

EEB views towards a robust revised EU Mercury Regulation

Brussels, 2 April 2021

Diffuse pollution remains a problem in Europe also because of both historical and current emissions of mercury to the atmosphere and subsequently surface waters. Strong action is needed to curtail remaining mercury use and emissions under the European Green Deal, as per the Chemicals Strategy for Sustainability and as part of the Zero Pollution Action Plan. Mercury levels measured in biota continue to exceed environmental quality standards in almost all surface water bodies (EEA Mercury report 2018). Each year, a third of EU born babies have mercury levels above “the recommended safe limit”. The potential impact on children’s brain development is lifelong and can result in a significant reduction in Intelligence Quotient (IQ), with the estimated annual economic cost of this damage to be at least EUR 9 billion (Bellanger et al., 2013).¹

Turning ambitious words into real action, the EU should lead by drastically reducing remaining mercury uses, emissions and exposure; the review of the EU Mercury regulation presents the opportunity to do so. To protect human health and the environment from mercury, the revised policy framework should include:

1. Manufacturing and export of mercury-added products not allowed marketed in the EU, should be prohibited. Annex II needs to be updated accordingly, also as per the published inception impact assessment.

- To avoid double standards and prohibit export to countries with no or less stringent regulations.
- Such measures will promote mercury free markets and drive prices down.
- A dynamic link should be established: when EU legislation prohibits the putting on the market of mercury added products, the Mercury regulation should ban their manufacture and export automatically.
- The economic impact from banning the export of mercury-containing products already restricted in the EU is estimated to be small, as stated in the earlier EU Impact Assessment.²
- Re-location of EU businesses is unlikely, considering that mercury use is going down and equivalent measures in other countries are being implemented. Furthermore, big international markets such as India and China are following the lead of EU legislation.
- Mercury containing products contribute significantly to mercury spills and releases, especially in the waste stream, and therefore result in both direct health risks and environmental contamination.

In terms of mercury added products where mercury needs to be phased out – we would like to reiterate the **urgent need for the Commission to take a decision on the RoHS exemptions relevant to mercury added fluorescent lamps**, given that this decision is pending since 2016. **We urge the Commission to proceed with a phase out decision for CFLni, T5 and T8 mercury-added fluorescent lamps, including a 12-month transition period³.**

¹ <https://www.eea.europa.eu/highlights/soer2020-europes-environment-state-and-outlook-report>
Chemicals Strategy for Sustainability - https://ec.europa.eu/environment/strategy/chemicals-strategy_en
EEA 2018 Mercury in Europe’s environment, <https://www.eea.europa.eu/publications/mercury-in-europe-s-environment>
EC study on the feasibility of phasing out dental amalgam <https://circabc.europa.eu/sd/a/4fd46a0f-54aa-48c6-8483-288ad3c1c281/Dental%20Amalgam%20feasibility%20study%20-%20Final%20Report.pdf>

Commission report to the European Parliament and to the Council: <https://circabc.europa.eu/sd/a/bcfa68b1-d382-4e25-a5d2-eb8c7c07a2e4/COM%202020%20378%20F1%20REPORT%20FROM%20COMMISSION%20EN.pdf>

² Impact Assessment – accompanying document to the proposal for a regulation on the banning of the exports and the safe storage of metallic mercury COM (2006) 636 final, p.44

³ <https://eeb.org/library/why-hasnt-the-european-commission-banned-wasteful-lamps/>

