IMO
INTERNATIONAL MARITIME LAW INSTITUTE
Established under the auspices of the International Maritime Organization
A specialized agency of the United Nations

\

CONTROL OF HARMFUL ANTI-FOULING SYSTEMS ON SHIPS BILL

[A BILL TO INCORPORATE THE IMO INTERNATIONAL CONVENTION ON THE CONTROL OF HARMFUL ANTI-FOULING SYSTEMS ON SHIPS-2001]

A Legislation Drafting Project submitted in partial fulfillment of the requirements for the award of the Degree of Master of Laws (LL.M.) at the IMO International Maritime Law Institute

Submitted By: NAYOMI MALINA KAHAWITA

[SRI LANKA]

Supervisor: BUBA BOJANG

Academic Year 2016/2017

TABLE OF CONTENTS

Explanatory Note to Accede and Incorporate the IMO Convention on the Control of Harmful Anti-Fouling Systems on Ships, 2001

1. Historical Background and the Importance of Anti Fouling Systems on Ships

The unwanted growth of marine organisms such as seaweeds, barnacles, algae, mollusks, and tubeworms on a ship's hull immersed beneath the sea waters is termed in the shipping industry as "marine biofouling". Marine Biofouling can be classified broadly as macro-fouling which includes plant fouling and animal fouling and micro -fouling which includes unicellular algae and bacteria.[1] It is estimated that there are in excess of 4,000 known fouling species, all of which have the potential to colonize a submerged surface of a ship's hull.[2] Generally the same major groups of marine species are responsible for marine bio fouling world-wide, but the individual dominant species such as barnacles, contributing to animal fouling, vary depending on the location and the region of the marine environment.[3]

The extent of fouling depends on a number of factors, including water temperature, salinity, nutrient level, intensity of solar radiation, and productivity of the organic matter on which the organisms feed.[4] The distribution of the fouling species differ depending on the geographic location of a particular region, and intense fouling has been recorded from sub-tropical and tropical regions in contrast with polar regions and temperate zones which are categorized respectively as low and medium fouling risk areas, whereas, the former two regions as high fouling risk areas.[5]

When the bottom of a ship is heavy with fouling organisms, it causes a slowing down of the speed of a ship, which in turn, consequent upon the vessel consuming a higher percentage of

[1] Siddhartha Roy and others, ' Fouling Organisms' < www.**slideshare**.net/RkInhellFishcos/**fouling-organisms** > accessed 02 May 2017
[2] Clair Hellio & Diego Yebra, 'Advances in Marine Anti-Fouling Coatings and Technologies' <https://books.google.lk/books?isbn=184569631X > accessed 02 May 2017
[3] ibid
[4] ibid
[5] Siddhartha Roy, (n.1)

fuel, and waning in its energy efficiency. Moreover, higher percentage of fuel spells out higher emissions to environment, contributing to the ultimate climate changes experienced globally.[6]

Furthermore, higher fuel consumption and can also facilitate the transport of harmful non-indigenous species (NIS).[7] When a hull is infested with fouling organisms it affects safe, sustainable and efficient shipping and such a ship is forced to dry dock and undergo cleaning of the hull, which is often a costly exercise.[8]

Thus a clean ship, free from biofouling sails faster, and consumes less energy. A small amount of fouling can lead to an increase of fuel consumption of up to 40%, and possibly as much as 50%, since the resistance to movement will be increased.[9]

The below pictorial depictions demonstrate the appearance of a clean ship hull *vis-a-vis* a fouled ship hull.

[6] Katherine A Dafforn, 'Anti-fouling Strategies : History and Regulation , Ecological Impacts and Mitigation' (Maritime Bulletin, Abstract, p466-473) <http://dx.doi.org/10.1016/j.marpolbul.2011.01.012- > accessed 02 May 2017
[7] ibid
[8]' Sri Lanka Ports Authority Tariff-2015' <http://www.slpa.lk/application_resources/images/Tariff_2015.pdf > accessed 02 May 2017
[9] International Maritime Organization ' Anti Fouling Systems' <http://www.imo.org/en/OurWork/Environment/Anti-foulingSystems/Pages/Default.aspx > accessed 02 May 2017

It can be stated that the fouling of ships' hulls has been a perennial woe of the mariners since the time the ships were invented as modes of carriage and conveyance.[10] Even though, the treatment and/or protection against the fouling of ships' hulls (anti-fouling mechanisms) can be traced back to the 412 BC, such ancient treatments were solutions developed on a trial and error basis

[10] Woods Hole Oceanographic Institute 'The History of Prevention of Fouling' <https://darchive.mblwhoilibrary.org/bitstream/handle/1912/191/chapter%2011.pdf?sequence=20 > accessed 02 May 2017

without any substantive scientific basis.[11] In the early days of sailing, the ships were constructed with wood. Thus, lime, and later a compound mixture of arsenic and sulfur followed by wood and lead sheathing were used to coat hulls of these wooden vessels. The use of copper sheathing containing mercury oxide and arsenic compounds gained popularity as anti- fouling systems, when iron and steel replaced wood as ship construction material in the 17th century.[12]

Historically, the development of anti-fouling sheathings falls readily into three parts:

(1) The repeated introduction and use of metallic sheathing, culminating in the discovery of copper sheathing as an effective antifouling surface;

(2) The invalidation of the use of metallic copper on iron hulls because of galvanic effects, which followed the development of iron ships; and

(3) the eventually successful efforts to devise antifouling paints that, in the case of iron or steel hulls, could be applied over an anti-corrosive coating.[13]

Gradually, with the progress made in the spheres of science and technology anti-foulants containing chemical compounds were rated both economically and efficacy wise more advantageous. By 1870, more than 300 antifouling patents had been registered and majority of them were based on chemical compounds, and the basic chemical component used in a majority of these antifouling paints was biocide(s) which deterred the settlement of fouling organisms through a leaching mechanism.[14]

However, the scientific studies developed over the years have shown that the biocides used in anti-fouling paints contained an aggressively harsh compound known as **organotin**. Organotin is a pesticide based anti-fouling coating. The principle biocides present in organotin compounds is termed "Tributyltin" (TBT) which even though economically viable has been regarded as

[11] International Paint Marine Coatings, ' History of Fouling Control' < www.international-marine.com > accessed 02 May 2017
[12] Woods Hole Oceanographic Institute 'The History of Prevention of Fouling' <https://darchive.mblwhoilibrary.org/bitstream/handle/1912/191/chapter%2011.pdf?sequence=20 > accessed 02 May 2017
[13] ibid
[14] International Paint Marine Coatings, ' History of Fouling Control' < www.international-marine.com > accessed 02 May 2017

harmful to the aquatic resources, and marine ecosystems and environment. Anti-fouling paint is currently the primary method of controlling fouling. Since the 1960s, tributyltin (TBT) has been the primary biocide in anti-fouling paint, and as of the year 2000 was used on a greater scale by more than 70% of the world's ocean going fleet.[15] Contrary to expectation, as shown by experimental data at the beginning of organotin chemistry, organotin biocide proved itself to be deleterious to the global marine ecosystems. Since organotin do not decompose rapidly in seawater, many incidences of deformities in some shellfish have been linked to organotin concentrations in sea waters.[16] Additionally the exposure to organotin concentrations mixed in sea waters have brought about chronic and acute malformation in oyster and dog whelk snail populations in the global marine habitat.[17] The exact extent of the toxicological impact caused by the use and application of anti-fouling coatings consisting of organotin biocides on the marine environment is yet unknown, and remains a subject area for comprehensive research and evaluation [18]

These organotin infused biocides slowly leach into the sea waters and while killing the marine organisms attached to a ship's bottom they also cause harm to other varieties of marine life by permeating over and mixing with the sea waters. These chemical biocides remain in the sea waters for long periods of time contaminating the waters. The sea waters is the natural habitat of fishes, corals and other marine-life, and accordingly these chemical biocides through fishes and other marine species enter into the food chains of humans, and thus endangering human health.

The shipping industry is gradually moving away from organotin infused anti-fouling systems and other pesticide based anti-fouling systems. However, a combination of two compounds, namely, copper metal and cuprous oxide form the basis for most metallic biocides currently used in antifoul paints/coatings. Both these products are very effective in deterring larval, mollusc and

[15]John M. Drake &and David M. Lodge, 'Hull Fouling is a risk factor for intercontinental species exchange in aquatic ecosystems' < http://www.aquaticinvasions.net/2007/AI_2007_2_2_Drake_Lodge.pdf > accessed 02 May 2017

[16] Iwao Omae, 'Review: Organotin antifouling paints and their alternatives' (Applied. Organometal. Chemistry. 2003; 17: 81-105) <www.interscience.wiley.com & www.birmingham.ac.uk/generic/seacoat > accessed 02 May 2017

[17] Michael A. Champ, & Peter F. Seligman, 'Organotin: Environmental Fate and Effects' (Springer Science & Business Media, 2012). < www.springer.com/gp/book/9780412582400 > accessed 02 May 2017

[18] ibid

weed growth, but their ability to repel foulants depends on their relative concentration in the paint, which in turn can cause harmful effects to the marine environment[19]

Apart from pesticide based anti-fouling coatings, there are other types of anti-fouling coatings such as pesticide free anti-fouling systems, using silicone and epoxy, self-polishing coatings known as ablatives and non-ablative.[20] These self-polishing ablatives which are also known as polymer coatings are regarded as the most effective biocidal anti-fouling systems which wear away as the ship is propelled through water to expose a fresh layer of biocide.[21]

In theory, fouled ships can be cleaned at regular intervals. This entails the physical removal of the attached organisms by methods such as under water cleaning by divers. However, this involves frequent maintenance of ships and high associated costs. In contrast, the use of an effective anti-fouling system (paint) has proven to be more cost effective, resulting in greater savings in vessel operation and maintenance expenses. An effective anti-fouling system can save a ship-owner money in a number of ways.[22]

- *Direct fuel savings by keeping the hull free of fouling organisms;*
- *Extended dry-docking interval, when the anti-fouling system provides several years of use;*
- *Increased vessel availability - since it does not have to spend so much time in dry docking*.

[19] Yachting Monthly, 'What happens when they ban anti fouling?' <http://www.yachtingmonthly.com/gear/what-happens-when-they-ban-antifoul-> accessed 02 May 2017

[20] Siddhartha Roy and others, (n.1)

[21] IMO, 'AFS.3/Circ.3 22 July 2009 on Guidance on best management practices for removal of anti-fouling coatings from ships, including TBT hull paints to the Convention' <http://www.imo.org/en/OurWork/Environment/Anti-foulingSystems/Documents/AFS.3-Circ.3.pdf > accessed 02 May 2017

[22] International Maritime Organization ' Anti Fouling Systems' <http://www.imo.org/en/OurWork/Environment/Anti-foulingSystems/Pages/Default.aspx > accessed 02 May 2017

Thus, it can be stated that the search for effective anti-fouling systems has always been closely entwined with the economics of the shipping industry, and thereby, the emphasis has always been to develop and innovate cost effective anti-fouling preventive methods.

In the 1990s the International Community began to realize that the need for common and collective action by all States was pivotal in relation to the preservation and conservation of the global environment for future generations. The common and collective action was stressed and advocated as the impetus for the effective functioning of the protection and preventive regimes. The Rio Conference on Environment and Development held in 1992 marked the distinct evolution towards establishing a global order for environmental protection. The foundation for the adoption of the International Convention on the Control of Harmful Anti-Fouling Systems on Ships was laid down at this conference which was instrumental in setting out a framework of global environmental responsibilities and fashioning the global environmental law [23]

2. International Convention on the Control of Harmful Anti-fouling Systems on Ships

The pollution caused to the marine environment through anti-fouling paints applied on the hull of ships is an operational source of marine pollution in the category of ship-source pollution. The International Convention on the prevention of pollution from Ships (MARPOL 73/38) was initially acclaimed as a comprehensive Convention which dealing with and covering all aspects of ship-source pollution. Thereafter the international community realized that the aspect of ship-source bio-pollution to the marine environment was not encompassed in MARPOL, which in turn, presented a lacuna in this areas. The introduction of potentially harmful and alien aquatic organisms through the discharge of ballast water of the ships and the occurrence of potential harm to sensitive ecosystems through harmful anti fouling systems applied on ships' hulls surfaced as grave global concerns posing veritable threats to the marine biodiversity and ecosystems around the world.

