



## Zero Mercury Working Group Preliminary Views on COP5 Decisions September 2023

This paper summarizes the preliminary views of the Zero Mercury Working Group (ZMWG) on the anticipated decisions at COP5. We highlight priority issues, and the key points on each. We encourage COP5 delegates to consult with ZMWG members for more details or positions on documents not discussed below.

In the following document you can find the ZMWG recommendations on:

1. Proposed Revisions to Annex A and B;
2. Setting Waste Thresholds under Article 11; and
3. Effectiveness Evaluation

### **ZMWG RECOMMENDATION ON THE PROPOSED REVISIONS TO ANNEX A**

- 1. Cosmetics-** To address the continuous global mercury crisis emanating from mercury skin lightening products (SLPs), the African Region proposed an amendment in May 2023 to strengthen the existing provisions within the Convention. The proposal has two parts.

**First, concerning amending Annex A, Part I:** The amendment proposes to replace the existing ban on the manufacture, import and export of cosmetics “over 1 ppm mercury,” to prohibiting “mercury-added” cosmetics, starting in 2025. By eliminating the mercury threshold, Parties can more effectively conduct market surveillance through utilization of simple, cost-effective hand-held testing devices that preclude the need for lab testing. Zero tolerance places the burden on manufacturers instead of on governments, who would only need to determine whether mercury is added or not. Many countries have no threshold limit.

**Second, concerning amending Annex A, Part II:** Three key measures are proposed to curtail toxic SLP sales, coordinate phase-out efforts and enhance public awareness about SLP hazards (along with other key provisions) which are complementary to the proposed Part I amendment and include the following:

***i. Setting national objectives to phase out sales and offering of sales is necessary.*** These measures are needed to facilitate removal and raise awareness of mercury SLPs. Like the Convention’s Annex A- Part II for dental amalgam, a menu of options is provided to curtail sales, offering of sales, advertising and display of mercury SLPs, along with other key provisions. While many countries have enacted such bans, a global approach is needed to reduce the circulation of mercury SLP through measures such as the following:

**--Developing and implementing strategies to discourage marketing, advertising and display.** Advertising restrictions support product bans by obstructing the marketing by manufacturers, distributors and retailers to reach out to potential customers.<sup>1</sup> Blocking ads sends a clear signal that mercury SLPs are illegal to market.

**--Developing and publicizing advisories, detention and prohibited substances lists of mercury-added cosmetics.** These are often used by governments to protect people from harm, facilitate identification by the authorities and prohibit illegal and toxic SLPs. Many national governments have already adopted

many of these activities and lists, often posted on their websites, to accelerate monitoring and surveillance.

**--Licensing and product ingredient approvals for manufacturing facilities for cosmetics and beauty products.** Many governments require licenses and product ingredient approvals for manufacturers that produce cosmetics. Ingredient lists can inform consumers of their choices and also serve as a rough inspection tool. Supporting governmental policies can require labelling or disclosure of product ingredients. Platforms can also be required to uphold product safety standards, among other requirements.

**--Engaging online platforms in developing and implementing product safety pledges.** Internet sales are a particular challenge for countries regulating toxic substances. E-commerce is often multinational, where unclear liability rules allow online platforms to evade responsibility and often lead to an uneven playing field. Concrete steps are needed to eliminate marketing and sales and reinforce and complement existing requirements in domestic laws and regulations. Voluntary agreements on mutual information sharing and collaboration are another avenue increasingly considered by governments, including “product safety pledges” that were first adopted by Europe.<sup>ii</sup> Since then, Australia<sup>iii</sup> and Korea<sup>iv</sup> have established similar pledges.

**ii. Coordinating and collaborating on phase out initiatives inter-ministerially and bilaterally and/or regionally.**

Mercury SLPs generally fall within the jurisdiction of the Health Ministry, but in tandem, customs are charged with border controls. Other Ministries have other responsibilities. Inter-ministerial coordination helps to better control the illicit trade of such products within a country, especially when roles, responsibilities, mandates and decision-making processes are defined. Beyond inter-ministerial cooperation, bilateral, regional and global cooperation can also assist in curtailing transboundary advertising, trade and sales of mercury SLPs.

