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COMMISSION STAFF WORKING DOCUMENT

IMO - Union submission to be submitted to the 7th session of the Sub-Committee on Pollution Prevention and Response (PPR 7) of the IMO in London from 17 – 21 February 2020 concerning additional information to assist PPR7 to support the inclusion of cybutryne in annex 1 to the AFS Convention

COMMISSION STAFF WORKING DOCUMENT
For the Council Shipping Working party

IMO - Union submission to be submitted to the 7th session of the Sub-Committee on Pollution Prevention and Response (PPR 7) of the IMO in London from 17 – 21 February 2020 concerning additional information to assist PPR7 to support the inclusion of cybutryne in annex 1 to the AFS Convention

Purpose

The document in Annex contains a draft Union submission to the Sub-Committee on Pollution Prevention and Response, which will hold its seventh session from 17 – 21 February 2020 (PPR 7), concerning additional information to assist PPR7 to support the inclusion of cybutryne in annex 1 to the AFS Convention. The draft Union submission for PPR 7 provides additional information requested by the 74th session of the IMO Marine Environment Protection Committee (MEPC 74) to address concerns raised at MEPC 74 in relation to the impact of removal or sealing of existing anti-fouling systems containing cybutryne. It is hereby submitted to the appropriate technical body of the Council for information, with a view to submit the document to the IMO prior to the required deadline of 13 December 2019[1].

Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products[2] establishes a harmonised system in the EU concerning the placing on the market and use of biocidal active substances and biocidal products. In particular, it aims at establishing at Union level a list of active substances which may be used in biocidal products. Pursuant to Article 9 of Regulation (EU) No 528/2012, decisions to approve or not an active substance are adopted at EU level by the Commission. By Commission Implementing Decision (EU) 2016/107 of 27 January 2016[3] cybutryne was not approved as an active substance for use in biocidal products for product-type 21 [for use in antifouling paints].The adoption of a non-approval decision triggers legal periods for the withdrawal from the market and the end of use. Pursuant to Article 89 (2) of Regulation 528/2012, Member States may allow the making available on the market up to 12 month after the date of decision, and the use up to 18 months after the date of the decision.

1 The submission of proposals or information papers to the IMO, on issues falling under external exclusive EU competence, are acts of external representation. Such submissions are to be made by an EU actor who can represent the Union externally under the Treaty, which for non-CFSP (Common Foreign and Security Policy) issues is the Commission or the EU Delegation in accordance with Article 17(1) TEU and Article 221 TFEU. IMO internal rules make such an arrangement absolutely possible as regards existing agenda and work programme items. This way of proceeding is in line with the General Arrangements for EU statements in multilateral organisations endorsed by COREPER on 24 October 2011.

2 OJ L 167, 27.6.2012, p. 1.

3 OJ L 21, 28.1.2016, p. 81.

Antifouling paints containing cybutryne cannot be placed on the market as from 17 February 2017 nor used in the EU as from 17 August 2017. The said draft Union submission therefore falls under EU exclusive competence[4].

[4] A formal EU position under Article 218(9) TFEU is to be established in due time should the IMO Maritime Safety Committee eventually be called upon to adopt an act having legal effects as regards the subject matter of the said draft Union submission. The concept of '*acts having legal effects*' includes acts that have legal effects by virtue of the rules of international law governing the body in question. It also includes instruments that do not have a binding effect under international law, but that are '*capable of decisively influencing the content of the legislation adopted by the EU legislature*' (Case C-399/12 Germany v Council (OIV), ECLI:EU:C:2014:2258, paragraphs 61-64).

ANNEX

SUB-Committee on POLLUTION PREVENTION & RESPONSE
7th session
Agenda item 19

PPR7/19/**
[Date]
Original: ENGLISH
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AMENDMENT OF ANNEX 1 TO THE AFS CONVENTION TO INCLUDE CONTROLS ON CYBUTRYNE, AND CONSEQUENTIAL REVISION OF RELEVANT GUIDELINES

Additional information to assist PPR7 to support the inclusion of cybutryne in annex 1 to the AFS Convention

Submitted by European Commission on behalf of the European Union

SUMMARY

Executive summary:	This document provides additional information requested by MEPC 74 in relation to the concerns expressed by document MEPC 74/10/9 and the impact of removal or sealing of existing anti-fouling systems containing cybutryne.
Strategic direction :	2
Output:	2.19
Action to be taken:	Paragraph 18
Related documents:	International Convention on the Control of Harmful Anti-Fouling Systems on Ships, 2001; resolution A.900(21), MEPC 71/14, PPR 5/19, PPR 5/INF.9, MEPC 73/INF.10, PPR 6/6, PPR 6-INF.7, PPR 6/20, MEPC 74/10/9

Background and Introduction

1 This document is submitted in accordance with paragraph 6.12.1 of the *Guidelines on the organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies* (MSC-MEPC.1/Circ.5).

