

The Application of Law on Pollution Control towards Marine Biodiversity Conservation in Malaysia

Dr. Maizatun Mustafa¹ and Dr. Mariani Ariffin²

¹ Assistant Professor, Legal Practice Department, Ahmad Ibrahim Faculty of Laws, International Islamic University Malaysia.

² Senior Lecturer, Department of Environmental Management, Faculty of Environmental Studies, Universiti Putra Malaysia.

Abstract. The biodiversity of the world's oceans which constitutes more than 70 percent of the earth's surface is crucial for providing a broad and life-supporting range of ecosystem. Being a maritime nation, as well as one of the top biodiversity-rich countries in the world, it is important for Malaysia to give its full commitment in conserving her mega-diverse ecosystems, including that of the richly endowed seas. At present, the well being of Malaysia's marine biodiversity is facing increasing threat from various sources, notably that of land-based and vessel-based pollution. Malaysia takes pollution issue seriously, and joins other key maritime nations in enhancing her legal regime in dealing with marine pollution. This paper seeks to highlight Malaysia's continuous effort towards marine pollution control through the application of law. Significantly, such effort can be used as a reference by other maritime nations for the purpose of collective marine environmental protection and biodiversity conservation.

Keywords: marine biodiversity, marine pollution, pollution control, marine pollution law.

1. Introduction

Malaysia is geographically divided into two parts, Peninsula Malaysia, and East Malaysia, with a total coastline of 4800 km. It has one of the largest continental shelf areas and is very rich in biodiversity, and is considered to contain the greatest species diversity of marine life in the world. Thus, the quality of her marine water plays an important role in the conservation of marine resources. Inevitably, any sources of pollution would cause a big threat to these resources. Over the years, Malaysia's marine environment continues to face serious pressure particularly due to pollution. Pollution from land-based sources, mainly as consequences of urbanization and industrialization along the coastal areas of Malaysia, has been identified as the major contributors towards marine pollution.

Apart from that, another source of marine pollution is that of vessel-based. By virtue of its geographical location, Malaysia is strategically located at the conjunction of the Straits of Malacca and the South China Sea, which serve as a major commercial shipping route between the Indian Ocean and the Pacific Ocean. The Straits of Malacca is most susceptible to vessel-based marine pollution such as oil and grease especially in recent years due to the heavy volume of shipping that uses it. By nature, oil is toxic to marine life. If oil spill reaches the shoreline, it interacts with sediments, vegetation, and habitats of wildlife and humans, causing erosion and contamination. Oil spill could remain for years in the sediment and marine environment, causing long-term effects to the marine biodiversity.

For Malaysia and other countries, issues relating to the conservation of marine biodiversity are very wide and complex. They include, among others, preservation of biological productivity, clean surface of the ocean, and preservation of food resources. Since pollution has been identified to be one of the major threats to marine environment, the control of marine pollution is therefore a prerequisite in the conservation of marine

ecosystem. In this regard, law can be considered as an important means of controlling pollution, and have been relied on by Malaysia in dealing with marine pollution.

For the purpose of implementing the law, by virtue of the Malaysian Emergency (Essential Powers) Ordinance 1969, Malaysia's jurisdiction is confined to the limit of her territorial waters of 12 nautical miles only. On this basis, Malaysia is given a total sovereignty within these waters, allowing her to enforce specific domestic laws which include that of pollution control. In addition, Malaysia also proclaimed her 200 nautical miles of the exclusive economic zone (EEZ), in line with article 5 of the United Nations Conventions on the Law of the Sea 1982 (UNCLOS), and is incorporated into the domestic law, namely the Exclusive Economic Zone Act 1984. With the existence of the EEZ regime, Malaysia holds special privileges and responsibilities, which amongst others include, for environmental protection purposes, the control of the discharge of oil and pollutant into the EEZ¹. By virtue of Malaysia's jurisdictional rights over its territorial waters and the EEZ, a number of legislations have been enacted that forms the country's maritime legal structure, pertinent to marine pollution. These legislations are examined below.

