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GOOD GOVERNANCE AND THE SUSTAINABLE DEVELOPMENT GOALS IN SOUTHEAST ASIA

Edited by

Rasyikah Md Khalid and Ainul Jaria Maidin

ROUTLEDGE



Good Governance and the Sustainable Development Goals in Southeast Asia

This book discusses management and governance initiatives undertaken by agencies and stakeholders towards achieving the Sustainable Development Goals (SDGs) in the Southeast Asian region, specifically Malaysia, Indonesia, Thailand and Singapore. It highlights the theories, methodologies and action plans involved in implementing the goals in these countries and the importance of developing a positive relationship between the public and government agencies.

With contributors coming from a range of disciplines and backgrounds across the Association of Southeast Asian Nations (ASEAN) region, this edited collection provides a holistic quantitative and qualitative approach to achieving the SDGs. In order to realise these development objectives, it argues that a strong understanding of the basic principles of governance across all levels is required, supported by effective citizen participation and conflict resolution. It provides a detailed overview of the importance of governance at the country level, addressing the key elements of an integrated framework to support sustainable transitions. Regional case studies highlight processes and recommendations for improving governance and risk management and elevating citizen awareness and participation.

Good Governance and the Sustainable Development Goals in Southeast Asia is a comprehensive and valuable companion for researchers, government agencies and professionals with an interest in the SDGs in Southeast Asia and beyond.

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**Edited by Rasyikah Md Khalid
and Ainul Jaria Maidin**

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Preface

The realisation of the Sustainable Development Goals (SDGs) and various internationally crafted and accepted development objectives depends on a shared understanding of the basic principles of governance amongst the nation-states. This is essential for realising sustainable development at all levels of government and is supported by effective citizen participation and efficient conflict resolution mechanisms. This book provides a detailed overview of the importance of governance in realising the SDGs at the country level. Adopting an interdisciplinary approach, the book examines how the fragmentation and sectoral governance approach can be a critical barrier in achieving the SDGs. The main issues that will be addressed are the logic behind an integrated framework for the governance of the various aspects of the SDGs, the crucial elements needed to implement this framework, and the transitions needed to promote a sustainable world. This book is inspired by the International Sustainable Development Research Society (ISDRS) conferences which have been running for 27 consecutive years. The track themes of the conference support innovative governance theories based on different perspectives that can promote the sustainability agenda. Based on this aspiration, this book also sets out the importance of assessing the associated risks to facilitate the transition towards sustainability. This process requires a deeper consideration of managing the associated risks to promote resilience, enhance democracy and elevate citizen awareness. Promoting good governance in sustainable development aims to assist societies in developing an effective public administration system within a democratic system and implementing sustainable development principles through partnerships at all levels. This book is a comprehensive and valuable companion for students, academia, government and professionals with research interests in aspects relating to SDG promotion and the way forward.

14 Saving the Ramsar sites

Tackling marine pollution in the Straits of Malacca (Goal 14)

Rasyikah Md Khalid, Wan Siti Adibah Wan Dahalan, Mariani Ariffin, Mada Apriandi Zuhir, and Febrin Febrin

Introduction

The Straits of Malacca are known as an important international shipping route. It is the shortest sea route linking the Indian Ocean via the Andaman Sea with the South China Sea to the Pacific Ocean (George, 2008). More than 80,000 vessels pass through both Straits each year, transporting oil and one-third of the world's traded goods (Seatrade Maritime News, 2017). The Straits are also rich with marine resources, with approximately 60% of fish landed in Malaysia worth RM1.2 billion (Gerke & Evers, 2006). In addition, the aesthetic and natural beauty of coastal beaches and islands along both Straits has provided lucrative tourism business for the littoral States (Rusli, 2012).

Be that as it may, the Strait has been long contaminated with oil and bilge discharge from the vessels and land sources and plastic pollution, contributing to environmental deterioration and degradation of marine resources (Freeman, 2003, Kaur, 2015). This chapter focuses on the fate of two Ramsar sites along the Straits, that is Tanjung Piai (Cape of Piai) and Pulau Kukup (Kukup Island). It examines the issue of marine pollution in the Straits through an existing national and international legal framework. This is pertinent since marine pollution prevention will improve the sustainability of life underwater (SDG 14) and increase the resiliency and sustainability of the cities and communities (SDG 11). It also strengthens the legal framework (SDG 16) and international cooperation (SDG 17).

Sustainable Development Goal (SDG) 14

SDG 14 calls for sustainable use of the oceans to conserve marine resources for humanity. This is rather hard to fully accomplish since shipping companies use oceans from countries around the world. They may contribute to the oil spills throughout their journey, which disappear quickly because of waves and currents. Marine pollution also originates from activities of the Straits States, either from solid waste, sewerages from squatters or farming, or industrial effluent. SDG 14 aims at reducing marine pollution by 2025 and minimizing ocean acidification through international scientific collaboration. This is to protect and restore

the marine ecosystem to the best ecological state and strengthen its resiliency to climate change impacts. Marine restoration can be achieved by all States based on available scientific data. By doing this, healthy and productive oceans can be achieved and will eventually benefit all humans.

