BRIEF 3

# DENTAL AMALGAM AND GOLD PLATING:
## REVIEW OF ANNEX A (MERCURY-ADDED PRODUCTS) AND ANNEX B (PROCESSES USING MERCURY).

NOVEMBER 2019

**ANNEX A**

*Proposal to Move Dental amalgam out of Part II and place it in Part I. The proposal therefore repeals Part II of Annex A by bringing amalgam into being a Part I product.*

*The language of the proposal is the following:*

**Part I: Products subject to Article 4, paragraph 1 and paragraph 3**

| Mercury-added products | Date after which the manufacture, import or export of the product shall not be allowed (phase-out date) |
|---|---|
| Dental amalgam for use in deciduous teeth, children under 15 years, pregnant women, and breastfeeding women. | 2021 |
| Dental amalgam, except where no mercury-free alternatives are available. | 2024 |

Article 4 and 5 (Meeting doc MC/COP.3/4)

> *The African Region is proposing to move dental amalgam from Part II to Part I of Annex A which would effectively move dental amalgam from a long term 'phase-down' to a short term 'phase-out' by 2021.*

The COP is required to review annexes A and B respectively no later than five years after the date of entry into force of the Convention. A draft decision at COP 3 will propose to establish an ad hoc group of experts made up of 20 party representatives. Ten observers can be nominated from NGO and other organisations.

This group will review Annex A and B and consider any submissions from parties to change the annexes. They will also prepare a report on the effectiveness to date of parties that are currently acting on mercury products and processes. The expert group will report its findings at COP 4.

The amendment proposed to Annex A was initially developed by a group of African countries (Botswana, Chad, Gabon, Guinea Bissau, the Niger and Senegal) but has since been modified as a proposal by the whole African Region, who will present a conference room paper (CRP) on the issue. The COP may decide to accept the African Region proposal and amend Annex A at COP 3 in line with the proposal, or it may decide to refer it to the expert committee which it will consider establishing.

IPEN supports the establishment of the expert committee, the review process and the adoption of the African regional proposal at COP 3.

### AMENDMENT TO ANNEX B (PROCESSES USING MERCURY) - MERCURY GOLD PLATING (ALSO KNOWN AS FIRE GILDING AND ORMOLU)

Currently, this metal plating process is not addressed in the treaty. IPEN participating organisation CEPHED, from Nepal, highlighted the extent of this practice and recorded elevated exposures among plating workers in the 2017 IPEN report: *Mercury in Women of Child-bearing Age in 25 Countries*. While this issue is not specifically on the agenda for COP 3, it may be raised as part of the future review of Annex A and B.

This ancient process of "fire gilding"—used as early as 2,000 years ago—was used to impart a thin gold plating to lower-value metals by mixing a blend of gold powder with elemental mercury and applying the paste to the object. The object would then be "fired" by placing it in a fire or extremely hot oven or kiln where the mercury vaporized, leaving a bright gold plating on the object. Very few accounts of modern-day practice of this technique exist, and

**Figure 1. Nepalese plating workers applying mercury/gold paste to statues and burning it off with a blow torch.** Source: CEPHED

even fewer descriptions of its health impacts.[1] In any event, the use of flame, blow torches or ovens to drive off the mercury in a vapor form creates a similar scenario to that of small-scale gold mining workers burning mercury off the amalgam to leave a gold residue and creating inhalable mercury vapor. This creates a significant exposure issue for workers and the public near plating facilities.

Nepal has a significant metal plating industry using this technique and its Minamata initial Assessment (MIA) demonstrates that a massive 12,825 kg of mercury every year is released by this process—more than double the emissions compared to all other sources in Nepal. However, there is no reference to this practice in the mercury treaty. While it is not on the agenda for COP 3 the mercury gold plate process needs to be added to Annex B as soon as possible and the practice prohibited. There are readily available electroplating alternatives that achieve the same outcome without mercury pollution and human exposure. There is some evidence to suggest this practice may also occur in India and parts of the Middle East, where gold plating of minarets uses a similar technique.

The requirements of the treaty indicate that any proposal to amend the Annexes must be submitted to the Secretariat and conveyed to the parties at least 6 months before the Conference of the Parties at which the amendment will be considered. Information on the practice of fire gilding and its locations is being gathered to create a proposal either through the review committee process (if a committee is established at COP 3 or through a direct proposal for consideration at COP 4). IPEN supports the addition of fire gilding/mercury gold plating to Annex B of the mercury treaty as soon as possible to reduce the massive emissions and releases caused by this process.

1 Vahabzadeh M, Balali-Mood M. (2016) Occupational metallic mercury poisoning in gilders. Int J. Occup Environ Med 2016: 7-122.

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