

# “Legal Solutions for Marine Pollution in Sri Lanka

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DOI: 10.29322/IJSRP.11.06.2021.p11468

<http://dx.doi.org/10.29322/IJSRP.11.06.2021.p11468>

**Abstract-**The study examines the relevancy of law and order to preserve marine resources. The main area of focus would be the years after 1948 as it is the time Sri Lanka got back the full sovereignty of maritime areas from its controllers. Pollution of maritime areas is a big hindrance to economic growth of the country as well because the situation creates a vulnerability to lose a great deal of foreign exchange. The prime cause for this is the marine transportation. The research therefore bases its argument on this significant aspect of Sri Lankan economy. The research would also suggest ways and means to improve the existing law system related to marine protection.

**Index Terms-** Marine, Sri Lanka, Pollution, Aquatic Resources, Acts

## I. INTRODUCTION

The idea of marine pollution covers the ways and means by which the coastal area of a country is polluted and made unfit for survival. As an island surrounded by water in four sides Sri Lanka gains much importance in matters concerning marine pollution.

Protection of the marine environment is a current and contemporary issue. The idea of marine pollution covers the ways and means by which the coastal area of a country is polluted and made unfit for survival. The pollution of the marine environment is a menace to public health and even the existence of the human race. As an island surrounded by water in four sides Sri Lanka gains much importance in matters concerning marine pollution. The main cause behind this pollution issue is unfortunately human activities especially transportation. The increased usage of marine transport as a mode of commodity transaction is one reason while the improper transport is the other. Besides this the certain ill-mannered activities of human beings—both sea-based and land-based contribute to marine pollution. Thus, it is clear that the island is vulnerable to a severe problem of marine pollution.

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## II. RESEARCH ELABORATIONS

Cleaning process of ships near the ports cause minor discharge to the marine environment (CZMP, 2006). Waste oil released from ships in the Colombo harbor has increased from 879 tonnes in 1997 to 1,258 tonnes in 1998 (Joseph, 2003). Boats with two-stroke outboard engines are common in Sri Lanka and 35% of unburned oil is discharged from these engines into the sea (Gunasekera, pers. comm.). It is stated that approximately 3350 ships are arriving to the Port of Colombo annually and most of them discharge their waste in the coastal region even though it is illegal.

In most of the Asian countries crude oil is imported from Middle East countries and the transportation is done through the Indian Ocean. China is the important importer of crude oil and in 1994 the statics of imported crude oil is 171 million tankers. The tanker transportation is a main problem in which affects the marine surroundings in Sri Lanka. The Statistics indicate that every month more than 1000 oil tankers are transported through the Dondarand have high potential risk for marine environment. Dondar is a small coastal town which is located 200 meters away from Colombo. An oil spill is an ejection of a liquid petroleum hydrocarbon into the environment due to human activity and is a form of pollution. Sri Lanka's position in the Indian Ocean and its vicinity to the main East-West shipping route, used by ships trading to and from the industrial centers of the Far East and the West, makes it susceptible to oil spills (MEPA, 2008).

Human error, lack of information, equipment failures, technical errors, explosions and fire might be the reasons for ship causalities which caused oil spills. Oil spills result in long term and short term harm to the marine environment. Spills may take months or even years to clean up. An article published by the marine environmental protection authority mentioned that “*The oil penetrates* into the structure of the plumage of birds, reducing its insulating ability, thus making the birds more vulnerable to temperature fluctuations and much less buoyant in the water. It also impairs or disables birds' flight abilities to forage and escape from predators. As they attempt to preen, birds typically ingest oil that covers their feathers, causing kidney damage, altered liver function, and digestive tract irritation. This and the limited foraging ability quickly cause dehydration and metabolic imbalances. Hormonal balance alteration including changes in luteinizing protein can also

result in some birds exposed to petroleum. Marine mammals exposed to oil spills are affected in similar ways as seabirds”.

The marine pollution from ship based sources is mainly covered by the Marine Pollution Prevention (MPP) Act 1981. The Marine Pollution Prevention Authority (MPPA) was established under the same Act in order to implement the Act. The name of the MPPA has changed to the Marine Environment Protection Authority (MEPA) by Act no 35 of 2008 who is responsible for formulating and implementing National Oil spill Contingency Plan.

Section 38 of the Act states that it is a duty to report oil or other pollutant discharged into under the Srilanka waters. Accordingly, polluter should report incident without delay to the MEPA.