**iii. Raising public awareness about the hazards of SLP use among physicians, dermatologists and beauty centers as well as consumers and family members.**

Raising public awareness among physicians, dermatologists beauty centers is key to informing consumers about the dangers of mercury SLPs. Collaboration with the medical community and civil society organizations (CSOs), along with education and outreach, can assist in effective implementation of a country’s strategy to curtail the availability and use of mercury SLPs. The media’s role in the fight against skin lighteners cannot be overstated.<sup>v</sup> In 2022, CNN ran a series that helped raise public awareness globally through investigating skin whitening practices worldwide to explain the underlying drivers of colorism.<sup>vi</sup>

***Despite current Convention provision, mercury SLPs continue to be sold, both in local markets and on the internet, contributing to a global mercury crisis that requires coordinated international action. The proposal would strengthen Convention provisions to include national advertising and sales bans, and address other related factors, that currently allow unscrupulous cosmetics manufacturers to add mercury compounds to SLPs and market and sell these increasingly illegal mercury SLPs worldwide. In addition, COP5 should initiate activities to “evaluate whether the trade in specific mercury compounds compromises the objective of this Convention and consider whether specific mercury compounds” should be subject to trade restrictions, in accordance with Article 3, Paragraph 13 of the Convention. A first step is to conduct an assessment of the global supply, trade and use of mercury compounds.***

**2. Dental Amalgam -** The proposal for strengthening the Convention on dental amalgam has two parts.

**First, in Annex A, Part I, it proposes to phase out the manufacture, import and export of dental amalgam by 2030.**

**Second, in Part II of the Annex A, it proposes adding text to request Parties to:**

- 1) Submit to the Secretariat a national plan concerning the measures they intend to implement to phase out the use of dental amalgam and**
- 2) Exclude or not allow, by taking measures as appropriate, the use of dental amalgam in government insurance policies and programmes.**

Both measures support phasing out the use of dental amalgam by 2030. This is consistent with the direction Parties are heading, over the years, in adopting additional measures to phase down use; discourage use in pregnant women and children (known as the “children’s amendment, effective in September 2023); and the overall phase out dental amalgam.

Over 17 countries have phased out amalgam use<sup>vii</sup>, announced plans for phasing out amalgam use, or use de minimis amounts of amalgam<sup>1</sup>. In addition, measures requiring mercury-free dentistry for children have been adopted in the entire European Union and another 12 countries<sup>2</sup>. Furthermore, the market is also moving towards mercury free fillings. Dentsply Sirona – the world’s largest manufacturer of dental products – exited the amalgam market in December 2020.<sup>viii</sup>

Given the recent global developments towards phasing out dental amalgam, ZMWG believes that such amendments should be supported as they are feasible without undermining dental care needs, since mercury free alternatives are available, effective and affordable worldwide.

***Since non-mercury dental fillings are cost effective, perform as well or better, and are available and used worldwide, we support the objectives of the proposed amendments calling for the discontinuation of dental amalgam by 2030.***

3. **Lamps** – At COP5, Parties will have an opportunity to set phase out dates for fluorescent lamps. **Taken in combination with the previous lighting amendments submitted at COP4 that have been carried forward, this new amendment proposes to expand the scope of coverage to phase out all Compact Fluorescent Lamps (CFLs) by 2025 and Linear and non-linear fluorescent lamps by 2026.**

Light emitting diode (LED) lamps are rapidly replacing CFLs and LFLs, and are widely available, as shown by several studies.<sup>ix</sup> Moreover, LEDs are twice as efficient as CFLs and LFLs, and LEDs last two to three times longer. Manufacturers’ literature on compatibility has shown that 91-94% of fluorescent fixtures in North America and Europe can accept a ‘plug and play’ LED tube, like-for-like products needing no specialist installation<sup>x</sup>. For the other 6-9% of fixtures, an electrician can by-pass the ballast and operate the LED tubes on mains voltage – thus, all existing fluorescent fixtures can be retained until they reach their end-of-life.

