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

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Mr. DODD, from the Committee on Foreign Relations, submitted the following

REPORT

[To accompany Treaty Doc. 110–13]

The Committee on Foreign Relations, to which was referred the International Convention on the Control of Harmful Anti-Fouling Systems on Ships, adopted on October 5, 2001 and signed by the United States on December 12, 2002 (the "Convention") (Treaty Doc. 110–13), having considered the same, reports favorably thereon with two declarations, as indicated in the resolution of advice and consent, and recommends that the Senate give its advice and consent to ratification thereof, as set forth in this report and the accompanying resolution of advice and consent.

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I. PURPOSE

The purpose of the Convention is to control the adverse effects of anti-fouling systems that have an impact on the marine environment and human health, and to encourage the continued development of anti-fouling systems that are effective and environmentally safe. An anti-fouling system is any surface treatment, paint, surface, or device that is used to prevent the growth of marine organisms, such as algae and barnacles, on the hull of a ship.

II. BACKGROUND

In the 1960s, organotin-based anti-fouling systems with Tributyltin (TBT) (a biocide)[1] were introduced to the shipping industry. By the late 1960s, a breakthrough in anti-fouling systems came in the form of "self-polishing" or "ablative" TBT-based paints, which controlled the release rate of the biocide over the life of the paint so that ships could go for several years between hull recoatings. By the 1970s, TBT-based anti-fouling paints were widely used, not only on pleasure craft, but also on large ocean-going vessels.[2] These systems are generally used to keep the hulls of ships smooth and free of "fouling" or hull-borne species that would otherwise reduce the maximum speed of a vessel and increase fuel consumption.

Researchers found, however, that TBT in the marine environment was not only killing hull-borne species, it was also killing sea life in the water.[3] Studies revealed high concentrations of TBT in shellfish and accumulations in fish and sea mammals, causing shell deformations in oysters, sex changes and sterility in certain mollusks, and various alternative adverse affects on other marine life. There was further evidence that TBT was entering the food chain and might therefore adversely affect human health.

Congress recognized the harmful effects of organotin compounds in anti-fouling systems on marine and freshwater organisms in 1988 and enacted legislation intended to protect the aquatic environment by restricting the use of such systems.[4] In 1990, the International Maritime Organization's Marine Environmental Protection Committee (MEPC) adopted a resolution which recommended that governments adopt measures to control the potential for adverse impacts on the marine environment from the use of anti-fouling paint containing TBT and, as an interim measure, to specifically consider eliminating the use of such anti-fouling paint on non-aluminum hulled vessels of less than 25 meters in length and the use of anti-fouling paints with a leaching rate of more than four microgrammes of TBT per day, which was consistent with U.S. law.[5] In November 1999, the International Maritime Organization (IMO) adopted an Assembly resolution that called for a legally-binding treaty that would address the harmful effects of anti-fouling systems used on ships. This resolution led to the Anti-Fouling Convention, which was adopted by the IMO on October 5, 2001. The United States played a leading role in the negotiation of the Convention and signed it on December 12, 2002.

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[1] TBT is an organotin that is a biocide. The most common organometallics used in anti-fouling paint are TBT oxide and TBT methacrylate.

[2] *Slick Alternatives: Silicone-based fouling release systems gain in popularity,* MARINE LOG (March 2007), p. 31 (noting that "[b]y the 1970s, TBT-containing anti-fouling paint was used on the hulls of most of the world's oceangoing ships").

[3] A publication by the Environmental Protection Agency, which goes into considerable detail regarding the damage that TBT causes to the marine environment, noted that "[TBT] is a problem in the aquatic environment because it is extremely toxic to non-target organisms, is linked to imposex and immuno-supression in snails and bivalves, and can be persistent." *See* Ambient Aquatic Life Water Quality Criteria for Tributyltin (TBT) final, Office of Water, 4304T, EPA-822-R-03–031, December 2003, Executive Summary. The publication goes on to cite a number of technical review papers that cover the hazards of TBT in the aquatic environment at page 2.

