Regime-Building: Essays in Tribute to Douglas M. Johnston* (Martinus Nijhoff Publishers, 2009), 193; Nihan Unlu, 'Current Legal Developments: Straits of Malacca' (2006) 21(4) *The International Journal of Marine and Coastal Law*, 546-547.

¹⁹ IMO, *Particularly Sensitive Sea Areas* (2002) International Maritime Organization <http://www.imo.org/environment/mainframe.asp?topic_id=1357>.

²⁰ IMO, *Revised Guidelines For the Identification and Designation of Particularly Sensitive Sea Areas* (2006) IMO <http://www.imo.org/includes/blastDataOnly.asp/data_id%3D14373/982.pdf>.

²¹ *Ibid.*

²² *Ibid.*

Traffic Limitations on the Straits of Malacca and Singapore

One of the potential APMs could be through the introduction of a scheme of limitation on shipping traffic. Such a plan to cap shipping movement in the Straits was suggested by the Malaysian government in 2008.²³

Although customary international law and the 1982 United Nations Convention on the Law of the Sea (LOSC) dictate that straits shall always be open for navigation, the State practice disclosed in the Montreux Convention is a historical exception to this general rule, however, the limitations prescribed by the Montreux Convention upon merchant vessels in Turkish Straits are only applicable in war and the limitations on average aggregate tonnage only apply to naval ships.²⁴ This instance of divergent State practice shows that putting limitations or conditions on vessels transiting straits is not entirely unprecedented.

A study conducted by Singapore revealed that the Strait of Malacca can sustain traffic up to five times the current level,²⁵ however, the data used in this analysis was dated and lacks precision.²⁶ The study also focused only on enhancing the carrying capacity of the Straits of Malacca and Singapore while at the same time maintaining navigational safety, and was not specifically focused on protecting and preserving the marine environment of the Straits. Meanwhile, a study by MIMA asserted that congestion will start when the number of ships reach the carrying capacity of 122, 640 annually, which is predicted to happen in 2024.²⁷

In advancing their submission in the IMO, the littoral States may contend that the proposed traffic limitation is critical to enhancing navigational safety by ensuring that the traffic in the Straits of Malacca and Singapore does not escalate to such a degree that it causes danger to mariners. They may also contend that this protective measure does not contravene the LOSC as the Convention provides that States have an overarching obligation to protect and preserve the marine environment.²⁸ If shipping traffic is not capped and it goes beyond the carrying capacity of the Straits, the marine environment of the Straits will ultimately suffer from undesirable consequences.²⁹

Toll-levying in the Straits of Malacca and Singapore

A toll-levying regime was previously practised in the Danish Straits, which comprise three channels connecting the North and Baltic Seas through the Kattegat and Skagerrak.³⁰ Beginning 1857, the payment of Sound Dues was discontinued.³¹ This previous practice by Denmark shows that the toll regime imposed upon navigating vessels is not something which is entirely unprecedented although it is now over 150 years since it was discontinued and it has not been replicated in any other part of the world. The willingness of the maritime powers

²³ Teh Eng Hock, 'Malaysia Seeks to Limit Maritime Traffic in Straits of Malacca' (2008) *The Star Online* <<http://thestar.com.my/news/story.asp?sec=nation&file=/2008/10/22/nation/2335917>>.

²⁴ The Montreux Convention, 1936 as quoted in Nihan Unlu, 'The Legal Regime of the Turkish Straits' in Gerard J. Mangone (ed), *International Straits of the World* (Martinus Nijhoff Publishers, 2002), 147-158.

²⁵ *Working Paper For "Carriage Capacity of the Straits of Malacca and Singapore"* (2009) SG Press Centre <http://www.news.gov.sg/public/sgpc/en/media_releases/agencies/mpa/press_release/P-20091028-2.html>.

²⁶ *Ibid.*

²⁷ Ibrahim, above n 5.

²⁸ Article 192 of the LOSC reads 'States have the obligation to protect and preserve the marine environment'.

²⁹ *Ibid.*

³⁰ Alex G. Oude Elferink, 'The Regime of Passage of Ships through the Danish Straits' *NILOS Papers Online*, 2.

³¹ *Ibid.*

at that time to pay hefty compensation to Denmark in return for free navigation represented an acknowledgement of the rights of a coastal State to impose a toll, however wide acceptance of relevant provisions of the LOSC would generally be considered as overriding that earlier acknowledgement.

