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NOTE

From:	General Secretariat of the Council
To:	Delegations
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Subject:	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 aspects to consider for the evaluation and the development of harmonized rules and guidance on discharge waters from Exhaust Gas Cleaning Systems (EGCS)

In view of the Shipping Working Party meeting on 6 December 2019, delegations will find attached a revised version of the draft EU submission.

It should be noted that the deadline for introducing the submission to the IMO secretariat is **13 December 2019**.

Compared to the previous version, changes are indicated in **bold underline** (new text) and ~~strikethrough~~ (deleted text).

Scrutiny reservation: all delegations.

[ADD IMO HEADER]
SUB-COMMITTEE ON POLLUTION PREVENTION AND RESPONSE
7th session
Agenda item 12

PPR 7/12/xx
17-21 February~~XY December~~ 2019**20**
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EVALUATION AND HARMONIZATION OF RULES AND GUIDANCE ON THE DISCHARGE OF LIQUID EFFLUENTS FROM EGCS INTO WATERS, INCLUDING CONDITIONS AND AREAS

Aspects to consider for the evaluation and development of harmonized rules and guidance on discharge waters from exhaust gas cleaning systems

Submitted by Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, the United Kingdom and the European Commission[1]

SUMMARY

Executive summary:	This document outlines aspects for consideration of GESAMP, and the Sub-Committee, contributing to the work towards the evaluation and harmonization of rules and guidance on discharge waters from Exhaust Gas Cleaning Systems (EGCS), including conditions and areas. Given the availability of different studies and data on the impact of EGCS operation on the environment, in particular of discharge waters from open-loop mode operation, and the identified need to conclude on the required risk assessment framework, the present document proposes questions pointing at knowledge-based areas where further clarification and scientific support is required in order to develop harmonised rules.
Strategic direction, if applicable:	1 and 2
Output:	
Action to be taken:	Paragraph 9
Related documents:	MEPC 74/14/1, MEPC 74/14/7, MEPC 74/14/8, MEPC 74/14/9, MEPC 74/INF.10, MEPC 74/INF.24**,** ~~and~~ MEPC 74/INF.27**, MEPC 73/INF.5 and PPR 6/INF.20**

[1] Reservation: the Commission.

~~Introduction~~ Background

1 MEPC approved, in principle, at its 74th session, a new output on "Evaluation and harmonization of rules and guidance on the discharge of liquid effluents from EGCS into waters, including conditions and areas" in the 2020-2021 biennial agenda of the PPR Sub-Committee and the provisional agenda for PPR 7, with a target completion year of 2021, and referred documents MEPC 74/14/1, MEPC 74/14/7, MEPC 74/14/8, MEPC 74/14/9, MEPC 74/INF.10, MEPC 74/INF.24 and MEPC 74/INF.27 to PPR 7 for further consideration, with a view to refining the title and the scope of the output.

2 The Committee further identified the need for more scientific research and instructed the Secretariat to liaise with GESAMP and to establish a task team of experts to be designated to assess the state-of-the-art scientific evidence relating to the environmental impacts of **water** discharges ~~of~~ **from** EGCS ~~effluent~~, with a view to reporting its findings to PPR 7.

3 PPR 7 would also be expected to complete the ongoing revision of the IMO 2015 EGCS Guidelines (IMO Resolution MEPC.259(68)). This revision has focused on the structure, clarification of principles and terminology as well as on the improvement of the certification framework principles and requirements. In the absence of an independent assessment of relevant scientific evidence, section 10 of the EGCS guidelines on discharge waters criteria has been overall kept unaltered, having undergone only a minor revision including editorials and provisions for discharge waters from temporary storage.

4 The assessment to be undertaken by the GESAMP task team should cover **environmental risk assessment connected to EGCS water discharges based on available** ~~the~~ analyses and results from existing **studies** ~~research projects~~[2], **including but not limited to those outlined in earlier submissions to the Committee and the Subcommittee,** the results from simulations for predicting the concentrations and impacts of target substances **including their combined effects** ~~and~~ **as well as** their accumulation in waterbodies, including in sediments and biota.[3] ~~Furthermore, earlier submissions to the Committee and the Sub-Committee (MEPC 73/INF.5, PPR 6/INF.20) should also be taken into account.~~

5 In view of the entering into force of the global sulphur cap in 2020, this document suggests that the subsequent work to be carried **out** under the new output should be organized taking into account the urgency to address the relevant environmental concerns by **the** timely setting **of** a harmonized regulatory framework with respect to operation of EGCS, in specific conditions and areas with due consideration to early movers who have prepared for the 2020 sulphur limit.