According to section 39 of the MPP Act, MEPA has power to direct all persons in-charge of ports, harbors, terminals, and repair yards to submit oil spill contingency plans.

Part VIII of the act contains provisions for prevention of pollution caused by discharge or escaped of oil, harmful substance or other pollutant into the territorial waters of Sri Lanka or any other Maritime zone. According to this section discharge or escaped oil or other pollutants into the sea from a ship, or other sources shall be guilty of an offence

Invasive alien species (IAS) brought in with ballast water. Studies have reported 26 previously unrecorded species from the inner harbor area of Colombo, some of which are found in the ballast water of ships. Some of these species are potentially harmful and they have been reported in sea areas near major ports. cause major damage to the environment and to fishing and the tourism industry. Even small spills may cause large damage and should be avoided. There is the possibility to spill oil from supply vessels and oil and gas transporting vessels. Furthermore, vessels involved in the offshore activities may introduce invasive species through ballast water and hull fouling. The national oil spill contingency plan of Sri Lanka covers all oil spills in Sri Lankan waters. But it is not capable to contain even medium size spill due to lack of resources. Therefore there is a requirement to update this plan and strengthen relevant organization by providing additional equipment's.

### III. METHODOLOGY

- 1) Identifying vessel source marine pollution incidence after independence & the negative impact caused to the environment.
- 2) Finding the economic cost of marine pollution through oil spills
- 3) The relevancy of the existing law system in order to curb marine pollution
- 4) The changes that can be made to improve the laws

Qualitative research methodology is used mainly in this study. The views and opinions of persons related to the field are

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<http://dx.doi.org/10.29322/IJSRP.11.06.2021.p11468>

obtained through interviews. Quantitative research methodology is also used for data collection and data analysis.

This research depends mainly on primary sources like Interviews and questionnaires and secondary data sources like reports, documents, and journal articles. For law related data the New Law Report is referred. It consists of the decided cases related to all legal issues.

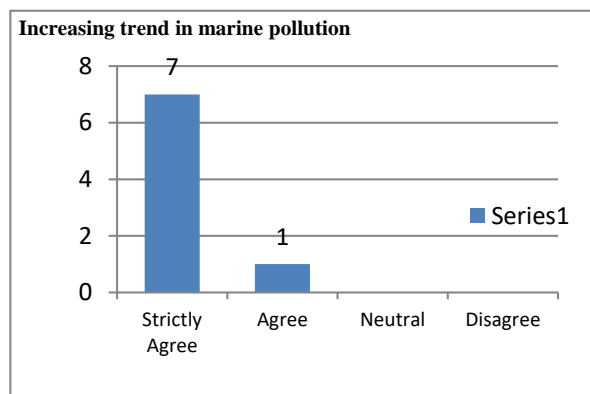
### IV. ANALYZIS

In order to investigate the effects of marine pollution by ship transportation in Sri Lanka and the aptness of the existing law and order to keep pollution under control, a survey was conducted using hundred (100) individuals with a considerable knowledge in the marine law.

When asked if there is an increasing trend in marine pollution in Sri Lanka, there was a definite positive response. As seen below in Figure 1, about 87% of the sample strongly believes that such a trend exists, while the rest agree.

This indicates that there is no about marine pollution being a problem in Sri Lanka. However, when asked about the reasons for this marine pollution, the response was more diverse. As seen in Figure 2 below, while an overall 75% believe that ships are the main cause of marine pollution, 25% state that there are reasons other than transportation for this trend in marine pollution.

Figure 01:

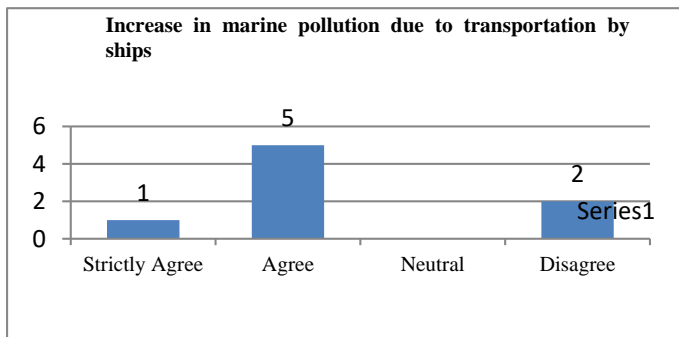


Source: Primary Data

Lot of reason to marine pollution but they said vessel transport based marine pollution is increasing Some of the reasons given for this are that there is fast development happening along the coastal line, and there is no proper waste disposal system for hotels and households in these areas, therefore land based pollution is the highest contributor. It was also observed that only about 5-10% of marine pollution is due to ship transportation. Even some of the respondent s who agreed that marine pollution was mainly caused by ships stated that it is only one of the many reasons. Others who agreed said that the increasing trend in marine pollution was due to the improved

port facilities, the increasing number of ships coming into harbor, and the inadequate onboard inspections.

