IMO

INTERNATIONAL MARITIME LAW INSTITUTE

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INCORPORATION OF THE INTERNATIONAL CONVENTION ON THE CONTROL OF HARMFUL ANTI-FOULING SYSTEMS ON SHIPS, 2001 INTO TURKISH NATIONAL LEGISLATION

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

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PART 1

EXPLANOTARY NOTE

1. Problem Definition

1. 1. Fouling

Any artificial structure in contact with seawater is rapidly coated by microbiological biofilm, which serves as a base for macro-organisms to grow on. This phenomenon, known as biofouling, accelerates the processes of corrosion of the material and cause losses in the performance of the structures. In maritime field, these damages take place on movable and stationary structures such as boats, petroliferous or gas platforms, oceanographic investigation implements[1].

There are many adverse effects of biofouling on marine structures and components. The major adverse effects can be broadly identified as below:

• *Fuel Consumption*: The hull of a ship unprotected by anti fouling systems, can accumulate up to 150 kg of biological incrustation by square meter during six months in the sea, which in a long tanker with 40,000 m^2 of underwater hull supposes an increase in weight of 6000 metric tons of biological incrustation, which means enormous economic losses due to fuel consumption[2]. Even 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[3]. In one study, it was indicated that a newly constructed ship, if no anti-fouling is used, would require 30% more fuel after 6 months of operation in order to obtain the normal speed[4].

[1] Lopez, E.E, Ruiz, A.T, Calonge, B.R, Portilla, M.A.G, Tejera, C.B.; "Recent Studies on Antifouling Systems to Artificial Structures in Marine Ecosystem", Journal of Marine Research, Vol.III, No1, 2006, p. 74.

[2] Ibid. p. 74.

[3] IMO News (International Maritime Organisation Magazine), 1999, p.14.

[4] Kırlı, L.; "Organotin Pollution in the Marine Environment", University of Gazi Journal of Science, Vol.18 (3), 2005, p. 518.

According to another research on naval ships done by U.S Navy in 1986, the benefits from the use of coatings against fouling was estimated to be from $100 to $130 million annually in fuel costs, and annual maintenance costs[5] .

• *Air Pollution*: Excessive use of fuel results in the increased levels of greenhouse gasses (CO_2, SO_2, NOx, etc.) in the atmosphere, which contributes to global warming, and ends up as acid rain. It is estimated that, globally, as a consequence of the fuel savings due to the use of anti fouling systems, 22 million tons less carbon dioxide and 0.6 million tons less sulphur di-oxide, are emitted to the environment annually[6]. Furthermore, the solvents that are used in removal of antifouling paints from the ships surface also cause hazardous chemical gasses to be released to the atmosphere[7].

• *Transportation of Invasive Species*: Invasive species are organisms which are transferred from their native ecosystem to other ecosystems accidentally or without intention. One of the mechanisms that transfer these organisms is fouling, which provide the medium for the invasive specie to be attached and to be transported over long distances. Invasive species can cause great hazards ecologically and economically. They can cause loss of economically important species, reduction in biodiversity and/or transfer and spread of various diseases in the region that they are transferred[8].

1. 2. Use of Antifouling Materials

Different types of protection have been used over time in order to avoid above mentioned adverse effects of fouling. The earliest example of struggle with the fouling problem was the use of copper coatings which were used by the Phoenicians which continued to be used on wood ships until the 18th century. After the

[5] Champ, M.A.; "Review of Organotin Regulatory Strategies, Pendingactions, Related Costs and Benefits", The Science of the Total Environment, 2000, p. 25.

[6] Evans, S. M.; "Tributyltin Pollution: the Catastrophe that Never Happened", Marine Pollution Bulletin Vol. 38, No. 8, 1999, p. 629.

[7] Okay, O.S.; "Antifouling İçeren Gemi Boyalarinin Uluslararasi Kurallar Çerçevesinde Kirletici Etkilerinin İncelenmesi (Review on the Polluting Effects of Vessel Paints Including Antifouling Systems in the Framework of International Regulations)", Symposium on Ship Engineering and Industry, Turkey, 2004, p. 169.

[8] Ibid. p.169.

construction of iron ships, paints widely known as “patents” in which the copper sulphate acted as biocide principle began to be manufactured[9].

During the 1960s, the chemical industry developed efficient and cost-effective anti-fouling paints using metallic compounds which were basically the organotin compounds[10]. The most significant and the most commonly used organotin compounds used in the industry are; Monobutyltin (MBT), dibutyltin (DBT), tributyltin (TBT), monophenyltin (MPT), diphenyltin (DPT), and triphenyltin (TPT). While mono and di-substituted compounds are used as PVC stabilizers, catalysts, and wood preservatives, triorganotin compounds are usually used as antifouling agents in the paints due to their biocide characteristic, especially in the marine equipments like buoy and ship hulls[11].

1. 3. Adverse Effects of TBT on Marine Environment

In the beginning of 1980s scientific studies showed that all the compounds of tin, especially TBT, are toxic compounds and they have a harmful effect on ecological and/or economical components of marine environment from bacteria to fish[12].

Scientific studies revealed that the distribution and persistence of TBT in the marine environment was a concern. This was attributed to the fact that TBT can degrade rapidly in seawater within days, but tends to adsorb onto particles and aggregates in sediments, where degradation processes are considerably slower. The half-life of TBT in sediments may be a matter of years, or even decades, which implies the persistence of these chemicals in the environment[13].

The effects of organotin compounds on *marine ecosystems* appear in different ways such as imposex (a condition in which male sexual characteristics, such as the development of a penis, is superimposed on

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[9] Lopez, E.E, Ruiz, A.T, Calonge, B.R, Portilla, M.A.G, Tejera, C.B.; “Recent Studies on Antifouling Systems to Artificial Structures in Marine Ecosystem”, Journal of Marine Research, Vol.III, No1, 2006, p. 74.

[10] IMO News (International Maritime Organization Magazine), (1999), p. 14.

[11] Kırlı, L.; “Organotin Pollution in the Marine Environment”, University of Gazi Journal of Science, Vol.18 (3), 2005, p. 518.

[12] Lopez, E.E, Ruiz, A.T, Calonge, B.R, Portilla, M.A.G, Tejera, C.B.; “Recent Studies on Antifouling Systems to Artificial Structures in Marine Ecosystem”, Journal of Marine Research, Vol.III, No1, 2006, p. 75.

[13] Evans, S. M.; “Tributyltin Pollution: the Catastrophe that Never Happened”, Marine Pollution Bulletin Vol. 38, No. 8, 1999, p. 629.

female gastropods), structural deformations in crustaceans, and mussel larvae mortality[14]. Among the adverse affects of TBT on marine organisms, the first reporting of the occurrence of abnormal shell growth in Crassostrea gigas, the pacific oyster along the east coast of England, was made in 1974[15]. Furthermore, it was determined that the organotin compounds in the sea water were diffused to the air in the form of aerosol with wave and the water movements[16].

In addition to above mentioned adverse effects, scientific researches show that organotin compounds also endanger human health through the consumption of sea food. According to the results of a study done in Finland in 2006, organotin compounds were detected in fish markets which were more than tolerable values of organotin compounds for human[17].

2. Developments in Different Countries

The widespread use of TBT anti-fouling systems on shipping of all kinds and mariculture structures resulted in relatively severe contamination during the 1980s and early 1990s. Governments of most developed nations took actions to regulate their use[18].

France was the first country to introduce legislation prohibiting the application of TBT paints to the vessels less than 25 meters in length in 1982.

In UK, a complete ban on sale or use on fish cages and on vessels less than 25 meters waterline length was imposed on 1 July 1987 under the Control of Pesticide Regulations of the Food and Environment Protection Act – COPA (1985). Regulations made under COPA which came into force on 28 May 1987 banned all retail sales of TBT-based paints for antifouling purposes. On 1 July 1987, under the new Food

[14] Kırlı, L.; "Organotin Pollution in the Marine Environment", University of Gazi Journal of Science, Vol.18 (3), 2005, p. 518.

[15] Champ, M.A.; "Review of Organotin Regulatory Strategies, Pendingactions, Related Costs and Benefits", The Science of the Total Environment, 2000, p.23.

[16] Kırlı, L.; "Organotin Pollution in the Marine Environment", University of Gazi Journal of Science, Vol.18 (3), 2005, p. 526.

[17] Health and Consumer Protection Directorate General Opinion Report (), Revised Assessment of the Risks to Health and the Environment Associated with the Use of the Four Organotin Compounds TBT, DBT, DOT and TPT, 2006, p.8, Available at: http://ec.europa.eu/health/ph_risk/committees/04_scher/docs/scher_o_047.pdf, accessed on: 14.01.2008.

[18] Evans, S. M.; "Tributyltin Pollution: the Catastrophe that Never Happened", Marine Pollution Bulletin Vol. 38, No. 8, 1999, p. 629.

and Environment Protection Act 1985, all sorts of use of triorganotins on vessels under 25 meters waterline length was banned by the Control of Pesticide Regulations 1986 (COPR).[19]

In Canada, the use of TBT anti-fouling systems, were first regulated under the Pest Control Products Act (PCPA) in 1989. Sale of unregistered antifouling paints ceased on June 16, 1989[20]. Japan banned the use of TBT in 1990. Austria and Switzerland were also banned the use of TBT even though they are land locked countries[21].

The restrictions resulted in a major shift away from the use of TBT paint on leisure craft and substantial reductions in inputs. In some regions partial recovery of mollusc populations were observed. The first indirect evidence of the effectiveness of the ban was the recovery of the oyster beds observed in the mid-1980s[22].

3. Consideration of the Problem on the Regional and International Platforms

The Barcelona Convention[23] for the Protection of the Mediterranean Sea against Pollution, which was signed in 1976, was the first attempt to strict the use of organotin compounds in a regional platform. The problem considered in the Protocol of the Barcelona Convention for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources[24]. Annex I and Annex II of the Protocol listed the organotin compounds and the Article 5 of the Protocol required the State Parties to propose and adopt legal measures for the purpose of controlling the listed organotin compounds. In 1989, in the sixth ordinary

[19] GIACOMELLO, A.M., GUHA, P., HOWE, P., JONES, K.C., MATTHIESSEN, P., SULLIVAN, C., SHORE, R.F., SWEETMAN, A., WALKER, L. , The Benefits of Chemicals Regulation Four Case Studies: (TBT, Methiocarb, DDT and PCBS a Report To DDEFRA, 2006, p.19, Available at: http://www.lancs.ac.uk/depts/lec/ccm/Lancaster%20Final%20report%20March%202007.pdf, accessed on: 14.01.2008.

[20] Special Review of Organotin Antifouling Paints for Ship Hulls, Pest Management Regulatory Agency Publications, 2000, p. 2, Available at: http://pmra-arla.gc.ca/english/pdf/sra/sra2000-01-e.pdf, accessed on: 14.01.2008.

