

# Progress of Implementation of MARPOL Convention Executing in Sri Lanka for Preventing Marine Pollution by Ships



Report No: PER/B/2020/06



**National Audit Office of Sri Lanka**

**Environmental Audit Division**



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## **1. Executive summary**

The ocean is important as a resource that is conducive to human survival and is rich in biological resources. It is the duty of every citizen to contribute to the control of climate activities around the world and to maintain the ocean as a pollution free zone, a vital part of the water cycle. The maritime zone of a country is determined by the United Nations Ocean Charter and the marine zone is defined by the Maritime Zone Act No 22 of 1976 in relation to Sri Lanka. Further, Sri Lanka has the responsibility to protect the unique Economic zone or pollution prevention zone up to 200 nautical miles from the baseline of the coastal zone according to the Act. The pollution caused by ships can be defined as one of the main causes of marine pollution. The convention was adopted by the international Maritime Organization in the year 1973. The convention which is defined as MARPOL 1973/1978, aims to prevent and minimize pollution in the event of a shipwreck and the normal operation and has provided 06 technical annexures, including regulations, for this purpose. The objective of this audit was to assess the legal Framework for mitigation and the legal framework of functioning and the efficiency of the institutions responsible for implementing the convention and the MARPOL Convention which is activated in Sri Lanka to minimize the pollution done in the ocean zone in Sri Lanka due to the ships. Hence there has been a risk of rising, the vast development of marine navigation in the coast of Sri Lanka since it has been considered as the Silk Road to Marine navigation from the past and the risk can be further increased in the future as well.

In obtaining the access to the audit the fact such as, a preliminary study of the MARPOL Convention, consideration of the need for proper formation of local laws and regulations required for the implementation of the MARPOL Convention in Sri Lanka, identification of technical issues 16 in the implementation of the map or condition in Sri Lanka, identifying the Institutions with refinery responsible for the above convention, studying the pre preparation for the conduct conditions, can the occur due to the problem has Sri Lanka prepare to become a major international Maritime hub, assessing the role of the Melon and environmental protection authority the name is situation; implementing

responsibility of the coastal state. Sri Lanka has also signed to become a party to the convention and enforced the annexures I to V in the year 1997. Although it was decided to access Annexure VI by a cabinet decision in the year 2016, the action required to implement, it had not been taken by 31st December 2020 at the date of audit.

It was observed that the Marine Pollution Prevention Act No 35 of 2008, which was enacted for the protection of the marine environment, has not added to the legislation required to fully implement the MARPOL Convention, although the convention should be implemented in Sri Lanka, incorporating its provisions into domestic law. Further it was observed that the shortage of physical and human resources were not sufficient to be a party to other international convention in maritime operations and to adopt the relevant conventions to domestic law.

However, despite the fact that the Trade and Shipping Secretariat and Maritime Environmental Protection Authority, have taken steps to implement the provisions of the technical annexures of the convention through the provisions of the existing Acts.

It was observed that strengthening the legal validity of this convention is essential in moving towards sustainable development goals and the expansion of Corporate development through the strengthening of physical and human resources and the need to establish a system of action for 24/7 emergency services in view of maritime operations and potential uncertainties in the marine environment. Accordingly it is observed challenges of operating as the maritime hub of the Silk Road can be overcome by updating domestic laws in line with international convention and accelerating the need for institutional Framework for the development of shipping operations, environmental protection and conservation.

## **2. Background and nature of the report**

### **2.1. Background**

The ocean is defined as the major source of oxygen for the food needs and respiration of millions of living things on Earth, which also contribute to the regulation of the climate around the world. The Ocean which act of the home to a wide variety of species, also provides many of the herbs needed for healthy living of the human. Not only that the vast ocean, which plays the most prominent role in the vital water cycle, provides man with a number of economically important mineral resources.

Sri Lanka is surrounded by the Indian Ocean the world's third largest ocean, covering 20% of the surface of the earth. According to the United Nations convention on the law of the sea, Sri Lanka has significant territorial rights. The Charter was signed by Sri Lanka on the 19th December 1982 and confirmed on 19th July 1997. The ocean areas belong to a country are as follows.

#### **I. Territorial sea**

The region from the Baseline of the coastal zone to 12 nautical miles into the ocean is called the Territorial sea. Our country has the full ownership of the sky, water and seabed in that region. The quantity of that is approximately 21700 square kilometers.

#### **II. Contiguous zone**

The region up to 12 nautical miles from the local maritime boundary is defined as contiguous zone. Our country has only the ownership of the water column and sea bed in this region. It covers an area of approximately 22 600 square kilometers.

### III. Exclusive Economic Zone

The area from the baseline to 200 nautical miles is called the Exclusive Economic Zone. Our country has the right for monitoring, engaging, testing and harvesting all living and nonliving resources in the region. This area is about 08 times the size of our country.

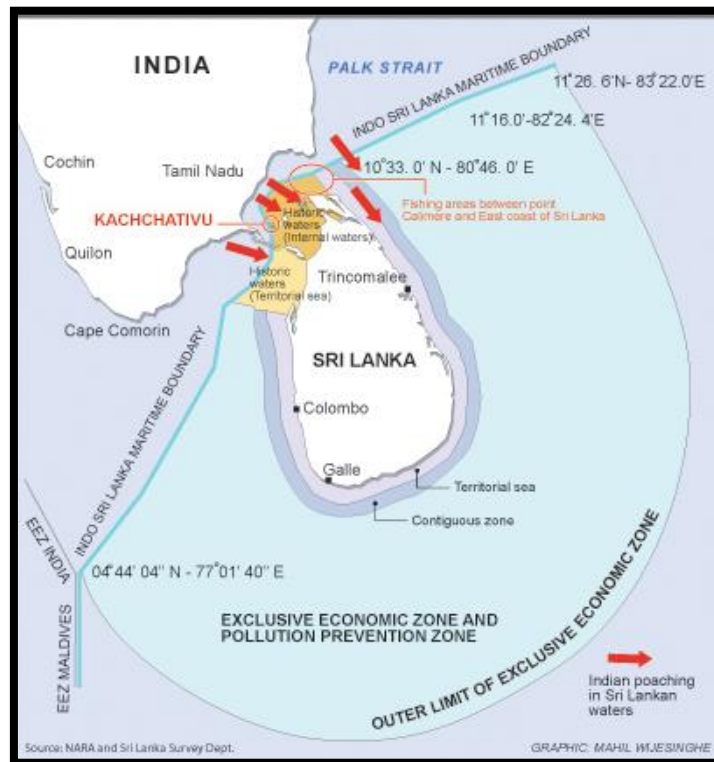


Diagram NO - 01

Our Exclusive Economic Zone is also designated as the Prevention of Pollution Zone and the Maritime Zone Convention No 22 of 1976, therefore our country has the full responsibility to prevent corruption in this region.

#### 2.1.1. The International Maritime Organization

The International Maritime Organization is a special Institution of the United Nations, which is responsible for the safety and security of maritime affairs and the prevention of maritime and air pollution by ships. The convention on International Maritime

Organization was enforced in the year 1958 and it was met in the year 1959. The International Maritime Organization is currently contained with 174 member states.

The International Maritime Organization (IMO) employs five key strategies to facilitate maritime operations. They are

- Convention
- Protocol
- Amendments
- recommendations, codes and guidelines
- Resolutions

The above main methods are categorized under 03 main categories by the International Maritime Organization. They are Maritime security, prevention of Maritime pollution and the recovering of losses and compensation in the event of Maritime pollution.

The International Maritime Organization has categorized and stated that each convention into following categories according to their importance.

a) Key Conventions

- i. SOLAS- safety of life at sea( SOLAS-1974)
- ii. MARPOL- prevention of pollution from ship( 73/ 78)
- iii. STCW- standards of training certification and watch keeping for seafarers( 1995- 2010)

b) Several Conventions in force for Maritime security as follows

- i. COLREG -Convention On International Regulations for preventing collisions at sea( 1972)
- ii. FAL- Conventions On Facilitation Of International Maritime Traffic-( 1965)
- iii. SAR- International Convention On Maritime Search And Rescue( 1979)
- iv. CSC- International Convention For Safe Containers( 1972)
- v. IMSO- Convention On The International Maritime Satellite Organization

c) Several Conventions for the Prevention of Maritime Pollution

- i. OPRC- International Convention on Oil Pollution Preparedness, Response and Cooperation( 1990)
- ii. PPRC- HNS protocol  
Protocol on Prepared Nurse Response and Cooperation to Pollution Incidents by Hazardous and Noxious Substances (2000)
- iii. AFS- International Convention on the Control of Harmful Antifouling Systems on Sheets( 2001)

d) Compromises to recover compensation and charging the fees

- i. CLC- International Convention on Civil Liability for Oil Pollution Damage(1969)
- ii. HNS- International Convention on Liability and Compensation for Damage in Connection with Carriage of Hazards And Noxious Substances by sea( 1996)( 2010 Protocol)
- iii. Nairobi International Convention on the Removal of Wrecks( 2007)
- iv. International Convention on Civil Liability for Bunner oil Pollution Damage( 2001)
- v. 1992 Protocol to the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage( fund- 1992)

e) Other Conventions

- i. International Convention on Tonnage Measurement of ships-(TONNAGE) 1969.
- ii. International Convention on Salvage (SALVGE-1989)



### **2.1.2. Compliance with the International Conventions**

Article 27(14) of the Constitution of the Democratic Socialist Republic of Sri Lanka stipulates the need to protect, preserve and maintain environment and Article 27(15) pledges to comply with international conventions and agreement and to incorporate them. In January 1977, the president can declare the unique Economic Zone (EEZ) of Sri Lanka as a pollution free zone in accordance with powers vested in it by section (7) of the Maritime Zones Act, 1976 to protect the sea from pollution.

### **2.1.3 Defining the flag state, port state and coastal state**

#### **i. Flag State Control**

The flag or merchant ship represents the information such as, whether it has been registered or licensed and also it is considered as nationality of the ship. Flag state is also should be assure that the ships under its own state are agree with the International regulations according to the UNCLOS. The special provisions are included for environmental protection and safety, Navigation of the convention which is recommended by the IMO and also it is included that the special responsibility for the flag States to certify the adhering of the international environmental law such as MAPOL.

#### **ii. Port State Control**

Port state control is the inspection of foreign ships in national ports to ensure that the condition of the ship and its equipment comply with the requirements of international regulations and that the ship is operated in accordance with payments laws. Up to present 09 regional agreements have been signed on poor governance in the world.

They are,

- Paris Memorandum of understanding
- Asia-Pacific(Tokyo)Memorandum of understanding
- Latin American understanding your agreement
- Caribbean Memorandum of understanding
- west and Central Africa Memorandum of understanding
- Mediterranean Memorandum of understanding
- Indian Ocean Memorandum of understanding
- Riyadh Memorandum of understanding etc.

iii. Coastal state control

It is the responsibility of the coastal state to protect its coastal living resources, protect it from marine pollution and protect its coastal population.

Through the Article 56 of the United Nations Convention on the Law of the Sea (UNCLOS) it has been stated regarding the exercise of jurisdiction over the coastal states in their unique economic zone (EEZ). Further control can be enforced over the territorial sea of a coastal state.

**2.1.3. The controlling of the flags state, port state and coastal state in Sri Lanka**

i. Flag state control

Flag state is the state in which a merchant ship is registered or licensed. After registration of ships, the flag state is also responsible for the legal responsibility and the enforcement of the regulations relating to survey of ships, certification, and safety and controlling pollution.

The Merchant Shipping Secretariat is the flagship state of Sri Lanka under the merchant shipping Act No 52 of 1971 established under the Ministry of Ports Shipping.

ii. Port State Control

The State Government Control is the inspection of foreign ships in national ports to ensure that the ship is in compliance with the requirements of international regulations that the ship is operated in accordance with those rules and regulations. The Merchant Shipping Secretariat. The Sri Lanka Ports Authority and the Sri Lanka Customs are primarily engaged in these activities in Sri Lanka. The role of the each institution regarding port state control are as follows.

a) The Merchant Shipping Secretariats

The Merchant Shipping Act deals with the public administration of the port, which operates under the Merchant shipping Act number 52 of 1971. The aim of Merchant shipping sector area is to conduct. "Port state control" surveys to prevent substandard ships in entering into the ports of Sri Lanka in accordance with the Memorandum of understanding on "Port State Control" in the region of the Indian Ocean.

b) Sri Lanka Ports Authority

The Sri Lanka Ports Authority was established in 1979 by the Sri Lanka Ports Authority Act No 59 of 1979 and the Sri Lanka Ports Authority Act first amended by Acts No 7 of 1984 and Act No 35 of 1984. The vision of the authority is to become the Excellence in Maritime Services in the Silk Road and the mission is to provide international level Maritime Services in a sustainable environment.