For fishermen and tourist operators on a small island, a healthy ocean will ensure livelihood sustainability. In this regard, SDG 14 is focusing on ending illegal, destructive fishing methods and overfishing. To this end, sustainable fishing can be achieved through regulated fishing activities and the promotion of research activities that will yield fish breeding. The governments need also limit the number of fisheries subsidies to reduce illegal and overfishing. However, they need to produce other mechanisms to support small-scale fishers and markets. Since the ocean is vast, international cooperation is the key to the success of SDG 14. There are several international conventions in this regard, such as The United Nations Convention on the Law of the Sea (UNCLOS) and the Basel Convention on the Control of Transboundary Movements of Hazardous Waste and Their Disposal. State parties must effectively implement and enforce them to ensure sustainable use of oceans and their resources.

Impacts of marine pollution on Pulau Kukup and Tanjung Piai

Pulau Kukup, or Kukup Island, is the world's second-largest uninhabited mangrove island, while Tanjung Piai or Cape of Piai is the southernmost point of continental Asia. Both sites were gazetted as National Parks under the Johore State Park Corporation Enactment 1989 on 27 March 1997 and 26 February 2004. In addition, Pulau Kukup and Tanjung Piai have also been designated as Wetlands of International Importance under the RAMSAR Convention 1971 on 31 January 2003. Both sites consist of mangroves and intertidal mudflats which provide a good source of income for local fishermen and small tour operators. As the State parks of Johore, both Ramsar sites promote sustainable or responsible tourism to minimize the impact of the tourism activities on the flora and fauna of the areas (Khalid et al., 2013) (see Figure 14.1).

It is estimated that half of the world's 54 endangered mangrove species in the IUCN (International Union for Conservation of Nature) Red List are found on Pulau Kukup and Tanjung Piai. Both sites are also important for flood control, windbreaker, and shoreline stabilization. Nevertheless, Pulau Kukup and Tanjung Piai are exposed to heavy international shipping traffic in the narrow stretch of the Straits (International Maritime Organization, 2017). It is also noted that the increased number of ships anchoring near Tanjung Piai has caused oil spills, naturally eroded the seaward mangrove area, threatening the survival of the endangered mangrove species and the livelihood of the locals in the areas. It is thus pertinent for the littoral States of Malaysia, Singapore, and Indonesia to control marine pollution in the Straits.

Oil and gas industries and shipping activities at and around Tanjung Piai and Pulau Kukup coupled with the surface run-off of lipophilic matters from inland activities may affect the marine environment. This could have adverse impacts on