[23] Patricia Birnie, Alan Boyle & Catherine Redgwell , *International Law and the Environment* (3rd Edition, Oxford University Press) 128

The hazardous impact on the marine environment caused by the anti-foulants containing organotin compounds was raised as a global concern at the International Maritime Organization (IMO) in 1988 by the Paris Commission to the Convention for the Prevention of Marine Pollution from Land-Based Sources.[24] As a consequence, in 1990, the IMO's Marine Environment Protection Committee (MEPC) adopted a resolution which recommended that governments adopt measures to phase out the use of anti-fouling paint containing TBT[25] Initially the resolution was applied with restrictions as to the size of the vessel and the per day use of TBT biocides for leaching.[26] The restricted use of anti-fouling paint containing TBT, did not bring about the desired results. Apart from doubts over the effectiveness and safety of alternative paints, there was concern that a general organotin phase out for ocean going vessels in the absence of acceptable alternatives, would have severe economic and ecological consequences.[27]

In 1992, at the UN Conference in Rio, on Environment and Development which adopted Chapter 17 of Agenda 21 Action Program called upon States to take measures to reduce pollution caused by organotin compounds used in anti-fouling systems.[28] In November 1999[29], IMO Assembly adopted the A895(21) resolution that called on the MEPC to develop an instrument to address the harmful effects of anti-fouling systems and calling for a global prohibition on the application of organotin compounds based anti-fouling systems by 1st January 2003, and a complete prohibition by 1 January 2008.[30] This instrument came to be known as the ***International Convention on the Control of Harmful Anti-fouling Systems on Ships.*** (*Hereinafter referred to as the "**Convention**").*

The Convention, was adopted on the 5th October 2001. The adoption of the Convention marked the successful outcome of one of the tasks set by Chapter 17 of Agenda 21 developed by the 1992 Rio Conference on Environment and Development.[31]. The Convention entered into force on 17th September 2008. It recognized organotin compounds, which act as biocides in anti-

[24] International Maritime Organization, 'Anti Fouling Systems' (n.20)
[25] ibid
[26] ibid
[27] ibid
[28] UN Programme of Action from Rio, *Earth Summit Agenda 21*
[29] 25th November 1999
[30] International Maritime Organization ' Anti Fouling Systems' (n.20)
[31] UN Programme of Action from Rio, *Earth Summit Agenda 21*

fouling systems as harmful, and advocated a complete prohibition on the use of organotin in anti-fouling coatings with effect from 1st January 2008.[32] Additionally, the Convention also provides a mechanism to prevent the potential future use of other harmful substances in anti-fouling systems by proposing amendments to the controls on anti-fouling systems.[33] It is noteworthy, that even though the aforesaid Convention has banned the usage of organotin based anti-fouling systems it does not underestimate the importance of having anti-fouling systems on ships. The said fact is affirmed by the preamble to the Convention, which recognizes the need to '*continue to develop anti fouling systems which are effective and environmentally safe and to promote the substitution of harmful systems with less harmful systems or preferably harmless systems'.*[34]

The said Conference adopted four resolutions which can be elaborated as follows:

- **Resolution 1** : **<u>Early and effective application of the Convention</u>**

  This resolution requests Member States to prepare for consent to be bound by the Convention as a matter of urgency and urges relevant industries to refrain from marketing, sale and application of the substances controlled by Annex 1 of the Convention.[35]

- **Resolution 2** :**<u>Future work of the Organization pertaining to the Convention</u>**

  This resolution invites IMO to develop guidelines for brief sampling of anti-fouling systems; guidelines for inspection of ships, and guidelines for surveys of ships. The guidelines are needed in order to ensure global and uniform application of the articles of the Convention which require sampling, inspection and surveys.[36]

  Under **Resolution 2**, the following have been developed and adopted:

  (a) Guidelines for survey and certification of anti-fouling systems on ships - adopted by resolution MEPC.102(48), superseded by resolution MEPC.195(61)[37]

[32] Annex 1 to the Convention
[33] Article 6 of the Convention
[34] Preamble to the Convention
[35] International Maritime Organization ' Anti Fouling Systems (n.20)
[36] ibid
[37] ibid

(b) Guidelines for brief sampling of anti-fouling systems on ships - adopted by resolution MEPC. 104(49) ; and[38]

(c) Guidelines for inspection of anti-fouling systems on ships - adopted by resolution MEPC. 105(49), superseded by resolution MEPC. 208(62).[39]

(d) Guidance on best management practices for removal of anti-fouling coatings from ships, including TBT hull paints (AFS.3/Circ.3)[40]

- **Resolution 3**: **<u>Approval and Test Methodologies for Anti-Fouling Systems on Ships</u>** this resolution invites States to approve, register or license anti-fouling systems applied in their territories. It also urges States to continue the work, in appropriate international fora, for the harmonization of test methods and performance standards for anti -fouling systems containing biocides[41]

- **Resolution 4** ; **<u>Promotion of Technical Co-operation</u>**

  The resolution requests IMO Member States, in co-operation with IMO, other interested States, competent international or regional organizations and industry programmes, to promote and provide directly, or through IMO, support to States in particular developing States that request technical assistance for:

  (a) *The assessment of the implications of ratifying, accepting, approving, or acceding to and complying with the Convention;*

  (b) The development of national legislation to give effect to the Convention, and

  (c) The introduction of other measures, including the training of personnel, for the effective implementation and enforcement of the Convention[42].

This resolution also focus on requesting the Member States, in co-operation with IMO, other interested States, competent international and regional organization and industry

[38] ibid
[39] ibid
[40] ibid
[41] ibid
[42] ibid

programmes, to promote technical co-operation in the spheres of scientific and technical research on the effects of anti-fouling systems and for monitoring these effects.[43]

3. Existing Legal Regime on Marine Pollution in Sri Lanka

Sri Lanka is not a State Party to the AFS Convention. Consequently, there is no existing legal regime regulating this aspect of ship source marine pollution caused by harmful anti-fouling systems. Marine Pollution, in general is a constant threat plaguing the marine ecosystems. The United Nations Convention on the Law of the Sea, 1982 (UNCLOS) defines 'marine pollution' as:

> *The introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities.*[44]

The following legislations regulate and govern the regime of marine pollution in Sri Lanka.

Merchant Shipping Act, 1971, as amended is the principal legal instrument governing the merchant shipping industry of Sri Lanka. This Act is largely based on the United Kingdom Merchant Shipping Act of 1894 and regulates of all ships registered or deemed to be registered under this Act wherever they may be, all ships, not being Sri Lankan ships, licensed under the Act to engage in the coastal trade, and all other ships while in a port or place in, or within the territorial waters of, Sri Lanka.

[43] ibid
[44] Article 1(1)(4) of UNCLOS

The National Environmental Act 1980 as amended, is the principle enactment dealing with the prevention of environmental pollution in general. Under this Act, the Central Environmental Authority has been established with a vision to establish a pollution free land and marine environment within Sri Lanka and along the Sri Lankan coastline for the sustainable national development and the wellbeing of its people.

However, the component of ship/vessel-source marine pollution is monitored in Sri Lanka by the Marine Environment Pollution Authority which was established by virtue of the provisions of the **Marine Pollution Prevention Act, 2008**. Its main objective is for the control, reduction, prevention and management of pollution arising from and out of ship-based or shore based activities in the territorial waters and on other maritime zone of Sri Lanka as declared by the **Maritime Zones Law, 1976**. At present the provisions of the Marine Pollution Prevention Act, have been dedicated for the prevention of marine pollution caused by oil spills.

The Fisheries and Aquatic Resources Act, 1996 has some provision for the prevention of marine pollution, especially in relation to the protection of fish and other aquatic resources.

The Coast Conservation Act, 1981 deals with the preservation and conservation of the coastal areas of Sri Lanka. The main objective of the Act is to make a survey of the coastal area and to make a Coastal Zone Management Plan to administer the development activities within the coastal areas.

Sri Lanka Ports Authority Act, 1979, under section 67 empowers the Minister to make regulation relating to the prevention of damage to, and pollution of premises of the Ports Authority and the pollution of the waters in the harbours, and any specified port.

When evaluating the aforesaid prevailing laws operating within the marine pollution regime of Sri Lanka the lacuna in the realm of marine pollution caused by marine biofouling is self-evident. The complete absence of monitoring and regulation of various ships that are being built in Sri Lanka, and those visiting the ports of Sri Lanka, as to whether the anti-fouling systems applied thereon comply with the international standards and specifications prescribed by regulations , resolutions and guidelines of the Convention is disheartening through a global

environmental perspective and has been emphasized as a significant inadequacy in the local environmental laws which needs immediate addressing.

In this backdrop, the ratification of the Convention is submitted to be essential and timely, and the next paragraph has been dedicated to deal with that aspect.

4. Importance of Accession to the Convention by Sri Lanka

The accession to an International Convention is a matter to be considered by the Executive Branch of the government. The primary aim of this drafting Project is to persuade the government to accede to the Convention and thereafter, incorporate the same into the national laws for implementation

Sri Lanka is an island in the South Asian Region and a strategically located hub of the Indian Ocean. The country has a coastal line of 1340km in length and ports *in Colombo, Galle, Hambantota* and *Point Pedro,* and natural harbours in *Trincomalee, Oluvil* and *Kankasanthurai.* Sri Lanka has a tropical climate and thus located within the Global Tropical region which is demarcated as a high risk fouling area.

The Port of Colombo located on the western coast of the island is the primary Port which has been ranked at no 28 of the "Top 101 Ports 2014"[45] According to Ports and Shipping Ministry data, the overall container ship arrivals to the Colombo Port have increased by 12.7% to 3,333 in 2015. The bulk cargo vessels arriving at Colombo port have also increased by 80% from 25 vessels to 45 vessels in 2015. In addition vessels, vehicle handling, liquid cargo, fuel transportation have increased from 328 to 359 ships showing 9.5% growth.[46] The total container volume handled in the Port of Colombo for the year 2014 is 4.9 million TEU, while in 2015, it has been increased up to 5.2 million.[47]

---

[45] Lloyds List, Maritime Intelligence Information< www.lloydslist.com/topports > accessed 02 May 2017

[46] Daily e-Paper, ' Colombo Port Records 13% growth in vessel arrivals' <http://www.ft.lk/article/512901/Colombo-Port-records-13--growth-in-vessel-arrivals%C2%A0http://www.ft.lk/article/512901/Colombo-Port-records-13--growth-in-vessel-arrivals%C2%A0 > accessed 02 May 2017

[47]<www.slpa.lk> accessed 02 May 2017

The Port of Hambantota is located facing the southern oceanic hemisphere, with direct access to the main international shipping routes linking with Asia Pacific region with Europe North America, Persian Gulf and the African continent and creating opportunities to access a plethora of international markets. The Port of Hambantota is the latest major Port development project embarked on by the Sri Lanka Ports Authority. The proposed development is directed to develop a major industrial and service Port with an attached industrial zone. It is still at its initial stages of operation and has shown great potential of being an industrial and service hub in the region of South East Asia.[48]

Boat & Ship building is a leading industry which is driving Sri Lanka towards greater industrialization. It contributes a significant share in the basket of exports and continues to grow, with a wide variety of products and services being offered to the international markets. The impetus for this industry has been received from the dynamic and burgeoning Ship repair industry which dates back to the early nineteen hundreds. There are around 20 to 25 active boat yards around the country producing various types of boats providing employment to around 2000 direct and around another 10,000 indirect.[49] These active boat yards located around the country operate without a mechanism for survey and certification as to whether the anti-fouling system used on the ships comply with the international standards and specifications. It is submitted that this, in turn, contributes to increase the chances of these ships built in local ship yards to be detained when entering the ports of other member states to the Convention, which is not a factor favorable to our burgeoning shipping industry.

The coastal belt of Sri Lanka is a haven to a variety of coastal ecosystems such as coral reefs, marine life in estuaries, and lagoons, mangroves, seagrass and seaweed communities, salt

[48]Sri Lanka Ports Authority , 'Port of Hambantota' <http://www.flandersinvestmentandtrade.com/export/sites/trade/files/trade_proposals/Port%20of%20Hambantota%20RFP.pdf> accessed 02 May 2017

[49] Sri Lanka Export Development Board, 'Boat and Ship Building' <www.srilankabusiness.com/boat-and-ship-building> accessed 02 May 2017

marshes, tidal flats, and large expanses of beaches. These ecosystems are important of the country's marine biodiversity.[50]

Fouling of the ship's hull causes biological invasion, which has been recognized as one of the greatest threats to global biodiversity. Biofouling on submerged structures within a port environments is one of the major pathways of invasions by Non Indigenous Species (NIS).[51] At a baseline study for biofouling faunal assemblage in Hambantota Port conducted by taking samples scraped from submerged hard substrata in 12 sampling sites with the assistance from divers, a noteworthy discovery had been made. Eight globally known invasive species which include, *Rapana venosa, Phallusia nigra, Perna perna, Brachidontes pharaonic, Balanus phitrite, Balanus reticulates, Balanus trigonus and Schizoporella errata*, were recorded from the site of Hambantota Port.[52] The exact extent and gravity of damage caused to Sri Lanka's marine environment and marine ecosystems by these invasive alien species is yet unknown, since country has not yet embarked on any marine scientific research and expeditions into the matter. However, the presence of non-indigenous species in local marine environs as a direct consequence of biofouling is a matter to be taken into significant consideration when seeking to ratify the Convention.