Its objectives and functions are stated through the section 6(1) of the Sri Lanka Ports Authority Act. The functions included it are cargo carriers, shipping and transshipment, landing and warehousing, wharfing tasks, Supplying water, electricity and fuel for the ship, petroleum for the ships and petroleum from ships, producing petroleum and operating lubricant, tasks between bunkers and fuel storage, monitoring tasks and tasks of binding ships, repairing the ships and diving beneath water and providing formal effective services for any related tasks. Comparison and security services on a regular basis, streamlining the ships within the port boundaries and on port access routes.

Sri Lanka contains 06 main ports such as Colombo, Galle, Trincomalee, Hambantota, Oluwila, and Kankesanthurai, and the number of ships which have been arrived in Sri Lankan ports in 2019 was 3320.

The Health Declaration should be issued by the port operations office (consisting of 07 doctors and 01 public health inspector) According to the guidelines prepared and used by the authority, the doctor obtains information on the presence of patients on board. And whether the injured passengers, accommodating on board. When a ship leaves one port, that particular port notifies the next port. If there is any mishap on the ship, the next port will be notified. In this regard the operational division of the port is the Ports Control Unit. This section doesn't allow entering the Sri Lankan ports in the event of a defect in the ship. After these enquiries, if there is no problem the doctor will issue a free port permit. Although the Quarantine and Prevention of Diseases Ordinance No 03 of 1897 has been applied in this regard, the World Health Organization has stated that the International Health Regulations 2005 should be followed in this regard.

**(c) Harbour master**

The Harbor Master is the officer responsible for enforcing specific ports or port regulations. The Harbor Master ensures and certifies the safety of navigation, port security and proper functioning of Port facilities.

**(d) Sri Lanka customs**

The vision of the Sri Lanka Customs Department which was established in 1806, is to become the foremost institution in Asia for directing customs administration which promotes security and prosperity in Sri Lanka.

The function of the customs is regulated by the Customs Ordinance No 17 of 1869.

When a merchant ship arrives in Sri Lanka, the shipping agent obtains the inventory. Currently this is done online and the details of the cargo, brought by the ship are included here. After the doctor visits firstly to the ship and verify that the ship is safe, the Customs officer in entered ship. The captain of the ship gives the following details.

- Name of the caption
- Crew of the ship
- Country which the ship belongs to
- Details of the registration of the ship( flag state)
- Details regarding the materials such as alcohol cigarette, weapons,

The shipping agent will then request permission to unload the car into the designated warehouse and grant that permission.

iii. Coastal State Control.

The coastal state a state containing coastal line that has jurisdiction over the activities of its territorial waters as well as its implications. The coastal and maritime boundaries of a country are governed by the legal system of that country.

Information on the relevant institutions any play girl role in relation to the coastal state, for control of Sri Lanka can be stated as follows.

<b>Relevant Institution</b>	<b>Special Section of the Act</b>
<p>1. Marine Environment Protection Authority</p>	<p>Marine Pollution Prevention Act No 35 Of 2008</p> <p>Part V I - Reception Facilities and Solution Prevention Measures</p> <p>Part Vii Maritime Disasters</p> <p>Part Viii Prevention Of Corruption Act Criminal Liability</p> <p style="padding-left: 40px;">Prevention Of Corruption Civil Liability</p> <p>Part Xi Natural Resources Including Petroleum</p> <p>Part X Prevention Of Pollution During excavation of natural resources including petroleum on other related activities.</p> <p>(operates up to 200 nautical miles)</p>
<p>2. Department of fisheries and aquatic resources</p>	<p>Act No 02 of 1996 Fisheries and Aquatic Resources</p> <p>IV Protection of fish and other aquatic resources</p> <p>V conservation</p>

<p>3. Department of Coast Conservation and Coastal Resources Management</p>	<p>Under The Coastal Conservation Act Number 57 of 1981( Amendment No 49 of 2011)</p> <p>The main functions activating for controlling erosion for ensuring the control of coastal erosion, certifying the development and favorable standards, improving the living resources, improving the living standards of coastal residents, resource uses, balancing the consideration objectives for the development need of the country.</p>
<p>4. Sri Lanka Coast Guard</p>	<p>Established under the Coast Guard Act No 41 2009</p> <p>The functions of this is ensuring the safety of coastal areas, maritime zones, real war and, and the protection of marine life from ships in distress at sea.</p>
<p>5. Department of Wildlife Conservation.</p>	<p>Wildlife and Flora Protection Ordinance( Authority 469) and Fauna and Flora Perfection Ordinance No 22 of 2009( Amended)- contributing to the conservation of marine national parks</p>

Table NO -01

### 2.1.5. Marine Pollution

Marine pollution is a condition in which human beings directly or indirectly add various substances or energies to the Marine environment, which are detrimental to life and human health as well as impede marine- related activities such as fishing and degrade the quality of seawater and the beauty of the ocean. Following are the summarized details of the each particular sources of marine pollution.

#### 2.1.5.1. Internal Sources Of The Country And Its Impact

i. Marine pollution caused by inland sources

The main sources of marine pollution from inland sources are the direct discharge of waste and wastewater into the ocean, the discharge of waste water into the sea through inland waterways, and the discharge of water mixed with agrochemicals into the ocean.

a) Possible sources of marine pollution and their visiting pollutants are as follows.

Source	Contaminants
Urban waste	oil, nitrogen and phosphorus(N,P) Chemicals, gases( CO <sub>2</sub> , CO,SO <sub>2</sub> )
Domestic waste	organic compounds, metals( Na,CA, Cu) Nitrogen and phosphorus(N,P) gases( CO <sub>2</sub> , CO,SO <sub>2</sub> )
Industrial waste	Organic compounds, heavy metals(Cr,Hg,Cd) gases( CO <sub>2</sub> , CO,SO <sub>2</sub> )
Agro waste	Organic materials, heavy metals(Cr,H g,Cd) nutrients(N,P)

Table NO -02



ii. **Impact of Marine Pollution by Inland Sources.**

The following types of effects can be occurred.

**a) Decreasing the amount of dissolved oxygen in the water**

Most of the waste that washed into the ocean doesn't decay and stays there for years. They use oxygen to decompose. As a result of this, the oxygen content of the water decreases. Due to this the marine life such as whales, turtles, sharks, penguin do not get necessary oxygen to breath.

**b) Damage to the reproductive process of marine organisms**

Agricultural and industrial waste contains highly toxic chemicals. They are very harmful to the living beings and is toxic chemicals accumulates in the adipose tissue layers of marine organisms and damages the reproductive system.

**c) Impact on food chains**

Some of the ways that released into the ocean as chemical waste is insoluble in water and sinks to the seabed. Very small aquatic organism feed on these and then travel to the bodies of other animals through the food chain. The food chain and also carries highly harmful heavy metals and other chemicals that accumulate in the tissues of marine organisms.

**d) Impact On Human Health**

Consumption of seafood with the above adverse conditions can lead to various ailments such as cancer and nervous system related diseases in humans due to the heavy metals and other chemicals contained in it.

### **2.1.5.2. Pollution by ships**

The details are as follows

#### **a) Ballast Water Threat**

About 90% of marine pollution is caused by land activities and about 10% by ship time activities. Today 90% of the world's transportation of goods is done by ships. With this one of the biggest threats to the ocean is the Ballast water, poses a risk of invasive aquatic organisms. Plants and pathogens migrating from one environment to another.

Ballast water is used to control the balance of a ship. Ballast water removal and filling at ports proportionately does with loading and unloading the cargo. As a research with the release of ballast water into the sea around the loading harbor, new species alien environments are added. The annual circulation of ballast water around the world is estimated at 10 to 15 million metric tons. It is estimated that about 3,000 species circulate with this water from one environment to another. These alien species have adverse effects on self-sustaining ecosystem as described below.

#### **i. Destruction of the ecological balance**

Following issues can be occurred as well as water causes an organism or plant to migrate from one system to another, if, it is suitable for the biological, chemical and physical conditions of the new ecosystem.

Migratory organisms can affect in the new environment or the food chain of the prevailing organism, effect on breeding grounds, influences as predator, invade the habitats by over growing, causes diseases acting as parasite, adding toxins to the environment and interfering the environmental factors necessary for the survival of the environment.

#### **ii. Social and Economic Damage**

The arrival of organisms which damages the fishing nets, pathogens can have a detrimental effect on aquaculture blocking the water supply ways and drainage systems.

### **iii. Health problems**

Consumption of contaminated by migratory organisms can lead to diseases such as cholera and even death by eating fish poisoned by these organisms.

## **b) Contamination of sea water by oil spilling**

### **i. The nature of oil pollution**

The impact of an oil spill over a vast Ocean region nearly eight times the size of Sri Lanka should be considered. More than 500 million metric tons of oil circulates across Sri Lanka's territorial waters annually. Ships over 20 meters deep are not allowed to enter Sri Lankan ports, years leap or not allowed to enter Sri Lankan ports, but smaller ships pump oil to tanks. Also oil is pumped into the country by a single point mooring buoy (SPMB) 9 kilometers off the coast, where sudden oil spills can occur oil and unrefined crude, needed for ships floats on water and does not evaporate.

### **ii. Effect of oil pollution**

- **Impact of oil spills on marine life**

The oil spills on the gills of fish as well as on the feathers of marine birds, making it difficult for them to navigate and disrupting the feeding of young. Prolonged exposure can also lead to cancer, changes in the reproductive system, changes in behavior and even death.

- **Destruction of coral reefs**

Improper exposure to sunlight duty substances such as oil floating on the same can distract photosynthesis and thus destroy corals and associated organisms; increasing the sea acidity also causes of coral reef destruction.

## **c) Damage caused by a Marine disaster**

The maritime disaster is another event in which there is a threat of material damage or material damage to a ship or an accident while sailing or any other incident on or off a ship.

**d) Pollution of marine environment during shipping**

There are several instances where the marine environment can be polluted during shipping.

Mixing the Chemicals transported by ships, into the ocean, including ship debris, others pollutants and wastewater of the ships into the ocean and the maritime disasters that can occur due to various reasons.

**2.1.6. Naval flow in Sri Lanka**

Following is the summary of ships arriving at Sri Lankan ports from 2014 to 2018 based on the data obtained from the annual reports of the Sri Lankan Ports Authority.

Port	Number of ships				
	2014	2015	2016	2017	2018
Colombo	3,742	4,197	4,405	4,329	4,331
Galle	36	164	216	87	84
Trincomalee	134	72	96	233	189
Kankesanthurai, Myladi	48	32	25	63	59
Hambantota	139	295	281	230	270

Table No 3

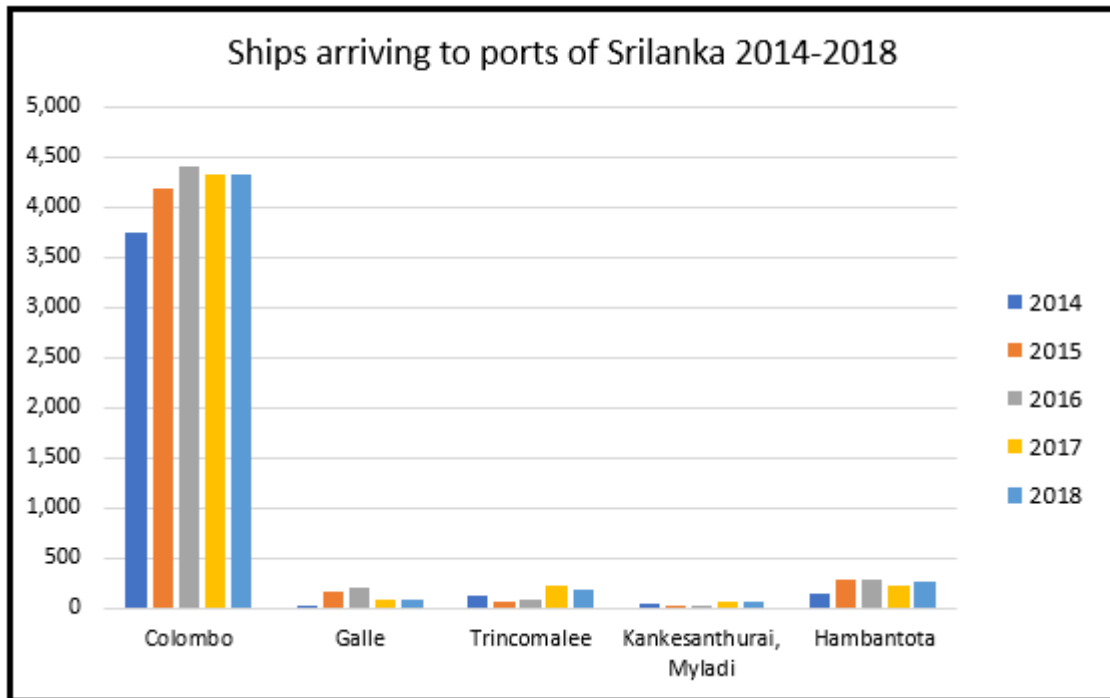


Diagram No: 02

From the year 2014 to 2018 the port of Colombo, the leading navel hub of the world, followed by the ports of Hambantota, Galle and Kankesanthurai. Among the categories of ships, such as container, conventional, dry bulk and oil/ gas tanker, passenger, other cargo, the attendance of the containers was high during the period between 2014- 2018. Among the Sri Lankan ports, the ships are attending mostly into ports respectively to Colombo, Hambanthota and Trincomlee and among them more ships which are containing containers, oil tankers or liquid bulk., dry bulk have attended into the Colombo port, which takes the main position among them.