Introduction ~~Proposal~~

6 This document identifies two possible tasks in the context of EGCS discharge waters. The first task could be to compile existing data and draw objective conclusions from the different studies based on scientific criteria in order to provide technical data that could be used in the context of any potential development of **a** further regulatory framework. The results from the first

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2 **Existing studies are referred to in earlier submissions to MEPC and PPR indicated in the section 'Related documents' on page 1 of this document.** ~~Including but not limited to~~ **In addition to those,** the following studies **have been recently published**:

a. "Scrubber Washwater Survey", 2019, study carried out by the Federal Maritime and Hydrographic Agency (BSH, Germany), funded by the German Environment Agency (UBA, Germany). **Only** ~~P~~**p**reliminary results **were already** submitted to the Organization (PPR 6/INF.20, 14 December 2018 **referred to in document MEPC 74/14/1**)
b. Closing the Loop - Environmental analysis of marine exhaust gas scrubbers on two Stena Line ships - IVL Swedish Environmental Research Institute 2018 - Funded by: European Commission via Connecting Europe Facility (CEF) and the SIVL foundation

3 **Although some studies have been listed here, the decision on which to consider and how to prioritise them should be at the discretion of the GESAMP task team, in view of its expertise.**

task should be made available to the Sub-Committee soon in view of the 2020 global sulphur cap implementation.

7 The second task could be to use the compiled data to proceed with further investigation to inform an appropriate response to potential concerns that may be identified in the first task**.** It is suggested that~~,~~ GESAMP identifies and oversees reference modelling studies on the environmental impact of the discharge waters from EGCS. The study should also take into account the extent to which pollutants in discharge waters are likely to accumulate in sediment and biota, the influence of currents on the location of such accumulation and of different circumstances and scenarios. The task should be completed by the end of 2021, including, if necessary, some limited field monitoring to verify conclusions.

8 In order to adequately evaluate the environmental impact of EGCS technology, it is appropriate to define some key questions set out in the Annex to this document to be answered in order to address the concerns expressed in document MEPC 74/14/1. The questions are directly or indirectly linked to previously identified areas of concern and therefore represent specific targets/objectives. They are non-exhaustive, open to discussion and aimed at contributing directly to GESAMP's task and help**ing to** focus~~ing~~ the work ahead.

Action requested of the Sub-Committee

9 The Sub-committee is invited to consider the Annex to this document **taking into account par. 6-8, and,** with the support of GESAMP's scientific advice, ~~and~~ take action **as appropriate** on the following aspects:

A. Assessment of available information, studies, research work, data on the environmental impact of EGCS discharge waters into the marine environment, and

B. Evaluation and harmonization of rules and guidance on discharge water from EGCS, including conditions and areas.

Assessment of available information, studies, research work, data on the environmental impact of EGCS discharge water into the marine environment		
Key Target Question		References
EGCS Discharge Water – Composition		
1	**What data are available on actual composition and pollutants ~~fractions~~ found ~~o~~in EGCS discharge water?**	
2	**Where sampling & analysis of EGCS discharge water ~~is found to~~have been reported, have the sampling conditions been thoroughly described, in terms of engine load, discharge water flow-rate, sampling point, inlet conditions?**	
3	**Were methodologies for sampling & analysis applied in the different available studies adequate to ensure the quality, repeatability and reproducibility of the results?**	
~~4~~	**~~Are available data on EGCS discharge water contributing to an evaluation of possible extent of accumulation of pollutants in water, sediment and biota?~~**	
5	**Where analytical~~sis~~ results ~~of~~ from several specific samples are reported, ~~can consistency be found~~ are the findings with regard~~s~~ to the occurrence and concentration incidence of different pollutants consistent?**	
6	**How can the different studies be assessed with regard~~s~~ to their reliability, independence and soundness of the implemented methodology?**	MEPC 73/INF.5 PPR 6/INF.20 MEPC 74/INF.27 MEPC 74/INF.24
[7]	**[~~When using scrubbers then there might still be an air emission of the target pollutants. Are there data allowing the load of substances lead out to the air to be compared to the load directly lead to the marine environment via EGCS discharge water?~~]**	
Local-Specific Data/ Modelling		
8	**Are there validated Environmental Risk models which can be used/adapted for the evaluation of the environmental impact of EGCS discharge water into the marine environment?**	
9	**~~What information exists on the influence of local circumstances (geographical, hydrological, geological etc.) contributing to pollutant accumulation, dispersion and potential impacts?~~** **Considering the available data on local-specific**	