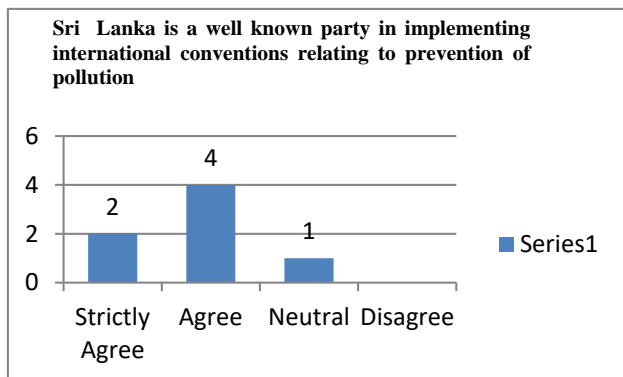
**Figure 02:**



Source: Primary Data

In response to the statement “The laws in Sri Lanka are not sufficient to prevent marine pollution”, 63% answered yes and 38% said no (see Figure 3). National acts like MEPA Acts 2. Sri Lanka signed in lot of marine pollution prevention related conventions. But those laws are not implemented

**Figure 03:**



Source: Primary Data

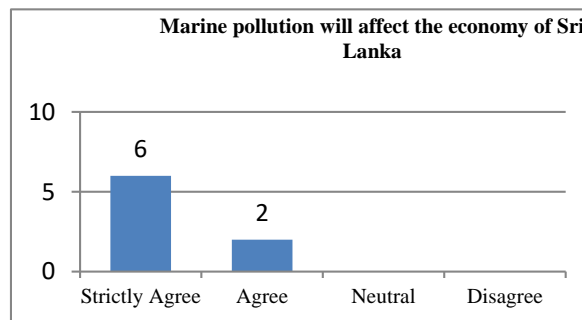
Some of those who responded positively stated that the regulations that are in place are weak, with laws that do not cover all aspects of the problem, laws that are overlapping, and especially issues with implementation. They observed that there is no due litigation procedure, and that marine pollution is not always given the priority. Other also added that because Sri Lanka is a developing country, many think that such laws prevent the economic development of the country. It was also noted that many of the laws and regulations were established recently, and there has been little time and manpower for regulatory bodies to invest in implementing these laws and regulations properly.

The negative responses were different. Some said that there are sufficient laws but there are major issues in implementation. Other noted that the laws were different based on the type of

pollution, and there must be more regulations against throwing solid waste into the sea. Other respondents also claimed that, while the laws are sufficient, there are clashes between Sri Lanka’s maritime laws, and this must be corrected. Overall, however, the general idea was that there needs to be better methods of implementing even the existing laws and regulations.

When asked of this marine pollution would affect the economy of Sri Lanka, all the respondents agreed, with 75% of the sample in strong agreement (see Figure 4).

**Figure 04:**

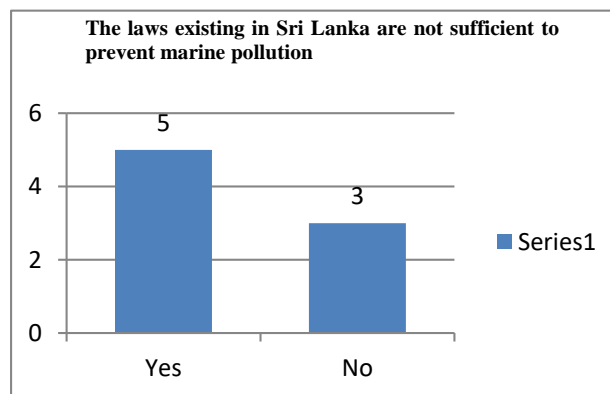


Source: Primary Data

Cleanup cost almost all respondent stated that there would be a negative effect on the tourism industry as well as the fishing industry. They noted that marine pollution could affect the marine eco system, decreasing the aesthetic beauty of the marine environment and marine biodiversity, and such effects could harm the economy in many ways. Additionally, respondents also noted that there would health issues caused due to the increasing trend in marine pollution in Sri Lanka.