2 PPR 6 agreed with the draft amendments to the AFS Convention, as prepared by the Technical Group and set out in the final report of the sub-Committee PPR 6/20 and PPR 6/20/Add.1 annex 8. The outcome of PPR 6 was reported to MEPC 74 as set out in document MEPC 74/10 requesting the Committee to note the report of the Technical Group on Amendments to the AFS Convention (paragraph 2.11) and to approve the draft amendments to annex 1 to the AFS Convention to include the controls on cybutryne with the view to subsequent adoption (paragraph 2.12).

3 MEPC 74 noted the report of the Technical Group on amendments to the AFS Convention that was established at PPR 6 to review the comprehensive proposals and took into consideration the document submitted by Japan MEPC 74/10/9 proposing modifications to the draft amendments to the AFS Convention. The document submitted by Japan proposed the deletion of the control measures for the removal or sealing of existing antifouling systems containing cybutryne from vessels that applied these coatings before 3 October 2021 and supporting the prohibition of applying or re-applying of antifouling systems containing cybutryne from 3 October 2021 and onwards.

4 MEPC 74 took into consideration document MEPC 74/10/9 by Japan and the different views expressed by the delegations participating in the meeting and agreed to refer the draft amendments to Annex 1 of the AFS Convention to PPR 7 for further consideration and invited the interested Member States and international organizations to submit information to PPR 7 on the impact of the removal of the antifouling systems containing cybutryne.

5 Furthermore, MEPC 74 requested the IMO Secretariat to provide legal advice to PPR 7 in relation to Article 4(2) of the AFS Convention, as many delegations were of the view that the proposal for deleting the provisions requiring the removal or sealing of the existing antifouling systems contained in document MEPC 74/10/9 conflicted with Article 4(2) of the AFS Convention. Additionally, during the meeting it was supported that the controls for AFS containing organotin compounds have been applied in a similar way as proposed for the control measures for cybutryne for which there was not any issue indicated. Therefore, it was important to maintain the consistency when applying international instruments.

6 The major concern expressed by Japan was the possible unavailability of sealer coats that could be applied without removing the existing antifouling system containing cybutryne. IPPIC indicated that the existing sealer coatings for AFS containing organotin could be effective for sealing cybutryne and other approaches for sealing cybutryne may also exist and be effective. However, further consideration was required for ensuring the appropriate supply with the coatings that will prevent cybutryne loss from the antifouling system.

Technical Discussion

7 Taking into consideration the concerns expressed during MEPC 74 the aim of this document is to provide clarity to assist the Committee accepting the amendments to the AFS Convention on the control of cybutryne proposed by the Technical Group that was established during PPR 6.

Negative impact of Blasting

8 Document MEPC 74/10/9 is referring only to one removal method for antifouling systems (dry blasting) and is not making any reference to other existing methods that are also suitable for the removal of antifouling systems. Methods like wet blasting and water blasting could also be used effectively compared to dry blasting or scraping (sanding, grinding) methods that are more frequently used for smaller size ships (pleasure boats, fishing vessels).

9 Irrespective of the new control measures AFS coating removal is used for the preparation of a new coating, since this is more effective and could also provide better antifouling results. This operation is performed in facilities that have the basic means for capturing and containing AFS waste, the fouling materials, dust and aerosol particles at the

facility. In addition, these facilities, in case they use water blasting, also have provisions for separating the water contaminants and waste. Furthermore, the persons involved in the removal of the AFS coatings are required to wear protective personal equipment when working on the removal of AFS coatings. As a measure to protect people working in the shipbuilding and ship repair industry ILO has recently updated the code for Safety and health in shipbuilding and ship repair (ILO, 2019)[5] that provides guidance to the industry and is used by many shipyards.

Hull Cleaning for re-applying and antifouling coating

10 For re-applying an antifouling system, the hull surface can be treated without the need for removing all the previous hull coating layers, the preparatory work depends mainly on: the type of the antifouling system applied (soluble matrix, insoluble matrix, self-polishing copolymers (SPC), controlled depletion polymer, hybrid SPC), the different ship type and the operational characteristics of the ship. However, this activity is performed in an interval that is usually not exceeding five years, since the effectiveness of the antifouling system is deteriorating and it needs to be replaced to remain effective. Studies have also shown that as the antifouling system becomes thinner the roughness of the hull surface is increased and this is causing an increase of approximately 6% to the fuel consumption which in combination with the increased fouling in the hull of the ship due to the reduced effectiveness of the anti-fouling system will cause an additional drop to the ships' efficiency by the extra drag increase.