### **2.1.7. Primary regulator Re statutory certificates used in shipping**

#### **i. Certificate of classification**

The structural rigidity of a ship is guaranteed. This is essential for the registration of a ship under the flag state.

#### **ii. Certificate of registry**

A statutory certification applicable to domestic law and United Nations Maritime law. It mainly includes information about the owner of the Ship, information about the ship, and the engine of the ship.

#### **iii. SOLAS certificate**

This is one of the most effective guarantees. The international Maritime organization (IMO) has established this certification for the first time since the sinking of the Titanic.

#### **iv. MARPOL certificate**

This certificate must be carried for the states, parties to the convention.

#### **v. International Anti FOULING Certificate**

International anti-corruption system certification

#### **vi. International ship load line certificate**

The international load line certification maximum quantity of cargo that ship can hold is determined.

#### **vii. International Tonnage Certificate**

The gross and net weight of the ship is determined.

#### **viii. Certificate of rating by the chief of shipping and offices**

Includes the rating of all the sailors on board.

### **2.1.8. For International Convention the Control of Shipping Pollution(MARPOL- 1973/ 1978)**

The International Maritime Organization (IOM) was instrumental in establishing the OILPOL convention in 1954 due to various accidents take place while transporting oil by ships. These accidents were caused by various natural causes and various human activities. In 1967 the accident of the LORRY CANYON ship carrying 120 000 tons of crude oil, making the turning point in alternating Maritime Pollution Prevention Convention and The Regulations. Accordingly the OILPOL convention of 1954 was further amended and a series of conventions were established internationally.

Steps have been taken internationally to Prevent Marine Pollution, as Marine Pollution has become one of the biggest environmental problems in the world today .Foremost among these is the MARPOL Convention (1973) Convention on the Control of Shipping Pollution.

MARPOL is an International maritime Convention for the Prevention of Pollution. The Convention Was Adopted By The International Maritime Organization (IMO) In 1973. The oil tank was later modernized in 1978 due to several accidents faced by the oil tankers. This Convention includes Regulations aimed at Preventing and minimizing pollution, including pollution in the event of an accident and pollution during normal operations. The main parts of the convention are as follows.

Article I - General

Article II - How to implement Annexure II of the Convention

Article III - Exchange of Information

Article IV – Signature, Signature ratification, Acceptance, Approval, accession

Article V - Activation

Article VI - Amendments

Article VII - Documentation

Article VIII - Depositors

Article IX – Languages

The following protocols are available under this convention.

- i. Protocol -I – Should be read with Article 08 of the Convention
- ii. Protocol –II must be read in conjunction with Article 10 of the Convention
- iii. Protocol 1997-1973 for the 1978 modernization of the MARPOL Convention 1997 Updated Protocol

There are 06 technical Annexures in MARPOL 1973/1978 Convention up to Date.

### **Technical Annexures**

- i. Regulations To prevent oil pollution
- ii. Regulations to control pollution caused by excessive amounts of harmful liquid
- iii. Regulations to prevent pollution caused by harmful substances packaged and transported by sea
- iv. Pollution caused by sewage discharge from ships
- v. Regulations to prevent pollution caused by waste disposal by the ships.
- vi. Regulations to prevent air pollution from ships

So far 156 parties have participated in the MARPOL Convention, which Sri Lanka signed as a party to the convention on July 24, 1997. This Convention has been enforced in Sri Lanka from 24 September 1997. Ships operating under each category that has signed and agreed to the MARPOL Convention must comply with the terms of that convention.

According to Article 03 of the MARPOL Convention, the MARPOL Convention shall apply to ships entitled to hoist the flag of its parties and to ships operating under the authority of one of the parties to the convention. Article 06 of the MARPOL Convention deals with the identification of breaches of the agreement and the enforcement of the convention. It states that the parties to the convention must assist in identifying and enforcing the convention in violation of the convention and adapting appropriate and practical measures to adapting an appropriate methodology for detecting faults, environmental monitoring and reporting.



## **2.2 Authority for Audit**

Audited under my direction in accordance with the provisions contained in the national audit Act No 19 of 2018, which should be read in conjunction with Article(154) (3) of the Constitution of the Democratic Socialist Republic of Sri Lanka.

## **2.3 Audit Objective**

Evaluating the MARPOL Convention for the Elimination of Shipping Pollution in the Maritime areas of Sri Lanka and the legal framework functionality and efficiency of the Institutions responsible for implementing the convention.

## **2.4 Access to Audit**

- i. Basic study of the MARPOL Convention
- ii. Considering the need to properly formulated local laws and regulations required for the implementation of the MARPOL Convention in Sri Lanka.
- iii. Identifying technical issues in the implementation of the MARPOL Convention in Sri Lanka.
- iv. Identifying the institutions ultimately responsible for the above agreement.
- v. As Sri Lanka prepares to serve as a leading international maritime hub in the future, a precautionary study on the future potential for maritime pollution by ships.

## **2.5 Scope of Audit**

### **2.5.1 Compliance with International Standards**

My order it was conducted in accordance with the International Audit Standards (ISSAI 5110- ISSAI 5140) of the Supreme Audit Institution.

### **2.5.2 Scope**

The following Institutions focus on the steps taken to implement active International conventions on Maritime pollution in Sri Lanka and the legal background in this regard.

- i. Marine Environment Protection Authority
- ii. Merchant Shipping Secretariat

### **2.5.3 Limitation Of Scope**

Apart from the flags and Port states to be discussed in the MARPOL Convention on the damage to the marine environment in Sri Lanka, on the roles to be played by the Maritime Environmental Protection Authority, the primary body of the coastal state administration, and the coastal conservation for participating in it are discussed herein. And the duties to be accomplished by the Department Of Coastal Protection and Resource Management, The Department of Wildlife Conservation, Department of Fisheries, The Disaster Management Centre, are not discussed here.

## **2.6 Audit Methodologies**

### **2.6.1 Sources of Evidence**

Relevant evidence was obtained from the following sources so that it could be considered quantitative and a reasonable conclusion could be drawn.

- Files
- Discussion notes
- Questionnaires
- Newspaper articles
- Magazines
- Media notes
- Articles from internet
- Research papers

## 2.7 Audit Criteria

Consideration of the provisions mentioned in the following Acts Ordinary/ Extraordinary Gazette Notification under the Audit Criteria.

- i. Prevention Of Marine Pollution Act No. 35 Of 2008
- ii. National Environmental Act No. 47 of 1980
- iii. Fisheries And Aquatic Resources No. 2 Of 1996
- iv. Sri Lanka Ports Authority Act No. 7 Of 1984
- v. Merchant Shipping Act No. 52 Of 1971
- vi. Coast Conservation Act No. 57 Of 1981
- vii. International Maritime Charters
- viii. Merchant Shipping(Amended) Act No. 17 Of 2019
- ix. Merchant Shipping (Amended) Act No. 36 Of 1988
- x. Offshore Freight Act No. 21 Of 1982
- xi. Coastal Conservation Department Act No. 41 Of 2009
- xii. Maritime Zonal Lo No. 22 Of 1976
- xiii. Extraordinary Gazette Notice Notification No. 1816/ 37 Dated 28<sup>th</sup> June 2013
- xiv. Extraordinary Gazette Notification No. 1996/ 27 Dated 6<sup>th</sup> December 2016
- xv. Extra Ordinary Gazette Notification No. 1709 Dated 7<sup>th</sup> June 2011
- xvi. Extra Ordinary Gazette Notification No. 1741/19dated 19<sup>th</sup> January 2012.
- xvii. Extraordinary Gazette Notification No. 1829/ 38 Dated 27<sup>th</sup> September 2013
- xviii. Extraordinary Gazette Notification No. 2017/ 31 dated 04<sup>th</sup> May 2017
- xix. Flag State Performance Table Issued By The International Chamber Of Shipping
- xx. Sustainable Development Objectives- 14 Objectives

### **3. Observations**

#### **3.1 The Functioning of the MARPOL Convention**

It is observed that a national policy has not been formulated in Sri Lanka on how to prevent Maritime Pollution by ships. Apart from that, the observations related to the convention were as follows.

##### **3.1.1. State responsibility of the state for the implementation of the MARPOL Convention**

The responsibility of the state for the use of a formal legal system for the supervision and certification on sponsorships, the prevention of maritime disasters, and the provision of port received facilities for the disposal of waste from the ship must be fulfilled.

According to the Budget Speech presented in the year 2016, Sri Lanka is targeted to be among the top 20 shipping ports in the world by 2025 and the Budget Speech for 2018 aims to expand the continental shelf in line with Strategic Growth Strategy.

In addition to that, Section 192 and 194 and 235 of chapter xii of the convention on the law of the sea provides the legal framework required to recover damages to the oceans and ecosystem caused by maritime pollution in a manner that is effective in accordance with international law. It is the responsibility of the state to make in in this regard.

The following observation is made in this regard.

- a) It was observed that there is not a single specific body in the local mechanism responsible as a whole for the implementation of all existing technical attachments to this convention in Sri Lanka in relation to the aforesaid subject.
- b) In accordance with the recommendations of the report of the international Maritime organization( IMO) on maritime affairs adults conducted in Sri Lanka in the year 2016, it has been stated that the mandatory charter of the international Maritime Organization should be incorporated into the local law and it should be done before 31st December 2018. But it has not been acted accordingly.

- c) When incorporated with international conventions into to domestic law, technical matters referred to therein may be recognized and implemented as reference or amendments to new Acts. However it was observed that this could create problems in the formulation of regulations in the future as the Merchant Shipping Act and the Marine Pollution Act can only regulate the provisions contained therein.

### **3.1.2. Coverage under the MARPOL convention**

The MARPOL convention, an international Maritime organization convention to prevent maritime pollution from ships, covers 06 fields such as pollution from oil, pollution caused by large amounts of harmful liquids, pollution from harmful substances which packed and transported through the ocean, pollution due to the sewage waste disposed by the ships, pollution caused by the waste disposed by the ship and the air pollution caused by the ships. According to the Article 01 of the convention, the parties to the convention are bound to enforce its provisions to prevent the release of harmful substances to the marine environment in violating the current convention. At the same time the Article 03 applies to the ships that have the right to carry the flag of a state that is a party to the convention, applies to the ships that are not entitled to carry the flag but are active under the authority of a state that is a party to the convention.

### **3.1.3. Issuing of certificates and survey on ships**

Article 05 of the MARPOL Convention provides for the issuing of certificates and special provisions for the survey of ships, and a certificate issued by one party in accordance with the regulations of the convention, shall be accepted by the other party with equal validity. A ship located in a port or offshore terminal under the control of a party to the convention shall be in possession of the relevant certificates and shall be subject to inspection by authorized officers whom are given the particular authority by that party. It is stated that the parties to the convention should work to apply the requirements of the present convention to the ships which are not parties to the convention.

However it was observed that only regarding the certification and related services related to the MARPOL Convention carried out by the Merchant Shipping Secretariat and the functions related to environmental conditions are fulfilled by the Marine Environment Protection Authority in 02 institutional scopes.

