

Berlin Declaration to End Amalgam Use in Europe by 1 July 2022

Whereas; The use of mercury in dental amalgam is the largest use of mercury in the European Union and a significant source of pollution.¹ Europe uses more dental amalgam (which is 50% mercury)² than any other geographic region and is the largest polluter of dental mercury.³

Whereas; The European Union, via joint action of the European Parliament, the Council of the European Union, and the European Commission, (1) effectively bans amalgam use in children, pregnant women, and breastfeeding women as of 1 July 2018, and (2) requires each Member State to submit a plan of action for a *further* phase down in use as of 1 July 2019, and (3) requires the European Commission to submit a recommendation by 30 June 2020 whether it is feasible to phase out amalgam in Europe in the long term and preferably by 2030.⁴

Whereas; This three-year plan is, effectively, a road map than can and should lead to the rapid demise of amalgam in Europe.

Whereas; Mercury is a notorious heavy metal of global concern that is known to impair a range of physiological systems, with the nervous, renal, and cardiovascular systems being most susceptible.⁵

Whereas; Between 226 and 322 tonnes of dental mercury (of which the European Union consumes 44-67 tonnes per year) was used around the world in 2015, accounting for about 19% of global mercury consumption in mercury-added products.⁶

Whereas; Dental mercury enters the environment via multiple pathways, polluting (1) air via cremation, dental clinic emissions, municipal waste and sludge incineration; (2) water via dental clinic releases and human waste; and (3) soil via landfills, burials, fertilizer and sludge disposal.⁷

Whereas; The European Commission's Scientific Committee on Health and Environmental Risks ("SCHER") confirms that dental amalgam in the environment can methylate (forming the most toxic form of mercury, methylmercury), that as a result "the acceptable level in fish is exceeded" under some circumstances, and thus there is "a risk for secondary poisoning due to methylation."⁸

Whereas; Due to the significant real costs of dental mercury pollution, amalgam is now recognized as "more expensive than most, possibly all, other fillings when including environmental costs."⁹

Whereas; Mercury-free dental restorative materials are available and preferred, as evidenced by the fact that mercury-free materials are used for 100% of all fillings in Sweden¹⁰ and Norway¹¹; about 97% in Japan¹²; about 90% in the Netherlands¹³, Switzerland¹⁴, and Mongolia¹⁵; and 80% in Singapore¹⁶ and Vietnam¹⁷.

Whereas; Mercury-free dental restorative materials are effective according to the World Health Organization report *Future Use of Materials for Dental Restoration*, which says "recent data suggest that RBCs [resin-based composites] perform equally well" as amalgam¹⁸ – and offer additional oral health benefits because "Adhesive resin materials allow for less tooth destruction and, as a result, a longer survival of the tooth itself. Funding agencies should take the initiative

and encourage the replacement of amalgam as the material of choice for posterior teeth with adhesive systems.”¹⁹

Whereas; The European Commission’s Scientific Committee on Emerging and Newly Identified Health Risks (“SCENIHR”) explains that mercury-free dental fillings “have facilitated a radical change in the concepts of restorative dentistry through the introduction of more minimally invasive techniques and the associated retention of more tooth substance when treating caries.”²⁰

Whereas; In 2015, SCENIHR withdrew the claim that amalgam is safe. Similar to its earlier 2008 opinion, SCENIHR’s preliminary opinion in 2014 claimed in section 4.1 that amalgam is “a safe and effective restorative material.”²¹ But after reviewing the evidence, SCENIHR explained in its response to a range of expert comments, “The word ‘safe’ has been deleted in 4.1.”²² So SCENIHR’s 2015 final opinion states that amalgam is merely “an effective restorative material.”²³

Whereas; The Minamata Convention on Mercury requires nations “to phase down the use of dental amalgam,” and to develop strategies for achieving that objective.²⁴

Whereas; The European Commission’s independent consultant BIOIS (2012) has examined all the policy options from environmental, economic and social perspective and urged the EU to “ban the use of mercury in dentistry” because – among other reasons – it is “necessary to achieve mercury-related requirements of EU legislation on water quality.”²⁵

Whereas; 88% of respondents to the European Commission’s online public consultation voted to phase out amalgam use (as opposed to phasing down amalgam use).²⁶

Wherefore, this 21st day of November 2017, it is hereby resolved,

1. We insist that the European Union end all amalgam use on a date to be determined, and in any case no later than 1 July 2022.
2. We urge each Member State to act before that deadline, ending amalgam use 1 July by 2020.
3. We recommend that all non-Member States in Europe likewise end amalgam use by this date.
4. We will work with civil society, governments and other stakeholders in Africa, Asia, the Americas and the Island States to accomplish the same goal.

¹Regulation of the European Parliament and of the Council on Mercury, and Repealing Regulation (EC) No 1102/2008 (17 May 2017), <http://data.consilium.europa.eu/doc/document/PE-4-2017-REV-1/en/pdf>, p.7

²U.S. FDA, *Final Rule for Dental Amalgam*, <http://www.fda.gov/downloads/MedicalDevices/ProductsandMedicalProcedures/DentalProducts/DentalAmalgam/UCM174024.pdf>, p.86.