[21] Champ, M.A.; "Review of Organotin Regulatory Strategies, Pendingactions, Related Costs and Benefits", The Science of the Total Environment, 2000, p.23.

[22] European Environment Agency Report, "Late lessons from early warnings: the precautionary principle 1896–2000", Environmental Issue Report, No: 22, 2001, p. 138.

[23] Barcelona Convention for the Protection of the Mediterranean Sea against Pollution ,16 February 1976, entered in force 12 February 1978.

[24] The Protocol of the Barcelona Convention for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources, 17 May 1980, entered into force in 1983.

meeting of the contracting parties of the Barcelona Convention, the contracting parties agreed on banning the use of organotin compounds on hulls of boats having an overall length of less than 25 meters and on all structures, equipment and apparatus used in mariculture as from 1 July 1991[25].

In 1990, International Maritime Organization (IMO) Marine Environment Protection Committee (MEPC) adopted the resolution, namely, ``Measures to Control Potential Adverse Impacts Associated with Use of Tributyl Tin Compounds in Anti-Fouling Paints''[26], recommending governments to adopt measures to eliminate the use of anti-fouling paints containing TBT on non-aluminium hulled vessels of less than 25 m in length and eliminate the use of antifouling paints with a leaching rate of more than 4 micrograms of TBT per day.

In 1992, the United Nations Conference on Environment and Development (UNCED), also known as the Earth Summit, was held in Rio de Janerio, Brazil. In the Conference, the Agenda 21, which is a comprehensive plan of action to be taken globally, nationally and locally by organizations of the United Nations System and Governments, was adopted by more than 178 Governments[27]. According to Chapter 17 of the Agenda 21; "States should take measures to reduce water pollution caused by organotin compounds used in anti-fouling paints". The Conference has drawn attention to the adverse effects of organotin compounds used in anti-fouling paints in a well-attended international platform.

In 1999, in its 21st session, the IMO Assembly adopted the Resolution A.895 (21). This Resolution points out the need of a global legally binding instrument to prohibit or control anti-fouling systems on ships. It states that the legally binding instrument should ensure a global prohibition of the application of organotin compounds by 1 January 2003, and a complete prohibition of the presence of organotin compounds by 1 January 2008. To develop such a draft global legal instrument on the issue, a working group was established at MEPC. The studies of the working group lead to a diplomatic conference to consider adoption of a legal instrument on the control of harmful antifouling systems used on ships[28]. **The**

[25] Champ, M.A.; "Review of Organotin Regulatory Strategies, Pendingactions, Related Costs and Benefits", The Science of the Total Environment, 2000, p.31.

[26] IMO, MEPC Resolution, 46 (30)

[27] Available at: http://www.un.org/esa/sustdev/documents/agenda21/index.htm, accessed on: 21/01/2008.

[28] Antifouling-Systems, International Convention on the Control of Harmful Antifouling-Systems on Ships, IMO Publications, London, 2003, p. iii

conference resulted in the adoption of the International Convention on the Control of Harmful Anti-fouling Systems (AFS Convention) on Ships, on 5 October 2001[29].

Article 18 of the Convention requires ratification of 25 States representing 25% of the world's merchant shipping tonnage and a 12 months period from ratification to enter into force. With the ratification by Panama on 17 September 2007, the Convention has been ratified by 25 States, with a combined 38.11% of world's merchant shipping tonnage and entered into force on 17 September 2008. In international area, adoption of AFS Convention can also be regarded as the realization of the Agenda 21[30].

4. Special requirement of AFS Convention:

According to the AFS Convention, parties to the Convention are required to prohibit and/or restrict the use of 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 Party.

Ships of above 400 gross tonnage and ships engaged in international voyages (excluding fixed or floating platforms, FSUs and FPSOs) will be required to be subjected to an initial survey before the ship is put into service or before the International Anti-fouling System Certificate is issued for the first time; and a survey when the anti-fouling systems are changed or replaced.

Ships of 24 meters or more in length but less than 400 gross tonnage engaged in international voyages (excluding fixed or floating platforms) will have to carry a Declaration on Antifouling Systems signed by the owner or authorized agent. The Declaration will have to be accompanied by appropriate documentation such as a paint receipt or contractor invoice. Anti-fouling systems to be prohibited or controlled will be listed in an annex (Annex I) to the convention, which will be updated when necessary.

As recommended by the 21st session of the IMO Assembly, the Conference agreed on an effective implementation date of 1 January 2003 for a ban on the application of organotin-based systems.

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[29] See Section 4.

[30] Okay, O.S.; "Antifouling İçeren Gemi Boyalarinin Uluslararasi Kurallar Çerçevesinde Kirletici Etkilerinin İncelenmesi (Review on the Polluting Effects of Vessel Paints Including Antifouling Systems in the Framework of International Regulations)", Symposium on Ship Engineering and Industry, Turkey, 2004, p. 168.

According to the AFS Convention, by 1 January 2008 (effective date), ships either; shall not bear such compounds on their hulls or external parts or surfaces; or shall bear a coating that forms a barrier to such compounds leaching from the underlying noncompliant anti-fouling systems. This applies to all ships (including fixed and floating platforms, floating storage units (FSUs), and Floating Production Storage and Offtake Units (FPSOs).

The Convention includes a clause in Article 12 which states that a ship shall be entitled to compensation if it is unduly detained or delayed while undergoing inspection for possible violations of the Convention. The Convention provides for the establishment of a ''technical group'', to include people with relevant expertise, to review proposals for other substances used in anti-fouling systems to be prohibited or restricted.

IMO adopted 3 further Resolutions (Resolution MEPC.102 (48) - Guidelines for Survey and Certification of Anti-fouling Systems on Ships, Resolution MEPC.104(49) - Guidelines for brief sampling of anti-fouling systems on ships, Resolution MEPC.105 (49) - Guidelines for inspection of anti-fouling systems on ships) to enhance the implementation of the Convention.

5. European Union

In 1989 the European Union adopted a Directive (89/677/CEE) banning the use of TBT from vessels smaller than 25 meters. For the purpose of banning the use of TBT for the vessels over 25 meters, a Council and Parliament Regulation (No. 782/2003) was adopted in 2003. The Regulation has set requirements parallel to the AFS Convention. The Regulation prohibits the application of organotin anti-fouling systems on EU flag ships. Furthermore, it requires either the removal of existing organotin anti-fouling systems from ships hulls and replacement with organotin-free systems, or the sealing of existing organotin coatings to form a barrier to prevent leaching. From 1January 2008, the EU regulation applies to all ships entering EU waters, irrespective of their flag. The EU will accept any certificate or declaration issued by an Administration or Recognised Organisation which states that the ship complies with the Convention or the Regulation

6. Current Situation in Turkey

Currently, there is no national legislation banning the use of anti-fouling paint systems which include TBT and/or other organotin compounds.

The results of research carried out between 1988 and 1989 in the Marmara Sea and Black Sea coastal regions of Turkey has shown an increasing trend in methylation of tin. Tin polluted waters were detected in the Iskenderun Bay and in the estuarine waters of the Mediterranean Sea[31]. Studies have also indicated heavy pollution from organotin compounds in the Aliağa Ship Detechment Plant which is located on the Aegean coastline[32].

Moreover, the use of organotin compounds on ships causes a major threat to marine environment in Turkish straits where the volume of vessel traffic is relatively very high. During 2007, 49913 vessels have passed through the Dardanel strait and 56606 through the Bosphorus[33]. In the same year only 13,234 vessels passed through the Panama Channel[34].

In addition to the above mentioned scientific facts, Turkey, as an EU Candidate country, should align its national legislation with the EU aquis. Furthermore, as a member of the international community, Turkey should place appropriate efforts contribute to the uniformity of internationally recognised rules and regulations[35].

In Turkey, the Undersecretariat for Maritime Affairs (UMA) is the competent authority for maritime affairs. The UMA was established in 1993 with the Decree Law on the Establishment and Duties of the Undersecretariat for Maritime Affairs (No: 491). Currently, it operates affiliated to Prime Ministry of Turkey.

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[31] Yemenicioğlu, S., Tuğrul, S., Kubilay, N., Salihoğlu, I.; "The Distribution of Methyltin Species in Different Seas", Marine Pollution Bulletin, No: 34, 1997, p.741.

[32] Vardar, E.;"Türkiye'de ve Dünya'da Gemi Söküm Sanayi ve Çevre (The Ship Detachment Industry and Environment in the World and Turkey)", Symposium on Ship Engineering and Industry, Turkey, 2004, p. 322.

[33] UMA Official website, Available at: http://www.denizcilik.gov.tr/tr/istatistik/bogaz_istatistik/genel_gecis.xls, accessed on: 21.02.2008.

[34] Available at: http://www.pancanal.com/eng/maritime/reports/table01.pdf), accessed on: 21.02.2008.

[35] On **18 February 2008, the Council adopted the EC** Decision (2008/157) on the principles, priorities and conditions contained in the Accession Partnership with Turkey. The Decision provides a new criterion under transport policy and states that Turkey should continue the alignment and implementation in the maritime sector paying special attention to the **effective implementation of pollution prevention.**

The UMA consists of a central administration and the attached local administrations. Within the central administration, the General Directorate of Maritime Transportation, General Directorate of Shipbuilding and Shipyards, and General Directorate of Merchant Marine serve as the main units[36]. Besides, there are also advisory units such as the Legal Department and the Consultancy of the Undersecretariat[37]. The local administrations consist of 7 Provincial Directorates located in different regions of Turkey[38] and 70 port authorities.

Decree law on the Establishment and Duties of the Undersecretariat for Maritime Affairs enumerates the duties of the Administration. The major duties undertaken by UMA can be listed as; adoption of measures related to the maritime trade, safety of life and property at sea, prevention of the maritime environment and coordination of bodies and agencies serving in the field of maritime affairs in accordance with the maritime policy and strategy of the government[39]. Furthermore, UMA is the competence authority for monitoring and issuing international certificates concerning the maritime field in Turkey.

In 2007 the UMA was prescribed a circular in which the following were declared[40] ;

- Turkey has not ratified the AFS Convention.
- Turkey shall immediately take action to adhere to the Convention.
- An authorization shall be granted to Classification Societies to issue compliance certificate to ships that comply with the Convention.
- Ship Survey Experts shall consider the requirements of the Convention and IMO Guidelines MEPC.102 (48)-104(49)-105(49) without requiring any compulsory action from the ship until the date of ratification.

It was also mentioned that the majority of Turkish fleet actually comply with the Convention, however, lacking any certificates.

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[36] Decree Law on the Establishment and Duties of the Undersecretariat for Maritime Affairs, No: 491, Date: 10.8.1993, Article (6)

[37] Ibid. Article (10).

[38] İstanbul, İzmir, Antalya,Trabzon, Samsun, Çanakkale, Mersin.

[39] Ibid. Article (2).

