



Brussels, 29.10.2018  
SWD(2018) 458 final

**COMMISSION STAFF WORKING DOCUMENT**

**For the Council Shipping Working party**

**IMO - Union submission to be submitted to the 6th session of the Sub-Committee on Pollution Prevention and Response (PPR 6) of the IMO in London from 18 – 22 February 2019 concerning consideration of a comprehensive proposal to amend Annex 1 to the Anti-Fouling Systems Convention (AFS 2001) to include controls on cybutryne**

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**PURPOSE**

The document in Annex contains a draft Union submission to the Sub-Committee on Pollution Prevention and Response, which will hold its sixth session from 18 – 22 February 2019 (PPR 6), concerning the required elements for a comprehensive proposal to amend the Anti-Fouling Systems Convention (AFS 2001) to include in Annex 1 controls on cybutryne, as well as consequential revision of relevant guidelines. It is hereby submitted to the appropriate technical body of the Council with a view to achieving agreement on transmission of the document to the IMO prior to the required deadline of 14 December 2018<sup>1</sup>.

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<sup>2</sup> 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 ban an active substance are adopted at EU level by the Commission. The non-approval Decision (EU) 2016/107<sup>3</sup> was adopted to ban cybutryne for use in antifouling paints, and 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.

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<sup>1</sup> 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.

<sup>2</sup> OJ L 167, 27.6.2012, p. 1.

<sup>3</sup> OJ L 21, 28.1.2016, p. 81.

## ANNEX

SUB-COMMITTEE ON POLLUTION  
PREVENTION & RESPONSE  
6<sup>th</sup> session  
Agenda Item 19

PPR 6/19/\*\*  
[Date]  
Original: ENGLISH

### **CONSIDERATION OF A COMPREHENSIVE PROPOSAL TO AMEND ANNEX 1 TO THE AFS CONVENTION TO INCLUDE CONTROLS ON CYBUTRYNE**

**Submitted by European Commission on behalf of the European Union**

#### **SUMMARY**

*Executive summary:* This document contains the required elements for a comprehensive proposal to amend the Anti-Fouling Systems Convention (AFS 2001). The proposal contains documented scientific evidence required by the comprehensive Proposal as listed in Annex 3 of the AFS Convention.

*Strategic direction:* 2

*High-level action:*

*Output:* 2.19

*Action to be taken:* Paragraph 12

*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, MEPC73/INF.10, PPR 6INF.\*

#### **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 MEPC 71 considered document MEPC 71/14 (Austria et al.), having agreed to include a new output on “Consideration of the initial proposal to amend Annex 1 to the AFS Convention to include controls on Cybutryne” in PPR’s biennial agenda for 2018-2019 and in the provisional agenda for PPR 5 with a target completion year of 2018.

3 PPR 5 considered the documents PPR 5/19 and the information paper PPR 5/INF.9 and agreed that a more detailed review of cybutryne was warranted, agreeing that the initial proposal contained in document PPR 5/19 and supported by the information paper satisfied the requirements of Annex 2 to the AFS Convention.

4 PPR 5 has recommended renaming the output from “*Consideration of an initial proposal to amend annex 1 to AFS Convention to include controls on cybutryne*” to “*Amendment of annex 1 to the AFS Convention to include controls on cybutryne and consequential revision of relevant guidelines*”.

5 PPR 5 recommended to the Committee that the target completion year of the output to be extended to 2020. In this regard, the Sub-Committee further recommended to the Committee to invite the submission of a comprehensive proposal containing the entire information required in Annex 3 to the AFS Convention, additionally taking into account the concerns expressed at this session regarding the need for a robust process for risk assessments and the possibly limited geographical scope of the risk assessments carried out for the initial proposal.

6 An information document containing useful information about the mathematical MAMPEC model combining hydrodynamic and chemical fate analysis has also been prepared for MEPC 73. This model can very accurately predict the concentrations of any antifouling substances in the marine environment and has previously been used to predict, with high accuracy, the concentrations of cybutryne in the open sea, shipping lanes, marinas and ports. MAMPEC has been validated for numerous substances and has moreover been used for various ballast water scenarios, producing very accurate results.

7 Furthermore, in document MEPC 73/INF.10 short summaries of peer-reviewed scientific journals were included, containing cybutryne concentrations in various regions worldwide and detailing the harmful effects of the substance on the marine environment. Many of these listed publications contain detailed information on cybutryne concentrations in ports, marinas, shipping lanes and the open seas worldwide. This published scientific evidence from numerous independent research groups on several continents details that increased concentrations of cybutryne and its main metabolite have been reported in many port areas and marinas worldwide and furthermore provide detailed evidence that the substance is responsible for causing adverse effects to the marine environment, and phytoplankton and corals in particular.

### **Elements required for the comprehensive proposal**

8 Article 6 of the AFS Convention describes the process of proposing amendments to Annex 1 of the Convention, which contains the control measures for harmful anti-fouling systems that are applied on ships. In PPR6/INF\* the requirements for the comprehensive proposal are included and analysed in detail, in order for them to be used by the Technical Group that is to be established for the evaluation of the anti-fouling system and its adverse effects to the marine environment and to human health.