If marine biofouling is not dealt with correctly the accumulated fouling poses a risk of transferring invasive non indigenous marine species (NIS) round the world with consequent damaging effect to local marine life and reduction of biodiversity. [53]

---

[50] S.A.M. Azmy, edited by Dr. Sriyanie Miththapala, 'Sri Lanka Report on Coastal Pollution Loading and Water' Quality Criteria < http://www.boblme.org/documentRepository/BOBLME-2011-Ecology-14.pdf> accessed 02 May 2017

[51] Prof. Jayasundara, 'Macro- Fouling Faunal Assemblage in Hambantota Port'<http://www.sjp.ac.lk/wp/wp-content/uploads/2016/09/Symposium-2016-Abstracts.pdf> (symposium abstracts 2016-University of Sri Jayawardenepura) & Dr..R.R.M.K.P. Ranathunga "Macro- Fouling Faunal Assemblage in Hambantota Port' <http://scholar.sjp.ac.lk/kamal/publications/macrofouling-faunal-assemblage-hambantota-port> accessed 02 May 2017

[52] ibid

[53] Hydrex Underwater Technology, 'White Paper: Clean Ship Hulls and Ports without Compromise' <http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=home.showFile&rep=file&fil=ECOTEC_Clean_Ship_Hulls_and_Ports.pdf> accessed 02 May 2017

Sri Lanka has not conducted any national assessment on coastal and marine pollution. Such assessment on national scale is stated to be of paramount importance in order to identify various sources contributory towards marine pollution.[54] Any such national assessment, must also encapsulate the sphere of biofouling, which at present has been undermined and over-looked. Pursuant to the national assessment a national action plan should be prepared geared towards the reduction and prevention of marine pollution focusing on all identified areas contributing to pollution. In order to conduct such a national scale assessment and thereafter a formulation of nation action plan, institutional strengthening, is vital. Institutional strengthening can be enhanced through strengthening of equipment and infrastructure, and by strengthening of technical expertise. In most cases, the latter is an onerous task. Unlike the logistical strengthening which is always entwined with the economic development of a country, strengthening of technical and legal expertise is achieved through empowerment of personnel with skills and knowledge. It is in this regard that the adoption and implementation of International Conventions are important. The International Conventions provide the basic guidelines and standards and the necessary technical expertise for national governments to adopt and build on when formulating the national strategies and plans.

Furthermore, in the sphere of bio-fouling, there is no regulatory mechanism in place to monitor as to whether any of the ships entering the ports and harbours of Sri Lanka use harmful anti fouling systems. Sri Lanka, as a middle income earning, developing state, is geared towards boosting its economy through trade and commerce. Resultantly more ships arrive in the ports and harbours surrounding the island. This in turn, leaves ample room to expose our sensitive marine ecosystems, susceptible aquatic life, water borne plants and public health to hazardous or potentially hazardous conditions. The economic progress in the present times should be intermingled with sustainable development. The cornerstone of sustainable development is submitted to be a combination of ecological well-being and human well-being. The ecosystems and their services are not only instrumental for improving human well-being, but are also constitutive elements of human well-being.[55] Thus, it is needless to state that for sustainable development to be a success story, both of the aforesaid variables should be complementary and

[54] S.A.M. Azmy, edited by Dr. Sriyanie Miththapala, (n.48)
[55] 'Ecosystems and Human Well-being' <www.millenniumassessment.org/documents/document.301.aspx.pdf >accessed 02 May 2017

harmonious. Marine Pollution causes disruption to the harmonious balance, Biofouling being a component of marine pollution is a contributory factor to such disharmony unless proactive and pre-emptive measures are taken to regulate and curb the adverse effects thereof. In fact, this is an essentiality, as *the environment is not an abstraction but represents a living space, the quality of life and the very health of human beings, including generations unborn*.[56]

In this backdrop, the accession to the Convention would be of timely significance to Sri Lanka and thereupon may be enacted as a primary legislation.

5. Explanation on textual content of the proposed Bill

The text of the proposed Bill consists of Ten Parts under Ten Sub-Headings and Nine Schedules comprising of the modified guidelines by taking into account the information contained in the Annexures and the Resolutions of the Convention. These guidelines have been included in the Schedules of the draft Bill with a view to provide minimum standards for the conduct of surveys, sampling and certification of anti-fouling systems on ships. These guidelines in appropriate circumstances can be expanded and executed by the Flag State Administration by making implementing standards detailing out the specifications.

It is believed that when drafting a Bill of this nature, the main objective of a drafter should be to give maximum effect to the provisions of the Convention, by making those provisions adaptable and workable within a national legal framework. In this endeavor, a Bill should feature as much details as possible for proper implementation of the basics, whilst leaving the residue to be implemented by way of regulations under the Ministerial powers. In fact this motivation should be the golden thread spinning throughout the tapestry of the Bill. Furthermore, such an effort would also enable to promote a consistent application of the provisions of the Convention when carrying out the overall objectives. It is emphasized that the main objective of the Convention is to initially to reduce and thereafter to control and finally to eliminate the adverse effects on the marine environment and human life caused by anti-fouling systems applied on ships, through a legal regime controlling and regulating the usage of such anti fouling systems on ships.

[56] *Legality of the Threat or Use of Nuclear Weapons* (Advisory Opinion) (1996) ICJ Rep 226

5.1. Control of Anti Fouling Systems

Annex I to the Convention has tabulated the control on Anti Fouling Systems, based on the effective date, in two stages, *viz*.

- *By the effective date of 1 January 2003, all ships shall not 'apply or re-apply' organotin compounds which act as biocides in anti-fouling systems.*

- *By the effective date of 1 January 2008 all ships (except fixed and floating platforms, Floating, Storage Units (FSU) and Floating, Production. Storage and Offloading (FPSO) that has been constructed prior to 01st January 2003 and that have been in dry-dock on or after 01-01-2003) either (i) shall not bear such compounds on their hulls or external parts or surfaces; or (ii) shall bear a coating that forms a barrier to such compounds leaching from the underlying non-compliant anti-fouling systems.*[57]

The Bill under reference adopting the Convention for Sri Lanka has been prepared after 1 January 2008. Thus, the details pertaining to the effective dates have not been taken into consideration.

The following paragraphs will present an overview of certain salient aspects of the provisions contained in Part 1 to Part XI of the proposed Bill which form part of the main body of the Bill.

The proposed Bill will come into force on such date as the Minister may appoint by Order published in the Gazette. (Clause 1)

5.3. Part 1: General Provisions (Interpretations)

The draft Bill, in Part I, by Clause 2, provides for the definitions for relevant terms and phrases used in the main body of the Bill.

Amongst the several defined phrases the following definitions are vital for consideration.

[57] Table in Annex 1 of the Convention

The phrase, "**anti-fouling system**" has been defined to mean '*a coating, paint, surface treatment, surface or device that is used on a ship to control or prevent attachment of unwanted organisms containing organotin compounds reacting as biocides.* This in turn, is a compendious version of the definition for "anti-fouling system" found in the Convention. However, the draft text of the Bill deviates from the Convention by seeking to provide a definition for "**controlled anti-fouling compound** for the purpose of clarity which is needful for national legislation. The proposed Bill defines a " **controlled anti fouling compound**" to mean:

> *the anti-fouling compound applied on any anti-fouling system containing* ***organotin*** *compound which act as biocides or containing any other harmful substance to be regulated by the Minister, and includes any future controlled anti-fouling compound that would be approved by the Marine Environment Protection Committee of the International Maritime Organization in terms of Article 6 of the Convention on the Control of Harmful Anti-Fouling Systems on Ships 2001, and accordingly regulated by the Minister under this Act.*

It is noteworthy that the above definition leaves room to be inclusive to add on any future harmful or hazardous substance that may be approved by the MEPC and subsequently to be regulated by the Minister into our law. This is concurrently provided for as a matter to be regulated under Clause 38 of the proposed Bill which deals with the Ministerial powers.

The phrase "m**arine environment**" which demarcates the geographic scope of application of the proposed Bill stipulates the territorial sea of Sri Lanka since the ports, harbours, shipyards and off shore terminals are located within the territorial sea. The "**territorial sea of Sri Lanka**" has been identified in the context of the Maritime Zones Law, 1976 and Presidential Proclamation 1977 made there under.

Furthermore, the draft Bill seeks to adopt the same definitions given to the terms "**ship**" and "**off shore terminal**" respectively as those in the Marine Pollution Prevention Act of 2008, since the Marine Environment Protection Authority established under the Marine Pollution Prevention Act

of 2008, has been indicated together with the Port Authority of Sri Lanka as agencies to render assistance to the Flag State enforcement of the provisions of the draft Bill.

It is to be noted that the term "**ship**" in the proposed Bill includes fixed and floating platforms. Since these units have been expressly excluded from the survey and certification requirements under Regulation 1 of Annex 4 of the Convention, the proposed Bill under Ministerial powers have provided to make regulations for the survey and certification of such units as well.

5.4. Part II: Scope of Application

The proposed Bill, in Part II, by Clause 3, deals with the geographic Scope of Application.

Article 3(1) of the Convention provides that contracting States to the Convention are required to prohibit the use of organotin contained anti-fouling systems and restrict the use of any harmful anti-fouling systems on ships flying their flag, as well as ships not entitled to fly their flag but which operate under their authority, and all ships that enter a port, shipyard or offshore terminal of a State Party. The warships, naval auxiliary, or other ships owned for non-commercial purposes of the State are excluded from the application of the Convention, in terms of Article 3 (2).

The above mentioned Article 3(1) of the Convention, was adopted by the draft Bill by clause 2(1), by making same applicable for ships registered in Sri Lanka or ships operated under the authority of Sri Lanka and to foreign ships entering any shipping facility (which includes ports, harbors and offshore terminal) of Sri Lanka. The proposed Bill seeks to categorize the ships taking into account the tonnage and the length of a ship, and this categorization has been inserted to accommodate the survey, and certification regime, This categorization, in turn resonates the provisions in Regulations 1 and 5 of Annex 4 of Article 10 of the Convention and have been drafted taking into account the provisions of these two Regulations of Annex 4.

The Regulation 1 of Annex 4 of the Convention, stipulates that the survey guidelines specified therein are applicable to ships which are of 400 gross tonnage and above. Thus, the draft Bill by

clause 2(1) (a) and (c) refers to such categorization of Sri Lankan and foreign ships visiting the ports of Sri Lanka.

The Regulation 5 of Annex 4 of the Convention refers to the issuance of a Declaration of Anti-fouling System pursuant to a survey for ships which are of 24 meters or more in length but where the gross tonnage is less than 400. Clause 2(1) (b) and (d) of the draft Bill have been drafted embodying this categorization.

Thus in doing so it is contemplated to make the regulatory and monitoring mechanism stipulated in the proposed Bill to be applicable for all ships where the minimum length is 24 meters.

The proposed Bill provides exclusion from application to warships naval auxiliaries and other ships owned or operated by Sri Lanka in keeping with Article 3(2) of the Convention in Clause 3(3) paragraph (a). Furthermore, the proposed Bill also provides exclusions for the warships, naval auxiliary or other ships owned and operated by contracting States to the Convention which are being engaged in non-commercial purpose on behalf of such State in Clause 3(3) paragraph (b).The draft Bill proposes to extend this exclusion not only to contracting States to the Convention but also to the warships and other government ships non- contracting States to the Convention, operating for non-commercial purpose by Clause 3(3) paragraph (c) .