[40] Official Communication: Undersecretariat for Maritime Affairs, General Directorate of Marine Transportation Circular, Date: 26.06.2007 No:B.02.1.DNM/0.06.03.01.143.01/20930.

7. Methodology

In this study Turkish Constitutional procedure for ratification of an international treaty has been followed. There is no specific provision in Turkish Constitution concerning the persons having the authority to negotiate and sign an international treaty. However, in practice President of Republic, Prime Minister, Minister of Foreign Affairs, and persons authorized by the Council of Ministers are assumed competent to conclude an international treaty[41]. For the purposes of this study, the Convention on the Control of Harmful Anti-Fouling Systems on Ships is assumed to be signed by a competent authority.

After signature, international treaties are subject to ratification. According to Turkish Constitution the ratification process is completed in two stages. Firstly, Turkish Grand National Assembly enacts a statute for approving the ratification of the treaty[42]. The statute concerning the approval of ratification has to be published in the Turkish Official Gazette as for all other statutes. After the 'approval of the ratification statute' is published, the treaty becomes appropriate for ratification[43]. The second stage is the ratification of the treaty by the President of Republic. According to the Constitution, Article 104/b-6, the President has the power to ratify and promulgate international treaties. The President ratifies the treaty through a decree[44] which is also signed by the Council of Ministers and Prime Minister[45].

The approval statute and the President's decree are only references of ratification of the relevant treaty. They do not address the contents of the treaty. The transposition of the provisions of the treaty into domestic law is realized through enacting a regulation or a **by-law** which will be prescribed on basis of the relevant law(s).

Under Article 124 of the Turkish Constitution, the Prime Ministry, the ministries and public corporate bodies may issue by-laws with the purpose of ensuring the enforcement of statutes and regulations related to their

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[41] Gözler, K.; "Türk Anayasa Hukuku Dersleri (Lectures on Turkish Constitutional Law)", Ekin Kitabevi, 2004, p. 247.

[42] Turkish Constitution, Date: 9.11.1982, Article 90 (1).

[43] See the Draft Statute Concerning The Approval Of The Ratification Of International Convention On The Control Of Harmful Anti-Fouling Systems On Ships in Annex-A.

[44] See the Draft **Decree Concerning the Ratification of International Convention on the Control of Harmful Anti-Fouling Systems on Ships in Part 2 Section 2.**

[45] Gözler, K.; "Türk Anayasa Hukuku Dersleri (Lectures on Turkish Constitutional Law)", Ekin Kitabevi, 2004, p. 247.

particular fields of operation provided that they are in conformity with such statutes and regulations. If a by-law is issued by a ministry and applied throughout the country, the Council of State is authorized to declare the by-law or any of its provisions null and void if it is contrary to a statute or regulation[46]. By-laws issued by other corporate bodies not applied throughout the country might be invalidated by lower administrative courts. Not all the by-laws but only those by-laws indicated by the special law shall be published in the Official Gazette[47].

Decree Law No: 491 give UMA the duty to "take all measures to prevent the deterioration of the maritime environment and sea pollution for fields under the jurisdiction of the Undersecretariat with ensuring the monitoring and auditing"[48]. Furthermore, with a devolution of authority protocol which was signed between Ministry of Environment and UMA in 2006, the authority of monitoring and inspection under Environmental Code within ports and piers have been given to UMA[49]. According to the said protocol, if there is an environmental pollution within the above mentioned areas, the UMA shall take the photographs and videos of the polluted area and the polluter, take samples and analyze those samples in laboratories and issue a fact-finding report and take administrative measures concerning the polluter according to fact-finding reports. According to the relevant provisions of the above mentioned decree law and the protocol, authority and responsibility for implementation, survey, monitoring and inspection is given to UMA for the purposes of the study.

In Turkish maritime legislation, after their ratification, most of the International treaties and resolutions were transposed into Turkish domestic law as by-laws. To comply with Turkish legislation practice on maritime issues, a by-law will be drafted to set a detailed and effective implementation and enforcement of the Convention on the Control of Harmful Anti-Fouling Systems on Ships.

Since a by-law should be prescribed in accordance with a statute in Turkish legal system, the draft by-law is based on Decree law on the Establishment and Duties of the UMA and the Environment Law. Moreover, the Resolution MEPC.102 (48) - Guidelines for Survey and Certification of Anti-fouling Systems on Ships,

[46] Council of State Statute, No: 2575. Date: 06/01/1982, Art.24 (1) (d).

[47] The Law Concerning the By-laws which have to be published in Official Gazette, No: 3011, Date: 24.05.1984.

[48]Decree Law on the Establishment and Duties of the Undersecretariat for Maritime Affairs, No: 491, Date: 10.8.1993, Article (2), paragraph (g)

[49] Ministry of Environment Circular No: 2006/13, Date: 21/06/06.

Resolution MEPC.104 (49) - Guidelines for brief sampling of anti-fouling systems on ships, Resolution MEPC.105 (49) - Guidelines for inspection of anti-fouling systems on ships, Council and Parliament Regulation (No. 782/2003) have been taken into account for an extensive and effective implementation.

In 2006, Prime Ministry prescribed a by-law concerning the procedures and principles for preparing a legal draft[50]. According to Article 1 of the said by-law, the draft laws, draft decree laws, draft regulations and draft by-laws which are prepared by the Prime Ministry, Ministries and other Public Institutions should be in accordance with the technical procedures set by the by-law. Thence, the technical procedures set by the above mentioned by-law have also been taken into account in the drafting process.

After its submission to International Maritime Law Institute (IMLI), this legal drafting study will also be submitted to UMA. It is hoped that the draft legislation in this study will contribute to the ongoing studies on the ratification of AFS Convention and also to the implementation of the Convention after its ratification in Turkey. With the ratification of the AFS Convention, Turkey will contribute to the phasing out process of anti-fouling systems that use organotin compounds as biocides in international and regional platforms.

[50] By Law on Procedures and Principles for Legislation Drafting, No: 26083 Date: 17/12/2006.

PART 2

DRAFT LEGISLATION

SECTION 1

THE STATUTE CONCERNING THE APPROVAL OF THE RATIFICATION OF THE INTERNATIONAL CONVENTION ON THE CONTROL OF HARMFUL ANTI-FOULING SYSTEMS ON SHIPS

No: **Date:**

Article 1

Ratification

(1) The ratification of the International Convention on the Control of Harmful Anti-Fouling Systems on Ships, which was adopted by the International Conference on The Control of Harmful Anti-Fouling Systems for Ships in 2001, and signed on …/…/2008 on behalf of the Republic of Turkey, has been approved.

Article 2

Publication

(1) This law shall enter into force on its publication date.

Article 3

Enforcement

(1) The provisions of this law shall be enforced by the Council of Ministers.

SECTION 2

DECREE CONCERNING THE RATIFICATION OF THE INTERNATIONAL CONVENTION ON THE CONTROL OF HARMFUL ANTI-FOULING SYSTEMS ON SHIPS

Decree No: ……. /…….. **Date: …/…/2008**

The International Convention on the Control of Harmful Anti-Fouling Systems on Ships which was adopted by the International Conference on The Control of Harmful Anti-Fouling Systems for Ships in 2001, and signed on …/…/2008 on behalf of the Republic of Turkey and approved by the Turkish Great National Assembly on …/…/2008 is hereby ratified.

Republic of Turkey

Prime Minister **List of Ministers**

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SECTION 3

BY-LAW ON THE PROHIBITION OF ORGANOTIN COMPOUNDS USED ON SHIPS

No: **Date of Approval:**

PART I
General Provisions

Article 1
Purpose

(1) The purpose of this By-Law is to reduce or ban the use of organotin compounds, which act as active biocides, in anti-fouling systems used on ships.

Article 2
Legal Basis

(1) This By-Law has been issued on the basis of the provisions of the Decree on the Establishment and Duties of the Undersecretariat for Maritime Affairs No: 491, Environment Law No: 2872, Port State Control Regulation No: 26120, the International Convention on the Control of Harmful Anti-Fouling Systems on Ships, IMO Resolutions No: MEPC.102 (48), MEPC.104 (49), MEPC.105 (49) and the European Union Council and Parliament Regulation No: 782/2003.

Article 3

Scope

(1) This By-Law shall apply to:

(a) ships flying the flag of Turkey,

(b) ships not flying the flag of Turkey but registered under the Turkish Ships Registry, or the Turkish International Ship Registry .

(c) ships that enter a port or offshore terminal of Republic of Turkey but do not fall within points (a) or (b)

(d) ships constructed, transformed or repaired in Turkey.

(2) This By-Law shall not apply to any warship, naval auxiliary or other ship owned or operated by a State and used, for the time being, only on government non-commercial service.

Article 4

Definitions

(1) For the purpose of this By-Law;

(2) '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;

(3) 'gross tonnage' means the gross tonnage calculated in accordance with the tonnage measurement regulations contained in Annex 1 to the International Convention on Tonnage Measurement of Ships, 1969, or any successor Convention;

(4) 'length' means the length as defined in the International Convention on Load Lines, 1966, as modified by the Protocol of 1988 relating thereto, or any successor Convention;

(5) ‘ship’ means a vessel of any type whatsoever operating in the marine environment and includes hydrofoil boats, air cushion vehicles, submersibles, floating craft, fixed or floating platforms, floating storage units (FSUs) and floating production storage and off-loading units (FPSOs);

(6) ‘AFS-Convention’ means the International Convention on the control of harmful anti-fouling systems on ships, adopted on 5 October 2001, irrespective of its entry in to force;

(7) ‘Recognized organization’ means a body recognized in accordance with the provisions of Regulation on the Selection and Authorization of Classification Societies Acting on Behalf of the Flag State for Turkish Flagged Ships.

(8) ‘AFS-Certificate’ means the certificate issued to ships inconformity with the provisions of By-Law and issued by the administration or by a recognized organization acting on its behalf;

(9) ‘AFS-Declaration’ means a declaration drawn up under the provisions of Annex- III to this By-Law.

(10) ‘Company. means the owner of the ship or any other organization or person such as the manager or the bareboat charterer, who has assumed the responsibility for the operation of the ship from the owner of the ship and who, on assuming such responsibility, has agreed to take over all duties and responsibilities imposed by the International Safety Management ISM Code Regulation No: 26468.

(11) ‘International voyage’ means a voyage by a ship entitled to fly the flag of one State to or from a port, shipyard, or offshore terminal under the jurisdiction of another State.

PART II
Prohibition of the Application of Organotin Compounds Which Act as Biocides

Article 5
Prohibition

(1) As from the entry in force of this By-Law, organotin compounds in anti-fouling systems which are stated under Annex I shall not be applied, reapplied or installed on ships which are listed under Article 3.1.

(2) Two years after entry in force of this By-Law, Ships shall not bear compounds stated under Annex I on their hulls or external parts or surfaces or in case the ships bear a non complying antifouling system they shall bear a coating that forms a barrier to prevent leaching of compounds stated under Annex I.