#### **3.1.4. Enforcement of the Convention and the Detection of Violations**

The following observations are made.

- a) Article 06 of the convention provides for the enforcement of the convention and the provision for detection of violation. The parties to the convention must co-operate to enforce the terms of the convention and to expose any relevance violations. Optical measurements should be used to monitor environmental monitoring and violations of the terms of the convention. Appropriate methods should also be implemented for reporting and gathering evidence. Failure to do so may result in serious damage caused due to not having the opportunity to address the problem immediately. In addition to the above incidents, it was observed that the practical measurement methods currently in operation in Sri Lanka are insufficient to collect and report evidence.
- b) When ship to which the convention is concerned is at a port of show terminal in a state which is a party to the convention, it should be subjected to the officers authorized by the administration of that convention. There the ship is inspected whether any harmful material is discharged or breached the terms of the convention. If it is discovered that the terms of the agreement have been violated, report should be submitted to the administration to take appropriate action.

Accordingly it was observed that the legal framework in Sri Lanka needs to be further strengthened to take these actions. Thus immediate intervention is required in such a case as it is essential to identify whether there is a violation of maritime law for maritime pollution and to have the strength to act accordingly. It was observed that due to the non-legalization of the legal

provisions, the potential risk of delays in the intervention of the parties concerned was high.

### 3.1.5. Technical Annexures to the MARPOL Convention

Following is the information on each of the Technical Annexures to the MARPOL convention for the prevention of marine pollution by ships and the relevant regulations.

Number of the technical annexure	Name of the technical annexure	Number of regulations issued up to 31. 12. 2020
I	Regulations to prevent oil pollution	43
II	Regulations to control pollution caused by excessive amounts of harmful liquids	18
III	Regulations to prevent pollution caused by harmful substances packaged and carried by sea	8
IV	Regulations to prevent pollution caused by sewage discharge from ships	13
V	Regulations to prevent pollution caused by ship waste	10
VI	Regulations to prevent air pollution from ships	23

Table NO -04

Among the details observed and this regard was that Sri Lanka had not taken the necessary steps to adopt technical and Annexure VI in relation to its role as a party to the conveyor. Accordingly it was observed that all the one of the nature air pollutants affecting Sri Lanka is the various causes of nautical transportation, as this Annexure VI has not been a party to provide the necessary provisions.

Other observations related to this are given in paragraph 3.1.5.6 and the observations related to Annexures I to V are as follows.

### **3.1.5.1. Technical Annexure I Prevention of oil pollution**

A brief summary of the technical attachment is as follows

- a) Annexure 1 to the prevention of soil pollution has issued 43 regulations as at 31st December 2020. The regulations, effective from October 2nd 1983, are intended to prevent oil-related marine pollution during normal operations and accidents. Various technical equipment such as oil water separators (OWS), Oil Content Meters (OCM), etc. should be developed in the ship to prevent contamination. The regulations mentioned in this Annexure cover the pollution caused by the cargo area of the ship and the cleaning of the tanks. The Oil Discharge Monitoring Equipment (ODME) an important technology mentioned in the MARPOL convention, enables the cargo area of the ship and the tanks to be kept clean. Another important feature mentioned here is the Oil Record Book.

According to the Budget Speech presented by the government of Sri Lanka in the year 2016 , about 35000 ships including 4500 oil tankers, use the route annually on the sea route through the Hambanthota port.

- b) This attachment defines “oil” as follows

- Crude oil
- Fuel
- Sludge
- Oil refuse
- Refined products



c) The specific SOF age of the regulations referred to in Annexure as follows.

Regulation number	Description in Brief
06	Oil seeds of 150 tons more and all other ships of 400 tons or more should be surveyed
06(2)	Appropriate measurement methods shall be established to ensure compliance with the provisions of the Annexure for the survey of ships which are not subject to the above provisions.
07	International oil pollution prevention Certificate is required for oil tankers of 150 tons or more than all other ships of 400 tons or more.
10	Certificate is issued for a specified period not exceeding 05 years and the certificate should be renewed after the expiry of the validity period.
15	Oil Disposal Limits.
15(7)	When a visible oil mark is observed in the vicinity of a shape on the surface of sea water, the government, it is a path to the convention, shall make prompt enquiries.
32	Oil Tankers intended to discharge waste water directly into the sea of approximately 150 tons or more must have an approved oil/water interface detectors.
39	Conditions apply to ships of approximately 400 tons or more for offshore excavation, fixed or floating platform for exploration.

Table NO -05

The following observations were made regarding the implementation of the above Annexures.

- i. It was observed that some of the provisions mentioned in the annexure regulations are being implemented under the matter and pollution prevention act and some of the provisions are being implemented under the trade and shipping secretariat.

Ex. –

- Provisions of oil waste recovery facilities
  - ❖ Section 21(a) of the prevention of Marine Pollution Act No.35 of 2008.
- Issuing of International Oil Prevention Certificate (IOPC) for shipping flags of Sri Lanka Merchant Shipping Secretariat.

It was observed that it was not possible to determine the finally responsible institution with respect to the efficiency of the implementation of the overall Annexure.

- ii. When a visible oil mark is observed on the surface of sea water, the parties to the convention must make an observation in this regard. It was observed that the mechanism has not been established to activate the 24/7 hours, services required for such a situation. As a result, it was observed that an oil spill in the event of marine catastrophe could pose a serious threat to the Marine environment from large- scale pollution and destruction of marine resources.
- iii. It was observed that the Annexure II was not applicable to ships/ boards engaged in commercial activities only in Sri Lanka
- iv. National Oil Spill Contingency Plan(NOSCOP)  
This plan is designed to manage the pollution caused by an oil spill in the ocean area and is outlined under three main concept(Tier-3)

Tier 1- Up to 50 tons of oil spill (each institutionally contributing)

Tier 2 - 50-100 tons in oil spill (NOSCOP plan)

Tier 3 - 100 Ton working oil Dispersion (International Assistance)

It was observed that in the event of an emergency oil spill under Tier-2 in the maritime zone of Sri Lanka, the equipment required for speed control was not installed under a single Institution of location.

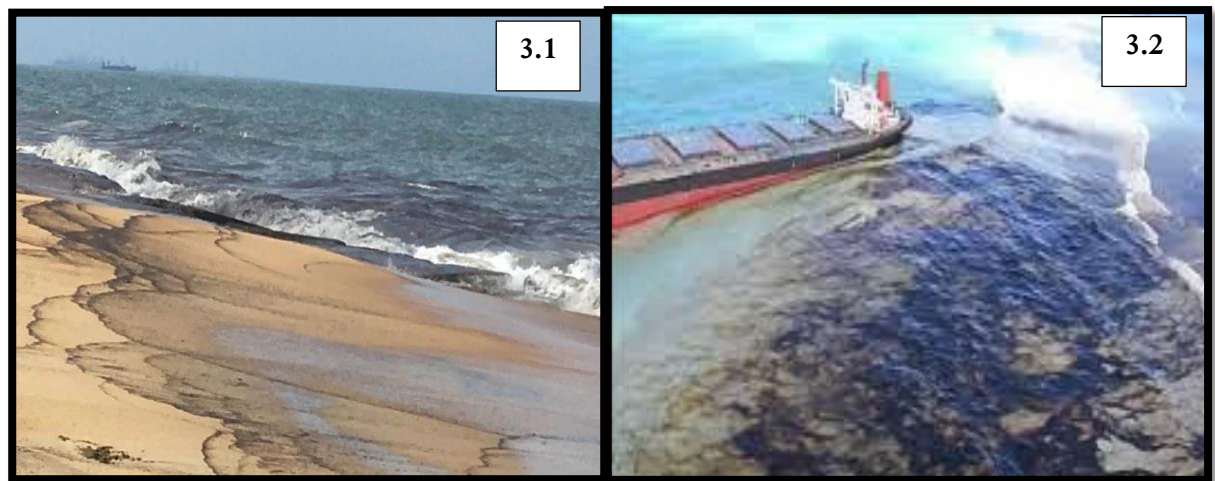


Diagram No -03

### **3.1.5.2. Annexure 2- control of pollution caused by excessive amounts of harmful liquids**

A brief summary of this technical annexure is as follows.

As on 31<sup>st</sup> December, 2020, Annexure II has issued 18 regulations to control pollution caused by high volume of harmful liquids.

In accordance with the convention effective from April 6, 1987, this Annexure outlines the criteria for the prevention of maritime pollution caused by excessively harmful liquids. Here 250 materials are evaluated and included in the Annexure list of the convention. Residues of these harmful substances can only be disposed of in accordance with the applicable regulations at locations with the disposal facilities. It is not permitted to disperse of any remnants of harmful substances within 12 miles of the nearest land due to any circumstances.

a) Harmful liquid is divided into four parts according to the Regulation No 06 of this Annexure

The details are as follows

- Category X- Prohibition of the discharge of harmful liquids into the sea during tank cleaning or pre ballasting, with a major hazard to Marine resources or human health.
- Category Y- Restriction on the quality and quantity of harmful liquids discharge into the sea during the cleaning of pre ballasting of tanks endangered to marine resources or human health and therefore into the marine environment.
- Category Z- Research on the quality and quantity of harmful liquids discharged into the sea during the cleaning or pre-ballasting of tanks endangered to marine resources or human health and therefore into the Marine environment
- Other Parts- The liquid parts that are discharged into the sea during tank cleaning of pre-ballasting, which are not harmful to marine resources, human health or legitimate users of the ocean.

(Other liquid components that do not fall under X, Y and Z according to the table of contaminants in Chapter 18 of the International Bulk Chemical Code)

b) Regulation No 13 prohibits the discharge of harmful liquids under types X, Y and Z of this Annexure into the sea except in full compliance with the appropriate operating requirements. The relevant disposal standards are as follows.

- An automated ship travelling at a speed of at least 07 nautical miles or a non-automated ship travelling at a speed of minimum 04 nautical miles.
- When the underwater discharge below the discharge point and when the maximum design speed is not exceeded.
- Disposal at a distance of not less than 12 nautical miles from the nearest land and not less than 25 m.



Diagram NO -04

Following is the basic information regarding the implementation of this Annexure in Sri Lanka.

- i. The server of ships carrying bulk hazardous liquids is carried out by the parties authorized by the Merchant Shipping Secretariat for ships with Sri Lankan flag.
- ii. The ships survey shall be conducted by the board of directors of the ship' own state, and the survey companies by the Merchant Shipping Office.
- iii. The International Anti-Corruption Certificate for transport harmful liquids in bulk to the ships on the Sri Lankan flag is issued by the relevant research institution on behalf of the shipping control secretariat.

The following observations are made in this regard.

According to the Regulation 16 of this nature every state that is a party to the convention on governance and Measurement shall be appointed as authorized inspectors to enforce these Regulations. However it was observed that no regulations had been issued for the control of marine pollution caused by harmful substances.

### **3.1.5.3 Technical Annexure III**

Prevention of pollution due to harmful substances caused by packaged and transported by the ocean.

Annexure III has issued 08 regulations as at 31<sup>st</sup> December 2020 to prevent pollution caused by harmful substances package and transported by sea. Effective from July 1<sup>st</sup> 1992 the Annexure Regulations cover general requirements considered in the issuing of detailed standards for packaging, marking, labeling documentation, packaging quantitative restrictions exceptions notices.

For the purposes of this Annexure (harmful substances) the substances referred to in the international Maritime dangerous goods code (IMDG code) as Marine pollutants or the materials relating to the Supplementary criteria in Annexure III.

The quantity of empty packaging contained in the packaging and transportation of hazardous materials as stated in this Regulation No 1(4) of this Annexure shall be taken into consideration (unless a state can ensure that empty containers do not contain hazardous sludge that could harm the marine environment)

Regulation No 08 of this Technical Annexure specifies the operating requirements regarding Port State Control. Accordingly, When a ship is at the port or offshore terminal on the other side, there is clear evidence to believe that the ship's custodian or crew are

unfamiliar with the pollution prevention mechanism caused by the harmful substances in accordance with the regulations of this Annexure if available, the ship may be surveyed by a state that owns that port or offshore terminal.



Diagram no 05

The following observations are made in this regard.

- i. When a ship is at a port or offshore terminal on the other side, the ship's custodian or crew may be surveyed when there is clear evidence that they are unfamiliar with the hazardous substances pollution prevention regulations in accordance with the Annexure regulations, but may be required to do so legal provisions had not yet been adequately established in Sri Lanka.
- ii. It was observed that the government concerned should ensure that the ship is not launched until the requirements of the Annexure, are complied with that, Sri Lanka has not added adequate legal provisions to comply with this.