However, under Part X in Clause 38(2) of the draft Bill which stipulates the Minister's powers to make regulations, it is provided that a regulatory mechanism has to be formulated with guidelines for inspections of such foreign war ships of both contracting and non-contracting States to the Convention, in order to verify compliance with the provisions of the proposed Act. Such regulations if they are to be made should extend to cover the warships, naval auxiliaries and other ships owned and operated by Sri Lanka as well and same has been provided for a matters for regulation making in appropriate instances under Clause 38(2) of the Bill. The foregoing provisions have been drafted into the proposed Bill after taking into account the undertaking highlighted in Article 3(2) of the Convention, whereby, each Party is alerted to adopt appropriate measures to ensure that such ship covered by the exclusion also act in a manner consistent with the Convention

Inspired by the principle of ***no more favourable treatment*** entrenched in Article 3(3), the provisions of the draft Bill, by Clause 3(4) have been made applicable to all foreign ships of non-contracting States to the Convention, when they visit any port/harbor/ off shore terminal of Sri Lanka,

5.5.Part III: Administration

The proposed Bill, in Part III, by Clauses, 4, 5, 6, and 7 deals with the Administration of the ant-fouling surveys, inspections and certification regime.

The Administration is to be handled by the Director Merchant Shipping of the Merchant Shipping Secretariat who shall be the Authority under the proposed Bill. [Clause 4(1) & (2)]. The Director Merchant Shipping is a public authority appointed under section of the Merchant Shipping Act No 52 of 1971. Merchant Shipping Secretariat which is the shipping administration arm of Sri Lanka has the overall responsibility for overseeing maritime concerns. The activities of the Merchant Shipping Secretariat are basically governed by the Merchant Shipping Act No.52 of 1971, Licensing of Shipping Agents Act No. 10 of 1972 and also the relevant clauses of the Admiralty Jurisdiction Act No. 40 of 1983 and subsequent regulations made thereafter. Merchant Shipping Secretariat plays multifaceted roles, including checking of ships for compliance of Sri Lankan and International Safety regulations (Flag State and Port State Control). Additionally it deals with the safety of life and property at sea, maritime education, training, examination and certification, registration of ships under Sri Lanka flag, Licensing of Shipping Agents, Container Depot Operators, Container Terminal Operators, Container Freight Stations, Freight Forwarders or a Non Vessel Operating Common carriers and implementing provisions of all applicable international Maritime conventions and national regulations [58]

It is provided under the draft Bill that the Director of Merchant Shipping may appoint qualified marine surveyors to carry out the surveys and inspections .[Clause 5(1) & (2)]. The relevant recognition criteria for such appointment to be regulated by the Minister in the exercise of the

[58] Merchant Shipping Secretariat, Ministry of Ports and Shipping <www.dgs**shipping**.gov.lk > accessed 02 May 2017

Ministerial powers to make regulation under Part X of the draft Bill. The appointment of qualified marine surveys is emphasized to be essential since these surveys and inspection are of technical nature requiring specialized expertise in these fields. The recognition criteria of these marine surveyors are to be laid down by the Minister by formulating regulations under Part X of the proposed Bill. Furthermore, these provisions pertaining to the appointment of marine surveys have been incorporated into the draft Bill after taking into consideration the provisions in this respect found in the *Control of Harmful Anti Fouling Systems Act of 2006 of Australia* [59]

The relevance of Clause 6(1) & (2) of the proposed Bill to be explained under the subheading "Annexes to the proposed Bill" featured in paragraph 5:11 of the Explanatory Note .

The proposed Bill, under Clause 7 provides for assistance to be obtained by two other agencies in Marine Pollution, and Port State Control Regimes, namely the Marine Environment Protection Authority and Sri Lanka Ports Authority in appropriate circumstances by entering into Memorandum of Understanding in this regard. These provisions of the draft Bill have been included in order to ensure smooth and efficient functioning of the tasks stipulated under the Bill.

5.6. Part IV: Flag State Control Surveys and Part V1: Port State Control Inspections

The proposed Bill, under Part IV by Clauses 8, & 9 and under Part V1 by Clauses 17.18.19 20 21 &22 focus on covering surveys and inspections.

In doing so, these Clauses aim to categorize the surveys and inspections as flag state control surveys and port state control inspections. The Flag State control and Port State control aspects have been dealt together in this explanatory note since, both surveys and inspections may be classified as *Flag State responsibilities* which are more fully elaborated in the following paragraphs.

[59] 'Protection of the Sea (Control of Harmful Anti-Fouling systems on Ships) Act of 2006' < www.**aus**tlii.edu.**au** > accessed 02 May 2017

5.6.1. Flag State Responsibilities

The primary responsibility for ensuring compliance of ships with the standards laid down by international law rest with the flag state maritime administration. The enforcement jurisdiction of a flag state is confined to its territorial sea. Additional control may be exercised by a flag state to protect the interests located within the territory and territorial sea of a coastal state in relation to prevention of infringement and punishment for violation of customs, fiscal, sanitary and immigration laws and regulation in the contiguous zone in terms of Article 33 of the UNCLOS.

On the other hand, Article 219 of the UNLCOS recognizes the responsibility of the port states to intervene if a foreign ship entering one of its ports is in violation of the applicable international regulations and standards relating to their seaworthiness and potential damage that can be caused to the marine environment of a state.

However, through a pragmatic perspective, even if a substandard vessel had managed to mislead the flag state administration and sail away, an effective port state control mechanism would always have the capability to detain such a ship thereafter, upon entering any Port State. Moreover, an efficient scheme of port-state inspection and control would provide a more practical solution for deterring substandard ships than flag state control since during a port state inspection a ship if found to be non-compliant with an international convention can be arrested and detained until such ship fulfills compliance and in certain instances subject to legal proceedings as well, which will be a costly deterrent.[60]

The Convention in terms of Articles 10 and 11(1) and (2) recognizes two flag state responsibilities, namely, to conduct surveys on ships for the purpose of verifying that the anti-fouling systems used on such ships do not contain any controlled anti-fouling compound under the Convention, and secondly, to engage in port state control inspections of the ships arriving in the ports of a contracting state to the Convention. The proposed Bill seeks to give effect to these provisions under Parts IV and VII thereof. .

[60] Patricia Birnie, Alan Boyle & Catherine Redgwell , *International Law and the Environment* (3rd Edition, Oxford University Press) 406

Furthermore, Regulation 1 of Annex 4 of the Convention and the guidelines stipulated in Resolution No: MEPC 102(48) are applicable to the flag state control surveys. The aforesaid Regulation and the Resolution stipulate three types of surveys to be conducted in relation to an anti-fouling system on a ship. Such surveys are to be conducted by taking into account whether the relevant anti- fouling system is one that has been applied to a new building, or one that is being used in an existing ship or whether it is a newly applied anti fouling system to an existing ship.

The proposed Bill aims to provide and stipulate Guidelines with a view to assist and guide the flag administration when conducting such surveys, in the form of Annexes 1,2,and 3 which as more fully mentioned in paragraph 5: 11 below, featuring the Guidelines laid down in Resolution No: MEPC 102(48).

In this respect it is pertinent to furthermore observe that the Guidelines set out in the foregoing Resolution extends to the cover the industry of manufacturing of the anti-fouling paints and in doing so the Resolution specifies that when making a request for a survey of the anti-fouling system of a ship such request should accompany such information, as the details of the manufacturer and the receipt of purchase of the anti-fouling paint & etc. in the form a declaration made by such manufacturer, These provisions have been given effect to by including in Clause 8(2) of the proposed Bill.

5.7. Part V: Certification Regime

The proposed Bill deals with the certification regime under Part V by Clauses 10, 11,12, 13 14 15 & 16**.**

Even though in the chronology of the main text of the proposed Bill, the provisions pertaining to certification follow the *Flag State surveys* provisions, in this Explanatory Note certification regime has been discussed after explaining the *Flag State responsibilities,* which encompass the surveys and inspections stipulated in both Parts IV and V1 of the proposed Bill.

The Convention, under Article 10 provides for the certification and further stipulates that the provisions thereof should be read together Annex 4.

Annex 4 of the Convention consists of Regulations 1, 2, 3, 4 and 5, and out of these, Regulations 2,3,4, and 5 of Annex 4 have been dealt under Part V of the proposed Bill since Regulation 1 of Annex 4 has already been covered under Part IV of the proposed Bill for Flag State surveys.

Clause 10 under sub-paragraphs (1) and (2) classifies the mandatory requirement to carry an International Anti Fouling System Certificate or Declaration on Anti Fouling System, (*as the case may be*) on board a ship as per the gross tonnage of a ship. Clause 10 (3) states that a Declaration shall be accompanied by a paint receipt or contractor invoice or any other appropriate documentation or endorsement thereon. Further, Clause 10 (4) provides that both the Certificate and Declaration should be accompanied with the Record of Anti Fouling System. At this juncture reference has to be made to provisions in Clause 16 of the proposed Bill, which stipulate that the Model Forms respectively of the Certificate, Declaration and Record have been prescribed in Annex 5 to the Bill. These Model Form in Annex 5, are a reproduction of the Forms in Appendices 1 and 2 to Annex 4 of the Convention.

Clause 11 stipulates provisions relating to the issuance of the International Anti Fouling System Certificates for both Sri Lankan vessels and foreign vessels of contracting States.

Clause 12 authorizes a marine surveyor, who has conducted a survey on a ship to issue or authorize the endorsement of a certificate if the anti-fouling system is found to be in compliant with the provisions of the Bill

Clause 13 enumerates the instances where a Certificate cease to be valid, while Clause 14 makes provisions for cancellation or suspension of a Certificate or Declaration and Clause 15 provides that a cancelled or suspended Certificate or Declaration should be surrendered to the Authority, namely, Director Merchant Shipping.

5.8. Part VII: Detentions

Part VII of the proposed Bill by Clause 23 to 26 is dedicated to prescribe provisions pertaining to the detention of foreign ships entering the ports of Sri Lanka.

Clause 23(1) provides that ship can be detained by a Port State authority under the proposed Bill when during the course of an inspection of a ship its anti- fouling system is not compliant with the standards and specifications.

Clause 23 (2) provides that when a ship is detained notice of such detention to be forthwith served on the Flag State through Diplomatic Channel.

The subject area of detention as covered by the proposed Bill is applicable when and if the anti-fouling systems used on such foreign ships are found to be not compliant with the international standards and specifications set out in the Convention and as recognized by Clause 24(1) from paragraphs (a) to (c).

Clause 24(4) of the Bill specifies the instances when a detained ship should be immediately released. In this connection it has been provided that the main instance for such a release to be occasioned is when a security has been deposited in a manner provided under Clause 23(5)

Clause 25 of the proposed Bill provides as follows:

> *When in an inspection involving a sampling proves that a ship's anti fouling system is non-complaint with this Act, but the result thereof had been obtained after the release of the detained ship to another port, the Authority hereinafter, can prevent the entry of such ship from entering into any port, harbor, off shore terminal or any other shipping facility of Sri Lanka, since such a ship could present an unreasonable threat of harm to the marine environment*.

The aforementioned provisions capture and recognize the importance taking preventive measures by a State (as part of port state control inspections) to prevent a ship which is potentially harmful to the marine environment a State from entering the internal waters of such State. In this respect, emphasis is placed on Article 192 of the UNCLOS, which contains a general obligation for states to protect and preserve the marine environment and to Article 194(2) of the UNLCOS which features an almost verbatim iteration of Principle 21 of the 1972 Stockholm Declaration, since Principle 21, which highlights the preventive principle, has come to be heralded as the basis for international environmental responsibility of States.

The duty to take preventive measures is known in the international legal regime pertaining to the environment, as the preventive principle. It may be distinguished from the precautionary principle contained in the Rio Declaration. The former imposes upon states the obligation to take measures to prevent known or foreseeable harm outside their territory. The latter would on the other hand require a state to take risk protective measures at an earlier point in time, namely where there is potential hazard to the environment but scientific uncertainty as to its precise impact. [61]

The draft Bill, by Clause 26(1) obligates the Authority to take reasonable efforts to avoid a ship being unduly delayed or detained in any port, harbor, shipyard, off shore terminal or any other shipping facility of Sri Lanka.

Furthermore, it has been provided under Clause 26(2), that if a ship is unduly delayed the Authority has been held liable for payment of compensation to any such ship. In this connection, the draft Bill under Clause 26(3) furthermore, provides that if the Authority and the ship-owner are unable to agree on the amount of the compensation, proceedings may be instituted by either party in the High Court of Sri Lanka and allow the Court to determine a reasonable compensation.

[61] Simon Marr, *The Precautionary Principle in the Law of the Sea: Modern Decision Making in International Law* (Martinus Nijhoff. The Hague. 2003) 9

The provisions contained in this Part of the Bill, have been drafted by taking into account the provisions in Articles 11(3) and (4) and 13 of the AFS Convention and Resolution No: MEPC 208(62).