There are a number of obstacles to introducing a toll regime in the Straits of Malacca and Singapore. Firstly, toll-levying is inconsistent with the exercise of unimpeded transit passage as provided for in Articles 38(1)³² and 44³³ of the LOSC. Both these articles of the LOSC reiterated that transit passage exercised by foreign vessels through straits used for international navigation could not be hampered by States bordering straits. Article 26(1) of the LOSC also prohibits a State from levying payment of tolls from vessels for the sole reason of navigation through the territorial sea of the State. Secondly, if transiting ships are bound to pay tolls, this may create long queues for ships to pass through the Strait of Malacca,³⁴ causing undue delays in the voyage of vessels which ultimately result in economic losses for many companies that rely on shipping to regulate their trading activities.³⁵ Thirdly, it would be difficult to devise the criteria for determining the toll fee, in particular, whether it should be based on the size of the ship, the cargo it is carrying or the potential of the vessel to pollute the seas.

The idea behind this proposed APM is to facilitate navigation through the Straits of Malacca and Singapore; the toll collection would not generate extra and excessive income for the littoral States as the money would be used to fund the maintenance of the Straits.³⁶

Compulsory Pilotage in the Straits of Malacca and Singapore

The Torres Strait in Australia is the only strait used for international navigation in which compulsory pilotage applies.³⁷ Currently, pilotage services are available and offered by major ports along the Straits of Malacca and Singapore.³⁸ Pilotage is made compulsory when ships are leaving and entering port limits.³⁹ But pilotage has never been made compulsory for ships navigating the Straits of Malacca and Singapore. Nevertheless, since 1977, vessels are recommended to take on a pilot when navigating through critical areas within the Straits.⁴⁰ Due to fear of future shipping casualties, there have been suggestions that the usage of a pilotage system in the Straits of Malacca and Singapore should be introduced.

In view of the critical nature of the Straits of Malacca and Singapore and the volume of shipping traffic passing through it, there is likely to be considerable controversy over the

³² Article 38(1) of the LOSC reads 'in straits..., all ships and aircraft enjoy the right of transit passage, which shall not be impeded...?.'

³³ Article 44 of the LOSC states 'States bordering straits shall not hamper transit passage...?.'

³⁴ George, above n 1, 57-60.

³⁵ Ibid.

³⁶ Mohd Hazmi bin Mohd Rusli, 'Shipping Controls in Critical Straits: A Study of the Legal Feasibility of the Designation of the Straits of Malacca and Singapore as a Particularly Sensitive Sea Area' (Paper presented at the International Conference on Environment 2010, Penang, Malaysia, 2010).

³⁷ Julian Roberts, 'Compulsory Pilotage in International Straits : The Torres Strait PSSA Proposal' (2006) 37(1) (1 January 2006) *Ocean Development & International Law*, 100-101.

³⁸ For instance, Port Klang Authority makes it compulsory for ships to engage pilots when entering port limits. *Port Klang* (2000) portsworld.com <<http://www.portsworld.com/ports/portklang.htm>>.

³⁹ Ibid.

⁴⁰ Michael Leifer, *International Straits of the World*, Malacca, Singapore and Indonesia (Sijthoff & Noordhoff, 1978), 205.

proposed plan to introduce compulsory pilotage in the Straits. Firstly, nations that are against such a plan would contend that Malaysia, Indonesia and Singapore have breached the provisions of the LOSC which allows for the unimpeded navigational regime of transit passage in straits used for international navigation. Opposing States may argue that Malaysia, Singapore and Indonesia have violated Articles 38(1) and 44 of the LOSC that prohibit States bordering straits from hampering transit passage. Secondly, they would assert that since the Straits of Malacca and Singapore are indispensable in regulating global trade, the imposition of compulsory pilotage would not only impede passage, but it would also unreasonably increase shipping costs, as vessels and ships would have to employ pilots while transiting the Straits. It could be argued that increases in the cost of shipping would adversely affect the world's economy. Thirdly from a practical perspective, could the littoral States provide a guarantee that the number of pilots would be sufficient for the Straits of Malacca and Singapore which accommodates more than 70,000 ship transits annually? These vessels could not expect their voyage to be impeded just because pilots could not be made available; this would clearly be inconsistent with the LOSC.

Malaysia, Singapore and Indonesia are, however, not lacking in arguments to rebut these potential criticisms and opposition to the compulsory pilotage plan. On the first issue, these littoral States may assert that the imposition of compulsory pilotage in the Straits of Malacca and Singapore would not impede transit passage, but on the other hand would facilitate safe and environmentally responsible passage of the Straits. For narrow parts of the Straits that are burdened with high navigational traffic, compulsory pilotage would be needed in order to prevent future mishaps and casualties.

