

MARINE ENVIRONMENT PROTECTION  
COMMITTEE  
82nd session  
Agenda item 5

MEPC 82/5/4  
26 July 2024  
Original: ENGLISH  
Pre-session public release:

## AIR POLLUTION PREVENTION

### EGCS pollution in Pacific Canada: investigation of Canada

Submitted by FOEI, WWF, CSC and Pacific Environment<sup>1</sup>

#### SUMMARY

*Executive summary:* Information and summary of an ongoing process with the Commission for Environmental Cooperation on Exhaust Gas Cleaning Systems.

*Strategic direction, if applicable:* 1

*Output:* 1.23

*Action to be taken:* Paragraph 15

*Related documents:* MEPC 81/5/4; MEPC 82/5 ; MEPC 81/INF.36 and PPR 9/INF.21

#### Introduction

1 Since the adoption of regulation 4 under MARPOL Annex VI in 2008, the use of exhaust gas cleaning systems (also referred to as scrubbers) has grown significantly. In 2008, only three ships worldwide had prototype EGCS installed. By 2020, approximately 4,300 ships had these systems installed and that number has continued to grow.

2 As a result, the global volume of scrubber washwater and bleed-off (hereto called "scrubber wastes") discharged into the world's oceans, including IMO-designated Particularly Sensitive Sea Areas (PSSAs) and Special Areas and other ecologically vulnerable areas, has ballooned. According to a conservative analysis of global scrubber discharge volumes, at least 10 gigatonnes (Gt), including at least 665 megatonnes (Mt) in PSSAs, are discharged annually based on 2019 traffic data<sup>2</sup> (see document MEPC 81/INF.36 (FOEI et al.))

3 In response to concerns about the ecological and human health impacts of scrubbers, more than 93 national, sub-national, and port-level bans and restrictions have been adopted on discharging scrubber wastes or using scrubbers as an alternative method of compliance.

<sup>1</sup> This submission is supported by Stand.earth

<sup>2</sup> <https://theicct.org/publication/global-scrubber-washwater-discharges-under-imos-2020-fuel-sulfur-limit/>

**Canada's domestic obligation to prohibit the deposit of deleterious substances into fish habitats and to protect the critical habitats of endangered and threatened species**

4 Some countries have continued to allow the discharge of scrubber wastes in contravention of that nation's own domestic laws. Canada is one such country. This is particularly problematic due to its obligations under the Canada-United States-Mexico Agreement (CUSMA) which requires parties to comply with and enforce each nation's own environmental laws. The environmental compliance oversight body under the CUSMA is known as the Commission for Environmental Cooperation (CEC).

5 Document PPR 9/INF.21 (Canada) found that in-water scrubber discharges, open-loop, closed-loop and hybrid, are more acidic and turbid than the surrounding water. It should also be noted that, in that document, it was found that particulate matter (PM), including Black Carbon (BC), and carbon dioxide (CO<sub>2</sub>) emissions from ships using heavy fuel oil (HFO) with a scrubber are higher than those using marine gas oil (MGO).

6 Subsection 36(3) of Canada's Fisheries Act "prohibits the deposit of deleterious substances into water frequented by fish, or to any place, under any conditions, where they may enter waters frequented by fish." A deleterious substance is defined as "any substance that, if added to any water, would degrade or alter the water quality such that it could directly or indirectly harm fish, fish habitat, or the use of fish by humans."

7 Scrubber washwater contains persistent and bioaccumulative contaminants, is strongly acidic, and a source of thermal pollution. Known contaminants in scrubber wastes include polycyclic aromatic hydrocarbons (PAHs), alkylated PAHs, particulate matter, nitrates, nitrites and heavy metals. These various pollutants can worsen water quality and bioaccumulate throughout food webs. Further, scrubber wastes are often not discharged into pristine environments, but rather ecosystems already bearing some contamination. Additional inputs of contaminants from scrubber wastes may push ecosystems beyond ecological thresholds. Predators at or near the top of the food chain, such as salmon and orcas, often bear greater pollution burdens and may suffer greater adverse impacts as a result.

8 Canada's Species at Risk Act also provides for the protection of species listed as threatened and endangered. In 2017, Canada created its Action Plan for Northern and Southern Resident Killer Whales, which are classified as threatened and endangered respectively. There are only 74 Southern Resident killer whales remaining. Environmental contamination has been identified as a key stressor for these populations.