5.9. Part VIII: Analysis of controlled anti-fouling compounds And Part IX: Violations and Penalties

Part VIII of the proposed Bill, by Clauses 27 & 28 deal with analysis of controlled anti-fouling compounds. While the provisions of Part IX by Clauses 29, 29, 30, 31, 32, 33, 34,35, 36 & 37 deal with violations and penalties.

The provisions of Part VIII conjoin and are relevant to the provisions in succeeding Part IX of the Bill. Furthermore the provisions in these two Parts of the proposed Bill highlights the provisions in Articles 12 and 14 of the AFS Convention, and thereby, these two Part have been dealt jointly in the Explanatory Note.

5.9.1. Analysis of controlled anti-fouling systems

The subject matter covered by Part VIII of the proposed Bill is with regard to the Analysis procedure of the Controlled Anti Fouling compound, and the issuance of an Anti-Fouling Analysis Certificate by a qualified analyst.

Clause 27(1) & (2) provides for the appointment of an Analyst by the Authority and the manner of reference of all suspected substance for analysis by such Analyst

Clause 28 (1) stipulates the Analyst after analysis shall issue a Certificate. Clause 28(3) stipulates that this certificate has been stipulated as a Certificate that should accompany the certificate to be filed by the Director Merchant Shipping under Clause 30 (1) (d) when institution legal proceedings against any detained ship bearing harmful anti-fouling system.

Clause 28(4) authorizes the admissibility of the said Analyst Certificate as prima facie evidence.

Moreover, under Clause 28 (5) it has been provided that the Analyst can be summoned as an expert witness to give evidence if the need so arises in a legal proceeding under the proposed Bill.

5.9.2. Offences and Penalties

In this connection, the proposed Bill under Clause 29 seeks to enumerate the categories of people who will be liable for penalty for commission of any offence under the proposed Bill.

Clause 30 (1) (a) (b) & (c) categorizes the violations and the penalties for such violations. The provisions specify cash fines to be imposed.

The provisions in the above Clause, furthermore, provide that the accused in appropriate circumstances may be ordered to remedy the damage, if any, caused to the marine environment by way of a fine and reimbursement of the expenses if any, incurred by the flag state administration in cleaning up the polluted areas. The draft Bill, provides for such fines where damage has been caused to the marine environment to be quantified by the Minister by making regulations and publishing in the Gazette after the Bill has been enacted as an Act as provided under Part X of the Bill. [Clause 37(2) (j)] These provisions in Clause 29 capture Principle 16 of the 1992 Rio Declaration accentuating the *Polluter Pays Principle*, which is submitted to be a constituent punitive component of International Environmental Law.

Moreover, the proposed Bill under Clause 30 provides for such fines to be credited to a Fund maintained by the Environment Protection Authority.

According to the provisions in Clause 30 (1) (d) "… *A Certificate issued under the hand of the Director Merchant Shipping to the effect that a ship does not carry on board a valid certificate or declaration or that the ship's anti-fouling system is not compliant with this Act shall be*

admissible as prima facie evidence of the matters contained therein…" Such Certificate should be accompanied with the Analysis Certificate referred to in Part VIII of the proposed Bill.

Clause 33 provides for what steps to be taken when an accused fails to make a payment of the fine so imposed under Article 30 (1) (c) and states that in such an occasion, a court order shall be obtained to liquidate the bond or financial security deposited by or on behalf of the ship owner under Clause 24 (4) & (5) or failing which the ship so detained to be sold in satisfaction of the sum due.

Clause 34 of the proposed Bill has conferred admiralty jurisdiction on the High Court of a Province established under the Article 154P of the 13th Amendment to 1978 Constitution of Sri Lanka. Section 13 of the Judicature Act of 1978 as amended, confers admiralty jurisdiction of Sri Lanka on the High Court. However, the Judicature Act was enacted in an era where there were no High Courts of the provinces and where all High Court of the Sri Lanka exercised exclusive criminal jurisdiction and regarded as High Court of the Republic of Sri Lanka[62]. With the promulgation of the 13th Amendment in 1989 and the Provincial Council Act of 1989. High Courts of the Provinces (Special Provisions) Act No 19 of 1990, the High Courts of the Republic became High Court of the Provinces and additionally to exercising criminal jurisdiction they also exercise civil jurisdiction Thus, at present it is the High Court of the Western Province sitting/holden in Colombo that has been designated and authorized by the Minister of Justice to hear and determine admiralty matters. Furthermore, under section 9(f) of the Judicature Act the High Court has been conferred jurisdiction to try '*...any offence wherever committed by any person, who is a citizen of Sri Lanka, in any place outside the territory of Sri Lanka or on board or in relation to any ship or aircraft of whatever category…*' As such, in order to overcome the aforesaid legislative restriction, the provisions of the Judicature Act with regard to jurisdiction of the High Court shall not be applicable the proposed Bill.

The provisions of Clause 35 specifically provide that all proceedings instituted under this should be concluded without any undue delay, and furthermore, Clause 36 stipulates a prescriptive time

[62] Chapter III of Judicature Act of 1978

limit having regard to the provisions in Article 228 of the UNCLOS when prosecuting any detained foreign ship which has entered into any shipping facility of Sri Lanka.

Clause 37 states that the assistance of the Attorney General shall be obtained by when prosecuting any offence under the proposed Bill.

5.10. Part X: Miscellaneous

The main highlight of Part X of the proposed Bill is Clause 38 sub-paragraphs (1) & (2), focusing on the power entrusted to the Minister in charge of the subject of Ports and Shipping to make general and special Regulations in order to give effect to the objects and purposes of the Bill.

Additionally, Clause 38 by sub-paragraphs (3) (4) & (5) stipulate the procedure to be adopted when giving effect to such special Regulations made by the Minister.

Amongst the matters that have been enumerated from sub-paragraphs (a) to (ml) in Clause 38 (2) of the draft Bill for which, the Minister has been empowered to make special Regulations recognition has been given to 'the collection, treatment, handling and disposal of waste materials from the application and removal of anti-fouling system containing any controlled anti-fouling compound in a safe, environmentally responsible manner causing least harm to the human health and environment. This is an obligation underscored in Article 22 of the Convention.

Additionally Clause 38 (2) of the Bill, also enlists matters such as setting out the recognition criteria for appointment of marine surveyor and marine inspectors, setting out the recognition criteria for appointment of laboratories or any other appropriate facility to conduct the sampling analysis of the anti-fouling systems. The promotion and facilitation of scientific and technical research and programmes on the effects of anti-fouling systems and setting out standards for monitoring of such effects having regard to Article 8 of the Convention has also been encapsulated in the ministerial regulation regime.

Furthermore, setting out a regulatory framework for best management practices for removal of anti-fouling coatings from ships is another important matter earmarked for making of regulation by the Minister, in order to give effect to the guidance on best management practice for the removal of anti-fouling coatings from ships stipulated in the IMO Circular bearing No: AFS.3/Circ.3 and dated 22nd July 2009.

Article 33 (1) of the 1978 Constitution of Sri Lanka provides that all laws, and subordinate legislation shall be enacted or made and published in Sinhala and Tamil together with a translation thereof in English. According to Article 18 (1) and (2) of the Constitution Sinhala and Tamil are recognized as official state languages. Thereby, Clause 39 of the proposed Bill has been drafted capturing the wordings to the effect "*in event of any inconsistency between the Sinhala and Tamil texts, the Sinhala text of this Act shall prevail".*

5.11. Annexes to the proposed Bill

The proposed Bill seeks to stipulate Guidelines in the form of Five Annexes. The 1st 2nd and 3rd Annexes have been dedicated for providing Guidelines relating to the conduct of Flag State surveys on newbuilding, existing ships, and existing ships intending to apply a new anti-fouling system, while 4th Annex stipulates the Guidelines for Sampling when conducting inspections which includes brief sampling or detailed or additional sampling, and the 5th Annex features the Model forms of the Anti- Fouling Certificate and Declaration on Anti Fouling System on ships.

These Guidelines have been drafted taking into consideration the instructions and details contained in the Regulations and Resolutions to the Convention. To elaborate further, the Guidelines concerned with Flag State surveys have been formulated taking into account the Guidelines for Survey and Certification of Anti-Fouling Systems on ships spelt out in Resolution MEPC 102(48) to the Convention, and Guidelines pertaining to the brief sampling or detailed and additional sampling and analysis of the anti-fouling system applied on a ship, feature the instructions contained in Resolutions No: MEPC 102 (49) and MEPC 208(62) of the Convention.

These Guideline are intended to be recommendatory, and serve as a *guidance* for Flag State Administration when implementing the provisions of the Bill relating to surveys and inspections involving sampling, The ultimate object is to achieve procedural uniformity which is align with the international standards and procedures.

The provisions of the proposed Bill in appropriate instances make reference to the Guidelines contained in the five Annexes. The competent Authority under the proposed Bill, namely the Director General of Merchant Shipping has been given the power under the Bill to issue implementing standards whenever it is deemed necessary to make the application of such Guidelines mandatory under Clause 6(1) & (2) of Part III.

PARLIAMENT OF THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

CONTROL OF HARMFUL ANTI-FOULING SYSTEMS ON SHIPS ACT NO… OF 2017

[**Certified on** …]

Printed on the order of Government

CONTROL OF HARMFUL ANTI-FOULING SYSTEMS ON SHIPS ACT NO…. OF 2017

AN ACT TO GIVE EFFECT TO THE INTERNATIONAL CONVENTION ON CONTROL OF HARMFUL ANTI FOULING SYSTEMS ON SHIPS (2001) AND TO MAKE PROVISIONS FOR THE CONTROL OF HARMFUL ANTI-FOULING SYSTEMS ON SHIPS REGISTERED IN SRI LANKA OR OPERATED UNDER THE AUTHORITY OF SRI LANKA AND ALL SHIPS OF MEMBER STATES ENTERING THE PORTS, HARBOURS, SHIPYARDS, OFFSHORE TERMINALS IN THE TERRITORIAL SEA OF SRI LANKA.

Be it enacted by Parliament of the Democratic Socialist Republic of Sri Lanka as follows:

1. This Act may be cited as the Control of Harmful Anti Fouling Systems on Ships Act No: … of 2017 and shall come into operation on such date as the Minister may appoint by Order published in the Gazette (hereinafter referred to as the 'appointed date')

Part I

General Provisions

2. In this Act unless the context otherwise requires :

"anti-fouling system" means a coating, paint, surface treatment, surface or device that is used on a ship to control or prevent attachment of unwanted organisms containing anti fouling compounds containing *organotin compounds, acting as a biocide.*

"any other person" shall mean any person other than the Master who at the relevant time is in command or in charge of any ship whether with or without the authority of the Owner or Master;

"Authority" means the Director Merchant Shipping appointed under the provisions of section 3 of the Merchant Shipping Act No 52 of 1971 or any officer specially or generally authorized to act in his behalf as an agent or representative;

"Convention" means the Convention on the Control of Harmful Anti-Fouling Systems on Ships 2001;

"controlled anti fouling compound" means the anti-fouling compound applied on any anti-fouling system containing organotin compound which act as biocides or containing any other harmful substance to be regulated by the Minister, and includes any future controlled anti-fouling compound that would be approved by the Marine Environment Protection Committee of the International Maritime Organization in terms of Article 6 of the Convention on the Control of Harmful Anti-Fouling Systems on Ships 2001, and accordingly regulated by the Minister under this Act ;

"Certificate" means the International Anti-Fouling Certificate

"Declaration" means the Declaration on Anti Fouling System

"gross tonnage" means the gross tonnage calculated in accordance with the International Convention on Gross Tonnage and Measurements 1969, as implemented by the Merchant Shipping Act No 51 of 1971 as amended ;

"High Court of Sri Lanka" means the High Court of a Province established under Article 154P of the Constitution and designated to exercise admiralty jurisdiction;

"Length" means the length specified in the International Convention on Load Lines 1966 as modified by the Protocol 1988;

"international voyage" means a voyage by a ship entitled to fly the flag of one State to or from a port, harbor, shipyard or offshore terminal under the jurisdiction of another State;

"marine environment" includes the area of the sea and its surrounding marine environment as contained within the territorial sea of Sri Lanka as herein defined;

"Marine Environment Protection Authority" means the statutory body established under the Marine Pollution Prevention Act No 35 of 2008;

"contracting State" means a State, the Government of which is a party to Convention on the Control of Harmful Anti-Fouling Systems on Ships, 2001;

"Minister" shall mean the Minister in charge of the subject of Ports and Shipping;

"Master" in relation to a ship, includes an agent or a representative or servant, except a pilot, the command, charge and control of a ship;

"President" means the elected President of the Democratic Socialist Republic of Sri Lanka;

"Regulations" means the regulations to be promulgated by the Minister under this Act;

"Sri Lanka Ports Authority" means the statutory body established under the Sri Lanka Ports Authority Act of 1979;

"ship-owner" in relation to a ship, includes a charterer, a ship manager and a ship-operator;

"ship" means a vessel of any type whatsoever operating in the marine environment and includes, hydrofoil boats, air-cushion vehicles, submersibles, floating craft and fixed or floating platforms used in navigation in the marine environment and includes all equipment, apparel and appurtenances (excluding supplies for sustenance) which are necessary for the navigation in the marine environment and conduct of the business of the ship;

"territorial sea of Sri Lanka" ,means the maritime zone described and delimited as per the Maritime Zones Law No 22 of 1976 and Proclamation of 1977; and

"off shore terminal" includes any installation or device (whether permanent or temporary) constructed, erected placed or used in or on or above the sea-bed and sub-soil of the territorial sea of Sri Lanka.