2. Legal Control of Marine Pollution

As mentioned earlier, land-based sources of pollution are the significant contributors towards the pollution of Malaysia's marine environment. They include industrial wastes, agricultural wastes, domestic sewage and siltation. There are a variety of pathways for land-based pollutants to reach coastal and marine waters, either directly or indirectly. With more than 150 river mouths located along the coastal areas of Malaysia, they become conduits for pollutants to enter coastal waters. These rivers that flow into the sea would therefore play a significant role in influencing the quality of marine environment. The main legislation in Malaysia to control marine pollution from land-based sources is the Environmental Quality Act 1974². This Act can be considered as the most comprehensive legislation introduced to deal with environmental protection and pollution control including that of marine pollution.

Under this Act, the control of pollution is done through the application of ambient environmental quality standards, or acceptable conditions. Parameters limit for acceptable conditions of various pollution sources are provided in relevant Regulations gazetted under the Act. Pollution is allowed to be discharged as long as it is within the limit of acceptable conditions. Otherwise, it would be an offence, unless specific contravention licence is applied and approved³. In relation to land-based pollution, the most relevant provision is section 25 that deals with the restriction of the discharge of pollution into the inland waters. The term "inland water" is extensively defined by this Act to include "any reservoir, pond, lake, river, stream, canal, drain, spring or well, or any part of the sea above the low water line along the coast, or any other body of natural or artificial surface or subsurface water". Under this Act, those who discharge effluents into such water without any licence may be held liable for an offence. The section imposes penalty in the form of fine of up to Ringgit Malaysia (RM) 100 000 or imprisonment of up to five years to any person found guilty of the offence.

The Environmental Quality Act 1974 has different provisions for the control of the discharge of wastes and oil into the sea. Specifically, section 27 prohibits any person from discharging or spilling any oil or mixture containing oil into Malaysian waters. Anyone who contravenes this prohibition shall be subjected to a fine of up to half a million ringgit, or imprisonment of up to five years or both. However, under certain circumstances, special defenses are granted to any person against the imposition of liability under section 27. They include situations where discharge or spillage was done for the purpose of securing the safety of the vessel; for purposes of saving human lives; as a result of damage to the vessel; as a result of a leakage; or as a result of an effluent produced by operation for the refining of oil⁴. With regard to section 29, a prohibition is imposed on any person against discharging environmentally hazardous substances, pollutants or wastes into the Malaysian waters. The terms "environmentally hazardous substance", "pollutants", and "wastes" are given their respective definitions by the Act to ensure comprehensive coverage of discharges that may cause

¹ Section 10 of the Exclusive Economic Zone Act 1984.

² Act A127.

³ Section 21 of the Environmental Quality Act 1974.

⁴ Section 28 of the Environmental Quality Act 1974.

pollution to the marine environment⁵. Penalty similar to that of section 27 will be imposed on anyone who contravenes section 29. However, unlike section 27, no defence are allowed for the contravention of section 29. Another form of pollution control under the Environmental Quality Act 1974 which is significant to control marine pollution is section 34B concerning the prohibition against the depositing of scheduled wastes. The handling of scheduled wastes or toxic and hazardous wastes, including their method of disposing, is strictly regulated by the Act. Under section 34B, it is a prohibition to discharge oil tanker sludges and oil water mixture such as ballast water into the Malaysian waters without written approval from the relevant authority. Penalty imposed to any person who contravene this prohibition is a fine not exceeding Ringgit Malaysia (RM) 500000, or to jail for term of up to five years, or both.