In addition to mercury reduction, there are tremendous energy, CO2 savings, along with significant financial savings. Based on [price and performance data](#) from more than 1200 lighting technologies, a Clean Lighting Coalition (CLiC) analysis found that phasing out LFLs as early as 2025 is technologically feasible and economically justified in over 60 countries. CLiC estimates that 183 metric tonnes of mercury will be avoided if the Parties choose 2025 as the phase-out date for all linear fluorescent lamps. However, if the phase-out year selected is 2026, 17 metric tonnes of mercury – 10% of the 2025

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<sup>1</sup> The European Union, the Czech Republic, Denmark, Finland, Ireland, Italy, Japan, Moldova, Nepal, Netherlands, Norway, Philippines, Russia, Slovakia, Sweden, St. Kitts and Nevis, and Suriname, among others

<sup>2</sup> Japan, Lithuania, Mauritius, Moldova, Nepal, Philippines, Russia, Suriname, Tanzania, the United Kingdom, the United States, Vietnam, and Zambia.

potential – will be lost. And if the phase-out year is 2027, 34 metric tonnes of mercury will be lost, which is nearly 20% of the 2025 potential.

The savings on electricity bills – US \$1.3 trillion from 2025-2050 – occurs if 2025 is selected as the phase-out year. If 2026 is selected for the phase-out year, US\$ 110 billion in savings will be lost. If 2027 is the selected phase-out year, US \$230 billion in savings will be lost.

In addition, by phasing out in 2025, there would be 3.2 giga-tonnes of CO2 emissions avoided between 2025-2050. If 2026 is the selected phase-out year, 300 million tonnes of potential CO2 savings are lost. If 2027 is the selected year for LFLs, 600 million tonnes of potential CO2 emission savings will be lost.

The following lamp categories (in blue) are to be discussed at COP5:

<p style="text-align: center;"><b>Mercury-added products</b> <b>Lamp categories to be discussed at COP 5</b></p>	<p style="text-align: center;"><b>Date after which the manufacture, import or export of the product shall not be allowed (phase-out date)</b></p>
Compact fluorescent lamps with an integrated ballast (CFL.i) for general lighting purposes that are ≤ 30 watts with a mercury content not exceeding 5 mg per lamp burner	2025 (already adopted)
Compact fluorescent lamps (CFLs) for general lighting purposes that are > 30 watts	2025 (African proposal)
Compact fluorescent lamps with a non-integrated ballast (CFL.ni) for general lighting purposes that are ≤ 30 watts with a mercury content not exceeding 5 mg per lamp burner	2025 (African proposal)
Linear fluorescent lamps (LFLs) for general lighting purposes: (a) Halophosphate phosphor ≤ 40 watts with a mercury content not exceeding 10 mg per lamp; (b) Halophosphate phosphor > 40 watts	[2025] [2027] [2030]
Linear fluorescent lamps (LFLs) for general lighting purposes: (a) Triband phosphor < 60 watts with a mercury content not exceeding 5 mg/lamp	[2027] [2030]
Linear fluorescent lamps (LFLs) for general lighting purposes: (b) Triband phosphor ≥ 60 watts	2026 (African proposal)
Non-linear fluorescent lamps (NFLs) (e.g., U-bend and circular) for general lighting purposes: (a) Triband phosphor, all wattages; (b) Halophosphate phosphor, all wattages	2026 (African proposal)

***Given the availability and overall superiority of LED alternatives, Annex A should be revised so that a timetable of 2025 is set for phasing out the manufacture and trade of all fluorescent lamps.***

#### 4. Batteries

Pursuant to decision MC-4/3, COP4 decided that the two remaining categories of button cell batteries should be phased out with the exact date to be discussed at COP 5. The two categories of button cell batteries not currently subject to Convention prohibitions on manufacture and trade are silver oxide (often used in watches), and zinc air (primarily used in hearing aids). During the COP3-COP4 intersessional process, the Battery Associations of Japan, Europe, North America, and Latin America, representing 90% of global manufacturing, indicated they stopped manufacturing these mercury-

added batteries and are only producing mercury free silver oxide and zinc air button cells.<sup>xi</sup> In addition, Chinese manufacturers are producing mercury free silver oxide and zinc air button cells, and new legislation in China requires the phase out of the mercury-added versions.<sup>xii</sup>