It is more difficult for Malaysia, Singapore and Indonesia to rebut the other opposing arguments.⁴¹ Indeed, in comparison with the Torres Strait, the Straits of Malacca and Singapore are heavily relied upon to link the East and the West. The volume of shipping traffic in the Straits of Malacca and Singapore is more than 70,000 vessels per year,⁴² approximately 24 times higher than that of the Torres Strait with 3000 transits per annum.⁴³ The imposition of compulsory pilotage would, inevitably increase global shipping costs. The issue of sufficiency of pilots is also a difficulty which would need to be addressed. With the high number of ships passing through the Straits, would Malaysia, Singapore and Indonesia be able to provide enough pilots?⁴⁴ This difficulty would need to be resolved prior to preparing the Straits of Malacca and Singapore for the imposition of compulsory pilotage with the littoral States of the Straits having to make proper arrangements to meet the future demands of pilots.⁴⁵

⁴¹ Mohd Hazmi bin Mohd Rusli, 'The Application of Compulsory Pilotage in Straits Used for International Navigation: A Study of the Straits of Malacca and Singapore.' (Paper presented at the 4th Oceanic Conference on International Studies, Auckland, 2010) <www.ocis.org.nz/ocis/files/Rusli.doc>.

⁴² Beckman, above n 4, 234-235.

⁴³ AMSA, *The Torres Strait Particularly Sensitive Sea Area* (2010) Australian Maritime Safety Authority <http://www.amsa.gov.au/Marine_Environment_Protection/Torres_Strait/Risk.asp>.

⁴⁴ Ibid.

⁴⁵ Ibid.

Possible Unilateral Measures by Littoral States

The Application of Non-suspendable Innocent Passage in the Straits of Malacca and Singapore

The Straits of Malacca and Singapore are located between two main oceans of the world that are the Indian Ocean in the West via the Andaman Sea and the Pacific Ocean via the South China Sea in the East. These waterways thus fit the definition of a strait used for international navigation in Articles 37⁴⁶ and 38(1) of the LOSC. Hence, the transit passage regime is applicable in these Straits and inevitably opens them up to international shipping traffic with the burden falling on the littoral States of accommodating unlimited shipping traffic.⁴⁷ This would be the case if the Straits of Malacca and Singapore are considered as one entity. If they are treated separately, the navigational regime that would apply to the Strait of Malacca would not be transit passage, as it connects the Andaman Sea and the Indian Ocean to the Strait of Singapore, which partly lies within the territorial sea of Singapore and the Indonesian archipelagic waters. The LOSC does provide for non-suspendable innocent passage to apply to a strait which connects one part of the high seas or the Exclusive Economic Zone (EEZ) to the territorial sea of another State.⁴⁸

If Malaysia and Indonesia, as States bordering the Strait of Malacca, supported such an interpretation of the Strait's status, the navigational regime in the Strait of Malacca would be viewed differently by these States who would contend that foreign vessels would cease to have the right to exercise transit passage in the Strait.⁴⁹ The application of non-suspendable innocent passage would allow both Malaysia and Indonesia to put more shipping control mechanisms on ships and aircraft transiting the Strait.⁵⁰ Submarines are required to surface while exercising navigation and aircraft would have no freedom of overflight over the Strait of Malacca.

However this interpretation of the navigational regime applicable in the Strait would be highly contentious with other members of the international maritime community. Given the fact that the extent of freedom of navigation provided by the non-suspendable innocent passage regime is less liberal than that of transit passage, the smooth flow of vessels through the Straits of Malacca and Singapore which has been enjoyed since before the LOSC came into force would inevitably be disrupted. In addition, the fact that the Strait of Malacca is a strait used for international navigation of long-standing⁵¹ and that the littoral States have

⁴⁶ Article 37 states that transit passage 'applies to straits which are used for international navigation between one part of the high seas or an exclusive economic zone and another part of the high seas or an exclusive economic zone'.

⁴⁷ Naoya Okuwaki, 'Improving Navigational Safety Governance in Straits of Malacca and Singapore' (Paper presented at the International Symposium on Safety and Protection of the Marine Environment of the Straits of Malacca and Singapore, Kuala Lumpur, 2007), 17-21.

⁴⁸ Article 45(1) (b) of the LOSC provides that non-suspendable innocent passage is applicable for foreign vessels that sail through a strait used for international navigation that connects a High Sea/EEZ to the territorial waters of a foreign State.