	circumstances (geographical, hydrological, geological etc.) that could influence dispersion, accumulation and impacts, the existing models, calculation methodologies and experience, what is the most suitable model for environmental risk assessment of EGCS discharge water?	
[10]	**[~~How should the target pollutants that already exist in the receiving environment at a certain background level in sediment and biota be included in the environmental risk assessment?~~]**	**PPR 6/INF.20** **MEPC 74/14/1**
[11]	**[~~In assistance of a complete Environmental Risk model, are there enough data (or validated computational models) to make a mass balance on the load of target pollutants led to the marine environment both directly, via EGCS discharge water, and indirectly through pollutant emissions to air?~~]**	
Onboard Monitoring~~/Control~~		
12	**Are current technologies for monitoring pollutants in discharge water sufficiently developed, with a sufficiently wide scope and fit for purpose?** **Are the sensors for pH, PAH, and turbidity that are currently deployed ~~"state-of-the-art" and~~ yielding verifiable, repeatable and reproducible results?**	PPR 6/INF.20 PPR 6/11/2
13	**~~Given the current evidence of heavy metals presence in EGCS discharge water, i~~Is turbidity still an adequate proxy parameter to ~~control~~ monitor ~~these~~ relevant pollutants, including heavy metals, in discharge water ~~(or emissions)~~?** **Are mature technologies available for onboard monitoring of heavy metal concentrations per se in EGCS discharge water?**	
14	**Taking into account the existing EGCS discharge water ~~control~~ monitoring provisions/requirements, what other ~~target~~ pollutants should be considered in the assessment of scrubber water?** **How ~~to take into account the~~can cumulative effects be taken into account?**	

Evaluation and harmonization of rules and guidance on discharge water from EGCS, including conditions and areas.		
Key Target Question		References
15	**Are the current EGCS discharge water criteria still fit for purpose in the light of the data obtained? In particular, do they sufficiently consider the total load**	

	of pollutants discharged, ~~and~~ the potential for them to accumulate in the water environment, in particular sediments and biota, and their combined effects?	
16	**~~Is~~ Are the currently available data on environmental ~~hazards~~ risks ~~of~~ from EGCS discharge water, in specific areas, ports, harbours or shipping lanes, taking into account different scenarios, sufficient to feed a Risk Assessment model and yield conclusions on areas at particular risk~~with relevant input elements~~?**	MEPC74/INF.24
17	**What are the potential control options that can be foreseen in order to mitigate the specific environmental ~~hazards~~ risks ~~identified and~~ associated ~~to from~~ with EGCS discharge water?**	
~~18~~	**~~In the context of the available data, models, calculation methodologies and experience, what is the most suitable model for environmental risk assessment of EGCS discharge water, that also take into account that the target pollutants can exist at a certain background level in the receiving environment?~~**	~~MEPC74/14/1~~
19	**Assuming a relationship between the Particulate Matter (PM) abatement efficiency and the concentration of Pa~~A~~AH in the discharge water, would it be relevant to look for PM measurements in addition to EGCS discharge water samples, for improved correlation?**	
20	**A number of EGCS installations operating in open-loop mode have no water treatment plant installed. Bearing in mind that these installations are still able to comply with the discharge criteria, can current EGCS Guidelines still be considered fit for purpose? Assuming a simple pollutant mass balance, what criteria should apply to take account of the total load of pollutant?**	MEP73/INF.5 PPR6/INF.20 MEPC74/INF.27 MEPC74/INF.24
21	**On the basis of a specific Risk Assessment model, is it possible to establish a relationship for specific model areas between the EGCS discharge water pollutant concentrations and the toxicity Threshold ~~Limit Values (TLV) for specific model areas?~~** **~~Do we need (a) reference risk assessment model/s ?~~**	PPR 6/INF.20 MEPC 74/14/1
22	**What are the options available for the harmonization of rules and guidance on the water discharges ~~of liquid effluents~~ from EGCS ~~into waters~~, including**	

	conditions and areas ~~is needed~~, taking the following factors into consideration: **a. Results of the risk assessment** **b. Availability of technical safeguards/technology/facilities <u>on board ships and in ports</u>** **c. Potential need to create zero-discharge zones in specific areas** **d. Relevance of the EGCS discharge water criteria** **e. Consequential need to set evidence-based rules on mitigation technologies and prohibitions**	