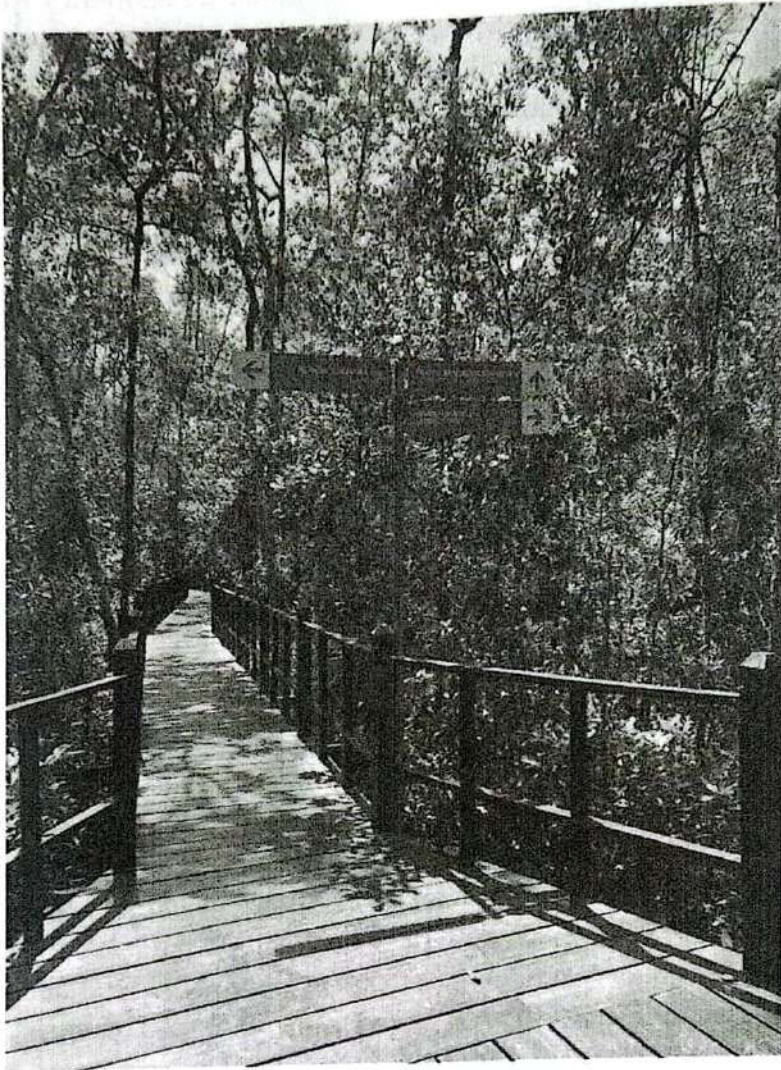


Figure 14.1 Mangroves of Cape of Piai Source: Authors' own

the fisheries in the areas. Petrochemical discharges were reported to have affected fisheries in Kukup since the 1980s. A recent study by Fadzil et al. (2017) evaluates the extent of total petroleum hydrocarbon (TPH) and oil and grease (O&G) pollution in the waters of mangroves listed as Ramsar sites in Johor and found higher TPH and O&G in the area surrounding Pulau Kukup and Tanjung Piai. Oil pollutants from shipping operational activities, including deballasting and tanker cleaning, accidental discharges, and illegal dumping of oil waste into the oceans, could reach the mangrove ecosystem and then may deposit on mangrove roots, seedlings, sediments, and mudflats for a long time and affect the aquatic wildlife and fisheries (Fadzil et al., 2017) (see Figure 14.2).

The O&G readings obtained in the study area (range 0.06–1.50 with mean 0.37 ± 0.28 mg L⁻¹) is higher than the Marine Water Quality Criteria and Standards recommended value of 0.14 mg L⁻¹ for mangroves, estuarine and river-mouth areas. While TPH readings in Tapis crude oil obtained in the study area (ranged from 6.50–80.3 with mean 20.2 ± 15.7 mg L⁻¹) were comparable to levels of



Figure 14.2 Ships anchoring near Cape of Piai Source: Authors' own

TPH in seawater reported elsewhere in Malaysian waters, the highest TPH was found in Pulau Kukup. Thus, continuous monitoring of O&G and TPH level in the waters of Pulau Kukup and Tanjung Piai is necessary to ensure that water quality with respect to these parameters remains suitable to support the mangroves' beneficial uses, including for fisheries activities (Fadzil et al., 2017).

Pulau Kukup and Tanjung Piai are popular fishing areas in Malaysia which are also involved in the aquaculture industry. A study on the selected endocrine disrupting compounds (EDCs) concentration in the mariculture fish at Pulau Kukup found a concentration of Bisphenol A (BPA) in three fish species, namely *Trachinotus blochii* (0.322 ng/g), *Lates calcarifer* (0.124 ng/g) and *Lutjanus campechanus* (0.023 ng/g) (Ismail et al., 2018). Furthermore, 4-octylphenol (4OP) and 4-nonylphenol (4NP) were also detected in *T. blochii* at concentrations of 0.084 ng/g and 0.078 ng/g, respectively. This suggests EDC exposure to the mariculture species, which could then affect human health via food intake.

While such low concentrations of EDCs are believed not to be harmful to adults, they may pose risk to small children (Ismail et al., 2018). Another study on EDCs in mariculture sediments of Pulau Kukup further confirmed the presence of EDCs including BPA, diethylstilbestrol, and propranolol in the ecosystem which indicates potentially unregulated discharges from anthropogenic activities (Ismail et al., 2020). The occurrence of EDCs in the fishes and sediments of Pulau Kukup is of great concern to both human health and the environment. Thus, regular

monitoring of EDCs is recommended in the marine ecosystem in Pulau Kukup and the surrounding areas (Ismail et al., 2020).

Apart from pollution, heavy shipping in the surrounding waters of Pulau Kukup and Tanjung Piai has also exacerbated coastal erosion problems threatening the survival of the mangrove ecosystem in the long term. For instance, tens of thousands of maritime ships that pass through the Straits of Malacca produce oil pollutants and big waves that worsen erosion in Tanjung Piai and reduce the mangrove (Aslinda et al., 2014). Coastal development activities such as land reclamation, artificial islands, breakwaters, and dredging of port channels in the surrounding area have also contributed further to the erosion problem (Aslinda et al., 2014).

Loss of mangrove forests can reduce marine resources and affect the eco-tourism industry in both Ramsar sites. Furthermore, erosion has also been associated with unhealthy vegetation in some parts of Tanjung Piai, particularly the area near the sea or the bay–mangrove periphery. The unhealthy vegetation areas tend to develop gaps which cause them to be susceptible to diseases, poor health, and pests (Razali et al., 2019). The mangroves in Pulau Kukup and Tanjung Piai exist in very fragile ecosystems. They require a delicate balance of environmental conditions to survive and thrive.

Ratification of international conventions

Generally, foreign vessels crossing the Malacca Strait transit at the port of Singapore, thus making the Malacca Strait a very strategic world trade route. The heavy traffic creates a considerable potential for environmental pollution, especially pollution from ship waste generated from ship operations in the form of liquid waste and garbage disposed of carelessly and illegally washing ships. (Robertua et al., 2019). This is on top of pollution from land and ship accidents.

The issues of pollution and erosion along shorelines faced by Pulau Kukup and Tanjung Piai point to the need for better coastal protection at and around them. This can be done if the littoral States cooperate in reducing pollution in the Straits. The following discussion analyses existing legal mechanisms and the issues in tackling marine pollution in the areas. For a start, Malaysia, Singapore, and Indonesia are parties to the following conventions (see Table 14.1).