2. **Dental amalgam should be phased out by 2025, as it is the largest remaining EU mercury use.** (Wood, 2020). Amalgam can methylate (forming the most toxic form, methylmercury), contaminating fish humans eat. Phasing out amalgam is the most cost-effective way to prevent dental mercury pollution as alternatives are available, affordable, effective and preferred by most EU citizens. Amalgam phaseout will prevent pollution and exposure via emissions from cremation, dental clinics, waste incineration, human waste, burials and other pathways. Awareness raising measures at EU level are necessary.⁴
3. **Mercury emissions from crematoria should be controlled at EU level.** Emission limit values (ELV) should be set, following the latest 2020 EU findings (Wood, 2020). Although mercury emissions from this source are estimated to be at least 1.6 t, this needs to be re-examined. While there is an increasing preference for cremation over burial, some Member States do not seem to be taking control measures⁵.
4. **Prohibit import of mercury, mercury compounds and mixtures unless they are intended for environmentally safe disposal.**
 - To ensure that EU mercury supplies are reasonably balanced with EU demand, mandatory storage obligations, and policies, encouraging mercury recovery from wastes and products.
 - To better protect the EU waste/mercury recyclers by avoiding lower-cost mercury flooding the EU market.
 - To gain the environmental benefits from such a ban, as less mercury would be entering the EU market.
 - To reduce EU and overall mercury demand, potentially speeding closure of existing primary mercury mines, with the various environmental benefits that this entails.

We would also like to point out that:

- The EU has the power to undertake targeted import prohibitions where it is necessary to implement important EU policies.⁶
- The Impact Assessment (IA) should consider this scenario, which would still allow the EU the economic benefits of environmentally safe disposal; therefore this would not entail any appreciable cost for the EU.

Together with an import ban (unless for disposal), transit of mercury and mercury compounds via the EU may also be considered for prohibition. There is no need to facilitate the trade of a substance for which the official EU policy is to reduce and, where feasible, eliminate its use.

⁴ Assessment on the feasibility of phasing out dental amalgam (Wood 2020) <https://circabc.europa.eu/sd/a/4fd46a0f-54aa-48c6-8483-288ad3c1c281/Dental%20Amalgam%20feasibility%20study%20-%20Final%20Report.pdf>

Commission report to the European Parliament and to the Council: <https://circabc.europa.eu/sd/a/bcfa68b1-d382-4e25-a5d2-eb8c7c07a2e4/COM%202020%20378%20F1%20REPORT%20FROM%20COMMISSION%20EN.pdf>

Feedback attached in World Alliance Submission for Mercury Free Dentistry <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12924-Mercury-review-of-EU-law/F2164126>

Feedback from the European Centre for Environmental Medicine - <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12924-Mercury-review-of-EU-law/F2174464>

⁵ Assessment on the feasibility of phasing out dental amalgam (Wood 2020) <https://circabc.europa.eu/sd/a/4fd46a0f-54aa-48c6-8483-288ad3c1c281/Dental%20Amalgam%20feasibility%20study%20-%20Final%20Report.pdf>

⁶ With respect to the purely legal question of confronting trade obstacles, we note the promulgation of Council Regulation No. 1236/2005, restricting trade in products used for torture and other inhuman punishment. We specifically note the import prohibition of equipment that can only be used for capital punishment, torture, or other similar purposes in Article 4 of this regulation. This import prohibition suggests the EU can undertake very targeted import bans where it is necessary to implement important EU policies.

In all cases, there is a need to improve the accuracy of reporting for mercury and mercury compounds that pass through a country that is not the final destination; some Customs agencies may record the original source of the commodity, while others may record the final country.

- 5. Phasing out of mercury in porosimetry and new lighthouses should be examined**, due to important mercury volumes used.

Porosimetry

Important information was gathered on this issue in the COWI/Concorde 2008 report. This is one of the areas where policy recommendations have been put forward by the consultants. *Mercury consumption for porosimetry is substantially larger than previously expected and may be among the largest remaining uses in the EU today. Although mercury usage takes place in laboratory conditions, which tend to ensure a certain containment of the mercury, direct releases to the environment are expected, however, and due to the substantial amounts of mercury involved, the generated mercury-containing waste contributes significantly to the mercury input to waste in the EU. Alternatives to mercury porosimetry are commercially available today, though with some limitations, but unless mercury use for porosimetry is regulated, it is likely that the further development and implementation of alternatives will be slow. These preliminary findings indicate that it might be useful to investigate this mercury usage in more detail in future work, and that regulation may be warranted in the longer perspective. Also it appears that at least for some uses/types of instruments mercury use can be phased out.*

Based on earlier research,⁷ we would strongly recommend that steps should be taken to ensure that 100% of the mercury used is recycled, and to phase out mercury use in porosimetry as soon as and where possible, creating incentives for the development of mercury free alternatives for the remaining uses.