When asked if Sri Lanka was a well-known party in implementing international conventions with regard to marine pollution, I need answer as natural bcz if we compare with USA, Frans, UK, Australia, srilankas law implementation is low but in south Asia ok about 86% of the sample agreed with this statement, and 14% were neutral (see Figure 5). This indicates that, in general, there is a view that Sri Lanka is aware of and a party to many of the international conventions that have been put forward to prevent pollution.

**Figure 05:**

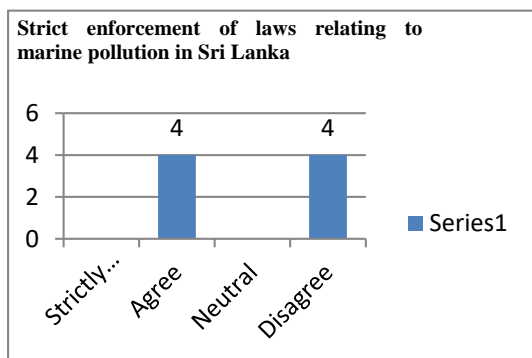


Source: Primary Data

However, when asked if the laws relating to the prevention of marine pollution were strictly enforced in Sri Lanka, there was an interesting response. As indicated in Figure 6, there was a 50% positive 42% only positive because laws are not sufficiently implementing ( it is my hypothesis so I have to prove it so change it as 42,58 response and a 50% negative response, highlighting that there is are differences in how the implementation of the existing laws and regulations is done in Sri Lanka.

When asked if there were challenges in implementing the laws, most answered yes. They stated that enforcing laws and regulations was a process that takes a lot of time and is therefore difficult to achieve quickly. Some also stated that the legal tools such as acts and regulations available were insufficient, and a lack of coordination between the relevant institutions means that there are the process of implementation is not done smoothly. Some respondents also indicate that there were overlapping laws and gaps in the laws in various government institutions. Respondents also noted a lack of inspections and investigations that led to this problem. Thus, the problem is that even the existing laws are not implemented properly due to a number of reasons, and this does not help in preventing marine pollution.

Figure 06:



Source: Primary Data

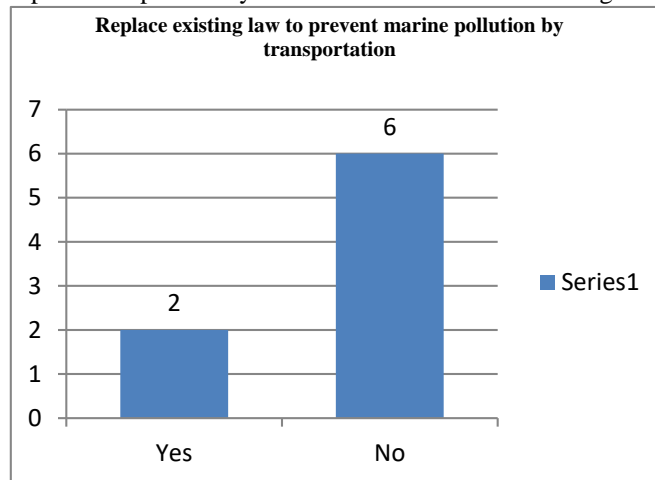
When asked if the existing laws to prevent marine pollution caused by transportation should be replaced, a majority of the respondents disagreed. As indicated in Figure 7, there was 75% that did not think the laws regarding transportation should be changed. Instead, it would seem that many feel there is a need to implement the existing laws properly.

Figure 07:

Source: Primary Data

When asked to suggest further ways to prevent marine pollution due to transportation, no need to replace because sri lanka has enough national acts and party in enough international convention40 need and 60 no need...many respondents stated that Sri Lanka needs to sign the relevant conventions and implement the regulations stipulated in those conventions by incorporating them into local legislation. Fr instance, one

respondent specifically said that Sri Lanka should sign the



MARPOL Annex I-VI. Respondents also noted a need to strengthen the existing laws. Some stated that the Marine Environment Protection Authority holds the main responsibility in this regard, and they should take more authority and send out more officers for technical inspection of ships. Some respondents also suggested that there should be better coordination and relationship between relevant authorities, and this could enhance the existing marine pollution prevention mechanisms. For instance, there was a suggestion to create a positive link between MEPA and DMS in order to implement the laws and regulations more effectively.