Under Article 43 of UNCLOS, Malaysia, Singapore, and Indonesia need to cooperate to prevent, reduce, and control pollution from ships in the Straits. Consequently, the Tripartite Technical Experts Group (TTEG) was formed in 1975 as an official forum consisting of technical agencies to deal with navigation safety and pollution prevention in the Straits. The forum became a platform for dialogue and exchange of views on issues of common interest in the Straits. Besides TTEG, the three littoral States also established the Co-operative Mechanism on Safety of Navigation and Environmental Protection of the Straits of Malacca and Singapore in 2007. This has been a primary avenue for the user States, the shipping industry, and other stakeholders to discuss safe navigation and accident reduction with the littoral States. If accidents can be avoided, the

Table 14.1 Relevant Conventions on Marine Pollution Control

No	Convention	Pollution Control Provisions
1	The United Nations Convention on the Law of the Sea (UNCLOS)	<p>Article 42: Coastal States to adopt laws and regulations relating to transit passage through the Straits in preventing, reducing, and controlling pollution.</p> <p>Article 43: User States and State bordering a strait to cooperate for the prevention, reduction, and control of pollution from ships in a strait.</p> <p>Article 193: Coastal States to protect the marine environment in their enjoyment of sovereign right to exploit natural resources.</p> <p>Article 194: measures to minimize the release of toxic and harmful substances.</p> <p>Article 198: duty to notify on imminent or actual damage due to pollution.</p> <p>Article 199: develop contingency plan to mitigate damage.</p>
2	The Basel Convention on the Control of Transboundary Movements of Hazardous Waste and Their Disposal	<p>Article 1: plastics covered if defined in Annex I or contain hazardous characteristic in Annex III or "household waste" under Annex II.</p> <p>Article 4 (2): States to reduce the generation of hazardous and other wastes to the minimum, to ensure adequate disposal facilities and to minimize transboundary movement.</p> <p>Annex IV: disposal options for plastic waste (landfill, incineration, and recycling).</p>
3	Basel Convention (post COP14, 2019 & effective 1/1/2021)	<p>Plastic wastes presumed to be hazardous and subject to the prior informed consent (PIC) procedure (except recyclable cured resins, non-halogenated and fluorinated polymer).</p> <p>States to monitor the movement of plastic exported to other countries.</p>
4	International Convention for the Prevention of Pollution from the Ships (MARPOL) 73/78 Annex I, II, III, VI, V and Protocol 97 (Annex IV)	<p>Annex V on Regulation for the Prevention of Pollution by Garbage from the Ships provides that dumping of all plastics into the sea including synthetic rope, synthetic fishing nets, plastic garbage bags, and incinerator ashes from plastic products are banned under Regulation 3(1)(a), even when the plastics are mixed with other garbage. The disposal of plastics from the ship is allowed only when it is necessary to secure the safety of the ship and those on board or saving life at sea, the escape of garbage is resulting from damage to the ship, or it is due to the accidental loss of synthetic fishing nets (Regulation 6).</p>
5	International Convention for the Control and Management of Ships' Ballast Water and Sediments 2004	<p>Prevent the spread of harmful aquatic organisms from one region to another by establishing standards and procedures for the management and control of ships' ballast water and sediments. Thus, all ships in international traffic are required to manage their ballast water and sediments to a certain standard, according to a ship-specific ballast water management (BWM) plan.</p>

(Continued)

Table 14.1 (Continued)

No	Convention	Pollution Control Provisions
6	International Convention on the Control of Harmful Anti-fouling Systems on Ships 2001	The Convention prohibits the use of harmful organotin in anti-fouling paints used on ships and establishes a mechanism to prevent the potential future use of other harmful substances in anti-fouling systems.
7	International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC 90) and Protocol (OPRC-NHS 2000)	The OPCR facilitates international cooperation and mutual assistance in preparing for and responding to major oil pollution incidents. It requires States to plan and prepare by developing national systems for pollution response. Likewise, ships must also be covered with preparedness and response regimes in case of oil incidents. The Protocol was adopted to combat major incidents of Hazardous and Noxious Substances (NHS). Thus, ships are required to carry a shipboard pollution emergency plan to deal with such incidents.

marine environment of the Straits can be spared from unwarranted oil and other noxious substances spills (Rusli, 2012).

This cooperation is enhanced through a memorandum of agreement signed between the Global Environmental Facility, the International Maritime Organization (IMO), the World Bank, the littoral States, and the shipping industry in 2006 (Wan Dahalan et al. 2013). Malaysia, Indonesia, and Singapore are also members of the UNEP's (United Nations Environment Programme) Coordinating Body on the Seas of East Asia (COBSEA). Although there is no regional convention between them, their programmes promote compliance with existing environmental treaties and are based on member State goodwill. All States have given good commitments towards ensuring safe navigation, which will eventually reduce oil spills and marine pollution in the area.