(3) The Administration has the authority to change the content of the Annex I with reference to scientific studies. The changes shall enter into force 60 days after their publication on the Turkish Official Gazette.

PART III
Surveys and Certification Requirements for Anti-Fouling Systems

Article 6
Surveys

(1) Ships of 400 gross tons and above engaged in international voyages, excluding fixed or floating platforms are subject to survey before certification under this By-Law.

(2) Ships of 24 meters or more in length but less than 400 gross tonnage engaged in international voyages, excluding fixed or floating platforms, shall carry a Declaration on Antifouling Systems (Annex III) signed by the owner or authorized agent.

Article 7

Authority

(1) As regards the enforcement of this By-Law, surveys of ships shall be carried out by duly authorized Ship Survey Experts that operate under provincial directorates of the Administration or by the Recognized Organization that is authorized by the Administration.

Article 8

Initial Survey

(1) In order to issue a certificate, an initial survey should be conducted upon request of the company; before a new building ship is put into service or when certificate is required for the first time or when the anti-fouling system is changed or replaced from a ship.

Article 9

Request for Survey

(1) Prior to any survey, a request for survey should be submitted by the Company to the Administration, or to a Recognized Organization along with the ships data requirements as listed below :

(a) Name of ship
(b) Distinctive number or letters
(c) Port of registry
(d) Gross tonnage
(e) IMO number

(2) A request for survey should be supplemented by a declaration and supporting information from the anti-fouling system manufacturer, confirming that the anti-fouling system applied, or intended to be applied to the ship is in compliance with the requirements of this By-Law. Such declaration should provide the following information contained in the Record of Anti-Fouling System, as can be found in Annex IV to the By-Law:

(a) Type of anti-fouling system
(b) Name of anti-fouling system manufacturer
(c) Name and color of anti-fouling system
(d) Active ingredient(s) and their Chemical Abstract Service Registry Number (CAS number(s))

Article 10
Surveys for Newbuildings

(1) The survey referred in Article 8 and Article 9 shall consist of the examination of the International Anti-fouling System Certificate or a Declaration on Anti-fouling System, to verify that

(a) the anti-fouling system specified by the documentation submitted with the request for survey complies with the provisions of the By-Law
(b) and the anti-fouling system applied is identical to the system specified in the request.

(2) In the event of doubt arising as to the condition of the ship or its equipment or its documentation, one or more of the following examination and testing should be conducted as deemed necessary by the surveyor:

(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.

(3) The verification tasks set out in paragraph (2) should be conducted at any time, either before, during, or after the anti-fouling system has been applied to the ship, as deemed necessary to verify compliance. No checks or tests must affect the integrity, structure or operation of the anti-fouling system.

Article 11
Surveys for Application of a New Antifouling System to Existing Ships

(1) If the existing anti-fouling system is confirmed by an International Anti-fouling System Certificate not to be controlled under Annex I of the By-Law, the provisions described in paragraph 10.1 apply.

(2) If the existing anti-fouling system that is not documented by an International Anti-Fouling System Certificate and not controlled under Annex I of the By-Law, verification should be carried out to confirm that the anti-fouling system complies with the requirements of this By-Law.This verification should be based on sampling and/or testing and/or reliable documentation, as deemed necessary by the surveyor. The Surveyor may require documentation for verification such as Material Safety Data Sheets, 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 provisions described in paragraph 10.1 apply.

(3) If the existing anti-fouling system has been removed, the removal should be verified according to the provisions described in paragraph 10.1.

(4) If a sealer coat has been applied, verification should be carried out to confirm that the name, type and color 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 provisions described in paragraph 10.1 apply.

(5) If the existing anti-fouling system is controlled under Annex I of the By-Law, it should be removed according to paragraph 11.3 or covered by a sealer coat according to paragraph 11.4 not later than 2 years after entry in force of this By-Law

Article 12

Surveys of Existing Ships requesting only an International Anti-fouling System Certificate

(1) If the existing anti-fouling system is declared to be controlled under Annex I of the By-Law, 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 when directed by the By-Law.

(2) If the existing anti-fouling system is declared not to be controlled under Annex I of the By-Law, verification should be carried out to confirm that the antifouling system complies with the requirements of the By-Law pursuant to paragraphs 11.2 and 11.3. If information required by Surveyor raises no reasonable doubt that the system applied is compliant with Annex I of the Convention, the International Anti-fouling System Certificate may be issued on this basis.

Article 13

Sampling of the Anti-fouling System

(1) 'Sampling' specified in paragraph 10. (2)(b) and 11.(2) shall be conducted considering the technical procedures set by the Resolution No:MEPC.104(49) concerning the Guidelines for Brief Sampling of Anti-Fouling Systems on Ships.

Article 14

Notification

(1) Upon satisfactory completion of a survey, the Surveyor shall forward a completed Declaration of Survey (Annex V) to the Administration.

(2) When the Surveyor determines that the ship's anti-fouling system does not conform either to the particulars of a Certificate or to the requirements of this By-Law, such Surveyor shall immediately notify the Company to take corrective action within 30 days for compliance with this By-Law. If the required corrective action is not taken in due time, the Surveyor shall notify the Administration and the Administration shall ensure that the Certificate is not issued or is withdrawn as appropriate.

Article 15
Certification

(1) An Anti-fouling System Certificate shall be issued by Administration after successful completion of a survey in accordance with this By-Law. Certificates issued by a Recognized Organization have the same validity as a Certificate issued by Administration

(2) Certificates issued under the authority of a State which is Party to AFS Convention shall have the same validity as a Certificate issued by Administration only when the certifying State's legislation requires the minimum conditions of this By-Law.

Article 16
Validity of an International Anti-fouling System Certificate

(1) A Certificate issued under this By-Law shall cease to be valid in either of the following cases:

(a) if the anti-fouling system is changed or replaced and the Certificate is not endorsed in accordance with this By-Law; and
(b) upon transfer of the ship to the flag of another State. In the case of a transfer, if requested, the Administration shall transmit to the other State a copy of the Certificates carried by the ship before the transfer and, if available, acopy of the relevant survey reports.

PART IV
Inspections of Ships and Detection of Violations

Article 17
Inspections

(1) The Administration has the power and obligation to inspect the ship in any port, shipyard, or offshore terminal whether the ship is in compliance with the provisions of this By-Law. Inspections should be carried out by Ship Survey Experts or other officers authorized by the Administration. Administration determines the need to inspection. Inspections can be done periodically.

Article 18
Detection of Violations

(1) Unless there are clear grounds for believing that a ship is in violation of this By-Law, any such inspection shall be limited to:

(a) verifying that, where required, there is onboard a valid International Anti-fouling System Certificate or a Declaration on Anti-fouling System; and/or

(b) a brief sampling of the ship's anti-fouling system. The time required to process the results of such sampling shall not be used as a basis for preventing the movement and departure of the ship.

(2) If there are clear grounds to believe that the ship is in violation of this By-Law, a thorough inspection should be carried out taking into account of the provisions of this By-Law and Guidelines developed by the Organization.

(3) If the ship is detected to be in violation of this By-Law after the inspections stated under 18.2 carried out, the Surveyor, who is carrying out the inspection, shall give a notice to the violating

ship to comply with the requirements of this By-Law in 6 months and shall immediately report the situation to Administration.

(4) If the ship does not comply with the requirements of this By-Law in time given under paragraph 18.3, ship shall detain in successive inspection. In such case Surveyor shall inform the Administration immediately.

Article 19

Penalties for Violations

(1) If there is a violation under paragraph 18.3 the following fines shall be imposed on ships in accordance with the Environmental Law No: 2872 ;

(a) Up to 1000 (inclusive) gross tons 40 YTL (New Turkish Lira) per gross ton.
(b) Between 1000 and 5000 (inclusive) gross tons, additional 10 YTL per gross ton.
(c) Over 5000 gross tons, additional 0, 1 YTL per gross ton.

(2) If there is a violation, under paragraph 18.4, the fines stated under paragraph 18.1 shall be doubled.

PART V

The Miscellaneous Provisions

Article 20

Right of objection

(1) A Company or Company's agent located in Turkey can object to the detention decision of the Surveyor. Objection against the decision of detention must be made to the Administration within 30 days from the date of detention.

(2) The Administration will examine and make decision on the objection within 15 days.

(3) Such objection shall not affect the detention of the ship. Surveyor should inform the master of the ship regarding the availability of the right of objection.

(4) Nothing in this By-Law shall prejudice the rights of the disagreed party to take the detention decision before the competent Administrative Court.

Article 21
Compensation

(1) When a ship is unduly detained or delayed under the provisions of this By-Law, it shall be entitled to compensation for any loss or damage suffered.

Article 22
Entry into Force

(1) This By-Law shall enter into force on its publication date.

Article 23
Enforcement

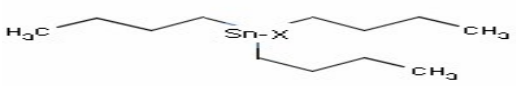
(1) The provisions of this By-Law shall be enforced by the Undersecretariat for Maritime Affairs.

ANNEX-I

PROHIBITED ORGANOTIN COMPOUNDS[51]

Common name Tributyltin (TBT) compounds including: tributyltin oxide; tributyltin benzoate; tributyltin chloride; tributyltin fluoride; tributyltin linoleate; tributyltin methacrylate; tributyltin naphthenate.

Chemical name and other names or synonyms		
	IUPAC	CAS
Tributyltin oxide	hexabutyldistannoxane	bis(tributyltin)oxide
Tributyltin benzoate	(benzyloxy) tributyl stannane	tributyltin benzoate
Tributyltin chloride	tributyl-chloro stannane	tributyltin chloride
Tributyltin fluoride	tributyl-fluoro stannane	tributyltin fluoride
Tributyltin linoleate	tributyl-(l-oxo-9, l2-octadecadienyl) oxy-stannane	tributyltin linoleate
Tributyltin methacrylate	tributyltin methacrylate	tributyl-(2-methyl-l -oxo-2-propyl)oxystannane
Tributyltin naphthenate	tributyl-mono(naphthenoyloxy) stannane	tributyltin naphthenate

Chemical structure	Tributyltin derivatives $C_{12}H_{27}SnX_5$
	

Chemical Name	**CAS number(s)**
Tributyltin oxide	56-35-9
Tributyltin benzoate	4342-36-3

[51] This Annex is prepared considering the International Trade Chemical Rewiev Commitee Report adopted in United Nations Environmental Programme Roterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides, Annex III. (Published on: 26 November 2006).**This list is an indicative list. It is not intended to be exhaustive.**

Tributyltin chloride	1461-22-9
Tributyltin linoleate	24124-25-2
Tributyltin methacrylate	2155-70-6
Tributyltin naphthenate	85409-17-2

Harmonized System Customs Code	3808-90-90

Other numbers	
EC	Index number 050-008-00-3 (common number for all TBT compounds)
EINECS	Tributyltin oxide: 200-268-0; tributyltin benzoate: 224-399-8; tributyltin chloride: 215-958-7; tributyltin fluoride: 217-847-9; tributyltin linoleate: 246-024-7; tributyltin methacrylate: 218-452-4; tributyltin naphthenate: 287-083-9.
RTECS	Tributyltin oxide: JN8750000; tributyltin benzoate: WH6710000: tributyltin chloride: WH6820000; tributyltin fluoride: WH8275000; tributyltin linoleate: WH8585000; tributyltin methacrylate: WH8692000.