[4] *See* Section 2 of P. L. 100–333 (signed into law on June 16, 1988); the Organotin Anti-Fouling Paint Control Act of 1988 (OAPCA), 33 U.S.C. §§ 2401–2410.

[5] The United States was already doing this pursuant to OAPCA.

Over the last several years, the Environmental Protection Agency (EPA) has been working to phase out the use of TBT as an anti-fouling coating on ships in the United States. The EPA has achieved this by, for example, canceling registrations for TBT anti-fouling systems permitted under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).[6] Administration officials have informed the committee that as of December 1, 2005, the last FIFRA registration for a TBT anti-fouling system to be used on the hulls of ships and boats was cancelled, giving the registrant until December 31, 2005, to sell any existing stock of its product produced before December 1, 2005. Beyond December 31, 2005, the registrant could no longer legally sell or distribute the product. Since the functional shelf-life of TBT anti-fouling systems is limited, administration officials testified that significant use of such systems at this time "seems unlikely." Nevertheless, TBT-based paints continue to be applied to ships in countries that have not prohibited TBT use. In testimony before the committee, administration officials stated that "TBT-based systems are still produced in Asia, particularly Southeast Asia and Korea . . . ." Under the treaty, however, ships using TBT paints in violation of the Convention's requirements would not be allowed into U.S. ports, shipyards, or offshore terminals.

To mitigate the damaging impact of these anti-fouling systems, the Convention: 1) requires Parties to prohibit the use of anti-fouling systems containing organotin compounds acting as biocides (if not properly sealed) on ships that fly their flag or operate under their authority and provides for prohibiting ships that use such systems from entering Parties' ports, shipyards, or offshore terminals; 2) requires Parties to take appropriate measures to safely and in an environmentally sound manner collect, handle, treat, and dispose of wastes resulting from the application or removal of controlled anti-fouling systems; 3) provides a procedure through which new, harmful anti-fouling systems can be added to the prohibited list in Annex 1 in the future, after a comprehensive and technical review process; 4) obligates Parties to take appropriate measures to promote and facilitate scientific and technical research, as well as share information, regarding anti-fouling systems; and 5) addresses the inspection of ships to determine compliance with the Convention and requires Parties to establish sanctions for violations that are "adequate in severity to discourage violations" of the Convention.

The coatings industry has developed alternatives that do not contain TBT. Some of these coatings are silicone-based. They are "super slick" coatings that prevent any organisms from attaching to the hull when the ship is moving.[7] Because they have a lower tension surface, a side benefit is that the silicone-based coatings make the ship more fuel efficient. Some ships may choose to first remove the existing coating that contains TBT before applying a coating that is TBT-free, but it is more likely that ships will first apply a sealant to the existing coating to prevent leaching of the harmful compounds into the water and then apply a TBT-free coating, which is an alternative provided for in the Anti-Fouling Con-

[6] 7 U.S.C. § 136 *et seq.*

[7] *Slick Alternatives: Silicone-based fouling release systems gain in popularity,* MARINE LOG (March 2007), p. 31.

vention. For structures that do not move through the water, such as buoys, a "prickly" coating has been developed that keeps organisms from attaching.

The ratification of this treaty is favored not only by the administration and environmental organizations, but also by the shipping industry and major manufacturers and importers of anti-fouling systems. Industry participated in discussions that led to the Convention. At the IMO, the International Chamber of Shipping, for example, "urged the Marine industry to follow the dates in the Convention and requested that Governments control the manufacture of TBT antifoulings in support of the dates for the TBT ban."[8] In testimony before the committee on July 10, 2008, Ambassador David Balton noted that "the U.S. anti-fouling paint industry favors this Convention. Why? Because it promotes a single regulatory program for all countries that will likely increase the use of environmentally friendly anti-foulants that they, the U.S. industry, have developed. U.S. shipyards are also interested in the single international standard because it provides a more level playing field as between them and shipyards in other countries."