***Global availability of non-mercury alternatives has been clearly established, and Annex A should be revised so that all mercury-added battery types are subject to the prohibition against manufacture and trade by 2025.***

## **5. Switches/Relays**

COP4 pursuant to decision MC-4/3 decided that the remaining switches should be phased out with the exact date to be discussed at COP 5. Certain “high capacity” or “high frequency” switches or relays have been exempted until now, but the earlier intersessional expert group could find no evidence this exemption is necessary because non-mercury alternatives are available.<sup>xiii</sup>

***To that end, such switches and relays should now be prohibited from manufacture and trade by 2025.***

### **ZMWG RECOMMENDATION ON THE PROPOSED REVISIONS TO ANNEX B**

**Polyurethane production using mercury containing catalysts** – Current provisions request Parties to take at a minimum the measures listed under Annex B Part II, including to reduce the use of mercury for polyurethane production, while “aiming” at a phase out of this use within 10 years of the entry into force of the Convention. COP 4 decided to further consider adding the production of polyurethane using mercury-added catalysts to part I of annex B at its fifth meeting.

The primary use of mercury catalysts is in the production of polyurethane coatings, adhesives, sealants, and elastomers. The mercury catalyst remains in the final polyurethane product, which can then be used in bedding, thermal insulation and in floorings. Floors can emit mercury vapours over the course of their lifetime, as well as when the flooring material is removed.

Viable substitutes for mercury catalysts are already in use for over 95% of PU elastomer systems, and have been used many years (e.g. tin, amine, and titanium, zirconium bismuth, zinc, platinum, etc compounds). The cost of most mercury-free catalysts is competitive with the typical mercury catalyst cost, and especially when taking into account waste disposal costs, the environment and other customer concerns. (COWI, 2008, 117)

In the most recent inventory of mercury use in the USA, the responses indicated that this use has been discontinued.<sup>xiv</sup> In the EU (and Norway), Regulation (EC) No 2017/852 prohibits manufacturing processes in which mercury or mercury compounds are used as a catalyst from 1 January 2018. In its National Implementation Plan, Japan reports that no mercury catalysts are used in polyurethane production.<sup>xv</sup>

***Given non-mercury alternatives are globally available, as demonstrated by the prohibitions already in place and the transitions already accomplished, Annex B should be revised so that production of polyurethane using mercury containing catalysts is prohibited.***

### **ZMWG RECOMMENDATION ON SETTING WASTE THRESHOLDS UNDER ARTICLE 11**

Following the COP 4 decision, the expert group on waste thresholds continued their discussions to consider appropriate thresholds for Convention coverage of Category C wastes, or wastes contaminated with mercury, such as industrial waste and sewage sludge. Wastes below the threshold would be excluded from Convention coverage, and thus not subject to Article 11 environmentally sound management (ESM) requirements.

At COP 4 under decision MC-4/6, Parties were invited to submit information on approaches other than the total mercury concentration approach, including risk-based considerations to be considered by experts.

***In the meeting of Technical Experts on Mercury Waste Thresholds held on February 16-18, 2023***, the group did not agree on a specific threshold value although there was agreement that threshold value should be established. Three threshold values were considered by the group. Out of the 19 parties, four parties supported proposing 10 mg/kg as one threshold value, four supported proposing 25 mg/kg as one threshold value, eight parties supported proposing 10 and 15 mg/kg in square brackets, and three parties did not express specific support.

ZMWG is opposed to a 25 mg/kg threshold, which would allow vast quantities of mercury-contaminated waste to escape treatment and be used in ways that can lead to further contamination (ie agricultural application as soil improvement and reuse in the construction industry.) It would further allow waste incinerator bottom ash and sewage sludge to avoid regulation as mercury wastes under the treaty. In many developing and undeveloped countries, waste management is uncontrolled, leading to open dumping and unlicensed disposal<sup>xvi</sup>. Communities may be located adjacent to or, or even on, dumpsites. Close proximity to and direct contact with wastes, including Category C wastes, may occur under the following circumstances:

- Open dumping or air dispersion of waste into residential areas;
- Residential structures adjacent to or on disposal sites;
- Informal pickers and/or children accessing disposal sites;
- Landspreading near residential areas; and/or
- Reuse as fill and other reuse scenarios allowing for direct exposure.