Category	Pesticide
Regulated category	Pesticide
Use(s) in regulated category	Used in non-agricultural biocide pest control products. The most common use of TBT was in anti-fouling paints for ship hulls. It was also used as a biocide to prevent the fouling of appliances and equipment submerged in coastal and marine aquatic environments. TBT continues to be used in material and wood preservatives and as a slimicide.

Trade Names	
Anti fouling paints:	**Manufacturing concentrates:**
Intersmooth Hisol BFA253 SPC	BIOMET 303/60 Anti-fouling agent
Interswift BKA007	BIOMET 304/60 Anti-fouling agent

Acronyms and abbreviations	
<	Less than
>	Greater than
μg	microgram
μm	micrometre
ADI	Acceptable daily intake
ATSDR	Agency for Toxic Substances Disease Registry
BCF	Bioconcentration factor
bw	Body weight
°C	Degree Celcius (centigrade)
CAS	Chemical Abstracts Service
CSTEE	Scientific Committee for Toxicity, Ecotoxicity and the Environment (European Commission)
D	day
EC	European Commisson
EC_{50}	Effect concentration, 50%
ED_{50}	Effect dose, 50%
EEC	European Economic Community
EHC	Environmental Health Criteria
EINECS	European Inventory of Existing Chemical Substances
FAO	Food and Agriculture Organisation of the United States
g	gram
h	hour
IPCS	International Programme on Chemical Safety
IUPAC	International Union of Pure and Applied Chemistry
k	Kilo-(x1000)
kg	Kilogram
l	Litre
LC_{50}	Lethal concentration, 50%
LD_{50}	Lethal dose, 50%
mg	milligram
ng	nanogram
NOAEL	No-observed-adverse-effect level
NOEC	No-observed-effect concentration
NOEL	No-observed-effect level
Pa	Pascal
PEC	Predicted environmental concentration
PNEC	Predicted no effect concentration
Pow	Octanol-water partition coefficient
RTECS	Registry of Toxic Effects of Chemical Substances
TWA	Time weighted average
UNEP	United Nations Environmental Programme
US EPA	United States of America Environmental Protection Agency

ANNEX-II

INTERNATIONAL ANTI-FOULING SYSTEM CERTIFICATE

Issued Under the
International Convention on the Control of Harmful Anti-Fouling Systems on Ships
Under The Authority of the
Republic of Turkey Undersecretariat for Maritime Affairs

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

Particulars of ship

Name of ship.....
Distinctive number or letters.....
Port of registry.....
Gross
tonnage.....
IMO number2.....
An anti-fouling system controlled under Annex 1 has not been applied during or after construction of this ship ……☐

An anti-fouling system controlled under Annex 1 has been applied on this ship previously, but has been removed by ……. *(Name of the facility)* on …. *(Date)*……..☐
An anti-fouling system controlled under Annex 1 has been applied on this ship previously, but has been covered with a sealer coat applied by …….. *(Name of the facility)*…… ……on……..... *(Date)*……..... ☐

An anti-fouling system controlled under Annex 1 was applied on this ship prior to…. *(date),* but must be removed or covered with a sealer coat prior to ……. *(date).*

THIS IS TO CERTIFY THAT:

1 the ship has been surveyed in accordance with By-Law 1 of Annex 4 to the Convention; and

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

(Place of issue of Certificate)
……
(Date of issue) (Signature of authorized official issuing the Certificate)

Date of completion of the survey on which this certificate is issued: ……..

ANNEX-III

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)*

……

ANNEX IV

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 (if applicable).....

Type(s) of anti- fouling system(s) used .....

Type(s) of anti- fouling system(s) used and date(s) of application……

Date(s) of application of anti-fouling system(s)……..……..

Name(s) of company (ies) and facility(ies)/location(s) where applied .....

Name(s) of anti-fouling system manufacturer(s).....

Name(s) and colour(s) of anti-fouling system(s).....

Active ingredient(s) and their Chemical Abstract Services Registry Number(s) (CAS number(s))

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)

…… .....

(Date of issue) (Signature of authorized official issuing the record

ANNEX-V

DECLARATION OF SURVEY

THIS IS TO CERTIFY that a survey required in accordance with regulation 1(1) (b) of Annex 4 to the Convention found that the ship was in compliance with the Convention

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(ies) and facility(ies) location(s) where applied.....

Name(s) of anti-fouling system(s) manufacturer(s).....

Name(s) and colour(s) of anti-fouling system(s).....

Active ingredient(s) and their Chemical Abstract Services Registry Number(s) (CAS number(s))
……
Type(s) of sealer coat, if applicable …….

Name(s) and colour(s) of sealer coat applied, if applicable…….

Date of application of sealer coat ……

Signed.....
(Signature of authorized official issuing the Record)
Place: .....
Date: .....
(Seal or stamp of the authority)

SECTION 4

INTERNATIONAL CONVENTION ON THE CONTROL OF HARMFUL ANTI-FOULING SYSTEMS ON SHIPS, 2001

INTERNATIONAL MARITIME ORGANIZATION

IMO

E

INTERNATIONAL CONFERENCE ON THE CONTROL OF HARMFUL ANTI-FOULING SYSTEMS FOR SHIPS
Agenda item 8

AFS/CONF/26
18 October 2001
Original: ENGLISH

ADOPTION OF THE FINAL ACT OF THE CONFERENCE AND ANY INSTRUMENTS, RECOMMENDATIONS AND RESOLUTIONS RESULTING FROM THE WORK OF THE CONFERENCE

INTERNATIONAL CONVENTION ON THE CONTROL OF HARMFUL ANTI-FOULING SYSTEMS ON SHIPS, 2001

Text adopted by the Conference

1 As a result of its deliberations, as recorded in the Record of Decisions of the Plenary (AFS/CONF/RD/2) and in the Final Act of the Conference (AFS/CONF/25), the Conference adopted the International Convention on the Control of Harmful Anti-fouling Systems on Ships, 2001.

2 The above-mentioned Convention, as adopted by the Conference, is annexed hereto.

***

ANNEX

INTERNATIONAL CONVENTION ON THE CONTROL OF HARMFUL ANTI-FOULING SYSTEMS ON SHIPS, 2001

THE PARTIES TO THIS CONVENTION,

NOTING that scientific studies and investigations by Governments and competent international organizations have shown that certain anti-fouling systems used on ships pose a substantial risk of toxicity and other chronic impacts to ecologically and economically important marine organisms and also that human health may be harmed as a result of the consumption of affected seafood,

NOTING IN PARTICULAR the serious concern regarding anti-fouling systems that use organotin compounds as biocides and being convinced that the introduction of such organotins into the environment must be phased-out,

RECALLING that Chapter 17 of Agenda 21 adopted by the United Nations Conference on Environment and Development, 1992, calls upon States to take measures to reduce pollution caused by organotin compounds used in anti-fouling systems,

RECALLING ALSO that resolution A.895(21), adopted by the Assembly of the International Maritime Organization on 25 November 1999, urges the Organization's Marine Environment Protection Committee (MEPC) to work towards the expeditious development of a global legally binding instrument to address the harmful effects of anti-fouling systems as a matter of urgency, **MINDFUL OF** the precautionary approach set out in Principle 15 of the Rio Declaration on Environment and Development and referred to in resolution MEPC.67(37) adopted by MEPC on 15 September 1995,

RECOGNIZING the importance of protecting the marine environment and human health from adverse effects of anti-fouling systems,

RECOGNIZING ALSO that the use of anti-fouling systems to prevent the build-up of organisms on the surface of ships is of critical importance to efficient commerce, shipping and impeding the spread of harmful aquatic organisms and pathogens,

RECOGNIZING FURTHER the need to continue to develop anti-fouling systems which are effective and environmentally safe and to promote the substitution of harmful systems by less harmful systems or preferably harmless systems,

HAVE AGREED as follows:

ARTICLE 1

General Obligations

(1) Each Party to this Convention undertakes to give full and complete effect to its provisions in order to reduce or eliminate adverse effects on the marine environment and human health caused by anti-fouling systems.

(2) The Annexes form an integral part of this Convention. Unless expressly provided otherwise, a reference to this Convention constitutes at the same time a reference to its Annexes.

(3) No provision of this Convention shall be interpreted as preventing a State from taking, individually or jointly, more stringent measures with respect to the reduction or elimination of adverse effects of anti-fouling systems on the environment, consistent with international law.

(4) Parties shall endeavour to co-operate for the purpose of effective implementation, compliance and enforcement of this Convention.

(5) The Parties undertake to encourage the continued development of anti-fouling systems that are effective and environmentally safe.

ARTICLE 2

Definitions

For the purposes of this Convention, unless expressly provided otherwise:

(1) “Administration” means the Government of the State under whose authority the ship is operating. With respect to a ship entitled to fly a flag of a State, the Administration is the Government of that State. With respect to fixed or floating platforms engaged in exploration and exploitation of the sea-bed and subsoil thereof adjacent to the coast over which the coastal State exercises sovereign rights for the purposes of exploration and exploitation of their natural resources, the Administration is the Government of the coastal State concerned.

(2) “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.

(3) "Committee" means the Marine Environment Protection Committee of the Organization.

(4) "Gross tonnage" means the gross tonnage calculated in accordance with the tonnage measurement regulations contained in Annex 1 to the International Convention on Tonnage Measurement of Ships, 1969, or any successor Convention.

(5) “International voyage” means a voyage by a ship entitled to fly the flag of one State to or from a port, shipyard, or offshore terminal under the jurisdiction of another State.

(6) “Length” means the length as defined in the International Convention on Load Lines, 1966, as modified by the Protocol of 1988 relating thereto, or any successor Convention.

(7) “Organization” means the International Maritime Organization.

(8) “Secretary-General” means the Secretary-General of the Organization.

(9) “Ship” means a vessel of any type whatsoever operating in the marine environment and includes hydrofoil boats, air-cushion vehicles, submersibles, floating craft, fixed or floating platforms, floating storage units (FSUs) and floating production storage and off-loading units (FPSOs).

(10) “Technical Group” is a body comprised of representatives of the Parties, Members of the Organization, the United Nations and its Specialized Agencies, intergovernmental organizations having agreements with the Organization, and non-governmental organizations in consultative status with the Organization, which should preferably include representatives of institutions and laboratories that engage in anti-fouling system analysis. These representatives shall have expertise in environmental fate and effects, toxicological effects, marine biology, human health, economic analysis, risk management, international shipping, anti-fouling systems coating technology, or other fields of expertise necessary to objectively review the technical merits of a comprehensive proposal.