Legal issues in tackling marine pollution

a) No right to suspend transit passage

Article 233 of the UNCLOS provides that the Straits State may take appropriate enforcement measures if a foreign vessel has committed a violation of the generally accepted international regulations in relation to prevention, reduction, and control of pollution and causing or threatening major damage to the marine environment of the Straits. Violations of the regulation constituting threats of significant damage to the marine environment will depend on the interpretation of Article 233. Nevertheless, littoral States have no right to suspend transit passage as it is not covered under Article 233. Furthermore, Article 38 establishes that

all ships and aircraft enjoy an absolute right of transit passage. Thus, the Straits States have limited abilities to enforce their regulations in cases of wastes dumped by transit vessels. Article 42 also limits the coverage of enforcement to discharge of oil, oily waste, and noxious substance.

b) Inadequate Straits State laws for marine pollution control

Among the three littoral States, Indonesia has the lowest standards of control over marine plastic pollution in its territorial water and it has the fewest laws to regulate the deliberate dumping by vessels in its Maritime Zones. Indonesian law and regulations provide no specification on the disposal or discharge of plastic into the marine environment, and it has already faced the problem of plastic waste invading into its rivers and stream. In contrast, Malaysia is struggling with maritime law enforcement that is sectoral and not uniform (Mustafa & Ariffin, 2011). In addition, since there is inconsistency in the definitions of dumping and waste, the three littoral States have different perspectives on the problem. Besides, the guidelines provided under the Basel Convention on plastic waste management are not binding, making compliance difficult to enforce (Raubenheimer & McIlgorm, 2018).

c) Increasing number of vessels anchoring near Tanjung Piai

Around 80,000 vessels pass through the Straits of Malacca annually and this is increasing. Many of which have been anchoring near Tanjung Piai, which is located at the juncture of the Straits of Malacca and the Straits of Singapore, while waiting for the green light to enter Singapore's ports. As Tanjung Piai is located at the international border, it is inevitable that the vessels will stop nearby and discharge oil and other waste into the sea off Tanjung Piai. This pollutes water and threatens the marine and mangrove species in and around Tanjung Piai (see Figure 14.3).

Indonesia's response towards pollution incidents in the Straits of Malacca

In 2020, according to the Coordinating Ministry for Maritime Affairs and Investment of the Republic of Indonesia, there were three shipwrecks in the Straits of Malacca and Singapore, namely the *M.V. Shahrax*, *M.V. Samudra Sakti I*, and *M.V. Tina I* (Biro Komunikasi Kemenko Bidang Maritim dan Investasi, 2021). Foreign vessels often carry out illegal activities to reduce operating costs and avoid sanctions from port authorities, and Singapore regulations require that every ship that docks in Singapore ports be clean of waste, thereby encouraging illegal dumping of waste in the Straits of Malacca (Robertua et al., 2019). Indonesia ratified the United Nations Convention on the Law of the Sea in 1982 (UNCLOS 1982) through Law No. 17 of 1985 concerning UNCLOS 1982. Based on this Law, all regulations contained in UNCLOS 1982 are entirely