⁴⁹ Mohd Hazmi bin Mohd Rusli, 'Shipping Controls in the Malacca Strait: Has the Strait Reached an Environmental Tipping Point?' (Paper presented at the 7th Asian Law Institute Conference, Kuala Lumpur, Malaysia, 2010).

⁵⁰ *Ibid.*

⁵¹ Vivian Louis Forbes, 'Managing Marine Environment, Resources and Space in the Torres Strait: The Future Charted' (Paper presented at the Sixth MIMA Conference on the Straits of Malacca: Charting the Future, Kuala Lumpur, 2009).

over many years acquiesced in the application of transit passage to the Strait are indications of State practice and *opinio juris* going towards the customary international law position that transit passage is applicable in the Straits of Malacca and Singapore. The littoral States of the Straits of Malacca and Singapore have acknowledged the importance of the Straits to shipping even before the LOSC entered into force,⁵² however, the littoral States could argue in response that the application of non-suspendable innocent passage would not impede and hamper free passage of shipping. If ships complied with accepted international rules and did not commit any acts that would prejudice the peace, good order or security of the littoral States, then the littoral States would not interrupt such passage.

The Re-adoption of Three Nautical Mile Territorial Sea Claims in the Strait of Malacca

The extension of the maximum territorial sea limit from 3 nautical miles to 12 nautical miles led to the introduction of the transit passage regime in straits used for international navigation to ensure smooth flow of maritime traffic through straits. For straits that are wide enough and possess a convenient high seas or EEZ corridor, transit passage would not be applicable; instead freedom of navigation in the high seas or EEZ corridor would apply along such routes.⁵³

Japan did extend its territorial sea limits from 3 nautical miles to 12 nautical miles as promulgated by its domestic law,⁵⁴ however, the application of the 12 nautical mile limit was excepted for five straits lying within the Japanese territorial sea which are Soya, Osumi, Tsushima, Tsugaru and Korea Straits.⁵⁵ Tsushima Island straddles the middle of the waterway, dividing the Korea Strait into two parts i.e. the Western Channel and the Eastern Channel. South Korea shares the Western Channel of the Korea Strait with Japan, and did the same thing by not extending its territorial Sea more than 3 nautical miles in some parts of the Strait.⁵⁶ They did this mainly due to security reasons and to provide freedom of navigation to Soviet warships to sail through their territorial Sea.⁵⁷

The introduction of a 12 nautical mile territorial sea limit in the Strait of Malacca by Malaysia and Indonesia has resulted in some parts of the Strait becoming integrated in totality

⁵² Republic of Indonesia Department of Foreign Affairs, *Joint Statement of the Governments of Indonesia, Malaysia and Singapore* (Department of Foreign Affairs, Republic of Indonesia, 1971), as quoted in Leifer, above n 40, 204.

⁵³ Article 36 of the LOSC states that transit passage does not apply to a strait used for international navigation if there exists through the strait a route through the high seas or through an EEZ of similar convenience with respect to navigational and hydrographical characteristics.

⁵⁴ Article 1 of Japan's Law on the Territorial Sea states "the territorial Sea of Japan comprises the areas of the sea extending from the baseline to the line twelve nautical miles seaward thereof." Paragraph 2 of the Supplementary Provision of the same law excludes the application of Article 1 to Soya Strait, Tsugaru Strait, the eastern channel of the Tsushima Strait, the western channel of the Tsushima Strait and the Osumi Strait. These designated areas remains with 3 nautical miles territorial sea limits regime. See 'Law on the Territorial Sea' (Law No.30 of 2 May 1977) <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/JPN_1977_Law.pdf>; Yutaka Kawasaki-Urabe and Vivian L. Forbes, 'Japan's Ratification of UN Law of the Sea Convention and Its New Legislation on the Law of the Sea' (1997) 1996-1997 *IBRU Boundary and Security Bulletin*, 92-100.

⁵⁵ *Ibid.*

⁵⁶ Territorial Sea and Contiguous Zone Act, Law No. 3037, Promulgated on 31 December 1977, amended by Law No. 4986 which was promulgated on 6 December 1995, as quoted in Park Hee Kwon, *The Law of the Sea and Northeast Asia: A Challenge for Cooperation* (Kluwer Law International, 2000), 168-179.