PART II
Scope of Application

3. (1) This Act shall apply to:

(a) All ships, flying the flag of Sri Lanka or operating under the authority of Sri Lanka of 400 gross tonnage and above and engaged in an international voyages;

(b) All ships, flying the flag of Sri Lanka or operating under the authority of Sri Lanka of 24 meters in length or more or less than 400 gross tonnage engaged in an international voyage;

(c) All foreign ships of contracting States of 400 gross tonnage and above, engaged in international voyage and entering the ports, harbors, shipyards, off shore terminals or any other shipping facility of Sri Lanka; and

(d) All foreign ships of contracting States of 24 meters in length or more or less than 400 gross tonnage engaged in international voyage and entering the ports harbors, shipyards, off shore terminals of any other shipping facility of Sri Lanka.

(2) Unless the context otherwise so requires, both "Sri Lankan ships" and "foreign ships" shall be referred to generally as "ships" in this Act.

(3) Provided however that the provisions of this Act shall not apply to:

a. any warship, naval auxiliary or other ships owned or operated by the Government of Sri Lanka and used only in Government non- commercial service;

b. any warships, naval auxiliary or other ships owned or operated by a member state and used for the time being only in Government non-commercial service; and

c. any warships, naval auxiliary or other ships owned or operated by a non-member state and used for time being only in Government non-commercial service.

(4) In the application of the provisions of this Act, foreign ships of non- contracting States shall not receive more favorable treatment than ships of contracting States to the Convention.

PART III
Administration

4. (1) The Authority shall exercise the powers, and discharge the functions under this Act.

(2) The Authority shall have the general superintendence of this Act and the general supervision of all matters relating to the ships' anti fouling systems compliance with this Act.

5. (1) The Authority may appoint a qualified person or body corporate as a marine surveyor to carry out surveys and inspectors.

   (2) A marine surveyors so appointed shall discharge the functions under the general control and supervision of the Authority.

6. (1) The Authority shall have the power to issue whenever it is necessary or appropriate to do so, such implementing standards for the purpose of giving mandatory effect to any of the Guidelines stipulated in the Annexes to this Act, or any regulation made by the Minister under the Act.

   (2) It shall be the duty of all persons in respect of whom any implementing standards are issued under subsection (1), to comply with the same.

7. The Authority may enter into a Memorandum of Understanding with the Marine Environment Protection Authority and/or Sri Lanka Ports Authority for provision of assisted services in appropriate circumstances to discharge the functions under this Act.

PART IV
Flag State Control

8. (1) A ship-owner or master or any other person in charge of a ship shall submit to the Authority a request for survey along with the ship's data pertaining to the name of ship, distinctive number or letters, Port of Registry, gross tonnage, IMO number as contained in the International Anti Fouling Certificate.

   (2) A request for survey shall be supplemented by a declaration from the anti- fouling system manufacturer, providing information pertaining to type of anti-fouling system, name of anti-fouling system manufacturer, name and colour of anti-fouling system, active ingredient(s) and their chemical and/or supporting documentation confirming that the anti-fouling system applied, or intended to be applied on the ship is devoid of any controlled anti-fouling compound.

9. (1) Upon receiving a request for survey the Authority shall:

(a) Conduct an initial survey in respect of a ship before it is put into service or before the issuance of the International Anti- Fouling Certificate to verify that the ship's anti fouling systems is devoid of any controlled anti fouling compound taking into account the guidelines stipulated in the Annex 1 to this Act.

(b) Conduct a survey on a ship to verify whether the existing anti-fouling system contains any controlled anti-fouling compound, taking into account the guidelines stipulated in the Annex 2 to this Act.

(c) Conduct a survey on a ship where the existing anti- fouling system has been changed or replaced to verify that the changed or replaced anti fouling system does not contain any controlled anti-fouling compound, taking into account the guidelines stipulated in the Annex 3 to this Act.

(d) Verification tasks specified under sub-paragraph (a) (b) and (c) should be conducted by the Authority either before or during or after the anti-fouling system has been applied, used or installed on the ship.

(2) If the survey conducted by the Authority includes a brief sampling or detailed and additional sampling and analysis of the anti-fouling system applied on a ship such survey shall be carried out taking into account the guidelines stipulated in the Annex 4 to this Act.

(3) The provisions under this part shall not be applicable to fixed or floating platforms.

PART V
Certification

10. (1) All ships of 400 gross tonnage and above, and engaged in international voyage shall carry on board the International Anti Fouling System Certificate.

(2) All ships of less than 400 gross tonnage but 24 meter or more in length, and engaged in international voyage shall carry on board a Declaration on Anti-Fouling System signed by the owner or owner's authorized agent.

(3)The Declaration shall be accompanied by a paint receipt or a contractor invoice or any other appropriate documentation or contain appropriate endorsement.

(4) Both the Certificate and the Declaration shall be accompanied with the Record of Anti Fouling Systems.

11. (1) The Certificate shall be issued by the Authority or by any agent of representative of the Authority.

(2) The Authority shall issue the Certificate:

(a) Upon satisfactory completion of initial survey;

(b) Upon acceptance of an International Anti Fouling System Certificate issued by a Member State; or

(c) Upon satisfactory completion of a survey for change or replacement of an anti-fouling system

.

12. (1) Where a survey of a ship has been conducted by a marine surveyor, such surveyor shall have the authority to issue or authorize the endorsement of a certificate, if the anti- fouling system of the ship is compliant with this Act.

(2) Such certificate shall have the same force and effect and receive the same recognition as a certificate issued by the Authority.

13. A Certificate shall cease to be valid:

(a) If the ship ceases to be a Sri Lankan ship.

(b) If the anti-fouling system is changed or replaced subsequent to the issuance or last endorsement of the certificate;

(c) If after the re-application of an anti-fouling system the ship is put into service without having the certificate endorsed in respect of such re-applied anti-fouling system.

14. The Authority may cancel or suspend a Certificate or Declaration:

(a) if it has reason to believe that such documentation was issued on false or erroneous information; or
(b) If the relevant Anti-Fouling system has sustained damage and/or otherwise is deficient.

15. A Certificate or Declaration which has been cancelled or suspended or expired or ceased to be valid must be surrendered to the Authority.

16. The Model Forms of the International Anti Fouling Certificate, Declaration on Anti Fouling System Certificate, Record of Anti Fouling System have been prescribed in the Annex 5 to this Act

PART VI
Port State Inspections

17. (1) All ships of contracting States to the Convention shall be subject to the inspection by the Authority or appointed marine surveyors when entering the ports, harbors, shipyards, offshore terminal in the territorial sea of Sri Lanka to verify that the anti- fouling systems applied and/or used and/or installed on such ships are compliant with this Act.

(2) Such inspection shall require to:

(a) Embark the ship and inspect any part of the ship's hull, machinery, and equipment;

(b) Examine and take samples of any substance on the external surface of the ship

(c) Direct the master or any other person in charge of the ship to take such steps to facilitate the inspection;

(d) Request the master of the ship to produce any certificate, declaration, endorsement or record that is required by this Act to possess on board a ship;

(e) Make photocopies of, any such documents, records or books; and

h) Take photographs (including video recordings) of the ship or of equipment, or anything else, in or on board the ship.

18. (1) The above mentioned inspection shall be conducted to ascertain and verify :

(a) Whether this Act, regulations made thereunder and the Guidelines stipulated in the Schedules to this Act are being complied with in respect of the ship;

(b) When required there is on board a valid Certificate or Declaration; and/or

(c) It is necessary to conduct an inspection involving a brief sampling of the ship's anti-fouling system for compliance verification

(2) The time spent to process the samples when a sampling inspection is carried out cannot be used as a reason to delay a ship.

19. (1) The anti-fouling systems applied on Ships of non-contracting States to the Convention are also subject to inspection to verify compliance with this Act.

(2) When inspecting a ship flying the flag of a non-contracting State and/or operated under the authority of a non-contracting State to the Convention, if such ship does not carry on board a Certificate, the Authority shall request for documentation that contains the same information as in the Certificate, and take such information into account in determining whether the anti-fouling system applied on such a ship is compliant with this Act.

20. (1) The Authority may conduct a detailed inspection of a ship entering any port, harbor, shipyard, offshore terminal or any other shipping facility of Sri Lanka, when there are clear grounds to believe that the ship is in contravention of this Act.

(2) The aforesaid clear grounds may include that:

a. the ship is from a flag of a non-contracting State to the Convention and there is no anti- fouling documentation;

b. the ship is from a flag of a contracting State to the Convention but there is no valid Certificate;

c. the painting date shown on the Certificate does not match the dry-dock period of the ship

d. the ship's hull shows excessive patches of different paints; or

e. the Certificate is not properly completed

(3) A detailed inspection of a ship may involve additional sampling and analysis of the anti-fouling system applied on a ship.

21. (1) If the inspection conducted by the Authority includes a brief sampling or detailed and additional sampling and analysis of the anti-fouling system applied on a ship such inspection shall be carried out taking into account the guidelines stipulated in the Annex 4 to this Act.

(2) The decision to carry out any brief sampling or detailed inspection, as the case may be, on a ship shall be made based on safety to persons, the ship, its machinery and equipment, marine environment and/or terminal or port.

22. (1) The Authority may inspect a ships when it enters the port, harbor, shipyard, off shore terminal or any other shipping facility of Sri Lanka, at the request of another member state to the Convention, provided such request is supported by sufficient evidence to show that the ship is operating or has operated with anti-fouling systems containing controlled anti fouling compound.

(2) The Authority conducting such an inspection at the request of another contracting State to the Convention shall send the inspection report to such member state to take appropriate action.

(3) The procedure for conducting an inspection and specification relating to the preparation of the inspection report to be stipulated by regulations made under this Act.

Part VII

Detention of ships

23. (1) The Authority when conducting an inspection of a ship, if such ship is found to be in contravention of the provisions of this Act, may take steps to detain, such ship from the port, harbor, shipyard, offshore or any other shipping facility of Sri Lanka.

(2) When a ship is detained from entry and/or any proceedings are taken against the owner, or master or any other person of a ship under this Act, notice shall forthwith be served on the Consular Officer or Diplomatic Representative for the country to which the ship belongs.

.

24. (1) The Authority shall detain a ship when :

.

a. certification is invalid or missing;

b. the ship admits it does not comply (thereby removing the need to prove by sampling); and

c. sampling proves the ship is non-compliant within the port jurisdiction

.

(2) In the event of such a detention the Authority shall:

(a) Direct the owner, the master or any other person in charge of the ship to rectify the anti-fouling system on the ship in order to bring it into compliance with this Act; or

(b) Direct the dispatch of the ship to the nearest ship-repair yard for this purpose, provided it can proceed to sea without presenting an unreasonable threat of harm to the marine environment;

(c) Provided if there are no facilities in the port of detention to bring the ship's anti fouling system into compliance with this Act, the Authority, subject to the agreement with another port, may allow

such ship to sail to such port in order to undergo rectification and bring the ship's anti-fouling system into compliance, and

(d) Take steps as provided for under sub section (3) herein under; and

(e) Institute legal proceedings for such non- compliance under the provisions of this Act.

(2) Notice of a detained ship shall be forthwith served on the flag State via a Consular or a Diplomatic Representative.