ARTICLE 3

Application

(1) Unless otherwise specified in this Convention, this Convention shall apply to:

(a) ships entitled to fly the flag of a Party;

(b) ships not entitled to fly the flag of a Party, but which operate under the authority of a Party; and

(c) ships that enter a port, shipyard, or offshore terminal of a Party, but do not fall within subparagraph (a) or (b).

(2) This Convention shall not apply to any warships, naval auxiliary, or other ships owned or operated by a Party and used, for the time being, only on government non-commercial service.

However, each Party shall ensure, by the adoption of appropriate measures not impairing operations or operational capabilities of such ships owned or operated by it, that such ships act in a manner consistent, so far as is reasonable and practicable, with this Convention.

(3) With respect to the ships of non-Parties to this Convention, Parties shall apply the requirements of this Convention as may be necessary to ensure that no more favourable treatment is given to such ships.

ARTICLE 4

Controls on Anti-Fouling Systems

(1) In accordance with the requirements specified in Annex 1, each Party shall prohibit and/or restrict:

(a) the application, re-application, installation, or use of harmful anti-fouling systems on ships referred to in article 3(1)(a) or (b); and

(b) the application, re-application, installation or use of such systems, whilst in a Party's port, shipyard, or offshore terminal, on ships referred to in article 3(1)(c), and shall take effective measures to ensure that such ships comply with those requirements.

(2) Ships bearing an anti-fouling system which is controlled through an amendment to Annex 1 following entry into force of this Convention may retain that system until the next scheduled renewal of that system, but in no event for a period exceeding 60 months following application, unless the Committee decides that exceptional circumstances exist to warrant earlier implementation of the control.

ARTICLE 5

Controls of Annex 1 Waste Materials

Taking into account international rules, standards and requirements, a Party shall take appropriate measures in its territory to require that wastes from the application or removal of an anti-fouling system controlled in Annex 1 are collected, handled, treated and disposed of in a safe and environmentally sound manner to protect human health and the environment.

ARTICLE 6

Process for Proposing Amendments to Controls on Anti-Fouling Systems

(1) Any Party may propose an amendment to Annex 1 in accordance with this article.

(2) An initial proposal shall contain the information required in Annex 2, and shall be submitted to the Organization. When the Organization receives a proposal, it shall bring the proposal to the attention of the Parties, Members of the Organization, the United Nations and its Specialized Agencies, intergovernmental organizations having agreements with the Organization and non-governmental organizations in consultative status with the Organization and shall make it available to them.

(3) The Committee shall decide whether the anti-fouling system in question warrants a more in-depth review based on the initial proposal. If the Committee decides that further review is warranted, it shall require the proposing Party to submit to the Committee a comprehensive proposal containing the information required in Annex 3, except where the initial proposal also includes all the information required in Annex 3. Where the Committee is of the view that there is a threat of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason to prevent a decision to proceed with the evaluation of the proposal. The Committee shall establish a technical group in accordance with article 7.

(4) The technical group shall review the comprehensive proposal along with any additional data submitted by any interested entity and shall evaluate and report to the Committee whether the proposal has demonstrated a potential for unreasonable risk of adverse effects on non-target organisms or human health such that the amendment of Annex 1 is warranted. In this regard:

(a) The technical group's review shall include:

(i) an evaluation of the association between the anti-fouling system in question and the related adverse effects observed either in the environment or on human health, including, but not limited to, the consumption of affected seafood, or through controlled studies based on the data described

in Annex 3 and any other relevant data which come to light;

(ii) an evaluation of the potential risk reduction attributable to the proposed control measures and any other control measures that may be considered by the technical group;

(iii) consideration of available information on the technical feasibility of control measures and the cost-effectiveness of the proposal;

(iv) consideration of available information on other effects from the introduction of such control measures relating to:

- the environment (including, but not limited to, the cost of inaction and the impact on air quality);

- shipyard health and safety concerns (i.e. effects on shipyard workers);

- the cost to international shipping and other relevant sectors; and

(v) consideration of the availability of suitable alternatives, including a consideration of the potential risks of alternatives.

(b) The technical group's report shall be in writing and shall take into account each of the evaluations and considerations referred to in subparagraph (a), except that the technical group may decide not to proceed with the evaluations and considerations described in subparagraph (a)(ii) through (a)(v) if it determines after the evaluation in subparagraph (a)(i) that the proposal does not warrant further consideration.

(c) The technical group's report shall include, *inter alia,* a recommendation on whether international controls pursuant to this Convention are warranted on the anti-fouling system in question, on the suitability of the specific control measures suggested in the comprehensive proposal, or on other control measures which it believes to be more suitable.

Organization, the United Nations and its Specialized Agencies, intergovernmental organizations having agreements with the Organization and non-governmental organizations in consultative status with the Organization, prior to its consideration by the Committee. The Committee shall decide whether to approve any proposal to amend Annex 1, and any modifications thereto, if appropriate, taking into account the technical group's report. If the report finds a threat of serious or irreversible damage, lack of full scientific certainty shall not, itself, be used as a reason to prevent a decision from being taken to list an anti-fouling system in Annex 1. The proposed amendments to Annex 1, if approved by the Committee, shall be circulated in accordance with article 16(2)(a). A decision not to approve the proposal shall not preclude future submission of a new proposal with respect to a particular anti-fouling system if new information comes to light. (6) Only Parties may participate in decisions taken by the Committee described in paragraphs (3) and (5).

ARTICLE 7

Technical Groups

(1) The Committee shall establish a technical group pursuant to article 6 when a comprehensive proposal is received. In circumstances where several proposals are received concurrently or sequentially, the Committee may establish one or more technical groups as needed.

(2) Any Party may participate in the deliberations of a technical group, and should draw on the relevant expertise available to that Party.

(3) The Committee shall decide on the terms of reference, organization and operation of the technical groups. Such terms shall provide for protection of any confidential information that may be submitted. Technical groups may hold such meetings as required, but shall endeavour to conduct their work through written or electronic correspondence or other media as appropriate.

(4) Only the representatives of Parties may participate in formulating any recommendation to the Committee pursuant to article 6. A technical group shall endeavour to achieve unanimity among the representatives of the Parties. If unanimity is not possible, the technical group shall communicate any minority views of such representatives.

ARTICLE 8

Scientific and Technical Research and Monitoring

(1) The Parties shall take appropriate measures to promote and facilitate scientific and technical research on the effects of anti-fouling systems as well as monitoring of such effects. In particular, such research should include observation, measurement, sampling, evaluation and analysis of the effects of anti-fouling systems.

(2) Each Party shall, to further the objectives of this Convention, promote the availability of relevant information to other Parties who request it on:

(a) scientific and technical activities undertaken in accordance with this Convention;

(b) marine scientific and technological programmes and their objectives; and

(c) the effects observed from any monitoring and assessment programmes relating to anti-fouling systems.

ARTICLE 9

Communication and Exchange of Information

(1) Each Party undertakes to communicate to the Organization:

(a) a list of the nominated surveyors or recognized organizations which are authorized to act on behalf of that Party in the administration of matters relating to the control of anti-fouling systems in accordance with this Convention for circulation to the Parties for the information of their officers. The Administration shall therefore notify the Organization of the specific responsibilities and conditions of the authority delegated to nominated surveyors or recognized organizations; and

(b) on an annual basis, information regarding any anti-fouling systems approved, restricted, or prohibited under its domestic law.

(2) The Organization shall make available, through any appropriate means, information communicated to it under paragraph (1).

(3) For those anti-fouling systems approved, registered or licensed by a Party, such Party shall either provide, or require the manufacturers of such anti-fouling systems to provide, to those Parties which request it, relevant information on which its decision was based, including information provided for in Annex 3, or other information suitable for making an appropriate evaluation of the anti-fouling system. No information shall be provided that is protected by law.

ARTICLE 10

Survey and Certification

A Party shall ensure that ships entitled to fly its flag or operating under its authority are surveyed and certified in accordance with the regulations in Annex 4.

ARTICLE 11

Inspections of Ships and Detection of Violations

(1) A ship to which this Convention applies may, in any port, shipyard, or offshore terminal of a Party, be inspected by officers authorized by that Party for the purpose of determining whether the ship is in compliance with this Convention. Unless there are clear grounds for believing that a ship is in violation of this Convention, any such inspection shall be limited to:

(a) verifying that, where required, there is onboard a valid International Anti-fouling System Certificate or a Declaration on Anti-fouling System; and/or

(b) a brief sampling of the ship's anti-fouling system that does not affect the integrity, structure, or operation of the anti-fouling system taking into account guidelines developed by the Organization.* However, the time required to process the results of such sampling shall not be used as a basis for preventing the movement and departure of the ship.

(2) If there are clear grounds to believe that the ship is in violation of this Convention, a thorough inspection may be carried out taking into account guidelines developed by the Organization.*

* Guidelines to be developed.

(3) If the ship is detected to be in violation of this Convention, the Party carrying out the inspection may take steps to warn, detain, dismiss, or exclude the ship from its ports. A Party taking such action against a ship for the reason that the ship does not comply with this Convention shall immediately inform the Administration of the ship concerned.

(4) Parties shall co-operate in the detection of violations and the enforcement of this Convention. A Party may also inspect a ship when it enters the ports, shipyards, or offshore terminals under its jurisdiction, if a request for an investigation is received from any Party, together with sufficient evidence that a ship is operating or has operated in violation of this Convention. The report of such investigation shall be sent to the Party requesting it and to the competent authority of the Administration of the ship concerned so that the appropriate action may be taken under this Convention.

ARTICLE 12

Violations

(1) Any violation of this Convention shall be prohibited and sanctions shall be established therefor under the law of the Administration of the ship concerned wherever the violation occurs. If the Administration is informed of such a violation, it shall investigate the matter and may request the reporting Party to furnish additional evidence of the alleged violation. If the Administration is satisfied that sufficient evidence is available to enable proceedings to be brought in respect of the alleged violation, it shall cause such proceedings to be taken as soon as possible, in accordance with its laws. The Administration shall promptly inform the Party that reported the alleged violation, as well as the Organization, of any action taken. If the Administration has not taken any action within one year after receiving the information, it shall so inform the Party which reported the alleged violation.

(2) Any violation of this Convention within the jurisdiction of any Party shall be prohibited and sanctions shall be established therefor under the law of that Party. Whenever such a violation occurs, that Party shall either:

(a) cause proceedings to be taken in accordance with its law; or

(b) furnish to the Administration of the ship concerned such information and evidence as may be in its possession that a violation has occurred.

(3) The sanctions established under the laws of a Party pursuant to this article shall be adequate in severity to discourage violations of this Convention wherever they occur.

ARTICLE 13

Undue Delay or Detention of Ships

(1) All possible efforts shall be made to avoid a ship being unduly detained or delayed under article 11 or 12.