III. MAJOR PROVISIONS

A detailed article-by-article analysis of the Convention may be found in the Letter of Submittal from the Secretary of State to the President, which is reprinted in full in Treaty Document 110–13. A summary of key provisions is set forth below.

Prohibitions on Harmful Anti-Fouling Systems

Article 4 requires each Party to "prohibit and/or restrict" the application, re-application, installation, or use of the anti-fouling systems listed in Annex 1 on ships that fly its flag or operate under its authority, as well as on ships that enter its ports, shipyards, or offshore terminals. Specifically, the Convention prohibits the presence on ships' hulls of anti-fouling systems that contain organotin compounds acting as biocides, unless the compounds have been sealed so that no leaching occurs. The United States would implement such obligations through new implementing legislation.

The Handling of Waste Resulting from the Application or Removal of Harmful Anti-Fouling Systems

Article 5 requires Parties to take "appropriate measures" within their territory to require that wastes from the application or removal of an anti-fouling system that contains organotin compounds acting as biocides are collected, handled, treated, and disposed of in a safe and environmentally sound manner to protect human health and the environment. The United States would implement this obligation through existing legislation. Specifically, certain wastes generated during the application and removal of anti-fouling paints may be considered hazardous wastes, due to their solvent and/or active ingredient content. Hazardous wastes are subject to Solid Waste Disposal Act requirements, including those addressing generation, transportation, treatment, storage, and dis-

[8] IMO TBT Antifouling Ban—Account of discussions at IMO-MEPC47 (4–8 March 2002) and Summary of Reaction to IMO Antifouling Systems Convention (IMO-AFS) available at http://www.intersmoothspc.com/environment/Interswift _IMO.PDF.

posal.[9] In addition, section 301(a) of the Clean Water Act regulates the discharge of pollutants into the waters of the United States. Discharges from industrial facilities such as shipyards and drydocks may be subject to permitting under the Clean Water Act. Such permits would establish technology-based effluent limits for discharges of pollutants from such facilities and, where necessary, any more stringent limits needed to achieve applicable water quality standards adopted by States or the EPA under the Clean Water Act.[10]

New Anti-Fouling Systems That Are Deemed Harmful Can Be Restricted Through the Convention

Article 6 provides a mechanism for adding new anti-fouling systems to the list of controlled anti-fouling systems in Annex 1 if, after a comprehensive review process, such systems are determined to pose a potential for unreasonable risk of adverse effects on nontarget organisms or human health. The Convention provides that the standing IMO Marine Environment Protection Committee would review such proposals. The United States has a permanent seat on the IMO Marine Environment Protection Committee by virtue of U.S. membership in the IMO and would therefore participate in this process, regardless of whether the United States joins the Anti-Fouling Convention.[11] Nevertheless, it is necessary to be a Party to the Convention in order to have an effective voice in many of the decisions.

If representatives of the Parties to the Convention sitting on the IMO Marine Environment Protection Committee decide that a more in-depth review is warranted, a technical group is established in accordance with Article 7 of the Convention to review the system.[12] The technical group would ultimately report back to, among others, the Parties, the IMO, and the Committee. The Committee would then decide whether to approve any proposal to amend Annex 1 of the Convention, but only representatives of the Parties to the Convention sitting on the Committee could participate in making this decision. Ultimately, each Party decides through the amendment process set forth in Article 16 whether it wishes to be bound by the amended annex, as described further below.

Section 10 of the proposed Anti-Fouling System Control Act, which has been submitted by the executive branch to Congress to implement the Convention, includes proposed rules to govern U.S. participation in the treaty mechanism provided for in Article 6 for adding new anti-fouling systems to Annex 1. Among other things, the legislation provides that "[u]pon referral of any anti-fouling system to the technical group . . . for consideration of new or additional controls, the Secretary of State shall convene a public meeting of the Shipping Coordinating Committee, for the purpose of re-

[9] *See* 42 U.S.C. §§ 6922, 6923, and 6924.