(3) The ship shall be released immediately if:

(a) The security is provided in accordance with subsection (5);

(b) all proceedings that have been instituted in respect of the offence have been discontinued upon a request made by the flag State of a ship by providing a full dossier of the case and records of the proceedings instituted by such flag state in relation to the offence;

(c) All proceedings have been concluded (whether or not any appeal is pending) without any person being convicted of an offence or being found liable to pay any amount of money in respect to the offence;

(d) All proceedings have been concluded, and all penalties and other amounts of money, and all costs and expenses ordered to be paid, in respect of the offence have been paid;

(e) The Authority forms the belief that the offence did not occur, or did not occur as a result of actions in relation to the ship; or

(f) The Authority determines for any other reason that the ship should be released.

(5) The security referred to in subsection (4) must be furnished in a form acceptable to the Authority, and in an amount, that, in the Authority's opinion, is equivalent to the maximum amount of all penalties, other amounts of money, costs and expenses that

could be payable by the master or owner or any other person in charge of the ship in respect of the offence.

25. When in an inspection involving a sampling proves that a ship's anti fouling system is non-complaint with this Act, but the result thereof had been obtained after the release of the detained ship to another port, the Authority may prevent future entry of such a ship into any port, harbor, off shore terminal or any other shipping facility of Sri Lanka, on the ground that such a ship could present an unreasonable threat of harm to the marine environment.

26. (1) The Authority should take all reasonable efforts to avoid a ship being unduly delayed or detained in any port, harbor, shipyard, off shore terminal or any other shipping facility of Sri Lanka.

(2) The Authority would be responsible for payment of compensation to any ship which has been unduly delayed or detained in any port, harbor, shipyard, off shore terminal or any other Shipping Facility of Sri Lanka.

(3) If the Authority and the ship-owner are unable to agree on the amount of the compensation, proceedings may be instituted by either party in the High Court of Sri Lanka and pay such reasonable compensation as the Court determines.

PART VIII
Analysis of controlled anti-fouling compound

27. (1) If any anti fouling substance applied on the anti-fouling system of a Sri Lankan ship or foreign ship, is suspected of being consisted of a controlled anti-fouling compound under this Act, such substance shall be referred by the Authority, for analysis by an Analyst appointed by the Authority under this Act.

(2) All such referrals for analysis of any suspected substance shall be made by the Authority or any person authorized by the Authority in writing.

28. (1) An Analyst shall cause such suspected substance to be analyzed, and thereafter issue a certificate.

(2) The aforesaid certificate issued by an Analyst shall contain an endorsement that suspected substance was subject to analysis and additionally shall set out the following matters:

(a) A description of the substance inclusive of details pertaining to when and how it was received by the Analyst;

(b) The date on which the analysis was carried out;

(c) A description of the method used in conducting the analysis; and

(d) A description of the results of the analysis

(3) Such certificate shall accompany the certificate to be issued under the hand of the Director General of Merchant Shipping under section 29 (1) (d) of this Act.

(4) A certificate issued by an Analyst is admissible in any proceeding for non-compliance under this Act as *prima facie* evidence of:

(a) The matters in the certificate; and

(b) The correctness of the results of the analysis.

(5) An Analyst may be summoned as a witness in any proceedings instituted under this Act for non-compliance.

PART IX
Offences and Penalties

29. Where an act or omission which constitutes an offence for which a ship owner is liable under this Act has in fact been committed or made by the master, agent, servant or any other person in charge of the ship, such master, agent, servant or any other person in charge of the ship shall be liable to be proceeded against for the offence in the same manner as if he were the ship owner, and shall be liable to like punishment as if he were the ship owner.

30. (1). Every person referred to in subsection (1) who:

(a) contravenes or fails to comply with any provision of this Act;

(b) contravenes or fails to comply with any regulation made thereunder;

(c) contravenes or fails to comply with any Guidelines stipulated in the Annexes to this Act, which have been made mandatory by the issuance of any implementing standard.

shall be guilty of an offence under this Act, and on conviction be liable to a fine not less than [Rupees three million and not exceeding Rupees six million][63], in addition appropriate circumstances the accused shall be ordered to remedy the damage, if any, caused to the marine environment by way of a fine in order to reimburse the expenses if any, incurred by the Authority, in clearing up the polluted areas.

(d) A Certificate issued under the hand of the Director Merchant Shipping to the effect that a ship does not carry on board a valid certificate or declaration or that the ship's anti-fouling system is not compliant with this Act shall be admissible as *prima facie* evidence of the matters contained therein.

(e) Any person who obstructs or impedes the Authority or its agent or any representative or person or body appointed by the Authority, in the exercise of powers and/or performance of duties and/or discharge of functions under the provisions of this Act, any Regulation made thereunder, any Guideline stipulated in the Annexes to this Act which has been made mandatory by the issuance of an implementing standard, shall be guilty of an offence under this Act and on conviction be liable to a fine not less than [Rupees five hundred thousand and not exceeding Rupees one million][64]

31. The Authority may, having regard to the circumstances in which an offence under this Act is committed, compound such offence for a sum of money not exceeding one-third of the maximum fine imposable for such offence, and all such sums of money received by the Authority in the compounding of an offence under this section, shall be credited to the Fund established under the Marine Environment Protection Authority Act No 35 of 2008.

32. Where the ship-owner is a body of persons, then:

[63] In consonance with the fines prescribed by the Marine Pollution Prevention Act No 35 of 2008
[64] In consonance with the fines prescribed by the Marine Pollution Prevention Act No 35 of 2008

(a) if that body of persons is a body corporate, every person who at the time of the commission of the offence was a Director, General Manager, Secretary or other similar officer of that body; or

(b) if that body is not a body corporate, every person who at the time of the commission of the offence was the President, Manager, Secretary or other similar officer of that body,

shall be deemed to be guilty of that offence, unless he proves that such offence was committed without his knowledge or that he exercised all due diligence to prevent the commission of such offence

33. Where the accused fails to make payment of any sum imposed by way of a fine, the Court shall make order that the bond or financial security deposited by or on behalf of the ship owner be liquidated or failing which the ship detained pursuant to the provisions of this Act to be sold in satisfaction of the sum due.

34. Notwithstanding anything to the contrary in the Judicature Act No 2 of 1978 every offence under this Act committed in the territorial sea of Sri Lanka shall be triable by a High Court of the Province established under the Article 154P of the Constitution designated to exercise admiralty jurisdiction

35. All proceedings instituted under this Part shall be concluded without undue delay;

36. (1) All proceedings under this Part may be brought at any time.

(2) Provided,

If the prosecution relates to an offence involving a foreign ship the prosecution must not be brought after the expiry of three (3) years from the date of commission of the offence;

37. The Authority shall obtain the assistance of the Attorney General in the prosecution of every offence under this Act.

Part X

Miscellaneous

38. (1) The Minister shall make regulations where required to be prescribed under the provisions of this Act and where necessary to give effect to the principles and provisions of this Act.

(2) Without prejudice to the generality of the powers conferred by sub-section (1) the Minister shall prescribe regulation in respect of all or any of following matters.

(a) Proclaiming any harmful anti-fouling substance or compounds applied on anti-fouling systems as controlled or prohibited and regulating the manufacture, distribution sale, and application of such substance or compound.

(b) Setting out a regulatory framework for best management practices for removal of anti-fouling systems from ships.

(c) The collection, treatment, handling and disposal of waste materials from the application and removal of anti-fouling system containing any controlled anti-fouling compound and for dredging and disposal of port and harbor sediments contaminated by any controlled anti-fouling compound in a safe, environmentally responsible manner causing least harm to the human health and environment.

(d) Setting out the survey, and certification mechanism for Fixed or Floating Platforms, and for ships which are less than 24 meters in length in order to verify that the anti-fouling systems applied on such units comply with this Act.

(e) Setting out the survey and certification mechanism for any warship, naval auxiliary or other ships owned or operated by the Government of Sri Lanka and used for non-commercial purposes to verify that the anti-fouling systems applied on such units comply with this Act.

(f) Formulating a regulatory framework with guidelines for the inspection of any warship, naval auxiliary or other ships owned or operated and used for non-commercial purposes by the member

states or non-member states to the Convention to verify that the anti-fouling systems applied on such units comply with this Act.

(g) Setting out the recognition criteria for appointment of marine surveyor.

(h) Setting out the recognition criteria for appointment of laboratories or any other appropriate facility to conduct the sampling analysis of the anti-fouling systems under the Act.

(i) For promotion and facilitation of scientific and technical research and programmes on the effects of anti-fouling systems and setting out standards for monitoring of such effects.

(j) The prohibition and/or regulation of doing anything in relation to the conduct of the surveys, inspections and issuance of certificates in relation to the anti-fouling systems on ships by any person other than any personnel authorized under the Act.

(k) Quantifying the fines payable in the instances where controlled anti fouling compound is discharged into the marine environment and causing pollution.

(l) The prohibition of manufacture, sale, and distribution of anti-fouling systems which consist of and/or made of and/or formed of controlled anti-fouling compound.

(m) Setting out safety standards for manufacture of anti-fouling paints/coatings/systems for ships' hull fouling protection

(3) Every such regulation shall be published in the Gazette and shall come into force from the date of such publication or on such later date as may be specified in such regulation.

(4) Every regulation published in the Gazette shall be brought before Parliament for approval not later than three months from the date of such publication or from the date of coming into force. Every regulation which is not approved shall be deemed to be rescinded as from the date of such disapproval but without prejudice to anything previously done there under.

(5) Notice of the date from which any regulation is rescinded shall be published in the Gazette.

39. In the event of any inconsistency between the Sinhala and Tamil texts, the Sinhala text of this Act shall prevail.

Annexes

Annex 1
Surveys for new-building Guidelines

1. As part of the survey, it should be verified that the anti-fouling system of a ship specified by the documentation submitted with the request for survey complies with this Act

2. The survey should include verification that the anti-fouling system applied is identical to the system specified in the request for survey.

3. The verification required by aforesaid paragraph 2 should include one or more of the following tasks, as deemed necessary to verify compliance:

(a) Checking that the product identification on anti-fouling system containers used during the application process is identical to the system specified in the request for survey.

(b) Sampling of the anti-fouling system.

(c) Testing of the anti-fouling system.

(d) Other checks conducted on site.

.

4. No checks or tests must affect the integrity, structure or operation of the anti-fouling system.

Annex 2
Surveys of existing ships Guidelines

1. If the existing anti-fouling system is declared to contain any controlled anti fouling compound under this Act an International Anti-Fouling System Certificate may be issued on request stating that the anti-fouling system will be removed, or covered with a sealer coat.

2 If the existing anti-fouling system is declared not to contain any controlled anti fouling system under this Act, a verification should be carried out to confirm that the anti-fouling system complies with the requirements of this Act

40. This verification may be based on sampling and/or testing and/or reliable documentation, as deemed necessary based on experience gained and the existing circumstances. Such documentation could be Material Safety Data Sheets (MSDSs) or similar, a declaration of compliance from the anti-fouling system manufacturer, invoices from the shipyard and/or the anti-fouling system manufacturer.

41. If the aforesaid information raises no reasonable doubt that the system applied on the ship is compliant with this Act, the International Anti-fouling System Certificate may be issued.

Annex 3
Surveys of existing ships intended to apply a new anti- fouling system Guidelines

1. If the existing anti-fouling system is confirmed by an International Anti-Fouling System Certificate not to be controlled under this Act, the guidelines described in the Annex 1 would apply.

2. If the existing anti-fouling system is declared not to be controlled under this Act, without being documented by an International Anti-Fouling System Certificate, a verification should be carried out to confirm that the anti-fouling system complies with the requirements this Act.

3. This verification may be based on sampling and/or testing and/or reliable documentation, as deemed necessary based on experience gained and the existing circumstances. Documentation for verification could e.g. be MSDSs, or similar, a declaration of compliance from the anti-fouling system manufacturer, invoices from the shipyard and/or the anti-fouling system manufacturer. To verify the new anti-fouling system, the guidelines described in the Annex 1 would apply.

.

3. If the existing anti-fouling system has been removed, the removal should be verified in addition to the guidelines described in the Annex 1 would apply.

.4 If a sealer coat has been applied, a verification should be carried out to confirm that the name, type and colour of the sealer coat applied to the ship match those specified in the request for survey, and that the existing anti-fouling system has been covered with that sealer coat. Additionally, the guidelines described in the 4th Schedule would apply.