New lighthouses

Evidence on the use and potential impacts of mercury in lighthouses has been extensively discussed in the COWI/Concorde 2008 report.

The report concludes 'It would be consistent with the objectives of the regulation to include mercury that is no longer used in light houses in an amendment to the 1102/2008 regulation. The relatively large amounts of mercury stored in each light house makes it feasible to send the mercury directly for safe storage.' This proposal should be further pursued and included as a provision of the revised EU mercury regulation.

- 6. End-of-life mercury added products should be collected separately and disposed of in an environmentally sound manner.**

For products/waste the separate safe collection of which is not explicitly required by law (e.g., for mercury thermometers), additional measures need to be taken.

This was also one of the conclusions of the 2011 REACH Socio Economic Analysis and Risk Assessment Committees while evaluating the ban of mercury added measuring devices,⁸ which stated that "a proper collection system for these devices may also be necessary to avoid mercury emissions into society from these devices."

⁷ from the discussions during the EEB, HCWH, ZMWG conference on 'EU Mercury phase out in Measuring and Control Equipment', October 2009

⁸ SEAC and RAC opinion on an Annex XV dossier proposing restrictions on mercury in measuring devices
http://echa.europa.eu/documents/10162/13641/compiled_rac_and_seac_opinions_mercury_en.pdf

Mercury containing wastes are also generally discussed in the COWI/Concorde 2008 (p.192)⁹ report; separate collection rates are rather low, resulting in secondary emissions from landfills and waste incinerators. To that end several recommendations are provided and should be considered for the new mercury regulation.

7. Set limits for mercury emissions to air/releases to water from the main point sources (i.e., Large Combustion Plants, Iron and Steel, Cement and Lime, Non-ferrous metals production) We call on the European Commission to:

- a. set a binding emission limit value of 1 µg/m³ (for any **coal/lignite combustion**) to apply latest 2030.

Rationale: The combustion of coal/lignite is the largest source of emissions in Europe (15,6 tonnes to air per year) and the second largest source globally (after emissions from Artisanal Small Scale Gold Mining). EU pollution prevention standards for power plants have the potential to cut mercury pollution by a factor 10, however the current EU BREFs standards offers a very large degree of flexibility e.g., the annual average BAT associated emission level for largest lignite power plants is set to <1*-7 µg/Nm³ (where <1 is corresponding to the BAT level also set in the Minamata Guidance), Member States systematically align to the upper lenient level or even derogate from it¹⁰.

- b. set minimal efficiency standards aligned to the upper BAT-AEE(P)Ls which will also reduce pollution load by useful production outputs.
- c. introduce a maximum mercury fuel threshold maximum permissible concentration threshold of mercury and compounds in any fuel or waste prior to its combustion set to 25 µg/kg weight/weight (dry)
- d. ELVs should also be set for **Iron and Steel production**: Activities of section 1.3, 2.1 and 2.2 of Annex I activities of the IED, we propose a maximum level of 10 µg/Nm³ for mercury and 5 mg/Nm³ for dust.