9 A summary of PPR6/INF\* is provided in the Annex of this document. It highlights the reasons for the request for a ban of cybutryne at international level; furthermore the adverse effects of cybutryne on ecologically sensitive areas and areas designated by IMO as Particularly Sensitive Sea Areas (PSSA) are reviewed as well as negative impacts on the marine environment in general.

### **Proposed way forward**

10 In document PPR6/INF\*, evidence is provided of the unacceptable risks identified for the environment, relating to the use of anti-fouling paints that contain cybutryne and propose the control of this chemical substance through an amendment to Annex 1 of the AFS Convention.

11 It is requested, in particular, that the Subcommittee establish a technical group in accordance with article 7 of the AFS Convention in order to review the proposal for the amendment of the Convention.

### **Action requested by the Subcommittee**

12 The Subcommittee is invited to consider this document together with document PPR6/INF\* and is requested to establish the technical group that is to review the comprehensive proposal contained in this document.

## Annex

### CONSIDERATION OF A COMPREHENSIVE PROPOSAL TO AMEND ANNEX 1 TO THE AFS CONVENTION TO INCLUDE CONTROLS ON CYBUTRYNE

#### Summary

After the international Convention on the Control of Harmful Anti-Fouling Systems (AFS Convention) came into force in 2008, a number of booster biocides for use in antifouling paints began to be utilized more widely, replacing TBT.

Among these substances is cybutryne, also known under its industry name Irgarol-1051. Cybutryne is applied to hulls of ships as an antifouling agent with generic antifouling benefit by inhibiting the electron transport in algae and plants. This thus reduced CO<sub>2</sub> uptake and decreased carbohydrate production result in an inhibition of growth in target organisms. A multitude of peer-reviewed studies have shown that cybutryne is acutely and chronically toxic for a variety of marine organisms, in some instances even more harmful than TBT. It has been shown to be highly persistent in the environment, accumulating in the sediment and causing long term effects in the marine environment. This has been demonstrated to be especially true for non-target and non-fouling marine algae that are highly sensitive at extremely low concentrations of the substance. This is especially critical, as algae are considered the pillar for the ecosystem structure and function as they provide the food base for most marine food chains. Phytoplankton and coral settlement were also shown to be highly sensitive to the compound, effects having already been found at levels below those detected in several monitoring studies.

Extensive information from monitoring described in PPR 5/19, PPR 5/INF.9, MEPC73/INF.10 and estimated concentrations obtained through state-of-the-art modelling approaches show that concentrations in waters, i.e. harbour and marina areas, ports and shipping lanes, in East and South East Asia, the Caribbean, the North American East and West Coast, Oceania, the Mediterranean and Europe exceed, in some cases significantly, the concentrations found to negatively affect marine ecosystems. Especially in South East Asia and the Caribbean, concentrations not only surpass the levels at which algal growth has been shown to be affected, but also negatively impact fish and other larger organisms.

Due to the international nature of shipping, national and regional measures or restrictions on cybutryne will only ever have a limited effect. While they can serve to locally reduce contamination, they are, given their circumscribed nature, insufficient in addressing the international scale of the issue.

This can be illustrated by studies from Australia, where cybutryne has at no time been approved or registered as an antifoulant, but has been found in seagrass near the Great Barrier Reef at concentrations negatively affecting the marine plant as well as the wider ecosystem in this area, which has been designated a Particularly Sensitive Sea Area by resolution MEPC 268(68). Furthermore, information from monitoring within close intervals in the European Union clearly demonstrates that cybutryne is still ubiquitous in some European

ports and marinas in spite of a local ban of the substance that went into force in 2013, albeit at lower levels than before 2013.

Moreover, regional measures cause legislative gaps and differences between IMO Member States. This goes counter the IMO's sustainable maritime transportation system goal that aims for an international regulatory framework promoting a globally harmonized approach for maritime transport.

Therefore, only globally concerted action can lead to an overall decrease of cybutryne levels in ports, marinas and shipping routes.

The described negative effects on marine algae, or phytoplankton, are relevant in particular as these organisms represent the basis of the marine food chain. A reduction in their biomass in certain areas does therefore not only affect the phytoplankton itself, but all local species directly or indirectly feeding on it, ranging from zooplankton to larger fish and crustaceans. Cybutryne can furthermore impair the growth of coral settlements at concentrations below those detected in the Americas, Europe and Asia. In these regions, the levels identified as causing negative effects in numerous laboratory test described in peer-reviewed publications have been exceeded by factors of 20 to 42. Given the increasing reports of coral bleaching in waters across the world, these figures should be cause for concern.

While cybutryne is a commonly used antifoulant, regional bans of the substance have been shown to have only negligible, if any, economic effects on both the shipping industry and paint manufacturers.

It is therefore believed that the negative environmental effects described in [PPR6/INF ...] give reason for an inclusion of cybutryne into Annex 1 to the AFS Convention.

There are several antifoulants that are similar in cost and pose a similarly low risk to human health, while having a far lower negative impact on the marine environment. An inclusion of the substance in Annex 1 to the AFS Convention is therefore expected to lead to insignificant economic disadvantage while bringing considerable benefit to the marine environment.