[10] *See* 33 U.S.C. §§ 1292 and 1311.

[11] In accordance with Article 37 of the Convention on the International Maritime Organization, the Marine Environment Protection Committee shall consist of all the Members. The United States became a Member of the IMO in 1950 and according to testimony from the executive branch, the United States plays a "strong and active role in this Committee."

[12] Article 6(6) makes it clear that "[o]nly Parties may participate in decisions taken by the committee described in paragraphs (3) and (5)," and the decision as to whether a more in-depth review is warranted, is one that is covered in paragraph 3 and thus only Parties to the Convention sitting on the committee may participate.

ceiving information and comments regarding controls on such anti-fouling system."

Research and Technical Cooperation Regarding Anti-Fouling Systems

Article 8 requires Parties to take "appropriate measures" to promote and facilitate scientific and technical research on the impact of anti-fouling systems on the environment. In addition, Article 8 also requires Parties to take "appropriate measures" to monitor the impact of anti-fouling systems and promotes the sharing of information between Parties on such things as scientific and technical activities undertaken in accordance with the Convention and other information regarding anti-fouling.

Section 11 of the proposed Anti-Fouling System Control Act would implement this article by providing the EPA and the National Oceanic and Atmospheric Administration (NOAA) with the authority to "undertake scientific and technical research and monitoring pursuant to Article 8 . . . ." In addition, the Navy continues to research alternative anti-fouling systems that do not contain organotin, NOAA currently conducts monitoring of TBT concentrations as part of its "Mussel Watch" program, and the EPA generally requires research on the ecological effects of biocidal anti-fouling systems as a condition of their registration under FIFRA.[13]

Certifying and Inspecting Ships, and Establishing Sanctions for Violations to Ensure Compliance

Article 10, in conjunction with Annex 4, requires a Party to ensure that certain ships entitled to fly that Party's flag or operate under its authority are surveyed and certified to ensure that each ship's anti-fouling system fully complies with the Convention. Article 11 provides that a ship to which the Convention applies may be inspected in any port, shipyard, or offshore terminal of a Party. Unless there are clear grounds for believing that a ship is in violation of the Convention, the inspection is to be limited to: 1) verifying that, where required, there is a valid onboard International Anti-fouling System Certificate or a Declaration on the Anti-Fouling System; and/or 2) a brief sampling of the ship's anti-fouling system, taking into account guidelines developed by the IMO. If there are clear grounds to believe that the ship is in violation of the Convention, a thorough inspection may be carried out, again taking into account IMO guidelines. Copies of these guidelines can be found in Annex II of this report. Further, Article 11 provides that a Party may take steps to warn, detain, dismiss, or exclude from its ports a ship that is "detected to be in violation" of the Convention. Article 3, however, exempts warships, naval auxiliaries, and other ships owned or operated by a Party and used in governmental non-commercial service from the application of these (and other) provisions. Finally, Article 12 requires Parties to prohibit any violations of the Convention and to establish sanctions under domestic law "adequate in severity to discourage" such violations. The proposed Anti-Fouling System Control Act would implement these requirements.

[13] *See* the Secretary of State's Letter of Submittal at VIII.

Dispute Resolution

Article 14 of the Convention, provides that Parties shall settle any disputes concerning the interpretation or application of the Convention by peaceful means of their own choice, which may include, inter alia, mediation, conciliation, or negotiation.

IV. Entry Into Force

With Panama's ratification of the Convention on September 17, 2007, 25 States representing over 25 percent of the world's merchant shipping tonnage have now ratified the Convention and thus, in accordance with Article 18(1), the Convention will enter into force on September 17, 2008, for those States that have ratified the Convention. The Convention will enter into force for the United States three months after the date the United States deposits its instrument of ratification with the Secretary-General of the IMO.