Rationale: The current emission concentrations achieved at EU Iron and Steel plants is uncertain due to absence/weak monitoring requirements. Data from German installations refer to emission levels of 3 µg/Nm³ (cowpers)/ 2 µg Basic oxygen steelmaking, / 10 µg for electric steelmaking. There are no dedicated EU limits in place. Most mercury is controlled as particulate bound to dust. For this reason, the dust parameter becomes very important. For sinter plants particulate emissions range from 0.73-36 mg/Nm³, depending on the type of techniques implemented. Fabric filters in combination with other more basic techniques achieve levels below 1 mg/Nm³. These techniques also show an important co-benefit on dioxins and furans emissions, which can be reduced by a factor 2-4 compared to the traditional electrostatic precipitators.

- e. ELVS should be set for **Cement plants** Activities of section 3.1 of Annex I activities of the IED, we propose a maximum level of 10 µg/Nm³ for mercury.

Rationale: The current emission concentrations achieved at EU Cement plants is uncertain due to absence/weak monitoring requirements. In Germany, a 10 µg limit applies if waste is co-combusted in installations, as from 2019. However, Cement and lime plants got exempted from this. Data from a few German installations show that levels <10 µg are already achieved. Out of 14 assessed installations in the North Rhine Westphalia Study, 6 already achieve emissions

⁹ https://ec.europa.eu/environment/chemicals/mercury/pdf/EU_Mercury_Study2008.pdf

¹⁰ Background briefing on the 2017 LCP BREF transposition for coal fired power plants, <https://eeb.org/library/background-briefing-on-the-2017-lcp-bref-transposition-for-coal-fired-power-plants/>

below 10µg (3,1-10µg). The highest emissions observed are up to 19,3µg. Dedicated mercury controls could be implemented in these installations but where not required so far.

- f. ELVS should be set for **Non-Ferrous Metals** Activities of section 2.1, 2.5 and 6.8 of Annex I activities of the IED, we propose a maximum level of 10µg/Nm³ for mercury.

Rationale: The current emission concentrations achieved at EU Nonferrous Metals is uncertain due to absence/weak monitoring requirements. The revised NFM BREF provides that a level <1µg/Nm³ is achieved as a daily average if uses of adsorbents (e.g., activated carbon, selenium) in combination with dust filtration is done. Dedicated mercury controls could be implemented in these installations but where not required so far.

- g. The **indirect release of industrial wastewater to an Urban Waste Water Plant** (UWWTP) containing mercury shall be prohibited. Where the UWWTP is designed to abate the mercury wastewater stream, the upstream wastewater discharges shall not exceed the relevant Maximum Allowable Concentration set in the EQS Directive that is 0,07µg/l.

Rationale: the benefit of this approach is also prevention at source and holding the source operator of the polluter accountable, and to prevent a “dilution” approach. It will incentivise the operator to prevent the generation or use of recalcitrant water pollutants in its production process. Some UWWTP are not equipped to effectively abate the pollutants concerned. Further dilution would also weaken the identification of sources of pollution. Finally, the responsibility of dealing with metals or other residues of concern in the sludges of the wastewater treatment plant shall be borne by the operator where they originate. This approach is therefore to be favoured. An indirect release of polluted wastewater has the same toxicity for the environment. Therefore, we suggest that the new policy framework – which could amend the IED- should clearly state that either indirect release of industrial wastewater is prohibited when the wastewater inventory detects the presence of mercury. Where the downstream UWWTP can effectively abate mercury (we doubt this) the BAT-AEL should be complied with “at the fence” and prior to further release through a downstream UWWTP and in no circumstances exceed the MAC level set in the EQS Directive (0,07µg/l).

Those amendments should also be brought to the revised IED framework, which should provide for a rejection of derogations on the mercury parameter.

The reduction of mercury pollution at the source through a revised Regulation must be coupled with an updated legal framework regarding mercury concentrations in the air: the soon to be revised **Ambient Air Quality Directives** must include a legally binding air quality standard for mercury, with appropriate monitoring and reporting requirements¹¹.

Thank you for considering the points above.

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¹¹ <https://eeb.org/library/air-quality-in-the-eu-how-to-do-your-part/>