³United Nations Environment Programme/Arctic Monitoring and Assessment Programme, *Technical Report Background Report to the Global Atmospheric Mercury Assessment* (2013), <https://oarchive.arctic-council.org/handle/11374/732>, p. 103

⁴Regulation of the European Parliament and of the Council on Mercury, and Repealing Regulation (EC) No 1102/2008 (17 May 2017), <http://data.consilium.europa.eu/doc/document/PE-4-2017-REV-1/en/pdf>

⁵ UNEP, <http://www.unep.org/chemicalsandwaste/Mercury/tabid/434/Default.aspx>; Ha E, Basu N, Bose-O’Reilly S, Dórea JG, McSorley E, Sakamoto M, Chan HM. 2017. *Current progress on understanding the impact of mercury on human health*. Environ Res. 152:419-433; Karagas MR, Choi AL, Oken E, Horvat M, Schoeny R, Kamai E, Cowell W, Grandjean P, Korrick S. 2012. *Evidence on the human health effects of low-level methylmercury exposure*. Environ Health Perspect. 120(6):799-806

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- ⁶ UN Environment (2017): *Global mercury supply, trade and demand*. United Nations Environment Programme, Chemicals and Health Branch. Geneva, Switzerland, 2017.
- ⁷ Concorde East West, *The Real Cost of Dental Mercury* (March 2012), http://www.zeromercury.org/index.php?option=com_phocadownload&view=file&id=158%3Athe-real-cost-of-dental-mercury&Itemid=70
- ⁸ SCHER, *Opinion on Environmental Risks and Indirect Health Effects of Mercury from Dental Amalgam* (2014), http://ec.europa.eu/health/scientific_committees/environmental_risks/docs/scher_o_165.pdf, page 4
- ⁹ Lars D. Hylander & Michael E. Goodsite, *Environmental Costs of Mercury Pollution*, SCIENCE OF THE TOTAL ENVIRONMENT 368 (2006) 352-370.
- ¹⁰ World Health Organization, *Future Use of Materials for Dental Restoration* (2011), http://www.who.int/oral_health/publications/dental_material_2011.pdf, p.21
- ¹¹ World Health Organization, *Future Use of Materials for Dental Restoration* (2011), http://www.who.int/oral_health/publications/dental_material_2011.pdf, p.21
- ¹² Bio Intelligence Service/European Commission, *Review of the Community Strategy Concerning Mercury* (p.213-14), 4 October 2010, http://ec.europa.eu/environment/chemicals/mercury/pdf/review_mercury_strategy2010.pdf
- ¹³ World Health Organization, *Future Use of Materials for Dental Restoration* (2011), http://www.who.int/oral_health/publications/dental_material_2011.pdf, p.21
- ¹⁴ Letter, Federal Office for the Environment to Francesca Romana Orlando (8 August 2011), <http://www.toxicteeth.org/SVIZZERA.pdf>.
- ¹⁵ World Health Organization, *Future Use of Materials for Dental Restoration* (2011), http://www.who.int/oral_health/publications/dental_material_2011.pdf, p.23
- ¹⁶ World Health Organization, *Future Use of Materials for Dental Restoration* (2011), http://www.who.int/oral_health/publications/dental_material_2011.pdf, p.23
- ¹⁷ World Health Organization, *Future Use of Materials for Dental Restoration* (2011), http://www.who.int/oral_health/publications/dental_material_2011.pdf, p.23
- ¹⁸ World Health Organization, *Future Use of Materials for Dental Restoration* (2011), http://www.who.int/oral_health/publications/dental_material_2011.pdf, p.11
- ¹⁹ World Health Organization, *Future Use of Materials for Dental Restoration* (2011), http://www.who.int/oral_health/publications/dental_material_2011.pdf, p.16
- ²⁰ European Commission Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR), *Final opinion on the safety of dental amalgam and alternative dental restoration materials for patients and users* (29 April 2015), http://ec.europa.eu/health/scientific_committees/emerging/docs/scenihr_o_046.pdf, p.69
- ²¹ European Commission Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR), *Preliminary opinion on the safety of dental amalgam and alternative dental restoration materials for patients and users* (26 August 2014), p.66
- ²² European Commission, *Results of the public consultation on SCENIHR's preliminary opinion on the safety of dental amalgam and alternative dental restoration materials for patients and users*, http://ec.europa.eu/health/scientific_committees/emerging/docs/followup_cons_dental_en.pdf, p.97
- ²³ European Commission Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR), *Final opinion on the safety of dental amalgam and alternative dental restoration materials for patients and users* (29 April 2015), http://ec.europa.eu/health/scientific_committees/emerging/docs/scenihr_o_046.pdf, p.71
- ²⁴ Minamata Convention (2013)
- ²⁵ BIO Intelligence Service (2012), *Study on the potential for reducing mercury pollution from dental amalgam and batteries*, Final report prepared for the European Commission-DG ENV, http://ec.europa.eu/environment/chemicals/mercury/pdf/final_report_110712.pdf page 20
- ²⁶ <https://ec.europa.eu/eusurvey/publication/MinamataConvention>