V. Implementing Legislation

Existing law, including the Solid Waste Disposal Act[14] and the Clean Water Act,[15] would be relied upon to implement aspects of this Convention; however, further legislation would be needed to allow the United States to comply with all of the Convention's obligations. Organotin-based anti-fouling systems are already regulated through OAPCA; however, the Act does not satisfy all of the Convention's requirements. For example, OAPCA only prohibits use of organotin-based anti-fouling paints on vessels under 25 meters in length (excluding aluminum hulls, outboard motors, and external drive units), while the Convention applies restrictions on the use of organotin-based anti-fouling systems more broadly, without regard to the length of a ship. On February 14, 2008, the executive branch submitted to Congress proposed legislation titled the "Anti-Fouling System Control Act," which would replace OAPCA in its entirety and fully implement the Convention. The committee understands that the United States will not deposit its instrument of ratification until the legislation necessary to allow the United States to fully implement the Convention's obligations has been enacted.

VI. Committee Action

The committee held a public hearing on the Convention on July 10, 2008. Testimony was received from Ambassador David A. Balton, Deputy Assistant Secretary of State for Oceans and Fisheries. A transcript of this hearing can be found in Annex II to Executive Report 110–15.

On July 29, 2008, the committee considered the Convention and ordered it favorably reported by voice vote, with a quorum present and without objection.

VII. Committee Recommendation and Comments

The Committee on Foreign Relations believes that the Convention would serve to protect the U.S. marine environment and U.S.

[14] 42 U.S.C. § 6901 *et seq.*
[15] 33 U.S.C. § 1251 *et seq.*

ecosystems from the harmful effects of anti-fouling systems and in particular the hazardous leaching of organotin, a well-known biocide, in our ports and other waters. U.S. ratification and enactment of the proposed implementing legislation would together require foreign vessels entering U.S. ports, shipyards, or offshore terminals to stop using harmful anti-foulants containing organotins. Moreover, given that the United States has already implemented prohibitions against organotin use, widespread ratification of the Convention will help to create a level playing field for the U.S. anti-fouling paint industry. Finally, joining the Convention would permit the United States to participate in decisions on the inclusion of other harmful anti-fouling systems in the future. Accordingly, the committee urges the Senate to act promptly to give advice and consent to ratification of the Convention, as set forth in this report and the accompanying resolution of advice and consent.

A. AMENDMENTS TO THE ANNEXES

Article 16 of the Convention sets forth procedures for amending the Convention and its annexes. There are four annexes to the convention: Annex 1—*Controls on anti-fouling systems;* Annex 2—*Required elements for an initial proposal;* Annex 3—*Required elements of a comprehensive proposal;* and Annex 4—*Surveys and certification requirements for anti-fouling systems.* In general, amendments to the Convention, including its annexes, are adopted by a two-thirds majority of the Parties present and voting. Amendments to the body of the Convention must be individually approved by each Party in order for them to enter into force for the approving Party. For amendments to an Annex other than Annex 1 of the Convention, Parties have a twelve-month period (unless the IMO Marine Environment Protection Committee decides on a different time period) after adoption, during which they can object to an amendment. If a Party does not object to such an amendment during the proscribed time period, that amendment will enter into force for that Party.

An amendment to Annex 1, which contains a list of the anti-fouling systems that are controlled by the Convention, would be handled in the same manner as an amendment to the other annexes; however, Parties are given the additional option of either 1) notifying the Secretary-General prior to entry into force of a particular amendment, that such an amendment shall enter into force for it only after a subsequent notification of its acceptance; or 2) making a declaration at the time it deposits its instrument of ratification or accession to the Convention that any amendment to Annex 1 shall enter into force for it only after notification to the Secretary-General of its acceptance of such amendment. The declaration included in the proposed resolution of advice and consent below would allow the United States to exercise the second option with respect to Annex 1 amendments, so that the executive branch would have time to transmit such amendments to the Senate for advice and consent. In the committee's view, any amendment to Annex 1 would require the advice and consent of the Senate.