- iii. It was observed that this Sri Lankan ports authority act published the IMDG code on hazardous Chemicals and Marine Environment Protection Authority conduct inspections on the harmful effects of such hazardous chemicals on the marine environment.

#### **3.1.5.4 Technical Annexure IV- prevention of pollution due to sewage waste by the ships.**

Through the Annexure IV, it has been issued 13 Regulations as at 31<sup>st</sup> December 2020 to prevent pollution caused by the sewage waste by the ships. Annexure IV of the MARPOL Convention contains regulations relating to the disposal of waste from ships to the sea, as well as regulations relating to the equipment and system that must be found on a ship disposal of waste as well as regulations regarding port reception facilities and survey and certification requirements.

In the deep sea, untreated sewage is generally considered to be decomposed by bacterial activity. Therefore MARPOL Annexure IV prohibits the discharge of sewage into the sea up to a certain distance from the nearest land. The government should provide the necessary sewage waste disposal facilities to the ships without delaying.

This Annexure has been enforced on 27<sup>th</sup> September 2003, and was revised on the 1<sup>st</sup> April 2004 and it has been enforced on 1<sup>st</sup> August 2005. This revised Annexure applies to ships with a carrying capacity of approximately 400 tons or more than ,or more than 15 people. According to the Annexure such a ship should have an approved waste water treatment system or a septic tank to hold the sewage waste. Sewage waste discharge into the sea is prohibited unless the approved sewage system is operational in the ship and the ship disposes the disinfected effluent through an approved system within a distance of more the 03 nautical miles from the boarder of the land.



The following details were observed regarding this

- i. It was observed that although the Marine Environment Protection Authority should established suitable measurement methods to ensure that all other ship annexures which are not applicable to this Annexure are in compliance with the relevant measurement methods have not been prepared till the date of the audit.
- ii. It was observed that the Marine Environment Protection Authority has not certified the equipment system required for a ship to dispose of sewage at the request of the Board of control for ships owned by Sri Lanka under another state. However it was observed that the relevant Merchant Shipping Secretariat is issuing relevant certificates of confirming in this regard.
- iii. It was observed that there is no provision in the prevention of Marine Pollution regarding minimum number of nautical miles applicable to the discharge of sewage waste from ships into the maritime zone and the approved thereof and that it should be done in accordance with the MARPOL convention.

Accordingly the relevant regulations had not been prepared to suit the locality.



Diagram No -6

### **3.1.5.5. Technical annexure prevention of pollution caused by ship space waste.**

Annexure V has issued 10 regulations as at 31<sup>st</sup> December 2022 to prevent pollution due to the waste disposal from the ships. This Annexure effective from December 31, 1988, covers various types of waste, how it should be disposed of, and the distance limits to be maintained when disposing of waste into the ocean. The most important feature Included in this attachment is the prohibition on the disposal of whole Types of plastic into the ocean. The revised Annexure will come into effect from 1st January 2013, it has been prohibited the dumping of all types of waste into the sea except food and other eco-friendly waste. In the event of an emergency, the ship is allowed to dispose of the waste into the sea only maintaining stability and for safety.

According to MARPOL Annexure V, garbage is all household, food processing, and operational waste except fresh fish or part of fish that are generated during normal operation. According to the Revised Annexure V (Regulation 3) of 2013, always generated on a ship should be classified according to the following classification.

- i. Plastic- Garbage containing any type of plastic such as nets, polythene, packaging materials, etc. falls under this category.
- ii. Household waste- Bottles, papers, cans, food generated during accommodation.
- iii. Food waste- Any food, fresh or spoiled can be dumped into the sea under the relevant conditions.
- iv. Cooking oil- All types of animal land vegetable oil used in cooking are prohibited from being dumped into the sea.
- v. Combustion effluent (alkaline) - ash generated by combustion engines other than plastic incinerators.
- vi. Operational waste
- vii. Animal waste
- viii. Fishing equipment
- ix. Electronic waste

According to the observation, only the relevant documents of the shape will be examined during the procedural inspection of this Annexure and it was observed that the Marine Environmental Protection Authority doesn't check the physical condition of the ship and the attention paid to the impact of naval waste was not sufficient.



Diagram NO – 07

### 3.1.5.6. Technical Annexure VI- Prevention of air pollution from ships

Annexure has issued 23 Regulation as set 3<sup>rd</sup> December 2020 to prevent air pollution from ships. The Regulations of the Annexure effective from 19<sup>th</sup> May 2005, introduce Regulations for the circulation of Hydrogen oxide, Sulfur oxide, volatile organic compound (VOC3), and ozone depleting pollutants into the atmosphere by ships. It limits emission and prohibits the emission of substances that damage the ozone layer. A chapter developed in 2011, introduced mandatory operational and Technical efficiency measurements to minimize the emission of greenhouse gas from ships.

Recommendations No 3.1 and 3.3 of the Cabinet Memorandum submitted by the Minister of Mahaweli Development And Environment on 28 March 2016 titled” Access to the Alliance 1997” with any MARPOL 73/78 Annexure VI containing amendments and regulations pertaining to the prevention of air pollution by ships” The following proposals under the Cabinet Memorandum No 16/ 0842/704/021 were approved at the Cabinet Meeting held on 17<sup>th</sup> May 2016.

- 3.1- Access to the Amended Annexure(MARPOL 73/78 Annexure VI) of the Alliance to prevent air pollution by ships
- 3.3 - Informing the Legislative Drafting Department to draft amendments to prevent maritime pollution required to implement the Alliance in Sri Lanka.

Accordingly, the following details were observed.

- a) It was observed that Sri Lanka has not become a party to this Annexure until 31<sup>st</sup> December 2020, despite the cabinet approval to enter into this annexure at the Cabinet meeting held on 17<sup>th</sup> May 2016. Although the regulation of air pollution by ships is to be done in accordance with Annexure VI any of the MARPOL Convention, Sri Lanka has not become the party to the Annexure and this situation is not covered by any Act in Sri Lanka, it could not be able to cover the problems aroused due to the prejudices regarding the details mentioned in the Annexure.
- b) It was observed that there are no legal provisions for the implementation of this Annexure in Sri Lanka, although the appropriate measurements should be established to ensure that all other ship attachments to which this Annexure is not applicable are compliant.
- c) Quality Testing of Bunker Fuel(ISO 8217- 2012) introduced by MARPOL Annexure VI. Due to the lack of legal provisions in Sri Lanka, the quality of oil is not currently tested by a government Institution.
- d) Sri Lanka and its environs have been identified as a major air pollution zone due to the ships passing to the Sri Lankan ports and through the marine zone of Sri Lanka, but it was observed that Sri Lanka does not have data on air pollution from ships currently.
- e) In the year 2015, the Air Resources Management Unit of the Ministry Of Environment and the University of Moratuwa had carried out tests on the emissions from the ships and according to those test, it has been stated that the fuel quality of the bunker was 2000 time less than the amount of sulfur contained in the diesel used in the motor vehicles.
- f) Thus it was observed that air pollution and the above conditions could be a possible cause for acid rains and the climatic changes.



Diagram No-08

### **3.1.6. Acting as an active member of the international Maritime Organization(IMO)**

The international Maritime Organization is the United Nations Specialized Institution responsible for the safety and security of ships and the prevention of maritime and air pollution by ships. .

The following observations were made in this regard

- a) The membership of the organization is important as a platform for making International Convention and domestic contribution to this matter by reaching and international consensus on the issues and challenges faced by regional and local shifting through its active membership. Accordingly, despite the membership of Sri Lanka, its active participation will help to acknowledge the problems faced by Sri Lanka as a Maritime hub on the Silk Road and the need to play the leading role in the shipping of Sri Lanka in the future. However, it was observed that the contribution of Sri Lanka to the issues and necessary improvements that have been actively contributed to as a member of this organization in the recent past is unsatisfactory.

b) Following are some of the amendments proposed by the International Maritime Organization (IMO) figuring the decision of international conferences.

- i. Amendment have been amended under MARPOL Annexure VI witch was effected from 1st January 2020 to maintain the Universal Sulfur Limit after shipping at 0.5 in order to prevent air pollution by shipping.
- ii. Maintenance of electronic reporting of oil, garbage, Nitrogen and Sulfur Oxide in relation to technical Annexure I, V and VI, has been identified with effect from 1st January 2020.

Accordingly, it was observed that Sri Lanka was not prepared enough for the amendments which are mentioned in the Annexure.

### **3.1.7. Functioning as a Contractual Salvor**

If one has been involved in the rescue of a ship in the event of a shipwreck as a contracted rescuer, he will be able to cover the cost of rescue operations and Hull and Machinery Insurance. But Sri Lanka was not a party to the Salvage convention. It is important for Sri Lanka to complete its preliminary work as statutory arbitrator to act in a more proactive and environmentally sound manner, protecting property, in the event of a risk in acting as a statutory savior. It was observed that the inclusion of provisions in future plans for Sri Lanka to act as statutory arbitrator in accordance with the provisions of the Merchant Shipping Act was a primary task but had not been acted upon in such a vision.

### 3.2. Legal Recognition

#### 3.2.1. Ratification and updating of MARPOL Convention

- a) The international convention for the Control of Marine Pollution (MARPOL) was adopted by the international Maritime Organization on 06 October, 1973. This convention was updated by the 1978 and 1997 protocols. Documents relating to acceptance of the MARPOL Convention by Sri Lanka was submitted on 24 June 1997 and this convention has been enforced in Sri Lanka since 24 September 1997. Under the MARPOL Convention, 06 Annexures have been introduced from time to time according to the requirement and those Annexures have been ratified and enforced by Sri Lanka as follows.

The details are as follows

Number of the Annexure	Name of the Annexure	The date introduced the Annexure
I	Regulations for Prevention Pollution by oil.	1983/10/02
II	Regulations for Prevention of Pollution Caused by Bulk Harmful Liquid Material	1987/04/06
III	Regulations for Prevention Of Pollution Bye Harmful Material Package And transported by Sea	1992/07/01
IV	Regulations for prevention pollution by the disposal of sewage waste from ships.	2003/09/27
V	Regulations for prevention pollution from the disposal of waste by ships.	1988/12/31
VI	Regulations for prevention air pollution by ships.	2005/05/19

Table No-06

- b) The International Maritime Organization (IMO) has made periodic updates to each of the above attachment as needed. Regulation Annexure I to V currently updated in Sri Lanka. In addition, the cabinet decision of 17 June 2016 had decided to enter into the Alliance Annexure VI.

The following observations were made.

The foremost need to strengthen the legal framework for the instrumentation of plans to prevent marine pollution, and the potential environmental impact of the coastline of Sri Lanka as a whole, and its potential environmental impact on the territorial areas of Sri Lanka. The need to comply with Regulations was observed.

### **3.2.2. Legal status of the implementation of the MARPOL Convention in Sri Lanka.**

The Cabinet Memorandum was presented by the Minister of Ports, Rehabilitation and Reconstruction with the aim for the adoption in Sri Lanka of the International Convention for the Prevention Of Marine Pollution (MARPOL) by the Alliance 1973, as amended by the Alliance 1978, and for the submission of legislation and bills on 10 January 1997 for the enhancement of the provisions of this convention locally in Sri Lanka, the CMP//97/0113/116/005 dated 06<sup>th</sup> February 1997 was given for this Memorandum and the following 02 proposals contained in the above Memorandum were approved.

- i. Recognition of the International Convention for the Prevention of Pollution, 1973 from ships, amended by the Alliance 1978.
- ii. Describing the department of legislation to draw legislation necessary to give effect to the provisions of this convention.
- iii. The Ministry Of Shipping, Ports, Rehabilitation and Reconstruction was mentioned as the Ministry to be acted upon in this regard.



According to the above Cabinet decision, the Legal Drafting Department had a structure to amend the Act and accordingly the Marine Pollution Prevention Act has been amended from 1997 to 2008. Accordingly, the prevention of marine pollution Act No. 35 of 2008 was enacted as a new Act with effect from 01 January 2009. It was observed that the necessary provisions for the full implementation of the MARPOL Convention have not being included in the provision Act.