Removal of anti-fouling coatings

11 When the AFS Convention entered into force in 2008 and prohibited the use of organotin acting as biocides in anti-fouling paints, an increased number of ships removed the anti-fouling coatings. At the time there were similar concerns that the removal of antifouling coatings containing TBT could affect the marine environment and the quality of the bottom sediments in nearby waters located close to the shipyards and other facilities tasked with the removal of anti-fouling systems. The London Convention and Protocol taking into consideration the concerns expressed, tasked a Scientific Group to develop the guidance on the "Best Management Practices" (BMPs) for the removal of anti-fouling coatings from ships. Before the entry into force of the AFS Convention the BMPs were submitted as document MEPC 58/INF.3, which was also adopted by the governing bodies in October 2008. Finally, this became an AFS circular document (AFS.3/Circ.3). This document contains six chapters and provides basic guidance on the practices that need to be followed in order to minimize the possible environmental effects that could be caused by the removal of anti-fouling systems.

12 The fundamental pylons as described by AFS.3/Circ.3 (BMPs) contributing to the minimization of the environmental risks are based on good housekeeping practices followed by the facilities ensuring that the materials used for the removal, the protective equipment

[5] ILO. (1974). *Safety and health in shipbuilding and ship repairing*. Retrieved from http://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---safework/documents/normativeinstrument/wcms_107897.pdf

and the instructions provided to the workers are adequate and result in good working habits and hygiene. The facility design requirements should be appropriate and designed to minimize waste that is generated by their operation by implementing the appropriate waste prevention strategies.

Sealer Coatings

13 One of the concerns that was highlighted in document MEPC 74/10/9 was the possible unavailability of sealer coatings and whether the coating manufacturers and suppliers would be ready to supply sealer coatings before the 3 October 2026. IPPIC's intervention during the MEPC 74 has not ruled out that the existing coatings applied to seal organotin compounds could also be applied to seal the coatings containing cybutryne and examples for overcoating with tie coats, primers and other antifouling coatings was provided. Therefore, it is expected that further information will be provided by IPPIC during the meeting of the TG in PPR7 that would support the position of the TG that sealing coatings would be available before 3 October 2026.

Emission scenarios of cybutryne after 60 months

14 During the preparation of the comprehensive proposal, multiple studies monitoring concentrations of cybutryne in several media and geographical areas were presented. One of the studies available, *Cresswell et al., (2006)*[6]*,* shows how the national ban of cybutryne in UK in 2001 caused the decrease of cybutryne concentrations in sea water on the south coast of the UK within 4 years after the measures were imposed. In pleasure craft marinas, concentrations were reduced to 10% of their pre-restriction levels within 2 or 3 years of regulatory action. In the worst-case scenario, in a locked marina with a large professional fishing fleet, the levels were reduced by around 50%, but the action on professional users became active 12 months after the restriction on amateurs, so further reductions were expected in future years once the full effect of the restriction comes into force. The measures that were taken by the authorities in the UK have successfully reduced the environmental concentrations of cybutryne. Overall the study concluded that simple regulatory action at manufacturer level was sufficient to see levels reduced without the need for further action at a more local level e.g. controls at point of sale or application. If the same amount of reduction (i.e. 10%) were to be considered after the banning of the substance in other scenarios, a level very close to acceptable levels would be achieved within a few years after banning.

15 The document PPR6/INF.7 addressing the elements for the comprehensive proposal required by the AFS Convention included an analysis that was based on the mathematical MAMPEC model. The analysis applied four scenarios (commercial harbour, Marina, Shipping Lane and open sea) in order to calculate the possible emissions for cybutryne for each one of the examined cases. The results that were provided for the commercial harbour included the total average annual release of cybutryne. In the model, the removal of the antifouling from the ships by re-blasting or spot blasting was taken into consideration and the total contribution of the removal operation was not exceeding 2.7% of the total annual average release of the substance.

[6] Cresswell T.,Richards JP, Glegg GA., Readman JW. (2006) The impact of legislation on the usage and environmental concentrations of Igrarol 1051 in UK coastal waters, Mar. Pollution Bulletin, **Oct 52(10) 1169-75**

16 In the calculations presented in the comprehensive proposal,a maximum loss (90%) over the shortest service life (5 years) is assumed. This is done in the same way when assessing the risk for antifouling paints in EU. That produces the most conservative leaching rate which is then used in MAMPEC to model the concentrations in water. The model cannot be used for a case where a substance is phased out and the remaining concentration needs to be calculated, but certain extrapolations can be made. At first, a longer service-life of maybe 10 years could be assumed and the leaching rates calculated accordingly. Because the leaching rates using the CEPE method almost have a linear relationship (considering that all other parameters stay the same), doubling the service life would halve the leaching rate. In this case the concentrations expected in water would be half and would still exceed the acceptable concentrations in sea water (2ng/L).

Table 1. Concentrations of cybutryne estimated in seawater assuming 10 years' service life.