The other three annexes of the Convention, however, are of a different nature. Annexes 2 and 3 provide procedural and technical details regarding what is needed for proposals to amend Annex 1, in accordance with the process set forth in Article 6 of the Conven-

tion. Specifically, Annex 2 lists the basic information a Party is to include in an initial proposal to amend Annex 1, which will be considered by the IMO Marine Environment Protection Committee. Should the IMO Marine Environment Protection Committee decide that further review of the proposal submitted with the information required by Annex 2 is desirable, Annex 3 lists the elements needed for a more comprehensive proposal to amend Annex 1, as discussed in Article 6(3). Annex 4 similarly sets forth procedural regulations that would govern the survey and certification of ships under the Convention, as noted in Article 10 of the Convention. The committee recognizes that the tacit amendment procedure provided in Article 16 for amending these annexes makes it possible for the implementation of the Convention to evolve without going through a standard amendment process, which can take years to complete. Amendments to Annexes 2, 3, and 4 should not, in the normal course, rise to the level of those that require the advice and consent of the Senate. If there is any question, however, as to whether an amendment to any of these three annexes goes beyond the current mandate of the Annex being amended as described in Articles 6 and 10 or might require Senate advice and consent for some other reason, the committee expects the executive branch to consult with the committee in a timely manner in order to determine whether advice and consent is necessary. Moreover, the committee expects that under such circumstances, the executive branch will make appropriate use of the objection procedure described above to prevent an amendment from entering into force for the United States before the conclusion of consultations on whether Senate advice and consent is necessary.

B. RESOLUTION

The committee has included in the resolution of advice and consent two proposed declarations; only one of them would be included in the instrument of ratification. Both are discussed briefly below.

First Declaration

This proposed declaration is contemplated in Article 16 of the Convention and essentially mandates that any amendments to Annex 1 of the Convention that have been adopted by States Parties would enter into force for the United States if and only if the United States notifies the Secretary-General of the IMO that it will accept the amendment. This declaration was recommended by the executive branch and would ultimately be included in the U.S. instrument of ratification. As noted above in the discussion regarding amendments to the annexes of the Convention, this declaration would be made in order to be sure that the executive branch would have time to transmit any such amendments to Annex 1 of the Convention to the Senate for advice and consent.

Second Declaration

This second proposed declaration states that the Convention is not self-executing. The Senate has rarely included statements regarding the self-executing nature of treaties in resolutions of advice and consent, but in light of the recent Supreme Court decision, *Medellín* v. *Texas,* 128 S.Ct. 1346 (2008), the committee has determined that a clear statement in the resolution is warranted. A fur-

ther discussion of the committee's views on this matter can be found in Section VIII of Executive Report 110–12.

VIII. Resolution of Advice and Consent to Ratification

Resolved (two-thirds of the Senators present concurring therein),

SECTION 1. SENATE ADVICE AND CONSENT SUBJECT TO TWO DECLARATIONS

The Senate advises and consents to the ratification of the International Convention on the Control of Harmful Anti-Fouling Systems on Ships, adopted on October 5, 2001 (Treaty Doc. 110–13), subject to the declaration of section 2 and the declaration of section 3.

SECTION 2. DECLARATION

The advice and consent of the Senate under section 1 is subject to the following declaration, which shall be included in the instrument of ratification:

> The United States of America declares that, pursuant to Article 16(2)(f)(ii)(3) of the Convention, amendments to Annex 1 of the Convention shall enter into force for the United States of America only after notification to the Secretary-General of its acceptance with respect to such amendments.

SECTION 3. DECLARATION

The advice and consent of the Senate under section 1 is subject to the following declaration:

> This Convention is not self-executing.

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