In Malaysia, while the marine area around the Straits of Malacca may be facing pollution from vessel-based sources, the area within the South China Sea is facing pollution as a result of off-shore oil and gas exploration activities. Considering the vital role petroleum industry plays in the Malaysian economy, it is thus subject to direct government control. Nonetheless, petroleum upstream activities can cause serious environmental concern, including that of marine pollution. At present, the regulation of such activities is within the ambit of the Environmental Quality Act 1974 through section 34A on the requirement of environmental impact assessment (EIA). Under this section, activities including oil and gas field developments, and construction of off-shore and on-shore pipelines would require the submission of the EIA report to the relevant authority for approval. It is an offence if any person failed to submit such report or failed to abide by conditions stipulated in the report. Criminal sanction will be imposed on those who contravene this section in a form of a fine of up to Ringgit Malaysia (RM)100 000, or jail of up to five years, or both.

While the scope of the Environmental Quality Act 1974 in dealing with different sources of marine pollution is wide, one pertinent limitation of this legislation is its jurisdictional limit over the control of marine pollution. Its enforcement power is restricted only to the Malaysia's territorial water of within 12 nautical miles. Thus, the Act is not enforceable on any pollution offences committed beyond that boundary. Nevertheless, the control of marine pollution that took place beyond that territorial limit and up to 200 nautical miles of Malaysia's maritime territory is regulated under a different legislation, namely the Exclusive Economic Zone Act 1984. For Malaysia, this Act is an important legislation enacted to implement the provisions of UNCLOS 1982. Part IV of the Act deals with the protection and preservation of marine environment and is crucial in dealing with marine pollution control. Specifically, Part IV ascertains Malaysia's sovereign-rights in exploiting its natural resources in the EEZ⁶, which must also be in compliance with Malaysia's environmental policies as well as in accordance with its duty to protect and preserve the marine environment in the zone. A stringent sanction is provided for under this Act regarding polluting the zone whereby it is an offence to discharge any oil, mixture containing oil or pollutant into the EEZ from any vessel, land-based source, installation, device or aircraft, from or through the atmosphere or by dumping⁷. This requirement is applied to the owner or occupier of vessel, place, device or aircraft, where upon conviction each shall be liable to a fine of not exceeding one million ringgit. It is also a requirement under this Act for any discharge of oil, mixture containing oil or pollutant into the EEZ to be reported, as otherwise it would also be an offence⁸. In addition, criminal sanction is also imposed on any person who fails to comply with directions to remove, disperse, destroy or mitigate damage by pollution⁹.

⁵ The Act defines the term "environmentally hazardous substances" as "any natural or artificial substances including any raw material, whether in a solid, semi-solid or liquid form, or in the form of gas or vapour, or in a mixture of at least two of these substances, or any living organism intended for any environmental protection, conservation and control activity, which can cause pollution". On the other hand, "pollutants" is defined as "any natural or artificial substances, whether in a solid, semi-solid or liquid form, or in the form of gas or vapour, or in a mixture of at least two of these substances, or any objectionable odour or noise or heat emitted, discharged or deposited or is likely to be emitted, discharged or deposited from any source which can directly or indirectly cause pollution and includes any environmentally hazardous substances". Whereas the term "waste" is defined to include "any matter prescribed to be scheduled waste, or any matter whether in a solid, semisolid or liquid form, or in the form of gas or vapour which is emitted, discharged or deposited in the environment in such volume, composition or manner as to cause pollution".

⁶ Section 9 of the Exclusive Economic Zone Act 1984.

⁷ Section 10 (1) of the Exclusive Economic Zone Act 1984.

⁸ Section 12 of the Exclusive Economic Zone Act 1984.

⁹ Section 14 of the Exclusive Economic Zone Act 1984.