9 The Southern and Northern Resident killer whales rely on fish as their primary food source, particularly Chinook salmon. These whales are found along the West Coast of the United States and Canada, with critical habitat for both populations found in British Columbia's coastal and internal waters. This region also receives large volumes of scrubber waste discharges from vessel traffic, particularly from cruise vessels travelling the Alaska cruise corridor.

10 The environmental non-governmental organization Stand.earth has filed a submission (SEM-23-007<sup>3</sup>) with the CEC regarding Canada's apparent failure to enforce its own environmental laws, as required by the CUSMA, by allowing the discharge of scrubber wastes in fish habitat as well as in critical habitat for endangered and threatened Resident killer whale populations. The Secretariat of the CEC, after consideration of the submission and the response from the Government of Canada, has determined that the submission warrants the preparation of a factual record.

---

<sup>3</sup> [http://www.cec.org/wp-content/uploads/wpallimport/files/23-7-rsp\\_en.pdf](http://www.cec.org/wp-content/uploads/wpallimport/files/23-7-rsp_en.pdf)

11 Many countries have domestic laws that are similar to those of Canada which protect fish habitats and endangered species. Further, other international agreements contain provisions for the enforcement of domestic laws. As such, there are likely other countries that are potentially in violation of multilateral agreements by allowing the continued discharge of scrubber wastes. Further, the discharge of increasing volumes of scrubber wastes puts economically important fisheries and threatened and endangered marine species at undue and unnecessary risk.

### Summary of relevant information from submissions

- 12 According to the Government of Canada response to the CEC submission:
- .1 the volume of scrubber waste discharges on Canada's Pacific Coast doubled between 2019 and 2022 from 44 million tonnes to 88 million tonnes;
  - .2 cruise ships accounted for nearly 46% of the total washwater discharged in 2022 on Canada's Pacific Coast;
  - .3 scrubber washwater contained 226 kg of PAHphe (phenanthrene equivalent), and nearly 26,000 kg of metals in 2022;
  - .4 in 2022, over 26 million tonnes of scrubber washwater were discharged into the Southern Resident killer whale (SRKW) critical habitat in Canada, including 69 kg of PAHphe and over 8,000 kg of metals;
  - .5 cruise ships accounted for 44% of the washwater discharge and 40% of the PAHphe and 44% of the metals in SRKW critical habitat; and
  - .6 ship scrubbers contributed between 40 and 98% of the loading of priority contaminants within 300 m of the SRKW critical habitat. Further, Environment and Climate Change Canada (ECCC) calculated that scrubbers are estimated to be responsible for the largest proportion of vanadium within 300 m of the SRKW critical habitat.

### Next steps

13 In light of the information provided in paragraphs 4 to 12, the co-sponsors believe that IMO should prohibit the use of scrubbers as an equivalent fuel sulphur compliance option for new ships under MARPOL and establish a timeline for phasing out scrubbers already installed on existing ships. In documents MEPC 81/5/4 (FOEI et al.) and MEPC 82/5 (FOEI et al.), the Committee has been urged to consider whether the use of scrubbers as an equivalent to low sulphur fuels is aligned with requirements outlined in regulation 4 of MARPOL Annex VI; to amend regulation 4 of MARPOL Annex VI to explicitly prohibit the use of scrubbers as a means of alternative compliance, thereby removing practices under MARPOL which are inconsistent with the obligations of IMO Member States under international treaty law, including human rights law; and to encourage national maritime administrations to ban the discharge of scrubber waste within their jurisdictional waters and to stop approving scrubbers as an alternative compliance method for ships registered under their flags until a global ban is introduced.

14 In the meantime, MEPC should adopt a resolution calling on shipping operators to immediately stop the release of scrubber discharge wastes in areas identified for their sensitivity, vulnerability, or conservation value.

**Action requested of the Committee**

15 The Committee is invited to consider the information provided in this document, and especially to:

- .1 consider paragraphs 4 to 12 and, in particular, their relevance to the ongoing deliberations under the PPR Sub-Committee on the evaluation and harmonization of rules and guidance on the discharge of discharge water from EGCS into the aquatic environment, including endangered species and enforcement of standards;
- .2 agree to develop and adopt a resolution calling on shipping operators to immediately stop the release of scrubber discharge wastes in coastal and marine protected areas, critical habitats for endangered species, IMO-designated Special Areas and PSSAs and other ecologically sensitive areas; and
- .3 take action as appropriate.

---