The noteworthy suggestions were signing MARPOL Annex I-VI and incorporating those provisions into local legislation, that there should be a positive link between MEPA and DMS in order to implement laws, the Marine Environment Protection Authority (the responsible organization in this regard) should have more officers for technical inspection of the ships, strengthening the laws, ratifying the related laws and implementing them within the country, improving acts and regulations by eliminating the present weak points, strengthening the Marine Environment Protection Authority, building better coordination and relationship between the relevant institutions, and signing the relevant conventions and implementing those regulations through Sri Lankan law.

Figure 8: Frequency of occurrence of vessel based marine pollution in Sri lanka 1999-2016

## V. CONCLUSION

A comprehensive and systematic legal framework has been embodied in various international conventions. Almost every aspect of the problem of vessel-source pollution is covered by those legal instruments, though there is still room for further improvement. Future development may be expected with the advances in construction and design of ships, navigation technology as well as the new generation of potentially polluting cargoes.

Still efforts are needed to strengthen the international regulatory framework and formulating robust as well as practical measures to ensure sustainable development of the maritime sector and the global economy.94 In the opinion of this writer, the

implementation and enforcement of legal instruments is of no less significance than legislation. In respect of the legal framework discussed in this thesis, the public and regulatory law has provide instruction for both shipping industry, public authorities and international organizations to adopt measures for exercising and enforcing the vessel-source pollution control and prevention law. However, more work has to be done in facilitating the implementation and enforcement of those international instruments by more states. As international treaties do not provide for inducements or incentives for state parties to effectively implement them, nor is there any supranational enforcement body. 95 Problems still exist in achieving a desirable result internationally.

At the international level, the costly operational and structural requirements prescribed in the regulatory conventions still pose a great burden on developing countries with large tonnages and those major ship registries as well as second-hand ships receivers. Therefore more effort is needed by the international maritime community to promote international co-operation between well developed and less developed countries, especially in technical and financial support for the less developed states, so as to achieve international success in the prevention and control of vessel source pollution. In the case of China, both economic development and a sound environment are of grave importance. A big step has been made by adopting 94 M Segar Abdullah, "Environmental Challenges for Shipping and Port Activities" in Neil Bellefontaine and Olof Linden (eds.), *Impacts of Climate Change on the Maritime Industry* (Malmö: World Maritime University 2008), 55. 95 Proshanto K. Mukherjee and Jingjing Xu, "The Legal Framework of Exhaust Emissions from Ships: A selective Examination from a Law and Economics Perspective" in Neil Bellefontaine and Olof Linden, (eds.), *Impacts of Climate Change on the Maritime Industry* (Malmö: World Maritime University 2008), much national legislation for the purpose of implementing international maritime law.

However, there are problems in practice with respect to the actual exercising of those requirements set out in those laws. To achieve a solution to the existing problems, the writer submits that from a national perspective of China, stringent supervision and sanction mechanisms are required for the public authorities of China in order to enforce the law; from an international perspective, more regional and international cooperation with other states and support from international maritime community, especially from developed states in aspects of technology development and financial assistance will be appreciated for China to achieve a sound and effective mechanism for vessel-source pollution control.

## VI. RECOMMENDATIONS

The ways to overcome the growing menace of marine pollution is not as visible as the problem. The MEPA is the mandated agency in Sri Lanka to address issues concerning marine pollution. Sri Lanka introduced the Marine Pollution Prevention Act (MPPA) as early as 1981, around the same time that the National Environmental Act (NEA) of 1980 was

introduced.

However, like many environmental problems, marine pollution also cannot be solved by efforts taken by a single line, single agency or a ministry. As explained in this article, marine pollution has its land-based sources as well as sea-based sources. Land-based sources are handled by a variety of agencies that include the CEA, CCD and municipal authorities.

Sri Lanka's efforts to manage land-based pollution can hardly be considered as a success story and hence the landward side of the problem is not under control. Despite failures, however, this is entirely a source that is within the control of the national jurisdiction, and as a result there is room for improvement through our own efforts.

The more contentious issue is the sea-based sources, which are trans-boundary and international. We have limited control of these sources and international cooperation is mandatory for solving them. There are several international agreements and arrangements that deal with different aspects of marine pollution and Sri Lanka is a party to many of them. Besides, there are regional arrangements too.

In spite of all these efforts, marine pollution continues to grow at a rapid rate. It is a global threat that needs global solutions. We as a nation should look after what is under our control while cooperating with the world community to overcome this global menace.

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