**3.2.3. The local hub for the implementation of the MARPOL Convention and the relevant Line Ministry.**

When the MARPOL Convention was ratified in Sri Lanka, the Ministry of Shipping, Ports, Rehabilitation and Re construction was responsible for implementing the Convention. The Prevention of Marine Pollution Act No.59 of 90 1881 established pollution prevention authority and the responsibility of implementing this convention was given to the Authority. The Marine Environmental Protection Authority was established by replacing in the Marine Pollution Act No.35 of 2008 with Act No.59 of 1981. At present the Line Ministry of the Marine Environmental Protection Authority is the State Ministry of Urban Development, Coast Conservation, Waste Disposal and Community Sanitation.

It was revealed that the Marine Environment Protection Authority is the national hub of the coastal state for the implementation of the MARPOL Convention in Sri Lanka and the Line Ministry of the Authority has been subject to change from time to time on 07 occasions as follows.

Year	National Center	Line Ministry
1999-2001	Marine Pollution Prevention Authority	Ministry of Port Rehabilitation and Reconstruction
2001-2002	Marine Pollution Prevention Authority	Ministry Of Ports and Southern Development
2002-2004	Marine Pollution Prevention Authority	Ministry of Fisheries and Marine Resources

2004-2009	Marine Pollution Prevention Authority	Ministry of Natural Resources and Environment
2009-2015	Marine Environmental Protection Authority	Ministry of Environment
2015-2019	Marine Environmental Protection Authority	Ministry Of Mahaweli Development and Environment
2019-present	Marine Environmental Protection Authority	State Ministry of Urban Development, Forest Conservation, Waste Disposal and Community Sanitation

Table No- 07

The following observations were made in this regard

- a) It was observed that the change of the Ministries belonging to the Authority may in some cases lead to operational problems with regard to practical conditions in the coordination and regulatory functions.
- b) It was also observed that the budget allocation should be done in recognition of the importance of their subjects but in some cases which may lead shortcomings in identifying there priority needs.
- c) The functions of subjects were assigned to the Ministers by the Extraordinary Gazette Notification No. 2187/27 dated 09<sup>th</sup> August 2020 and The Marine Environment Protection Authority was included in the Ministry of Urban Development, Forest Conservation, Waste Disposal and Public Sanitation. From 2020, the introduction of an appropriate action plan to prevent Marine pollution was among the special priorities of the ministry. Accordingly, it was observed that, this did not cover their primary need to strengthen the legal provisions required to implement the necessary plans to prevent Marine pollution.

### 3.3. Organizational Role and Preparation for Execution of Convention

#### 3.3.1. Role of the Marine Environment Protection Authority

##### 3.3.1.1. Differences between Acts to prevent marine pollution

Prevention of Marine Pollution Act No.59 of 1981 and the Prevention of Marine Pollution Act No.35 of 2008 introduced in Sri Lanka. Section 59 of the Prevention of Marine Pollution Act No.35 of 2008 repeals the Prevention of Marine Pollution Act No.59 1981.

The difference between Act No.59 1981 and Act No.35 of 2008 are as follows.

<b>Facts</b>	<b>Prevention of Marine pollution Act No. 59 of 1981</b>	<b>Prevention Of Marine Pollution Act No.35 of 2008</b>
The purpose of introducing the act	It is to make provisions for the prevention reduction and control of pollution in the water column of Sri Lanka, and to enforce international convention on the prevention of corruption and to make provisions for related to	To make arrangements for the control in which date of pollution in the water column of Sri Lanka, any other Maritime region the former coastal and coastal areas Sri Lanka and to make provision for related matters thereon.
Definition for water column	Water column of Sri Lanka Here the definition of the Maritime Zone Of The National State Assembly No.22 of 1976 has been obtained. Accordingly, the water column is divided into	It is included in the Sri Lankan local water column or any other Marine zone. Also the term “Maritime zone” is defined according to the definition of No.22 of 1976 regarding the Marine Zone,

	<p>05 parts.</p> <ul style="list-style-type: none"> <li>i. Indigenous sea</li> <li>ii. Adjacent zone</li> <li>iii. Forest Resource Zone</li> <li>iv. Continental Zone</li> <li>v. Pollution Prevention Zone</li> </ul>	<ul style="list-style-type: none"> <li>i. Adjacent Zone</li> <li>ii. Unique Economic Zone</li> <li>iii. Continental Pool</li> <li>iv. Pollution Prevention Zone</li> </ul> <p>, are included and also it is included, another zone which will be published at a particular date in the future as well.</p>
<p>Provisions regarding International conventions</p>	<p>Through the Section VII of the Act, It is presented the details regarding the functioning of the international conventions .The Act 17( 1) includes the power of the Minister to implement International conventions and subsection 17(2)(1) includes 05 major International conventions to be included therein.</p> <ul style="list-style-type: none"> <li>a) International Convention and Amendment on the Prevention of Soil Pollution 1954</li> <li>b) International</li> </ul>	<p>Confirmation, consent approval by the government of Sri Lanka under section6 (f) of the convention on the prevention of marine pollution and part II of the Prevention Of Marine Pollution Act No.35 of 2008 acceptance of all International conventions and applicable protocols on marine pollution that have been or may be committed.</p> <p>It is also the duty of the authority to carry out all the functions referred to in Act 6(a) to 6(g) under the section 6(a) all other Acts and things</p>

	<p>Convention on Civil Liability for Oil Corruption Damage 1969</p> <p>c) International Convention on the Establishment of an International Fund for the Compensation of Corruption Damage 1971</p> <p>d) International Convention Interference Of Ocean On The Corruption Disasters 1969</p> <p>e) International Convention and Alliances of 1978 on the Prevention of Corruption to ships 1973.</p>	<p>required to perform any function.</p>
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Table NO- 08

The following observations were made in this regard.

- a) Introduction of the Prevention of Marine Pollution Act No.59 of 1981 has been identified as a requirement for the next month of international convention for the prevention of maritime pollution, it was observed that e the enforcement of the International Convention has been removed with the enforcement of The Prevention of Marine Pollution Act No.35 of 2008.
- b) Although the Prevention of Marine Pollution Act No. 59 of 1981 specifically covers International Convention 1973, for the prevention of pollution of ships and the Alliance 1978, for the implementation of international convention, it is directory stated in the Prevention of Marine Pollution Act No.35 of 2008 was observed to be absent. Section 6(f) of the new Act only stipulates the acceptance and recommendation of international convention and relevant protocols. Due to this, it was not clear what the direct contribution to the enforcement of the relevant convention would be.
- c) Thus, in the event of an incident, it was difficult to obtain specific compensation for the legal acts involved. It is imperative that the Act be amended to deal with hazardous container shipments. It was observed that in such a case there may be difficulties in recovering losses in the event of an accident.
- d) It was observed that the Prevention of Marine Pollution Act No.35 2008 is about 12 years old and the Act had not been amended till 31<sup>st</sup> December 2020.The importance of amending this Act is observed according to the following details.
- i. The Current Act does not explicitly delegate the relevant powers to implement the Marine Pollution Prevention Act.
  - ii. Non- compliance with the International Maritime organization Mandatory Convention Act.
  - iii. Provisions for the implementation of the rules of International Conventions under the existing Act.
  - iv. Failure to include international standards in the act to deal with oil, disposal of hazardous and harmful materials.
  - v. Being able to have a positive impact on international trade
  - vi. Facilitate obtaining instrumental, technical and financial assistance for the restoration of polluted seas in the event of an emergency corruption of the sea,

and obtaining compensation from the relevant party in accordance with the International law.

- vii. With the port of Colombo being a Maritime hub in South Asia and nearly 300 ships plying the southern Sea belt of Sri Lanka daily, It is necessary to ensure to strengthen the coastal state to deal with the potential adverse effects of the maritime disaster for any other activity in unique economic zone in Sri Lanka .
- viii. Being able to control air pollution with the current growth of ships coming to Sri Lanka in the present.

### **3.3.1.2. Provisions of the prevention of marine pollution act in 35 of 2008**

The following details were observed during the sample audit of sections 7, 9, 26, 34, and 36 of the Prevention of Marine Pollution Act No.35 of 2008.

- a) According to the section 09(7) of the marine pollution prevention act no.35 of 2008, the Minister can order the amount of the charges to be charged for the investigation regarding the equipment and machines prescribed by a particular act or the regulations under that act.as of the date of audit ,31<sup>st</sup> December 2020, no provisions have been made regarding the equipment to be fitted to a ship and their inspection under this section and no charges have been levied for conducting inspections in this regard.
- b) Annexure I to the MARPOL Convention for the Prevention of Pollution By Ships and the International Convention on Civil Responsibility for Oil Pollution, established in 1992 by the Alliance to establish an interconnection, in addition to the convention adapted in 1971 Sri Lanka, ratified international convention for the establishment of an international fund for the compensation of oil corruption in 1983. The National Centre for the implementation of this Convention is the Maritime Environmental Protection Authority, which has been enforced in Sri Lanka since 1983 and 1987.
- c) It was Observed that all the national constitutions and provisions were required to make these conventions active in Sri Lanka, they had not been done up to the date of the audit. Failure to enforce the legal provisions required for the implementation of this convention in Sri Lanka would result in the loss of the possibility of a bearing the maximum

compensation provided for the convention on civil liability and possible in Impediment to International co-operation in the claim application process as a state affected by a Maritime disaster was observed.

- d) The International Monetary Fund for the compensation of oil corruption define pollution as the 04 main instances of clean-up operations and property damage costs, ancillary losses and net economic damages, and compensation and environmental measures taken to prevent for minimize pollution compensation is covered for environmental damage other than economic damage caused by the damage. Formal statutes had not been drafted to recover these damages.
- e) Club insurance pollution cover, convention on civil liability and fund convention are applicable in the event of an oil spill by a ship in the Exclusive Economic Zone (EEZ) as Sri Lanka is a party to this conventions, it is possible to seek compensation for maritime pollution in the coastal zone of Sri Lanka. Damage in the event of a small scattering can be compensated by social insurances coverage, in the case of a large scattering by the civil convention and in the event of further damage by a funding can be compensated. However the above convention on civil liability and funding convention applies only to oil tankers, while the Bunker Convention (international convention on Civil Liability or Bunker Oil Pollution Damage in 2001) and applies to oil pollution on other ships.
- f) Sri Lanka has not been a party to obtain the compensation to the international convention of HNS (International convention on liability and compensation or damage in connection with the carriage or hazardous and noxious substances by sea) for damages in connection with the carriage of hazardous and noxious substances in 1996 and the convention LLMC -76/96 (convention on Limitation of liability for marine claim) in relation to obtain marine compensation in 1976.



### 3.3.1.3. Orders issued by the Marine Environment Protection Authority

The minister has made orders under section 31 of the prevention of marine pollution act in 35 of 2008, all the specific rules and regulations are not included in the MARPOL Convention. Accordingly, a total 05 orders were issued in 2011, 2012, 2013 and 2016. It includes regulations related to maritime protection, among which the issue of marine pollution due to Petroleum is given more importance.

The details were as follows.

Order	Relevant section of the act
Offshore mining and utilization( Marine Environmental Protection) Ordinance No,01 of 2011 for natural resources including Petroleum	Section 40 of the Act- the standards to be followed by those engaged in in mining natural resources include in petroleum
Regulations( Marian environmental protection) check number02 of 2011	section07 of the Act- powers of the authority Statement 21 of the act- functioning on waste management
Regulations (Issuance of permits for the disposal into the sea)Marine Environmental Protection No. 01/ 2013	section 27 of the Act- disposing Materials such as oil under The power of a license section 28 of the Act- Requesting from the Authority for a license
Regulations( pollution recovery facilities) Environmental Protection 2016	Paragraph06 (e) Act- providing adequate and appropriate recovery facilities for Search types of soil harmful substances any other contaminants Section 21- Acting regarding waste management
Oil spill contingency plan regulations No01 of 2012	paragraph 6(i)- Preparation and implementation of a national oil corruption emergency plan Section39 - emergency plan on overflowing of oil.

Table No-09

The following observations were made in this regard

- a) In the event of Non- coverage of hold annexures to the MARPOL convention Undertaker a faucet regulations, no provisions have been issued to prevent Maritime solution due to other pollutants such as sway, wastewater, solid waste, air pollution and hazardous cargo transportation.
- b) It was observed that the above orders forward only some of the regulations contained in Annexures I and V

**3.3.1.4. Extraordinary Gazette Notification No.1996/ 27 dated 06<sup>th</sup> December 2001- environmental protection regulations on waste recovery facilities to be read along with section 6(e) and 21 of the Act.**

Under the provisions of their Marine Pollution Prevention Act, suppliers of ship-generated waste disposal must be registered with the Marine Environment protection Authority under 03 main categories. The details of the suppliers so register and the waste they obtained are as follows.