As a result, a higher level of protection is needed to ensure the safety of communities in these areas.

There are a substantial number of national thresholds already in place. Korea, Switzerland, Canada, and Uganda have used a threshold of around 1-2 ppm for a long period.<sup>xvii</sup> Indonesia already has set the threshold to be 0.3-10 ppm for different wastes and a dumping limit of 0.05 ppm.<sup>xviii</sup>

***ZMWG supports a decision for setting a threshold on mercury, which should be as low as possible with a maximum 10 ppm. We also agree that a review process should be kept open, to consider the revision of these thresholds latest at COP7.***

### ***ZMWG RECOMMENDATION ON THE EFFECTIVENESS EVALUATION FRAMEWORK***

In its [decision MC-4/11](#), COP4 agreed to begin the first effectiveness evaluation of the Convention and adopted the framework for the evaluation as outlined in Annex I to the decision. In the same decision, the COP established the Open-ended Scientific Group in accordance with the terms of reference to the decision.

Also, in decision MC-4/11, COP4 requested the Secretariat to support an intersessional process to refine the list of indicators to be used in the effectiveness evaluation, with a view to providing a final list of indicators for consideration and possible adoption by the COP at its fifth meeting.

While the proposed draft list of indicators considers the comments made by the Effectiveness Evaluation Group and has made satisfactory revisions, ZMWG believes that some of them could be improved.

In general, in the final list of draft indicators it is stated that “In addition to the number of parties, it is understood that the proportion of parties will also be relevant for some indicators.” ZMWG asks to

specify which indicators are to be considered relevant and to share the rationale used to define the relevance.

In particular, ZMWG has specific input on the following indicators:

**Indicator 6a.** Reporting mercury “traded” or “supplied” without mentioning for which allowable use sounds vague. The indicator would be more effective including the trading and supplying data by purpose which would allow to understand flows and measure the progress in phasing down mercury in various uses under Articles 4 and 5. The ZMWG strongly supports the comments of NRDC<sup>xix</sup>.

**Indicator C6 – removed.** The ZMWG supports Canada’s comment pointing out that indicator C6 “Volume, in tonnes, of mercury-added products (a) imported and (b) exported, in units per year, for each products category in part I of Annex A.” is key to evaluating the effectiveness of article 4(1). Therefore, we ask to reintroduce it.

**Indicator 23.** The proposed wording would evaluate a Party’s compliance efforts through its development and implementation of strategies. Evaluating the number of countries that “endeavoured to develop strategies” gives a measure of the attempts done, but not if the strategies have been developed and applied. To evaluate the Convention’s effectiveness, information is needed on how many Parties have succeeded. Therefore, we suggest to keep the previous wording<sup>xx</sup>.

**Indicator 27.** Adding examples of measures taken to provide information to the public (warning about fish consumption, about the risk to sensitive populations of dental amalgam, detention lists for mercury SLPs, etc.) could be helpful in evaluating the effectiveness of the information provided.

**Indicator 28.** Currently, this indicator could be misleading and overrate the effectiveness of the Convention because every single measure taken has the aim to protect human health, which is the main objective of the Convention as stated in Article 1. To that end we would recommend reverting to the original language which referenced Article 16, i.e., “in accordance with paragraph 1 of article 16.”

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<sup>i</sup> An “advertisement” is a form of communication through the media about products, services or ideas paid for by a sponsor. It is used to encourage, persuade or manipulate consumers to continue with an existing habit/consumption pattern, or to adopt a new habit/consumption pattern.