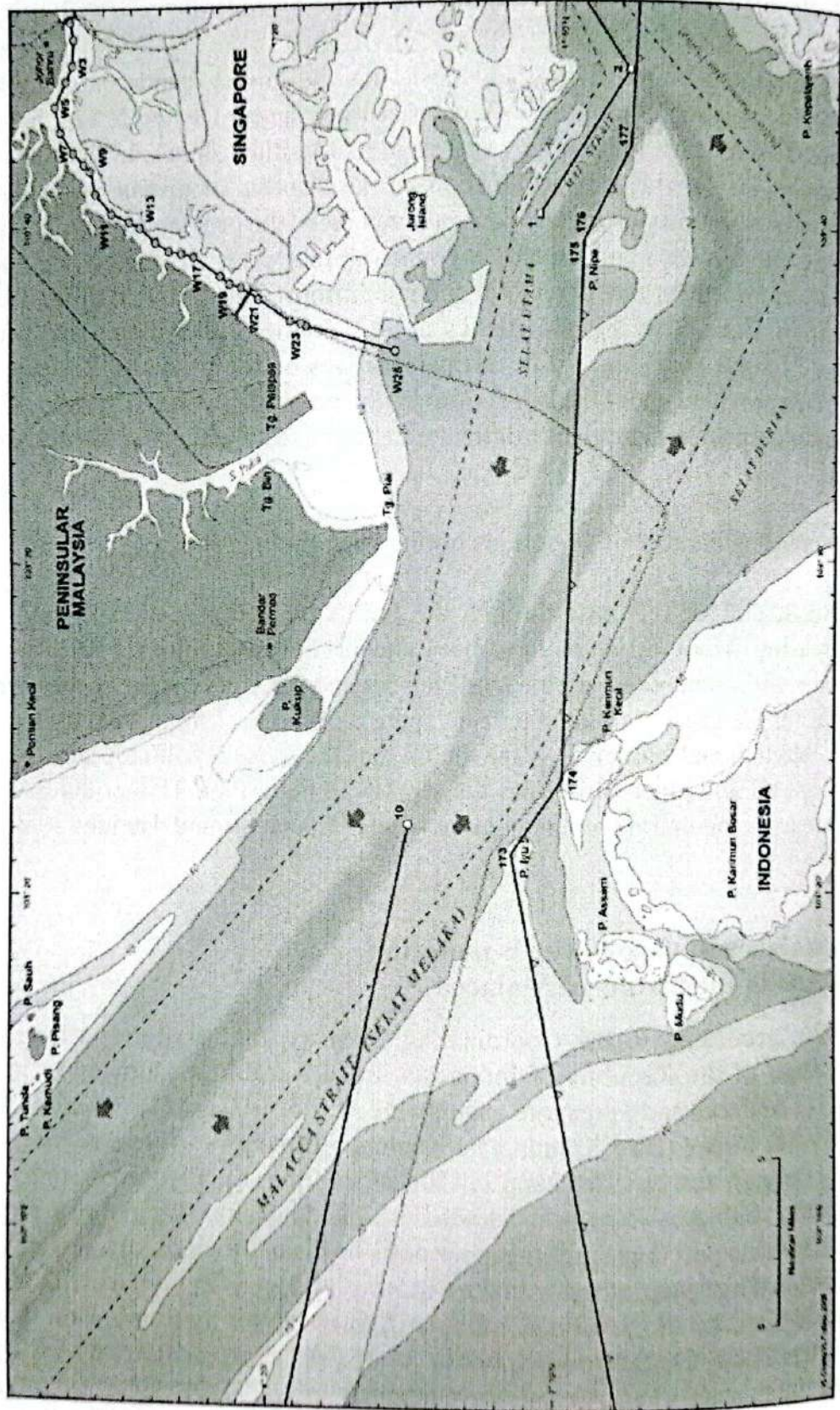


Figure 14.3 Map of Pulau Kukup and Tanjung Piai Source: Hamzah, Forbes, Jalil & Basiron (2014)

accepted by Indonesia. Furthermore, Article 1 of this Law states that "ratification of UNCLOS 1982, a copy of the original text in English is attached to this Law". On that basis, Indonesia has the authority to utilize, protect, and maintain the sea's resources under its jurisdiction. In addition, Article 207 to Article 212 of UNCLOS 1982 also mandate the obligation of countries participating in the Convention to make national regulations or laws to prevent, reduce, and control marine pollution. Thus, in national law, each party has its legal framework and institutions. Although based on Indonesian national law, the ratification of UNCLOS 1982 has provided sufficient legal basis for its application in Indonesian law.

Additionally, in Indonesian law related to marine pollution, several related regulations overlap with each other. Some of the laws related to this are:

1. Indonesian Law No. 32/2009 on Protection and Preservation of Environment;
2. Indonesian Law No. 17/2008 on Shipping;
3. Indonesian Law No. 27/2007 on Administration of Coastal Areas and Smaller and Outer Islands as amended with Law No. 1/2014;
4. Indonesian Law No. 31/2004 on Fisheries as amended with Law No. 45/2009;
5. Indonesian Law No. 6/1996 on Indonesian Territorial Water; and
6. Indonesian Law No. 5/1983 on Indonesia Exclusive Economic Zone (EEZ).

The law as described above has direct and specific relevance to the issue of marine pollution, while pollution to the environment is generally regulated in Indonesia Law No. 32/2009 on Protection and Preservation of Environment. The following table (Table 14.2) describes the laws in Indonesia, sources of pollution, regulated legal sanctions, and institutions responsible for marine pollution issues.

Based on Table 14.2 above, Law No. 6/1996 on Indonesian Territorial Water does not regulate sanctions. This law only contains rules related to Indonesian waters, definitions of the Archipelago, Island, Indonesian Waters, Low Water Line, Low Elevation, Gulf, and Sea Lanes, as well as the right of passage for foreign ships, which will be discussed in the next paragraph.

In addition to the law with a higher legal status as described above, further regulation of marine pollution is contained in the following implementing regulations:

1. Government Regulation of the Republic of Indonesia No. 21 of 2010 concerning the Protection of the Maritime Environment;
2. Government Regulation of the Republic of Indonesia No. 82 of 2001 concerning Water Quality Management and Water Pollution Control;
3. Government Regulation of the Republic of Indonesia No. 19 of 1999 concerning Control of Marine Pollution and/or Destruction;
4. Regulation of the President of the Republic of Indonesia No. 83 of 2018 concerning the Handling of Marine Debris;
5. Regulation of the President of the Republic of Indonesia No. 109 of 2006 concerning Mitigation of Oil Spill Emergencies at Sea;

Table 14.2 Indonesian law, pollution sources, and institutional agency on marine pollution