⁵⁷ Chi Young Pak, 'The Korean Straits' in Gerard J. Mangone (ed), *International Straits of the World* (Martinus Nijhoff Publishers, 1988), 75-77.

as a territorial Strait, particularly in areas having breadths of 24 nautical miles or less. Malaysia and Indonesia have full sovereignty over the Strait, however, as far as regulating shipping traffic is concerned, their powers are limited. Should both nations revert back to their former territorial sea limits of 3 nautical mile in the Strait of Malacca, there would be a 'high-seas or EEZ' corridor running through the Strait. This could nullify the application of transit passage in the Strait of Malacca.

With transit passage ceasing to be applied, ships and vessels would have the freedom to navigate in the high seas or EEZ corridor within the Strait of Malacca. They would be bound by a more restricted innocent passage regime if they traverse the Strait in areas within the 3 nautical mile limit from the baseline of the two littoral States. Hence, a 'marine environmental protection buffer zone' or a 'pollution prevention bubble' could be created within the Strait where the littoral States are given more powers by international law to regulate ship movements and traffic. This would put the littoral States in a better position to monitor pollution from vessels as well as enhancing security in areas of the Strait which are closest to the shore. There are no provisions in the LOSC and customary international law that prevent a State from reverting to its former territorial sea limits. Article 3 of the LOSC allows every State to establish the breadth of its territorial Sea up to a limit not more than 12 nautical miles, measured from its territorial sea baseline. The Strait of Malacca is quite wide at its north western entrance where it is around 200 miles from one coast to the other. However the narrowest point of the Strait of Malacca is between Tanjung Piai, located at the south-western tip of Peninsular Malaysia to Pulau Kerimon Kecil in Indonesia, which measures around 8.4 nautical miles. If the littoral States of the Strait of Malacca reverted to a 3 nautical mile territorial sea limit in the Strait, it would leave approximately 2.4 nautical miles of high seas/EEZ corridor at the narrowest point. It is true that Malaysia and Indonesia would sustain some significant territorial and resource losses if they applied a 3 nautical mile territorial sea limit at the northern part of the Strait. Not only they would they lose 9 nautical miles of their territorial sea, they would also forego their rights to exploit the maximum breadth of the EEZ in those areas.

One solution could be for both Malaysia and Indonesia to adopt both 12 nautical mile and 3 nautical mile limits in claiming their territorial sea in the Strait. In areas where the breadths of the Strait are quite wide, the littoral States may apply a 12 nautical mile territorial Sea limit. As the Strait gets constricted in its size, this is where the 3 nautical mile regime should be applied. By doing this, there would be sufficient areas within the Strait that could be a high seas/EEZ corridor for maritime traffic to pass through. The littoral States would then possess a 3 nautical mile territorial sea buffer zone in which they can exercise more power to control marine pollution from vessels in that maritime area. The littoral States would not lose out on EEZ limit claims; as the Strait narrows in breadth, there would be lesser EEZ areas that can be claimed by the littoral States. It is not without precedent to apply both 3 nautical mile and 12 nautical mile territorial sea limits as this has already been practiced by South Korea in relation to the Korea Strait.⁵⁸ Given the success of this regime as implemented by Japan and Korea in some of their straits, this proposal may also be a viable option for the Strait of Malacca.

⁵⁸ Ibid.

Conclusion

It is an irrefutable fact that the Straits of Malacca and Singapore will continue to become important maritime super-highways that accommodate considerable number of shipping traffic in the future. The littoral States cannot manage the protection and preservation of the marine environment of the Straits by themselves because they do not have full capacity to do so, both from a policy and resource perspective. It is not equitable to impose the entire burden for this protection on the shoulders of the littoral States, as the users too, benefit economically from using the Straits of Malacca and Singapore to regulate their shipping industries. As stated earlier, currently, there is an existing co-operative mechanism going on between the littoral States and the user States, however the development of such a mechanism does not go hand in hand with the increasing number of ships plying the Straits of Malacca and Singapore each year. If users of the Straits continue to be reluctant to actively assist, the littoral States may have no other option but to consider resorting to other solutions either through IMO processes or through unilateral measures. These measures, as discussed, may have the effect of restricting the full transit rights that all vessels enjoy now, which in high probabilities, will not be favoured by most users and maritime States. Should the waters of the Straits of Malacca and Singapore end up becoming foul and polluted, this is in itself contrary to the objectives of the LOSC that promotes sustainable balance between shipping and the protection of the marine environment. Indeed, it is important to carefully balance these two important elements so as to ensure that the environmental sustainability of the marine environment Straits of Malacca and Singapore is advocated and upheld.

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