(2) When a ship is unduly detained or delayed under article 11 or 12, it shall be entitled to compensation for any loss or damage suffered.

ARTICLE 14

Dispute Settlement

Parties shall settle any dispute between them concerning the interpretation or application of this Convention by negotiation, enquiry, mediation, conciliation, arbitration, judicial settlement, resort to regional agencies or arrangements, or other peaceful means of their own choice.

ARTICLE 15

Relationship to International Law of the Sea

Nothing in this Convention shall prejudice the rights and obligations of any State under customary international law as reflected in the United Nations Convention on the Law of the Sea.

ARTICLE 16

Amendments

(1) This Convention may be amended by either of the procedures specified in the following paragraphs.

(2) Amendments after consideration within the Organization:

(a) Any Party may propose an amendment to this Convention. A proposed amendment shall be submitted to the Secretary-General, who shall then circulate it to the Parties and Members of the Organization at least six months prior to its consideration. In the case of a proposal to amend Annex 1, it shall be processed in accordance with article 6, prior to its consideration under this article.

(b) An amendment proposed and circulated as above shall be referred to the Committee for consideration. Parties, whether or not Members of the Organization, shall be entitled to participate in the proceedings of the Committee for consideration and adoption of the amendment.

(c) Amendments shall be adopted by a two-thirds majority of the Parties present and voting in the Committee, on condition that at least one-third of the Parties shall be present at the time of voting.

(d) Amendments adopted in accordance with subparagraph (c) shall be communicated by the Secretary-General to the Parties for acceptance.

(e) An amendment shall be deemed to have been accepted in the following circumstances:

(i) An amendment to an article of this Convention shall be deemed to have been accepted on the date on which two-thirds of the Parties have notified the Secretary-General of their acceptance of it.

(ii) An amendment to an Annex shall be deemed to have been accepted at the end of twelve months after the date of adoption or such other date as determined by the Committee. However, if by that date more than one-third of the Parties notify the Secretary-General that they object to the amendment, it shall be

deemed not to have been accepted.

(f) An amendment shall enter into force under the following conditions:

(i) An amendment to an article of this Convention shall enter into force for those Parties that have declared that they have accepted it six months after the date on which it is deemed to have been accepted in accordance with subparagraph (e)(i).

(ii) An amendment to Annex 1 shall enter into force with respect to all Parties six months after the date on which it is deemed to have been accepted, except for any Party that has:

(1) notified its objection to the amendment in accordance with subparagraph (e)(ii) and that has not withdrawn such objection;

(2) notified the Secretary-General, prior to the entry into force of such amendment, that the amendment shall enter into force for it only after a subsequent notification of its acceptance; or

(3) made a declaration at the time it deposits its instrument of ratification, acceptance or approval of, or accession to, this Convention that amendments to Annex 1 shall enter into force for it only after the notification to the Secretary-General of its acceptance with respect to such amendments.

(iii) An amendment to an Annex other than Annex 1 shall enter into force with respect to all Parties six months after the date on which it is deemed to have been accepted, except for those Parties that have notified their objection to the amendment in accordance with subparagraph (e)(ii) and that have not withdrawn such objection.

(g) (i) A Party that has notified an objection under subparagraph (f)(ii)(1) or (iii) may subsequently notify the Secretary-General that it accepts the amendment. Such amendment shall enter into force for such Party six months after the date of its notification of acceptance, or the date on which the amendment enters into force, whichever is the later date.

(ii) If a Party that has made a notification or declaration referred to in subparagraph (f)(ii)(2) or (3), respectively, notifies the Secretary-General of its acceptance with respect to an amendment, such amendment shall enter into force for such Party six months after the date of its notification of acceptance, or the date on which the amendment enters into force, whichever is the later date.

(3) Amendment by a Conference:

(a) Upon the request of a Party concurred in by at least one-third of the Parties, the Organization shall convene a Conference of Parties to consider amendments to this Convention.

(b) An amendment adopted by such a Conference by a two-thirds majority of the Parties present and voting shall be communicated by the Secretary-General to all Parties for acceptance.

(c) Unless the Conference decides otherwise, the amendment shall be deemed to have been accepted and shall enter into force in accordance with the procedures specified in paragraphs (2)(e) and (f) respectively of this article.

(4) Any Party that has declined to accept an amendment to an Annex shall be treated as a non-Party only for the purpose of application of that amendment.

(5) An addition of a new Annex shall be proposed and adopted and shall enter into force in accordance with the procedure applicable to an amendment to an article of this Convention.

(6) Any notification or declaration under this article shall be made in writing to the Secretary- General.

(7) The Secretary-General shall inform the Parties and Members of the Organization of:

(a) any amendment that enters into force and the date of its entry into force generally and for each Party; and

(b) any notification or declaration made under this article.

ARTICLE 17

Signature, Ratification, Acceptance, Approval and Accession

(1) This Convention shall be open for signature by any State at the Headquarters of the Organization from 1 February 2002 to 31 December 2002 and shall thereafter remain open for accession by any State.

(2) States may become Parties to this Convention by:

(a) signature not subject to ratification, acceptance, or approval; or

(b) signature subject to ratification, acceptance, or approval, followed by ratification, acceptance, or approval; or

(c) accession.

(3) Ratification, acceptance, approval, or accession shall be effected by the deposit of an instrument to that effect with the Secretary-General.

(4) If a State comprises two or more territorial units in which different systems of law are applicable in relation to matters dealt with in this Convention, it may at the time of signature, ratification, acceptance, approval, or accession declare that this Convention shall extend to all its territorial units or only to one or more of them and may modify this declaration by submitting another declaration at any time.

(5) Any such declaration shall be notified to the Secretary-General and shall state expressly the territorial units to which this Convention applies.

ARTICLE 18

Entry into force

(1) This Convention shall enter into force twelve months after the date on which not less than twenty-five States, the combined merchant fleets of which constitute not less than twenty-five percent of the gross tonnage of the world's merchant shipping, have either signed it without reservation as to ratification, acceptance or approval, or have deposited the requisite instrument of ratification, acceptance, approval or accession in accordance with article 17.

(2) For States which have deposited an instrument of ratification, acceptance, approval or accession in respect of this Convention after the requirements for entry into force thereof have been met, but prior to the date of entry in force, the ratification, acceptance, approval or accession shall take effect on the date of entry into force of this Convention or three months after the date of deposit of instrument, whichever is the later date.

(3) Any instrument of ratification, acceptance, approval or accession deposited after the date on which this Convention enters into force shall take effect three months after the date of deposit.

(4) After the date on which an amendment to this Convention is deemed to have been accepted under article 16, any instrument of ratification, acceptance, approval or accession deposited shall apply to the Convention as amended.

ARTICLE 19

Denunciation

(1) This Convention may be denounced by any Party at any time after the expiry of two years from the date on which this Convention enters into force for that Party.

(2) Denunciation shall be effected by the deposit of written notification with the Secretary- General, to take effect one year after receipt or such longer period as may be specified in that notification.

ARTICLE 20

Depositary

(1) This Convention shall be deposited with the Secretary-General, who shall transmit certified copies of this Convention to all States which have signed this Convention or acceded thereto.

(2) In addition to the functions specified elsewhere in this Convention, the Secretary-General shall:

(a) inform all States which have signed this Convention or acceded thereto of:

(i) each new signature or deposit of an instrument of ratification, acceptance, approval, or accession, together with the date thereof;

(ii) the date of entry into force of this Convention; and

(iii) the deposit of any instrument of denunciation of this Convention, together with the date on which it was received and the date on which the denunciation takes effect; and

(b) as soon as this Convention enters into force, transmit the text thereof to the Secretariat of the United Nations for registration and publication in accordance with Article 102 of the Charter of the United Nations.

ARTICLE 21

Languages

This Convention is established in a single original in the Arabic, Chinese, English, French, Russian and Spanish languages, each text being equally authentic.

IN WITNESS WHEREOF the undersigned being duly authorized by their respective Governments for that purpose have signed this Convention.

DONE AT LONDON, this fifth day of October, two thousand and one.

* * *

ANNEX 1

CONTROLS ON ANTI-FOULING SYSTEMS

Anti-fouling system	Control measures	Application	Effective date
Organotin compounds which act as biocides in anti-fouling systems	Ships shall not apply or re-apply such compounds	All ships	1 January 2003
Organotin compounds which act as biocides in anti-fouling systems	Ships either: (1) shall not bear such compounds on their hulls or external parts or surfaces; or (2) shall bear a coating that forms a barrier to such compounds leaching from the underlying non-compliant anti-fouling systems	All ships (except fixed and floating platforms, FSUs, and FPSOs that have been constructed prior to 1 January 2003 and that have not been in dry-dock on or after 1 January 2003)	1 January 2008

ANNEX 2

REQUIRED ELEMENTS FOR AN INITIAL PROPOSAL

(1) An initial proposal shall include adequate documentation containing at least the following:

(a) identification of the anti-fouling system addressed in the proposal: name of the anti-fouling system; name of active ingredients and Chemical Abstract Services Registry Number (CAS number), as applicable; or components of the system which are suspected of causing the adverse effects of concern;

(b) characterization of the information which suggests that the anti-fouling system or its transformation products may pose a risk to human health or may cause adverse effects in non-target organisms at concentrations likely to be found in the environment (e.g., the results of toxicity studies on representative species or bioaccumulation data);

(c) material supporting the potential of the toxic components in the anti-fouling system, or its transformation products, to occur in the environment at concentrations which could result in adverse effects to non-target organisms, human health, or water quality (e.g., data on persistence in the water column, sediments and biota; the release rate of toxic components from treated surfaces in studies or under actual use conditions; or monitoring data, if available);

(d) an analysis of the association between the anti-fouling system, the related adverse effects and the environmental concentrations observed or anticipated; and

(e) a preliminary recommendation on the type of restrictions that could be effective in reducing the risks associated with the anti-fouling system.

(2) An initial proposal shall be submitted in accordance with rules and procedures of the Organization.

REQUIRED ELEMENTS OF A COMPREHENSIVE PROPOSAL

(1) A comprehensive proposal shall include adequate documentation containing the following:

(a) developments in the data cited in the initial proposal;

(b) findings from the categories of data set out in paragraphs (3)(a), (b) and (c), as applicable, depending on the subject of the proposal and the identification or description of the methodologies under which the data were developed;

(c) a summary of the results of studies conducted on the adverse effects of the anti-fouling system;

(d) if any monitoring has been conducted, a summary of the results of that monitoring, including information on ship traffic and a general description of the area monitored;

(e) a summary of the available data on environmental or ecological exposure and any estimates of environmental concentrations developed through the application of mathematical models, using all available environmental fate parameters, preferably those which were determined experimentally, along with an identification or description of the modelling methodology;

(f) an evaluation of the association between the anti-fouling system in question, the related adverse effects and the environmental concentrations, either observed or expected;

(g) a qualitative statement of the level of uncertainty in the evaluation referred to in subparagraph (f);

(h) a recommendation of specific control measures to reduce the risks associated with the anti-fouling system; and

(i) a summary of the results of any available studies on the potential effects of the recommended control measures relating to air quality, shipyard conditions, international shipping and other relevant sectors, as well as the availability of suitable alternatives.