<i>Regulation</i>	<i>Pollution sources</i>	<i>Sanction</i>	<i>Institution</i>
Law No. 32/2009 on Protection and Preservation of Living Environment	Land-based pollution	Administrative sanction, criminal sanction, fine sanction and civil remedies	Central government, municipal government and the Police.
Law No. 17/2008 on Shipping	Dumping and vessel-based sources	Administrative sanction, criminal sanction, fine sanction and civil remedies	Indonesia Navy, Indonesia Territorial Water Police, Civil Servant Investigator under the Ministry of Sea and Fishery.
Law No. 27/2007 on Administration of Coastal Areas and Smaller and Outer Islands as amended with Law No. 1/2014	Land-based pollution, sea-bed activities and activities in area	Administrative sanction, criminal sanction, fine sanction and civil remedies	Central government, municipal government and the Police.
Law No. 31/2004 on Fisheries as amended with Law No. 45/2009	Dumping and vessel-based sources	Administrative and criminal sanction	Indonesia Navy, Indonesia Territorial Water Police, Civil Servant Investigator under the Ministry of Sea and Fishery.
Law No. 6/1996 on Indonesian Territorial Water	Sea-bed activities, activities in area, dumping and vessel-based sources		Central government, municipal government and the Police.
Law No. 5/1983 on Indonesia EEZ	Pollution from activities in area	Criminal sanction, fine, civil remedies	Indonesia Navy

Source: Hananto, 2019.

6. Regulation of the Minister of Transportation of the Republic of Indonesia No. 20 of 2017 concerning Special Terminals and Terminals for Self Interest;
7. Regulation of the Minister of Transportation of the Republic of Indonesia No. PM 58 of 2013 concerning Control of Pollution in Waters and Ports;
8. Regulation of the State Minister of the Environment of the Republic of Indonesia No. 12 of 2006 concerning Requirements and Licensing Procedures for Disposal of Wastewater into the Sea; and

9. Decree of the Minister of Transportation of the Republic of Indonesia No. KP 355 of 2008 concerning the Establishment of the National Command and Control Center for Operations for Mitigating Oil Spill Emergency Situations at Sea (PUSKODALNAS).

Under the Government Regulation No. 19 of 1999 concerning Control of Marine Pollution and/or Destruction, the Government of Indonesia established a mechanism related to reducing marine pollution, including forming a National Coordination Team for the handling of marine debris. However, as officially stated by the Directorate of Coastal and Small Islands Utilization and Directorate General of Marine Spatial Management, various parties/sectors have made efforts to overcome and control pollution. However, they are still sectoral and not yet integrated, which cannot be done partially and must involve many parties/sectors (Biro Komunikasi Kemenko Bidang Maritim dan Investasi, 2021).

In addition, as a follow-up to the Government of Indonesia's commitment to reduce plastic waste in the sea by 70% by 2025, Presidential Regulation No. 83 of 2018 promulgated on 21 September 2019, contains the National Action Plan (NAP) for Handling Marine Debris. The NAP for Handling Marine Debris has five major strategies until 2025. Each strategy has a measurable (output) every year, the institution responsible for implementing the strategy, and funding sources for each activity. However, the government's commitment to implementing this Presidential Regulation is not optimum. The government still takes few concrete actions in implementing this Presidential Regulation. Efforts made are still reactive or countermeasures, while preventive efforts are still very minimal. The criticism given by ICEL (Indonesian Center for Environmental Law) (ICEL, 2019) to the Government of Indonesia is regarding the action plan of establishing four laws and regulations and one international agreement for 2018–2019, which has not yet been realized.

Currently, Indonesia does not have specific laws and regulations governing transit traffic in Indonesian waters or the Straits used for international shipping within Indonesian territory. Article 42 (1) of UNCLOS 1982 states that "Subject to the provisions of this section, States bordering straits may adopt laws and regulations relating to transit passage through straits". This arrangement is important because in addition to being mandated by UNCLOS 1982, national legal arrangements also concern the sovereignty of the State to enforce the law for violations of waste disposal pollution by considering the rights and responsibilities of transit traffic. Article 19 (2) (h) of UNCLOS provides that passage of a foreign ship shall be considered to be prejudicial to the peace, good order, or security of the coastal State if the ship engages in any act of wilful and serious pollution contrary to this Convention. Pursuant to this Article, Article 233 of Part XII laid some exceptions to the non-suspension of vessels transiting through the Straits used for international navigation. States bordering Straits can suspend the passage of foreign vessels if the passage causes major damage to the marine environment of such Straits (Hananto, 2019; Hazmi, 2012). This statement is in line with Muhammad Nasir (2013), but it does not provide full sovereign rights such as in the territorial sea. However, law enforcement based on national law related to marine pollution in

transit is important as a guideline for prevention and a legal basis for repressive actions for violations.

The transit traffic in the territory of Indonesia is only regulated in Law No. 6 of 1996 concerning Indonesian Waters. Article 20 of this Law states that

all foreign ships and aircraft are free to sail or fly solely for transit without stopping, directly and as quickly as possible through the Indonesian territorial sea in the strait between one part of the high seas or the exclusive economic zone of Indonesia with other parts of the high seas or Indonesia's exclusive economic zone.