Another Malaysian legislation that deals with marine pollution control is the Merchant Shipping Ordinance 1952. This Ordinance is considered to be the oldest law on merchant shipping and has been amended regularly over the years, particularly in response to changes and requirements of international law¹⁰. This Ordinance becomes one of the most important legislations in Malaysia when in 1991, a new Part VA on “Pollution from Ships” was inserted. Subsequently, the Ordinance was further amended in 2011 to extend its limit of territorial jurisdiction from the 12 nautical miles of the Malaysian waters to that of the 200 nautical miles of the EEZ. The combined effect of these amendments allows for a more comprehensive coverage of pollution control regulation under this Ordinance. Specifically, under the newly inserted section 306CA, the prohibition against the discharge of oil or harmful substances into any part of Malaysian waters is now extended to cover that of the EEZ, atmosphere, any Malaysian coast or Malaysian reef. The word “discharge” for the purpose of section 306CA is elaborated by section 306C to mean “any release of oil or harmful substances, howsoever caused, from a ship and includes any escape, disposal, spilling, leaking, pumping, emitting or emptying...”. Additionally, under the new section 306D, in a situation where there is an escape or likely escape of oil or harmful substance that may pollute or likely to pollute Malaysian waters, Malaysian coast, Malaysian reef or the EEZ, a notice may be issued to the owner of the ship requiring them to take steps to prevent or reduce the pollution. If the notice is not complied with, the owner, if found guilty of the offence, will be liable to a fine not exceeding Ringgit Malaysia (RM) 50 000 per day throughout the default period¹¹.

Considering the severity of the impact of oil pollution on the marine biodiversity, and the fact that Malaysia’s seas are most susceptible to vessel-based pollution, Malaysia’s legal regime pertaining to oil pollution control has to be dynamic. Thus, apart from relying on criminal sanction to impose punishment and ensure deterrence, civil liability in the form of payment of compensation is also imposed on any vessel that caused damage due to the discharge of oil into the sea. In this context, the type of oil pollution damage that can be claimed by the Malaysian government and other victims against the ship-owner is wide. They include property damage, the cost of clean up operations at sea and on-shore, economic loss suffered by those engaged in the fishing or marine culture industries and tourism sector, and the cost of reinstatement of the environment. Such liability is provided by a specific legislation, namely the Merchant Shipping (Oil Pollution) Act 1994. This legislation was enacted as an expansion of Malaysia’s jurisdiction in respect of civil liability for marine oil pollution. Basically, the passing of this Act is meant to give legal effect to two international treaties, the 1969 International Convention on Civil Liability for Oil Pollution Damage, and the 1971 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage. These two Conventions were amended by Protocols in 1992, and when Malaysia acceded to them in 2005, the Merchant Shipping (Oil Pollution) Act 1994 was amended to incorporate changes under the 1992 Protocols. For Malaysia, the significant advancement of this Act is the expansion of Malaysia’s marine pollution control jurisdiction to include not only the territorial waters, but also the EEZ.

Another significant advancement of the Merchant Shipping (Oil Pollution) Act 1994 is the expansion of its scope to include that of “bunker oil”. Previously, the Act only deals with pollution damage due to the escape of “oil”, without any reference to “bunker oil”. For this reason, the Act was again amended in 2011¹² to include the discharge of bunker oil from any ship. The amendment was made when, in 2008, Malaysia acceded to the International Convention on Civil Liability for Bunker Oil Pollution Damage 2001. The new amendment defines “bunker oil” as “any hydrocarbon mineral oil, including lubricating oil, used or intended to be used for the operation or propulsion of the ship, and any residues of such oil¹³”. Generally, bunker oil is used to drive ships’ engines and has been historically the most persistent form of oil pollution. It is very difficult to clean up and can have a potentially devastating impact on marine and coastal wildlife. The aim of the 2001 Convention is to ensure adequate, prompt and effective compensation to persons who suffer

¹⁰ Recently, the Merchant Shipping (Amendment and Extension) Act 2011 was enacted to extend the specified provisions of the Merchant Shipping Ordinance 1952 to the East Malaysian states of Sabah and Sarawak. It was also amended to provide for matters that include the implementation of the Convention on Limitation of Liability for Maritime Claims 1976 as amended by the Protocol of 1996.

¹¹ Section 306F of the Merchant Shipping (Oil Pollution) Act 1994.

¹² Merchant Shipping (Oil Pollution)(Amendment)Act 2011 Act A1394.