(2) A comprehensive proposal shall also include information on each of the following physical and chemical properties of the component(s) of concern, if applicable:

- melting point;
- boiling point;
- density (relative density);
- vapour pressure;
- water solubility / pH / dissociation constant (pKa);
- oxidation/reduction potential;
- molecular mass;
- molecular structure; and
- other physical and chemical properties identified in the initial proposal.

(3) For the purposes of paragraph (1)(b) above, the categories of data are:

(a) Data on environmental fate and effect:

- modes of degradation/dissipation (e.g., hydrolysis/photodegradation/ biodegradation);
- persistence in the relevant media (e.g., water column/sediments/biota);
- sediments/water partitioning;
- leaching rates of biocides or active ingredients;
- mass balance;
- bioaccumulation, partition coefficient, octanol/water coefficient; and
- any novel reactions on release or known interactive effects.

(b) Data on any unintended effects in aquatic plants, invertebrates, fish, seabirds, marine mammals, endangered species, other biota, water quality, the seabed, or habitat of non-target organisms, including sensitive and representative organisms:

- acute toxicity;
- chronic toxicity;
- developmental and reproductive toxicity;
- endocrine disruption;
- sediment toxicity;

- bioavailability/biomagnification/bioconcentration;
- food web/population effects;
- observations of adverse effects in the field/fish kills/ strandings/ tissue analysis; and
- residues in seafood.

These data shall relate to one or more types of non-target organisms such as aquatic plants, invertebrates, fish, birds, mammals and endangered species.

(c) Data on the potential for human health effects (including, but not limited to, consumption of affected seafood).

(4) A comprehensive proposal shall include a description of the methodologies used, as well as any relevant measures taken for quality assurance and any peer review conducted of the studies.

* * *

ANNEX 4

SURVEYS AND CERTIFICATION REQUIREMENTS FOR ANTI-FOULING SYSTEMS

REGULATION 1

Surveys

(1) Ships of 400 gross tonnage and above referred to in article 3(1)(a) engaged in international voyages, excluding fixed or floating platforms, FSUs, and FPSOs, shall be subject to surveys specified below:

(a) an initial survey before the ship is put into service or before the International Antifouling System Certificate (Certificate) required under regulation 2 or 3 is issued for the first time; and

(b) a survey when the anti-fouling systems are changed or replaced. Such surveys shall be endorsed on the Certificate issued under regulation 2 or 3.

(2) The survey shall be such as to ensure that the ship's anti-fouling system fully complies with this Convention.

(3) The Administration shall establish appropriate measures for ships that are not subject to the provisions of paragraph (1) of this regulation in order to ensure that this Convention is complied with.

(4) (a) As regards the enforcement of this Convention, surveys of ships shall be carried out by officers duly authorized by the Administration or as provided in regulation 3(1), taking into account guidelines for surveys developed by the Organization*. Alternatively, the Administration may entrust surveys required by this Convention either to surveyors nominated for that purpose or to organizations recognized by it.

(b) An Administration nominating surveyors or recognizing organizations** to conduct surveys shall, as a minimum, empower any nominated surveyor or recognized organization to:

(i) require a ship that it surveys to comply with the provisions of Annex 1; and

(ii)carry out surveys if requested by the appropriate authorities of a port State that is a Party to this Convention.

(c) When the Administration, a nominated surveyor, or a recognized organization determines that the ship's anti-fouling system does not conform either to the particulars of a Certificate required under regulation 2 or 3, or to the requirements of this Convention, such Administration, surveyor or organization shall immediately ensure that corrective action is taken to bring the ship into compliance. A surveyor or organization shall also in due course notify the Administration of any such determination. If the required corrective action is not taken, the Administration shall be notified forthwith and it shall ensure that the Certificate is not issued or is withdrawn as appropriate.

* Guidelines to be developed.

** Refer to the guidelines adopted by the Organization by resolution A.739(18), as may be amended by the Organization, and the specifications adopted by the Organization by resolution A.789(19), as may be amended by the Organization.

(d) In the situation described in subparagraph (c), if the ship is in the port of another Party, the appropriate authorities of the port State shall be notified forthwith. When the Administration, a nominated surveyor, or a recognized organization has notified the appropriate authorities of the port State, the Government of the port State concerned shall give such Administration, surveyor, or organization any necessary assistance to carry out their obligations under this regulation, including any action described in article 11 or 12.

REGULATION 2

Issue or Endorsement of an International Anti-fouling System Certificate

(1) The Administration shall require that a ship to which regulation 1 applies is issued with a Certificate after successful completion of a survey in accordance with regulation 1. A Certificate issued under the authority of a Party shall be accepted by the other Parties and regarded for all purposes covered by this Convention as having the same validity as a Certificate issued by them.

(2) Certificates shall be issued or endorsed either by the Administration or by any person or organization duly authorized by it. In every case, the Administration assumes full responsibility for the Certificate.

(3) For ships bearing an anti-fouling system controlled under Annex 1 that was applied before the date of entry into force of a control for such a system, the Administration shall issue a Certificate in accordance with paragraphs (2) and (3) of this regulation not later than two years after entry into force of that control. This paragraph shall not affect any requirement for ships to comply with Annex 1.

(4) The Certificate shall be drawn up in the form corresponding to the model given in Appendix 1 to this Annex and shall be written at least in English, French, or Spanish. If an official language of the issuing State is also used this shall prevail in the case of the dispute or discrepancy.

REGULATION 3

Issue or Endorsement of an International Anti-fouling System Certificate by Another Party

(1) At the request of the Administration, another Party may cause a ship to be surveyed and, if satisfied that this Convention has been complied with, it shall issue or authorize the issue of a Certificate to the ship and, where appropriate, endorse or authorize the endorsement of that Certificate for the ship, in accordance with this Convention.

(2) A copy of the Certificate and a copy of the survey report shall be transmitted as soon as possible to the requesting Administration.

(3) A Certificate so issued shall contain a statement that it has been issued at the request of the Administration referred to in paragraph (1) and it shall have the same force and receive the same recognition as a Certificate issued by the Administration.

(4) No Certificate shall be issued to a ship which is entitled to fly the flag of a State which is not a Party.

REGULATION 4

Validity of an International Anti-fouling System Certificate

(1) A Certificate issued under regulation 2 or 3 shall cease to be valid in either of the following cases:

(a) if the anti-fouling system is changed or replaced and the Certificate is not endorsed in accordance with this Convention; and

(b) upon transfer of the ship to the flag of another State. A new Certificate shall only be issued when the Party issuing the new Certificate is fully satisfied that the ship is in compliance with this Convention. In the case of a transfer between Parties, if requested within three months after the transfer has taken place, the Party whose flag the ship was formerly entitled to fly shall, as soon as possible, transmit to the Administration a copy of the Certificates carried by the ship before the transfer and, if available, a copy of the relevant survey reports.

(2) The issue by a Party of a new Certificate to a ship transferred from another Party may be based on a new survey or on a valid Certificate issued by the previous Party whose flag the ship was entitled to fly.

REGULATION 5

Declaration on Anti-fouling System

(1) The Administration shall require a ship of 24 meters or more in length, but less than 400 gross tonnage engaged in international voyages and to which article 3(1)(a) applies (excluding fixed or floating platforms, FSUs, and FPSOs) to carry a Declaration signed by the owner or owner's authorized agent. Such Declaration shall be accompanied by appropriate documentation (such as a paint receipt or a contractor invoice) or contain appropriate endorsement.

(2) The Declaration shall be drawn up in the form corresponding to the model given in Appendix 2 to this Annex and shall be written at least in English, French, or Spanish. If an official language of the State whose flag the ship is entitled to fly is also used, this shall prevail in the case of a dispute or discrepancy.

APPENDIX 1 TO ANNEX 4

MODEL FORM OF INTERNATIONAL ANTI-FOULING SYSTEM CERTIFICATE

INTERNATIONAL ANTI-FOULING SYSTEM CERTIFICATE

(This certificate shall be supplemented by a Record of Anti-fouling System)

(Official seal) (State)

Issued under the

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

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 ship[1]

Name of ship.....

Distinctive number or letters.....

Port of registry.....

Gross tonnage.....

IMO Number[2].....

An anti-fouling system controlled under Annex 1 has not been applied during or after construction of this ship...…….....

An anti-fouling system controlled under Annex 1 has been applied on this ship previously, but has been removed by …… (insert name of the facility) on …. (date) …….....

An anti-fouling system controlled under Annex 1 has been applied on this ship previously, but has been covered with a sealer coat applied by …… (insert name of the facility) ……on……....(date)……....….

An anti-fouling system controlled under Annex 1 was applied on this ship prior to…. (date)[3], but must be removed or covered with a sealer coat prior to ……..(date) [4].……

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

2 In accordance with the IMO Ship Identification Number Scheme adopted by the Organization with Assembly resolution A.600 (15).

3 Date of entry into force of the control measure.

4 Date of expiration of any implementation period specified in article 4(2) or Annex 1.

THIS IS TO CERTIFY THAT:

1 the ship has been surveyed in accordance with regulation 1 of Annex 4 to the Convention; and

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

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

(Date of issue) (Signature of authorized official issuing the Certificate)

Date of completion of the survey
on which this certificate is issued: ……..

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(ies) and facility(ies)/location(s) where applied .....
.....
Name(s) of anti-fouling system manufacturer(s).....
.....
Name(s) and colour(s) of anti-fouling system(s).....
.....
Active ingredient(s) and their Chemical Abstract Services Registry Number(s) (CAS number(s))
.....
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)
…… .....
(Date of issue) (Signature of authorized official issuing the record)

Endorsement of the Records[5]

THIS IS TO CERTIFY that a survey required in accordance with regulation 1(1)(b) of Annex 4 to the Convention found that the ship was in compliance with the Convention

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(ies) and facility(ies) location(s) where applied.....
.....
Name(s) of anti-fouling system(s) manufacturer(s).....
.....
Name(s) and colour(s) of anti-fouling system(s).....
.....
Active ingredient(s) and their Chemical Abstract Services Registry Number(s) (CAS number(s)) .....
…….....
Type(s) of sealer coat, if applicable …….....

Name(s) and colour(s) of sealer coat applied, if applicable
…….....
Date of application of sealer coat …….....

Signed:.....
(Signature of authorized official issuing the Record)

Place: .....

Date6: .....

(Seal or stamp of the authority)

5 This page of the Record shall be reproduced and added to the Record as considered necessary by the Administration.
6 Date of completion of the survey on which this endorsement is made.

APPENDIX 2 TO ANNEX 4

MODEL FORM OF DECLARATION ON ANTI-FOULING SYSTEM

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*)*