5. If the existing anti-fouling system is controlled under this Act, it should be removed or covered by a sealer coat. The provisions of aforesaid paragraphs 3 and 4 would accordingly apply in relation to such a circumstance.

Annex 4
Sampling Guidelines

Sampling Procedure

The sampling procedure should be performed in the following manner:

1. Control samples should be taken through the entire sampling and analytical process to account for possible contamination;

2. The mass of the fiber glass pads is weighed with a precision of at least 1 mg. The weight should be documented for each sample;

3. The fabric should be moistened thoroughly with isopropanol (0.7ml per sample) immediately before sampling;

4. When a sample point on the hull has been selected, any fouling present should be removed with water and a soft sponge/cloth before taking a specimen of the anti-fouling system (to avoid contamination of sample). Where possible, if carried out in dry-dock, sampling should be carried out after the hull has been water-washed;

5. The sampling device is then held against the surface to be sampled for a period of 5 seconds, prior to the sampling device being switched on;

6. The sampling device is switched on, thereby removing paint by the circular motion of the fiber glass fabric against the surface of the ship;

7. The sampling device should be applied to the surface of the hull for a suitable period of time, such that at least 20 mg of paint is taken up by the pad. As a general rule, if the pad colour after sampling matches the colour of the hull coating a sufficient sample has been taken;

8. The two-step analysis procedure requires that every sample should be taken in triplicate. Two of the specimens should be labelled Specimen 'A' and Specimen 'B'. In addition, a third specimen for storage/back-up should be taken. These specimens should be taken as close to each other as possible, but without overlap;

9. Upon completion of the sampling, the fiber glass fabric pads should be left to dry, and re-weighed.

10. Samples should be stored in appropriate sealed packaging, which will not react with or contaminate the sample

Sampling Device and Materials

1. The sampling device is constructed in a way that only the upper layer of paint is removed, thereby and should leave any underlying paint (sealer, primer etc.) intact. This result is achieved through the use of a moving disk, (eccentric rotation) which is covered by an abrasive material like quartz or glass fiber fabric. This abrasive material has to be suitable for its use as a supporting material for the removed paint. The sampling device described here consists of a polyethylene disk, on which fiber glass fabric can be mounted by the use of an O-ring. The disk is moved on an eccentrically rotating axis.

2. The device fulfils the following requirements:

(a) The device has to work independently from any stationary power supply. The device may be driven by an electrical motor (battery-driven) or may be mechanically driven by a clockwork-like spring, provided it is able to sustain the movement over the required time period;

(b) The applied force has to be constant during the operation, and the area for paint removal has to be defined;

(c) The abrasive material has to be inert against chemical solvents and acids and must not contain more than trace amounts of tin or tin compounds; and

(d) The amount of paint removed after a regular operation of the device has to be shown to exceed 20 mg per sample.

3. Any other sampling device may be used however, provided such a device has proven to meet all the above-mentioned requirements in paragraph (2).

Sampling and Analysis

1. The Sampling Analysis may be conducted in two stages appropriate circumstances, known as first stage sampling analysis and second stage sampling analysis.

2. The first-stage analysis serves to detect the total amount of tin in the AFS applied. The use of a portable X-ray fluorescence analyzer or any other scientifically justified method allowing the conduction of first-stage analyses on site could be considered best practice.

3. The second-stage analysis is used to verify whether or not the AFS system complies with the Convention requirements, i.e. whether organotin compounds are present in the AFS at a level which would act as a biocide.

4. The analysis should be conducted by a recognized laboratory meeting the ISO 17025 standard or another appropriate facility to be determined by the Authority taking into account the recognition criteria regulated by the Minister.

Sampling Methodologies

1. It is to the discretion of the Authority to choose the sampling analysis methodology. The sampling methodology will depend, inter alia, on the surface hardness of the paint, which may vary considerably.

2. The following general terms should be observed when choosing a methodology:

(a) the Authority should choose a number of sample points preferably covering all the representative areas of the hull, but it is desirable to have at least eight (8) sample points equally spaced down and over the length of the hull, if possible divided over PS and SB (keeping in mind that different parts of the hull may be treated with different anti-fouling systems);

(b) Triplicate specimens of paint at each sampling point should be taken in close proximity to each other on the hull (e.g., within 10 cm of each other);

(c) Contamination of the samples should be avoided, which normally includes the wearing of non-sterilized non-powdered disposable gloves of suitable impervious material – e.g., nitrile rubber;

(d) The samples should be collected and stored in an inert container (e.g., containers should not consist of materials containing organotin or have the capacity to absorb organotin);

(e) Samples should be taken from an area where the surface of the anti-fouling system is intact, clean and free of fouling;

(f) Loose paint chips coming from detached, peeled or blistered hull areas should not be used for sampling;

(g) Samples should not be taken from a heated or area where the paint is otherwise softened (e.g., heavy fuel tanks); and

(h) The underlying layers (primers, sealers, TBT containing AFS) should not be sampled if there is no clear evidence of exposure of extended areas;

3. The Persons conducting sampling should receive appropriate training in sampling methods.

4. The sampling method should take into account the type of anti-fouling system used on the ship.

5. The materials required for brief sampling methodologies should ideally be inexpensive, widely available and therefore readily accessible, irrespective of sampling conditions and/or location.

6. During sampling, care should be taken not to affect the integrity or operation of the anti-fouling system.

7. Sampling where the anti-fouling coating is visibly damaged[65] or on block mark areas on the flat bottom of the ship (where the intact anti-fouling system is not applied) should be avoided. Sampling adjacent to or below areas where the anti-fouling system is damaged should also be avoided. When a sample point on the hull has been selected, any fouling present should be removed with water and a soft sponge/cloth before taking a specimen of the anti-fouling system

[65] *During in-service periods, anti-fouling coatings on ships hulls often become damaged. The extent of damage varies between ships, and damaged areas can be visually recognized. Typical damage can be restricted to localized areas e.g. anchor chain damage (bow region), fender damage (vertical sides of hull), rust through areas (underlying rust causing coating failure) or in some cases be in smaller areas scattered over larger areas of the hull (usually older ships where over-coating of original system has taken place many times). 2 (Is this meant to be footnote 2?) In order to prevent contamination, wet paint samples should be taken from a newly opened container. Paint should be stirred to ensure even consistency before sampling and all equipment used should be cleaned prior to use. Liquid paint samples should be stored in appropriate sealed packaging which will not react with or contaminate the sample. In the case of multi-component coatings (where on-site mixing of several components is required prior to application), samples of each component should be taken and the required mixing ratio recorded. When a sample of wet paint is taken from a container, details of the paint should be recorded e.g. details required for the IAFS Certificate along with a batch number for the product*

(to avoid contamination of sample). Where possible, if carried out in dry-dock, sampling should be carried out after the hull has been water-washed.

8. Specimens of paint for analysis during survey and certification can be taken either as wet paints from product containers, or dry paint film sampled from the hull.

.

Sampling Strategy and number of Samples

1. The sampling strategy is dependent on the precision of the sampling method, the analytical requirements, costs and required time and the purpose of the sampling. The number of paint specimens taken of each sample should allow for a retention quantity for back-up/storage in the event of a dispute.

2. For dry samples, triplicate specimens of paint at each sampling point should be taken in close proximity to each other on the hull (e.g. within 10 cm of each other).

3. In cases where it is recognized that more than one type of anti-fouling system is present on the hull, where access can be gained, samples should be taken from each type of system:

(a) for survey purposes or for more detailed thorough inspections, in order to verify the compliance of an anti-fouling system, the number of sample points should reflect representative areas of the ships' hull; and

(b) For limited inspection purposes sample points on the hull should be selected covering representative areas where the anti-fouling system is intact. Depending on the size of the vessel and accessibility to the hull, at least four sample points should be equally spaced down the length of the hull. If sampling is undertaken in dry-dock, flat bottom areas of the hull should be sampled in addition to vertical sides as different anti-fouling systems can be present on these different areas.

Validity of the Sampling

1. In order to safeguard the validity of the sampling the following should be considered:

(a) only samples taken directly from the hull and free of possible contamination should be used;

(b) All samples should be stored in containers, marked and annotated on the record sheet. This record sheet should be submitted to the Authority;

(c) the receipts identifying the persons having custody and receiving transfer of the samples should be filled in and accompany the samples to reflect the transfer chain of the samples

(d) the Authority should verify the validity of the instrument's calibration validity date (according to the manufacturer instruction);

(e) in cases when a contracted specialist company is used for carrying out sampling, the Authority should accompany its representative to verify sampling;

(f) Photographs of the hull, sample areas and sampling process could serve as additional proof.

(g) the need of inviting the ship representative's presence during brief sampling to ensure that the evidence is legally obtained

(h) complete and sign the inspection report form together with the included sampling record sheets (to be filled in by the sampler), as far as possible, and leave a copy with the ship as a proof of inspection/sampling

(i) inform the next port State where the inspected ship is to call;

(j) agree with or advise the ship on to whom the ship's copy of the finalized inspection report will be sent in cases when it cannot be completed in the course of the inspection; and

(k) ensure that receipts identifying the persons having custody and receiving transfer of the samples accompany the samples are filled in to reflect the transfer chain of the samples.

Annex 5
Model Forms

FORM OF INTERNATIONAL ANTI-FOULING SYSTEM CERTIFICATE

…… ……
(Official seal) (State)

Issued under the provisions of the International Convention on the Control of Harmful Anti-Fouling Systems (hereinafter referred to as "the Convention")

Under the authority of the Government of

…….. (Name of the State)

By ……. (Person or organization authorized)

When a Certificate has been previously issued, this Certificate replaces the certificate dated ……..

Particulars of ship1

Name of ship …….

Distinctive number or letters……

Port of registry……

Gross Tonnage ……

IMO number2 ……

Details of anti-fouling system applied

Type of anti-fouling system used……

Date it was applied…….

Name of anti-fouling system manufacturers…….

_____ 1 alternatively, the particulars of the ship may be placed horizontally in boxes.

2 In accordance with resolution A.600 (15) – IMO ship identification number scheme, this information may be included voluntarily. Model Forms to be enclosed

[If applicable, indicate if any anti-fouling system prohibited under Annex 1 has been removed (√) or over-coated with a sealer coat (√)]

Name of anti-fouling system ……

Active ingredient(s) ……

CAS number……

THIS IS TO CERTIFY THAT:

1 the ship has been surveyed in accordance with article 9 of the Convention; and

2 the survey shows that the anti-fouling system on the ship complies with the applicable requirements of Annex 1 of the Convention.

Issued at…….. (Place of issue of certificate)

…… …….. (Date of issue)
(Signature of duly authorized official issuing the certificate)
……
(Seal or stamp of the authority, as appropriate)

MODEL FORM OF RECORD OF ANTI-FOULING SYSTEMS
RECORD OF ANTI-FOULING SYSTEMS

This Record shall be permanently attached to the International Anti-Fouling System Certificate.

Particulars of ship
Name of ship: .....
Distinctive number or letters: .....
IMO number: .....
Details of anti-fouling system(s) applied

Type(s) of anti-fouling system(s) used .....
Date(s) of application of anti-fouling system(s).....
Name(s) of company (is) and facility(ies)/location(s) where applied
.....
Name(s) of anti-fouling system
Manufacturer. .....
Name(s) and colour(s) of anti-fouling system(s).....
.....
Active ingredient(s) and their Chemical Abstract Services Registry Number(s) (CAS Number).....
Type(s) of sealer coat, (if applicable) .....
.....
Name(s) and colour(s) of sealer coat applied, if applicable
.....
Date of application of sealer coat.....
THIS IS TO CERTIFY that this Record is correct in all respects.
Issued at.....
(Place of issue of Record)
....

MODEL FORM OF DECLARATION ON ANTI-FOULING SYSTEM

Drawn up under the International Convention on the Control of Harmful Anti-Fouling Systems on Ships

Name of ship .....
Distinctive number or letters .....
Port of registry.....
Length .....
Gross tonnage.....
IMO number (if applicable) .....
I declare that the anti-fouling system used on this ship complies with Annex 1 of the Convention.
....
(Date) (Signature of owner or owner's authorized agent)
Endorsement of anti-fouling system(s) applied
Type(s) of anti- fouling system(s) used and date(s) of application.....
.....

....
(Date) (Signature of owner or owner's authorized agent)
Type(s) of anti- fouling system(s) used and date(s) of application.....
.....

....
(Date) (Signature of owner or owner's authorized agent)
Type(s) of anti-fouling system(s) used and date(s) of application
.....
....
(Date) (Signature of owner or owner’s authorized agent)