Article 21 paragraph 2 of this Law also stipulates that further regulation of the use of transit traffic will be regulated in a government regulation, but it has not yet been established. The absence of further regulation on the use of this transit passage of course, apart from not providing clear legal certainty, also complicates law enforcement efforts. As a result, legal loopholes are created for environmental pollution, e.g., pollution caused by ship waste generated from ship operational activities in the form of liquid waste and garbage which is disposed carelessly, and illegally washing of ships.

Related to the environmental pollution control in which the marine environment is a part, Article 13 of Law No. 32 of 2009 concerning Environmental Protection and Management has particularly regulated the environment's prevention, management, and recovery. However, as stated by Tarigan and Sihombing, 2019, there are no further implementing regulations regarding the technical control of marine environmental pollution, especially in the marine environment in the Straits of Malacca and Singapore. Several government programmes were also carried out to support the control of marine pollution, both from land and from other sources of pollution, including the Clean River Program, Blue Sky Program, Sustainable Beach Program, and other programmes developed by the Minister of the Environment of Indonesia, but they cannot withstand the high rate of marine pollution in the Straits of Malacca and Singapore (Sihombing, et al., 2019).

Future recommendations

Efforts must be enhanced to control, prevent, and enforce the law on marine pollution in the Straits of Malacca. It requires cooperation among Straits States to make specific laws and regulations, and the coordination of all relevant institutions. It is also recommended that the Straits States adhere to the following recommendations.

a) Compliance with other conventions

Besides UNCLOS, the Straits States may enter into a regional agreement in line with the Basel Convention to regulate environmentally sound management of plastic waste, the Stockholm Convention to eliminate the use of POPs (Persistent

Organic Pollutants) and the recycling of plastic products containing POPs, and the MARPOL Convention Annex V to ban the discharge of plastics by foreign ships in the Straits. These frameworks must be supported by strong and focused scientific research, engagement of business and community organization, committed government action, and supporting community-based programmes (Haward, 2018). The Straits States may also consider adopting the London Protocol and take a precautionary approach to avoid the transfer of pollution into another State and prohibit all illegal dumping.

b) Uniform laws amongst littoral States

It is high time for the development of uniform and binding practices and regulations between the Straits States. Uniform rules will encourage the Straits States to increase their standards of environmental care and due diligence and to ensure the problem is treated and solved in a like manner (George, 2008). The role of TTEG can be enhanced to control and mitigate marine pollution in the Straits. Similarly, the Cooperative Mechanism is proven to be effective in keeping the Straits safe and open to navigation based on the success of past projects. It reaffirms the sovereignty of the Straits States and their responsibility for safety and environmental protection. It should conduct further study on marine plastic debris, build environmental impact assessments, develop cost-effective solutions to reduce the impact of marine plastic, and create special funds to maintain the marine environment.

c) Tanjung Piai and Pulau Kukup as a Particularly Sensitive Sea Area (PSSA)

Malaysia has proposed Pulau Kukup and Tanjung Piai as a Particularly Sensitive Sea Area (PSSA) to the IMO in 2017. PSSA are areas that need particular protection by the IMO due to ecological, socio-economic, or scientific reasons that may make them vulnerable to damage by international maritime activities (IMO, 2020). Once granted, the PSSA will act as a strong mechanism to protect the area from oil and waste discharge from vessels anchoring around the area. There are 11 PSSAs around the world, including the Great Barrier Reef. The PSSA will ensure the sustainability of endangered species under the IUCN Red List in both Ramsar sites and prevent further erosion of the mangrove which acts as a natural buffer zone for tsunami and as a breeding ground for marine life. Be that as it may, the IMO has yet to approve the Malaysian application for PSSA status. This may be due to a reservation made by Indonesia during the IMO Marine Environment Protection Committee (MEPC) 71st session in 2017. Indonesia claimed that Malaysia's PSSA proposal coincides with the area currently under bilateral maritime boundary negotiation between Indonesia and Malaysia. It is ironic that after decades of cooperation, Indonesia raises concern over Malaysia's PSSA proposal.

Conclusion

The Straits of Malacca receive around 80,000 vessels annually. The high volume of vessels anchoring near Pulau Kukup and Tanjung Piai before entering Singapore

has led to oil discharge and marine pollution. Littoral States are also unable to enforce oil or other noxious substance discharge from transit passage. It is thus pertinent for the littoral States to enhance their cooperation in addressing the issue and contributing towards a more holistic marine pollution control and prevention in the Straits. In this regard, the TTEG should continue to be supported. At the same time, other stakeholders should participate in the Co-operative Mechanism projects towards safe navigation and accident reduction. Malaysia also needs to negotiate with Indonesia to protect Pulau Kukup and Tanjung Piai from further destruction in the spirit of cooperation. Malaysia's PSSA proposal is not for its unilateral benefit. The sustainability of wetlands and mangroves will enhance the marine ecosystem and benefit the fishermen living along the Straits. In the context of marine pollution in the Straits of Malacca and Singapore, it is necessary to evaluate and enforce the law on the existing legal rules in all related Straits States to achieve legal objectives, namely, legal certainty and justice. All parties should cooperate to conserve and sustainably utilize the Straits of Malacca's marine, aquatic, and maritime resources.

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