**a) Reclamation Services**

The number of suppliers register for the waste reclamation services and the Environment Protection Authority in the year 2019 was 29, and the registration under each category was as follows.

<b>Category of waste</b>	<b>Quantity Of Registered Suppliers</b>
Solid waste	02
Oil waste	03
Solid waste and oil waste	18
Oil waste and sewage waste	01
All the three categories of solid waste, oil waste and sewage waste	05

Table No-10

## b) Amount of Waste Reclaimed

The Volume of waste received to waste collection activities from 2016 to 2019 came are as follows.

Type of waste	Volume of waste m3				Total
	2016	2017	2018	2019	
Oil Waste	23	25	24	29	101
Solid Waste	1,400	1,549	1,660	1,647	6,256
Sewage Waste	22,871	26,382	23,835	27,145	100,233
Other	666	1,318	3,908	152	6,044
Total	24, 960	29,274	29,427	28,973	

Table No-11

The following observations are made.

- i. Thus, it is observed that most of the waste received by ships annually is sewage waste and solid waste. The need for robust implementation of a follow up process to ensure that the affluent does receive is disposed of locally in environmentally friendly manner is observed.
- ii. During the year 2020, 27 service providers were issued licenses for the provision of four basic facilities at the ports of Colombo, Galle, Hambantota and Trincomalee normally at 946, 125, 73 and 67 respectively. A total of 29, 329 cubic meters of waste oil was removed by 509 ships.

(Draft Annual Report – 2020)

### **3.3.1.5. Bunkering (Environmental Protection) Order No.02 of 2011**

Bunkering (Environmental Protection) Orders have been published by the Extra Ordinary Gazette Notification No. 1741/19 dated 19 January 2012. It was observed that in accordance with Regulations in Nos. 3, 4, 9 and 17 the relevant provisions for covering and recovering The Marine environmental damage caused by an oil spill were not included.

### **3.3.1.6. Physical and Human Resources of the Marine and Management Authority**

The Maritime Protection Authority had established 14 Regional Offices, covering 05 coastal districts, 05 provinces and 14 districts and the following details were observed in this regard.

- a) It is observed that the Mullaitivu regional office is understaffed and only one employee has been deployed for the Puttalam regional office.
- b) It was observed that the above 14 regional offices do not have any equipment required for emergency oil dispersion.
- c) Out of the 14 regional offices, only the Galle regional office has laboratory facilities and it was observed that no other office has laboratory facilities. Even the Galle laboratory did not have facilities to test all the pollutants (suspended particles of marine water, chemical, oil, etc.) related to the pollution of the ocean water.

### **3.3.1.7. Workshop and programs on marine pollution prevention**

The following are the findings of the sample test of workshops and programs on marine pollution prevention.

a) National workshop on Pre-preparation for Marine Pollution Reduction

A National workshop on Pre-preparation for Marine Pollution Reduction was held on 16 and 17 December 2014 with the participation of the international Maritime organization (I M O) in program (SACEP). Here are the South Asian Oil Chemical Action Plan had been drawn up for a debt disbursement and Sri Lanka is also a party to this plan. Despite such a plan, it was revealed that the activities were not fully coordinated under the South Asian Cooperation Environment Program and that there was no systematic plan on how to implement them in the event of a large- scale oil spill in the South Asian region.

b) Workshop on Chemical Dispersion Reactions

Two day workshop was held on 14th and 15th May 2015 at the Central environmental Authority to develop the capacity to react with the dispersion of the chemical. It was decided that the national plans should be registered to include the action to be taken in the event of a chemical dispersion, that pre-activation training be carried out in the event of a chemical dispersal, and that personnel be trained to operate in the event of a chemical dispersal. It was also decided that Sri Lanka should be a partner in the existing OPRC-HNS protocol for the disintegration of the chemical. However, it was observed that the work required to become a party to the existing OPRC-HNS protocol for the implementation of a chemical dispersal and to legislate accordingly had not been completed by 31 December 2020.

c) Ballast Water Management Project

The ballast water management project is very important in reducing environmental pollution through the infiltration of invasive alien organisms into the Marine environment through ballast water. This will help in identifying the species currently living in the water belt of Sri Lanka and identifying possible threats of future invasive alien species.

The following observations were made in this regard

- i. It was observed that Sri Lanka was not included as a path to the Ballast Water Management Convention.
- ii. The University of Ruhuna, university of Wayamba, University of Sri Jayawardhanapura, Nara, in collaboration with the Marine Environment Protection Authority, conducted preliminary biological surveys of the commercial ports of Sri Lanka such as Colombo, Galle, Tricomalee and Hambantota.
- iii. From 01 August 2013 to 1 July 2014, there were 3,742 Ships arrived at the port of Colombo for operations. A higher volume of alien invasive organisms were included in the ballast water which were tested using 16 samples from 15 ships carrying ballast water. The total number of ships arriving at the port of Colombo in 2018 was 4,331, that amount is an increase of 15.7 % over the year 2013. Accordingly it was observed that there can be an increase of the growth of the alien invasive organisms that can be transmitted to the local sea front of Sri Lanka.

#### **3.3.1.8. The quality of seawater**

The physical, chemical and biological properties of sea water associated with the areas in the Marine Zone are tested by the Marine Environment Protection Authority. The USEPA standard are used for this. The following details were observed during the audit in this regard

- a) It was subjected to do monthly water quality testing on 29 marine bathing ports, during the year 2020, and the results of these tests were classified into 06 categories. Out of these, it was observed that the condition of water was very poor in 10 bathing ports.
- b) Out of the above bathing ports, it was observed that the water quality of 03 main marine bathing ports under Colombo and Gampaha district is in a very poor condition.

(Draft Annual Report – 2020)

### **3.3.2. Marine Disasters by Shipping in the Maritime Areas of Sri Lanka**

#### **3.3.2.1. MT Maritime Disaster Regarding the ship, the New Diamond**

The ship new diamond which is 330 M long built in 1999 by the Japanese and launched in 2000. The ship was owned by a Greek company and was renamed the Diamond Warrior and later as the New Diamond. The New Diamond was registered under the Panamanian flag and was 21 years at the time of the accident on Sep 3, 2020. The ship was registered under the international Maritime Organization (IMO) 9191424 and was used to transport crude oil. The New Diamond, carrying 270,000 metric tons of crude oil bound for India from Kuwait, caught fire on September 3, 2020, 38 nautical miles off Sangamankanda point. In addition, 1700 metric tons of diesel required for the operation of the ship was stored.

The following observations were made in this regard

- a) When this ship, New Diamond caught fire, Regional Cooperation was also sought under Tier-3 Emergency Oil Dispensing Plan.
- b) In accordance with the powers set out in section 7(b) of the Marine Environmental Protection Authority Act, the Authority has the power to conduct inquiries and enquiries into pollution arising from ship related activities and to charge the charges of contamination by oil spills in connection with the New Diamond M T. A case had been filed against the captain of the ship New Diamond and the section 26 of the Act. The commander of the new diamond was fined with an amount of Rs.10 Million.
- c) Pursuant to section 38 of the Prevention of Marine Pollution Act No. 35 of 2008, MT is required to report to the coastal States the prevention caused by a shipwreck. A case has been filed against the commander of the ship new diamond, and a fine of Rs. 02 million rupees had been imposed.
- d) The Marine Environment Protection Authority had requested US \$ 280,000 from the relevant shipping company on September 03, 2020 to control the fire on the New Diamond, which was approximately Rs.52.3 million. This amount was deposited by the relevant shipping company in the General Treasury in the year 2020 and out of the

proceeds Rs.45.54 million had been provided by the General Treasury to the Marine Environment Protection Authority.

- e) Section 34 of part IX of the Marine Pollution Prevention Act No.35 2008 provides for the civil liability for the prevention of pollution. In the event of contamination of the water belt of Sri Lankan or other maritime area by any action under this Article, the owner of the ship, the person in charge of the ship or the owner of such equipment shall not be liable for any damage caused by any discharge or any discharge of any type of oil or other contaminants and such damage, shall be liable for expenses incurred for the purpose of deduction or removal. This section covers Maritime, coastal harbor or marine activities, tourism, tourism promotion, coastal and coral reef protection and development, health and well-being of coastal people and protection and conservation of living marine resources and wildlife.

The following word observation.

- i. The recovery of damages has not been done under the section 34 of the Act, until April 30, 2021, regarding the marine disaster by the ship, New Diamond which was taken place in the Exclusive Economic Zone of Sri Lanka on 03<sup>rd</sup> September 2020.
  - ii. Section 34 of the act also includes the protection and consideration of living marine resources and wildlife, but no action has been taken to recover the damages due to the accidents caused by the ship New Diamond.
  - iii. It was observed that although the action should have been taken to identify the sensitive areas for the protection and conservation of living Marine resources and wildlife and gazetting, no action has been taken up to the date of audit.
- (f) It was revealed that the Government of Sri Lanka has submitted Interim of Rs.300 million on 16 September 2020 and Interim Claim of Rs.100 million on 24 September 2020, to the relevant company and action was taken to recover the full amount which was taken to recover the fire of the ship New Diamond.



### 3.3.2.2. Naval accidents in the Maritime region of Sri Lanka

The following are some of the maritime accidents that took place in the maritime region from 1999 to 2020.

Nature of the accident	Date	Name of the ship	shipmen t type of cargo	country	Location	Distance from the scene of the accident	Marine pollutants
sinking of the ship	1999/08 /23	MV MELIKS AH	General Cargo	Turkey	Bundala	17 nautical miles off the South coast	16,500 metric tons of fertilizers, 200 metric tons of fuel
	2007/09/ 07	MV AMANA T SHAH	Cargo	Banglade sh		11.6 nautical miles	25 metric tons of fuel
	2009/04/06	MT GRANB A	Chemica l 1 tanker	Turkey	Trincoma lee	90 nautical miles	6250 metric tons of sulfuric acid
	2012/08/23	THERM O PYLAE SIERRA	General Cargo	Cypriot	4Km west of Mount Lavinia	4Kilo meters	70 metric tons of Bunker oil
	2012/10/30	SAIGON QUEEN	Cargo ship	Vietnam			
	2018/06/26	MUTHA PIONEE R	General Cargo	India		11.6 nautical miles	

Grounding	1994	MV COMSO MOLETS		AZERBAYDZHANA	Outside the Galle Port		100 metric tons of fuel oil
	2009-07-18	SRI LANKA GLORI	General Cargo	Sri Lanka	Near Rumassala beach		
	2009-05-22		Dredger		Colombo port		180 metric tons of oil
	2012-01-23	MV EUROHUN	Bulk carrier	Liberian flag	Trincomalee	5.5 nautical miles off the northern coast	
Collision	2007-08-03	MARINA SEDNA		Singapore	Galle port		Dispersion of 02 metric tons of oil
Ship fire	2017-04-04	MSC DANIEL	Very large container	Mediterranean Shipping Company		120 nautical miles from Colombo	Missing declaration of hazardous cargo can be the closest reason.
	2020/09/03	Mt NEW DIAMOND	Crude oil	Panama	Sangamankanda	38 nautical miles from Sangamankanda	oil dispersion
Other	2010/11/14	MT CHARHANA			Colombo port		Dispersion of metric tons of bunkering oil.
	2012/10/17	WELIGOWA ship			Kirinda Fisheries Harbor		Oil leak off 20 barrels

	2013/08/14	LPG FORME N TERA			Galle port		Oil leak by 1 metric ton barge
	2013/11/14	PF-77			Modara Port		Leak less than 1 metric ton
	2015/05/31	COLOM BO DOC YARD PLC			Dolphin pier & Doc 1- Colombo Dockyard		dispersion of 10 approximately 10 metric tons of oil
	2017/09/08	MUTUR AJAWEL A oil spill				West coast	Dispersion of 35 metric tons of oil in Muthurajawela.

(Source-Maritime Adversities around Sri Lanka (1994-2021))

Table No- 12

The following observations were made in this regard.

- a) During the inspection of the above information related to manage time accident, there were 10 instances of oil spills by ships in the unique Economic Zone of Sri Lanka. The progress of compensation in this regard had not been reported to audit, till the date of this report.
- b) The amount of physical resources available in Sri Lanka and their Tier 1 identified for oil spill management as per the National Oil Dispersion Plan (NOSCOP) sufficient for dispersal of up to 50 metric tons. However, the above information observation shows that the existing human and physical resources are insufficient to minimize future risks and damage to the marine environment.