<sup>ii</sup> [https://commission.europa.eu/business-economy-euro/product-safety-and-requirements/product-safety/product-safety-pledge\\_en](https://commission.europa.eu/business-economy-euro/product-safety-and-requirements/product-safety/product-safety-pledge_en)

<sup>iii</sup> <https://www.productsafety.gov.au/product-safety-laws/compliance/australian-product-safety-pledge>

<sup>iv</sup> <https://www.kats.go.kr/en/content.do?cmsid=534>

<sup>v</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5345401/>

<sup>vi</sup> <https://www.cnn.com/2021/11/14/world/as-equals-white-lies-skin-whitening-launch-intl-cmd/index.html>

<sup>vii</sup> <https://environmentalmedicine.eu/mercury-free-dentistry-for-planet-earth/>

<sup>viii</sup> Link to Dentsply’s annual report: <https://investor.dentsplysirona.com/static-files/89f1f08d-3eac-439b-9e93-7e0bfe2893b1>

<sup>ix</sup> <https://www.clasp.ngo/research/all/mercury-free-alternatives-to-certain-fluorescent-lamps-a-report-to-the-european-commissions-committee-on-the-regulation-of-hazardous-substances/> <https://www.clasp.ngo/updates/report-shows-market-readiness-to-eliminate-mercury-based-lighting/> <https://www.clasp.ngo/research/all/mercury-in-fluorescent-lighting-unnecessary-health-risks-actionable-solutions/>

<sup>x</sup> <https://www.clasp.ngo/updates/report-shows-market-readiness-to-eliminate-mercury-based-lighting/>

<sup>xi</sup> See [https://www.mercuryconvention.org/sites/default/files/documents/working\\_document/compilation\\_01\\_batteries.pdf](https://www.mercuryconvention.org/sites/default/files/documents/working_document/compilation_01_batteries.pdf), p. 3.

<sup>xii</sup> See [https://www.mercuryconvention.org/sites/default/files/documents/working\\_document/compilation\\_01\\_batteries.pdf](https://www.mercuryconvention.org/sites/default/files/documents/working_document/compilation_01_batteries.pdf), pp. 2-3.

<sup>xiii</sup> See

[https://www.mercuryconvention.org/sites/default/files/documents/submission\\_from\\_government/compilation\\_02\\_switches\\_and\\_relays.pdf](https://www.mercuryconvention.org/sites/default/files/documents/submission_from_government/compilation_02_switches_and_relays.pdf), pp. 1-5.

<sup>xiv</sup> See

[https://www.mercuryconvention.org/sites/default/files/documents/information\\_document/4\\_INF3\\_AnnexAB\\_Compilation.English.pdf](https://www.mercuryconvention.org/sites/default/files/documents/information_document/4_INF3_AnnexAB_Compilation.English.pdf), pp. 145-6.

<sup>xv</sup> Information from the Compilation on Processes - <https://www.mercuryconvention.org/en/implementation/intersessional-work>

<sup>xvi</sup> See e.g., South Africa Department of Environmental Affairs, State of Waste Report, 2018, available at

[https://soer.environment.gov.za/soer/UploadLibraryImages/UploadDocuments/141119143510\\_state%20of%20Waste%20Report\\_2018.pdf](https://soer.environment.gov.za/soer/UploadLibraryImages/UploadDocuments/141119143510_state%20of%20Waste%20Report_2018.pdf), Toxics Link, On the Edge: Potential Hotspots in Delhi, 2014, available at <http://toxicslink.org/docs/Report-On-the-Edge.pdf>,

UNEP, Africa Waste Management Outlook, 2018, available at <https://wedocs.unep.org/handle/20.500.11822/25514>,

UNEP, Waste Management Outlook for Latin America and the Caribbean, 2018, available at

[file:///C:/Users/dlennett/Downloads/Residuos\\_LAC\\_EN%20\(2\).pdf](file:///C:/Users/dlennett/Downloads/Residuos_LAC_EN%20(2).pdf).

<sup>xvii</sup> In the meeting of the group of technical experts on Mercury waste held on February 16-18, 2023, The group of technical experts requested the secretariat to prepare a table of existing thresholds.

[https://mercuryconvention.org/sites/default/files/inline-files/2\\_3\\_Existing\\_Thresholds.pdf](https://mercuryconvention.org/sites/default/files/inline-files/2_3_Existing_Thresholds.pdf)

<sup>xviii</sup> ppm=parts per million (mg/Kg)

<sup>xix</sup> NRDC comments available at <https://owncloud.unog.ch/s/7cRILSe64KCXUpl>

<sup>xx</sup> See also NRDC comments