¹³ The amended section 2 of the Merchant Shipping (Oil Pollution) Act 1994.

damage caused by spills of oil carried as fuel in ships' bunkers. The Convention also fills a significant gap in the regulations on marine pollution liability. Specifically, the 2001 Convention establishes a liability and compensation regime for spills of oil carried as fuel in ships' bunkers. This requirement is provided within the new section 3A of the Merchant Shipping (Oil Pollution) Act 1994 which imposes liability on owners of ships for any damages due to bunker oil pollution in area of Malaysia.

In recent times, Malaysia enacted yet another important maritime related legislation, namely the Maritime Enforcement Agency Act 2004. The main objective of the Act is to provide for the establishment of a sole marine enforcement agency with the task of ensuring the safety and security of the Malaysian Maritime Zone, and protecting maritime and other national interests. Under this Act, the scope of the "Malaysian Maritime Zone" is very wide and includes "the internal waters, territorial sea, continental shelf, exclusive economic zone and the Malaysian fisheries waters and the air space over the Zone¹⁴" and thus it covers all the maritime areas of Malaysia. In the context of comprehensive enforcement of marine pollution law in Malaysia, the enactment of this Act is commendable as it seeks to complement and harmonize the enforcement of existing maritime legal regime through the establishment of an agency known as the Malaysian Maritime Enforcement Agency. While the general aim of the establishment of this Agency is to improve Malaysia's maritime safety and security forces, the Agency is also responsible for the control and prevention of maritime pollution, and is given the power to enforce law and order under any federal law of Malaysia¹⁵. Because of its far reaching law enforcement powers in the Malaysian Maritime Zone, the Agency has a crucial role to play in consolidating and enforcing all the laws regarding marine pollution.

3. Conclusion

Malaysia's physical features and geographical location indicate her dependence on the sea for economic and other purposes. Thus this imposes a responsibility on Malaysia to protect her marine biodiversity against various harms, including pollution. Pollution of the sea is a national concern as it has an irreparable ecological impact on the marine environment unless effective steps are taken to prevent, mitigate, control or remove it. Thus, as a maritime nation, it is vital for Malaysia to ensure that her civil and criminal liability regimes continue to be dynamic to deal with the various sources of marine pollution. Apart from that, Malaysia also needs a strong legal structure over the seas covering the maximum area of her maritime zone with comprehensive environmental controls and standards relating, among others, to marine pollution. Existing legislations in Malaysia may contain adequate provisions based on domestic and international law for the control of marine pollution, but they are based upon a fragmented approach to the control of such pollution. The establishment of the Malaysian Maritime Enforcement Agency is one way for the country to effectively cope with, and coordinate, the enforcement of these piecemeal legislations. Although it is still premature to gauge the end result of the implementation of such planning, crucial developments in this area are nevertheless taking place as previously highlighted by this paper. These developments are reflections of changes that are taking place within the legal regime towards a more comprehensive and effective control of marine pollution for the betterment of marine biodiversity conservation.

4. References

- [1] A. G. Mazlan, et al (eds.). On the Current Status of coastal marine biodiversity in Malaysia, *Indian Journal of Marine Sciences*, 2005 vol. 34(1): 76-87.
- [2] Department of Environment. *Malaysia Environmental Quality Report 2009*. Kuala Lumpur: Department of Environment. 2010, pp. 56-59.
- [3] M. Mustafa. *Environmental Law in Malaysia*. The Netherlands: Kluwer Law International. 2011, pp. 89-96.
- [4] D.Hassan. *Protecting the Marine Environment from Land-Based Sources of Pollution*. Hampshire: Ashgate. 2006, p. 2.
- [5] A. G. Hamid. Malaysia's Commitments Under International Conventions and the Need for a Harmonized Legal Regime Regulating Marine Pollution. *MLJ*. 2007, 6: 124-148.

¹⁴ Section 2 of the Malaysian Enforcement Agency Act 2004.

¹⁵ Section 6 of the Malaysian Enforcement Agency Act 2004.