- c) It is stated that the Ship MT Grandba was sunk in the Exclusive Economic Zone (EEZ) of Sri Lanka in the year 2009 and was transporting 6250 metric tons of sulfuric acid at that time. It was observed there if such a situation arises in the future with the above incident, that is, the chemical dispersal emergency plants that may be involved in the transportation of hazardous material by ships should be prepared, but not adequately prepared as of the date of the audit.

Based on the above information, some of the ship fires and sinking that took place around Sri Lanka from 1999 to 2021 can be approximated as follows

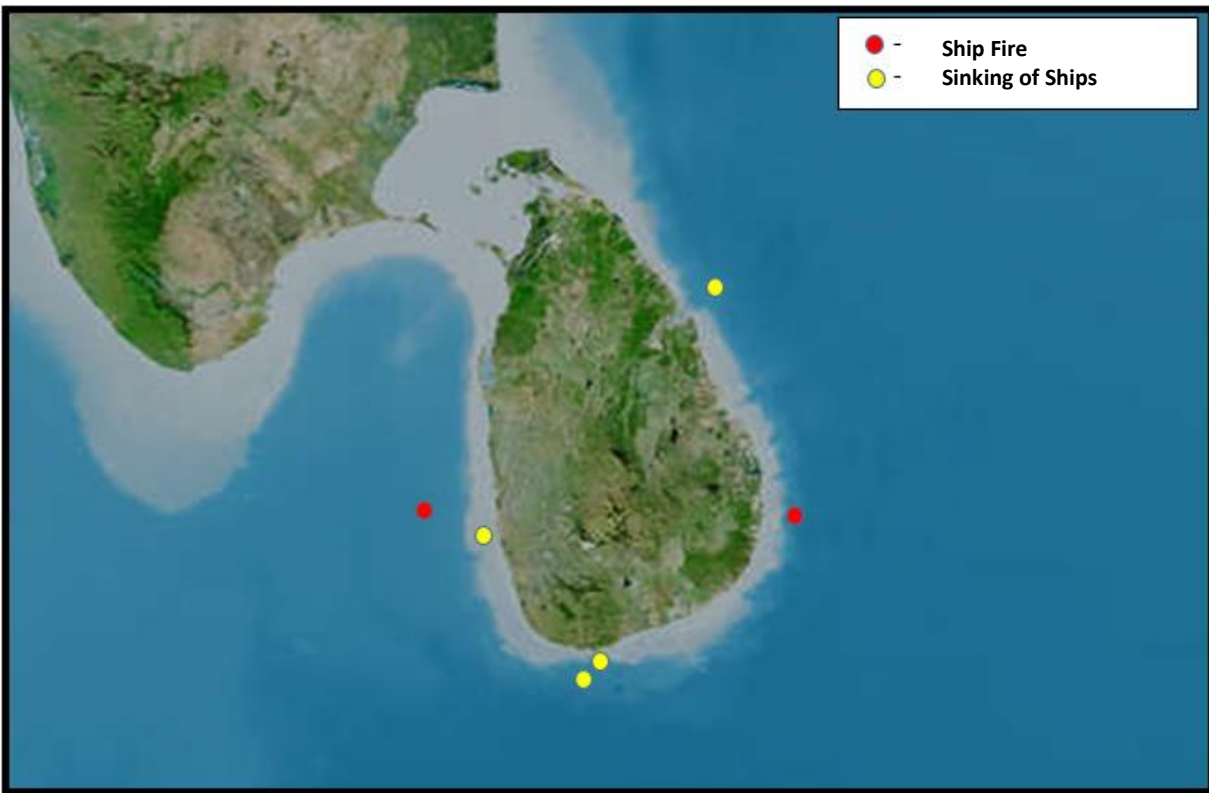


Diagram No- 09

### 3.3.3. Merchant Shipping Secretariat

Recognition of the Global shipping industry through maritime excellence the primary vision of the Merchant Shipping Secretariats. The Merchant Shipping Secretariats is also working on the implementation of the MARPOL Convention and is covered under the Merchant Shipping (Amendment) Act No.17 of 2019. The following amendments were made by this Act to amend The Merchant shipping Act No.52 of 1971. Section 26 of this Act has been amended to give effect to part VII (a). Immediately after part VII of the Main Charter. Section VII (a) Includes provisions for the prevention of pollution caused by ships. According to Section 215(a) of this Act, "certificate" means certificate issued in accordance with the Convention, while "convention" refers to the international convention for the prevention of corruption by ships 1973, as amended by the 1978 and 1997 protocols. The details were as follows.

Article	Description in brief
215(b)	Issuance of certificates, regarding any issue relating to the acceptance of certificate issued under the authority of the convention, and making orders for the format of the certificates and other matters.
215( c)(1)	Sri Lankan ship should not make an international voyage unless having a valid Certificate.
215 (c)(2)	Imposing fines and penalty for violation of the law
215(e)	When a clearance of the ship is required, the ship can be detained until the certificate is issued.
215(f)	Application for survey, inspection or enquiry of a ship.
215(i)	Issuing the certificate to the Ship, if it complies with the provision and order relevant to the survey report.
215(h)(1)	Cancellation of suspension of the certificate
215(k)(1)	Receipt by the Director General of Merchant and Shipping, a certificate issued under the authority of a country to which the convention applies.
215(k)(3)	taking necessary steps to ensure that the ship does not sail until it can sail in the sea without harming the marine environment in the absence of a valid certificate.

Table No- 13

The following observations were made

- a) It was observed that the Merchant Shipping Secretariat covers only matters relating to survey and certification in relation to their MARPOL Convention. It noted that while the focus was on the legal requirement for the implementation of the Annexure to the MARPOL Convention, the long-term implications for the environmental impact of the requirements of the Annexure, haven't been met.
- b) The following vacancies were observed in the number of employees in the Trade Shipping Secretariat in the year 2019. Accordingly, there were vacancies in 04 categories, including senior posts, Ranging from 44 percent to 100 percent. Accordingly, it had become very influential Factor to reach a high level of performance in the organization.

post	Approved number of employees	Existing number of employees	Number of employee vacancies	Number of vacancies as a percentage of employees
senior	24	10	14	58
tertiary	04	0	04	100
secondary	52	29	23	44
Primary	30	06	24	80

Table No-14

### 3.3.4. Performance in implementation of MARPOL Convention

The International Chamber of Shipping Publishers an Annual Shipping Industry Flag State Performance Table related to the Shipping Industry. The purpose of issuing this Performance Report is to encourage ship Builders and operational south westerners to ensure that their flag- bearing state has adequate provisions to protect the maritime environment and to improve the laws and regulations required to protect that flag-bearing state Maritime environment of their flag- bearing state

According to this performance report, each state is classified under 02 main criteria

Accordingly,



Light green - positive performance



Red - negative performance

Updated data has been used in the preparation of the flag stage performance table issued by the international chamber of Shipping. In preparing this report, it has been considered 06 criteria.

- Port state Control
- Ratification of convention
- Ro code (recognized Organization)
- Age (Low average age- Ship number)
- Report
- IMO meeting attendance and IMO Audit scheme

The following were observed regarding the performance of Sri Lanka as a flag state

- a) According to the flag state performance report for the shipping industry issued for the year 2018/ 2019, it was observed that although Sri Lanka had obtained positive performance index from MARPOL Annexure I to II, it had obtained a negative performance Annexure III to VI.
- b) according to the performance report on the flag state related to their shipping industry issued for the year 2020/ 2021, The Red Square mark with the following 03 points made it's a situation of special concern to Sri Lanka as a port state. It was a signal of where to go.

IMO meeting attendance

#### Port state control

- i. ratification of convention
  - Tokyo MOU white list –red
  - USCG quashed 21- No
- ii. Accepting the Convention
  - SOLAS 74(88 protocol) – Red
  - MARPOL Annexure III-IV –Red
  - LL 66 (88 protocol) –Red
- iii. IMO meeting Attendance – Red



**3.4. Preparation required for the development of the port of Colombo**

Given the Importance of the location of the Sri Lanka Silk Road as well as the important decisions taken in recent times on government policies, further development of its eastern and western jetties, especially the port city project, can be expected to further enhance shipping and shipping operations in the future. The need to mitigate the environmental issues that may arise in line with this development is significant and it is important to update the local legal Framework for the enforcement of the MARPOL Convention. Further, the need to adopt and adapt to this convention for instance the need to adapt and adopt to this convention further strengthens the need to adopt to the local situation in a context that reflects the recent increase in Maritime accident/ disasters and vulnerable ships in the water belt of Sri Lanka.

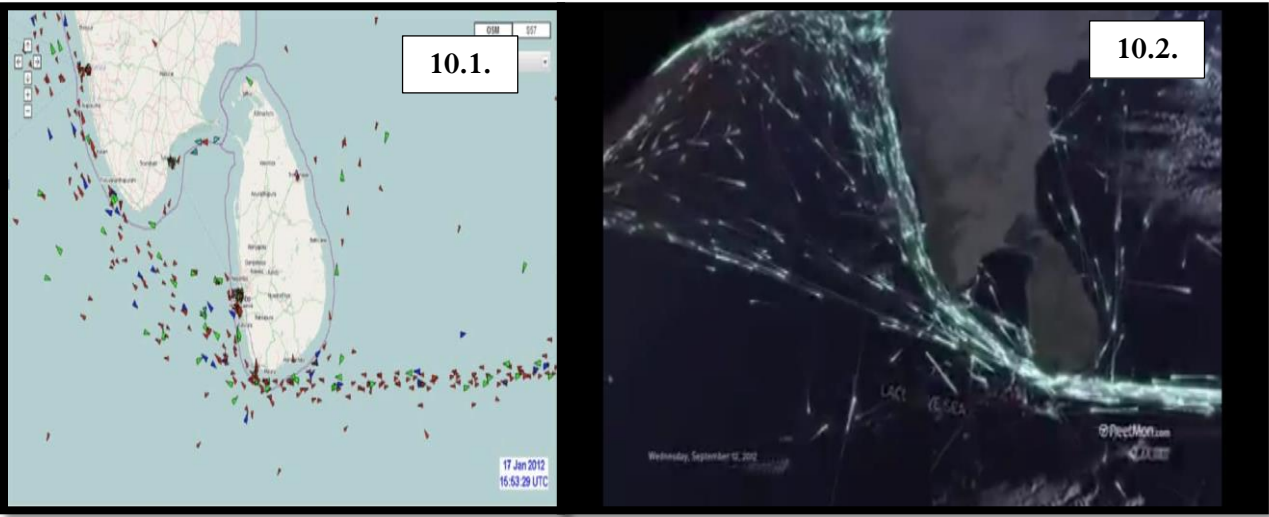


Diagram No-10

#### **4. Recommendations**

- 4.1.** Giving special priority to the implementation of the legal provisions locally for establishing MARPOL Convention for the prevention of maritime solutions by ships in Sri Lanka and to establish and legislate on the implementation of the convention, with the specific identification of institutions for the implementation of such laws and the feedback of such process.
- 4.2.** Taking action to make Sri Lanka an active member of the international Maritime organization(IMO)
- 4.3.** Considering the potential to act as a statutory salvage and focus on the potential for setting up such industries for Search and rescue.
- 4.4.** Improving the human and physical facilities required for institutional strength
- 4.5.** Considering the possibility of setting up 24/ 7 hours operation Centre for expeditious action on Maritime accidents and disasters.
- 4.6.** Expediting the formulation and legalization of formal constitution for the compensation of marine damages.
- 4.7.** Considering the possibility of establishing multi-purpose ship under the Sri Lankan flag with the necessary trained human resources to be able to operate immediately in Maritime accidents.
- 4.8.** Establishing and monitoring of facilities to obtain Maritime information related to marine pollution through satellite technology in real time.
- 4.9.** Capacity development for control of oil and chemical spill related to ports.
- 4.10.** Focusing on the establishment of Forensic Laboratory to identify the causes of accidents and deaths of marine life.
- 4.11.** Considering the possibility of establishing funding mechanism and the concept that the polluter must be paid so as to be able to cope with the maritime accident without incurring the cost of their Treasury.

**Sgd./W.P.C. Wickramaratne**  
**Auditor General**

W.P.C.Wickramaratne  
Auditor General  
16 July 2021