Scenario	Position	$PEC_{seawater}$ (ng/L)
OECD-EU commercial harbour	In harbour (Realistic worst case)	**213**
	Outside harbour (surrounding waters) (Realistic worst case)	**6**
OECD-EU Marina	In marina	**170**
	Outside marina (surrounding waters)	1.425
OECD-EU Shipping Lane		0.0089
Default Open Sea		0.000181

17 Nevertheless this assumes that all ships remain with the same coating without the additional application of a different coating. It is assumed, for example that only 25% of the ships remain untreated after a service life of 5 years. That would reduce the number of ships contributing to the load of cybutryne and can be estimated by a simple calculation (i.e 0.5 of leaching rate times 0.25 of ships). That would mean that one can multiply all estimated concentrations by a factor of 0.125. Once these calculations are done the concentrations will remain above the acceptable levels (2ng/L) inside harbours and marinas (figure 1) but provide acceptable concentrations in surrounding areas and the open sea (figure 2).

Table 2. Concentrations of cybutryne estimated in seawater assuming 25% of boats have 10 years' service life.

Scenario	Position	$PEC_{seawater}$ (ng/L)
OECD-EU commercial harbour	In harbour (Realistic worst case)	**53.25**
	Outside harbour (surrounding waters) (Realistic worst case)	1.5
OECD-EU Marina	In marina	**42.5**
	Outside marina (surrounding waters)	0.35625
OECD-EU Shipping Lane		0.002225
Default Open Sea		4.53E-05

The antifouling film acts as a biocidal reservoir which gradually becomes depleted and eventually fails when the concentration of biocide layer falls below the critical level necessary to control antifouling, usually this period is not exceeding the 5 years.

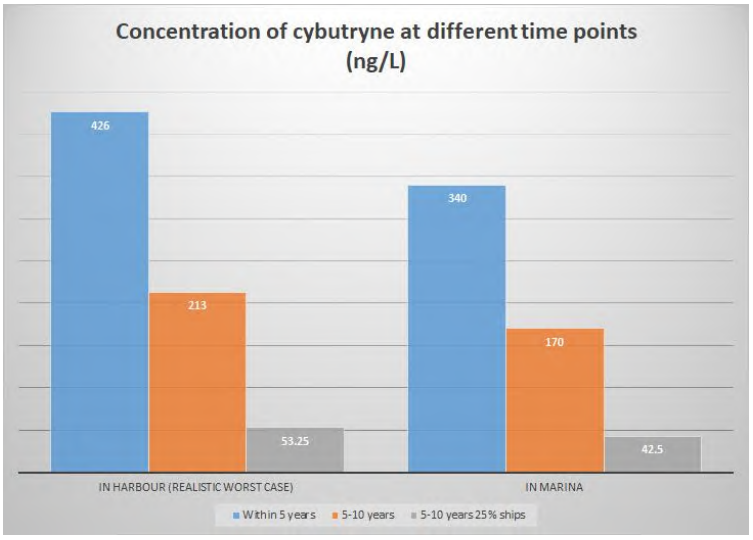

Figure 1. Concentrations of cybutryne estimated inside a harbour and a marina for a service life of 5 years, 10 years and assuming only 25% of boats remain untreated for 10 years.

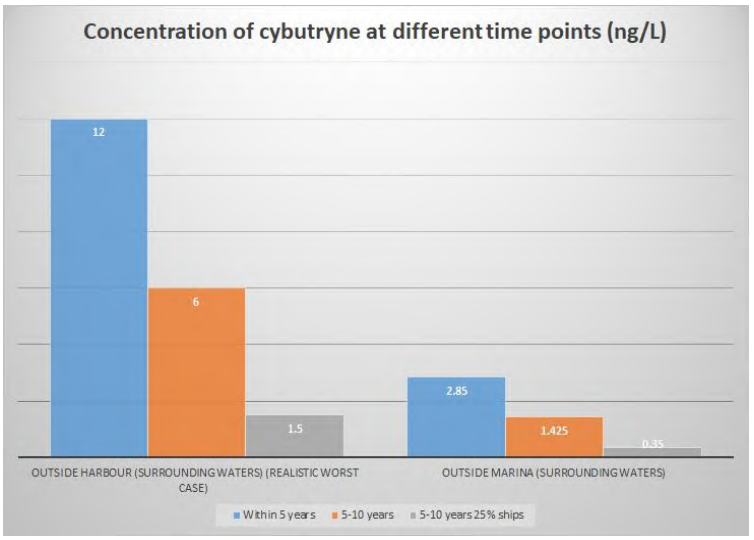

Figure 2. Concentrations of cybutryne estimated in the surroundings of a harbour and a marina for service life of 5 years, 10 years and assuming only 25% of boats remain untreated for 10 years.

Actions requested by the Sub-Committee

18 The Sub-Committee is invited to consider the information provided in this document.