

To:

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Commissioner Cecilia Malmström
Commissioner Elżbieta Bieńkowska

EEB calls for an ambitious EU Mercury Regulation

Brussels, 9 November 2016

Dear Vice Presidents and Commissioners of the European Commission,

The European Environmental Bureau (EEB) welcomes the release of the proposed EU regulation to implement the Minamata Convention on Mercury. However, we believe that the regulation should be strengthened, beyond the minimum requirements of the Convention, to ensure protection for human health and the environment, and as such confirm the EU's leadership role.

The EEB welcomes the outcome of the 1st reading vote at the European Parliament's Environment Committee (ENVI) and the rapporteur's report and proposed amendments (Eck report, ENVI Committee- [A8-0313/2016](#)). It is now important that such an approach is followed in order to substantially strengthen the Commission's proposal, making it into an ambitious EU regulation to reduce mercury pollution while sending a clear and unequivocal signal to the many other countries working toward the same objectives.

Given the discussions in the EU for over a decade now, our priorities for strengthening the regulation are summarised below:

- I. **The export of mercury-added products that are not allowed to be marketed in the EU should be prohibited** - to avoid double standards and to ensure they are not reaching countries with no or less stringent regulations to manage mercury – since alternatives exist, such a measure will promote mercury-free markets and drive prices down. **(Art. 5 and Annex II)**
- II. **The use of mercury in dentistry should be phased out by 2020; in the interim the mercury use in dentistry for children and pregnant women should be phased out by 2018 at the latest** - mercury-free dental restorations are available, affordable, effective and preferred by most EU citizens. Phase out is the most cost-effective way to prevent dental mercury pollution. **(Art. 10)**
- III. **A comprehensive mercury use and trade tracking system needs to be developed, effectively implemented, and made publicly accessible**, to record information from exports and imports of elemental and compound mercury between Member States, between the EU and external countries and also within the industry sector, in order to accurately monitor trade and assure compliance with the regulations. **(Art. 15)**
- IV. **The use of mercury in industrial facilities located in the EU, where mercury is used as catalyst or electrode, should be prohibited as early as possible**. Mercury-free processes exist since the 1970s in many cases (e.g. chlor-alkali). **(Art. 7 and Annex III)**

- V. **Mercury waste should be solidified before disposal in underground facilities** providing additional safety during handling and disposal. **Temporary storage of mercury waste should be allowed for a short period of time (3-5 years maximum)**, given available capacities, **in appropriate above ground facilities**. Conditions for environmentally safe disposal of solidified mercury should be set, and be stricter than those for temporary storage. **(Articles 11, 12 and 13).**
- VI. **The scope of the export ban should be expanded** to include additional mercury compounds and mercury waste, to avoid cases like DELA, where the EU mercury export ban regulation was circumvented and resulted in mercury being sent out of the EU illegally. **(Art. 3 and Annex I)**
- VII. **The regulation should be based on Art. 192(1)** with regard to the Treaty on the Functioning of the European Union and allow Member States to implement stricter measures, as early as appropriate. **(Citation)**

A strong EU position would recognise the EU's responsibility for its share of the problem. Ensuring, among other things, an EU export ban on mercury, mercury compounds and mercury-added products, would also be a pragmatic acknowledgement that there is little point in simply reducing mercury demand within the EU, while allowing unwanted mercury and mercury-added products to be exported to the developing world under far less stringent controls, much of the mercury released there, with the risk that it will ultimately return to Europe's atmosphere and eventually be taken up by the fish we eat.

The EU's leadership in resolving global mercury problems is an economic, health, environmental and moral imperative. Strong EU leadership will encourage other countries to reduce mercury consumption as well as engage in multilateral and global trade agreements, which are clearly needed to significantly reduce mercury as a global pollutant.

The value of a strong EU commitment to tackling mercury problems on the global stage must not be underestimated. This is a straightforward opportunity to reduce the health risks to millions of EU citizens, and many more globally, that we cannot afford to miss.

We therefore urge the Commission to give its full support to the ENVI vote outcome, during the upcoming trilogue meetings, taking into account the following points as presented in the appendix of this letter, as well as the EEB [earlier comments](#).

Thank you for your kind consideration of our recommendations.

Yours sincerely,

Jeremy Wates
Secretary General

CC: Director General Daniel Calleja Crespo, Director General Xavier Prats Monné, Director General Lowri Evans, Director General Jean- Luc Demarty

Appendix

Areas where the EC proposed regulation on mercury should be strengthened

I. The export of mercury-added products that are not allowed to be marketed in the EU, shall be prohibited (Art. 5 and Annex II)

- This is necessary to avoid double standards and also to ensure that mercury-laden products are not reaching countries with less stringent regulations.
- Since alternatives exist, such a measure will promote mercury-free markets and drive prices down.
- The economic impact from banning the export of mercury-added products already restricted in the EU is estimated to be small or non-existent, as stated in the EU Impact Assessment. There is no evidence to suggest that there will be any economic advantage for industry to maintain different production lines to export products with higher mercury levels than what is allowed in the EU.
- Re-location of EU businesses is unlikely, considering that mercury use is decreasing and equivalent measures in other countries are being developed and soon be implemented. International markets such as India and China are following the lead of EU legislation.

With reference to the specific products listed:

- Batteries: Mercury is banned from all batteries in the EU. The European Portable Battery Association (EPBA) supports the export ban of all mercury-added batteries, and not only the ones targeted by the Minamata Conventionⁱ.
- Lamps:
 - Regarding compact fluorescent lamps (CFLs) and linear fluorescent lamps (LFLs), the EU under RoHS already has stricter measures than those included in the Minamata Convention. There is no evidence to suggest that there will be any economic advantage for industry to keep two different production lines for export, when the price of the lamps is the practically the same.
 - The recent consultants' report assessing the RoHS exemptions on mercury in lamps recommends that low wattage CFLs as well as LFLs (T5, T8 and T12) are banned by 21 January 2018ⁱⁱ.
 - Furthermore in relation to other international markets, India just adopted very similar standards to the EU RoHS for CFLs and LFLs, which are in place since 1st October 2016, for all lamp manufacturing and imports. In China a non-binding lamp mercury roadmap issued by the Ministry of Industry in February 2013 includes even more stringent mercury levels than the EU (e.g., 1.5mg Hg for CFLs <30W).ⁱⁱⁱ
 - Halophosphate lamps are already banned in the EU and are being rapidly replaced in other countries by triband fluorescent lamps.
 - To align policies, the full listing of products with restrictions included in the RoHS concerning mercury should be banned from export.
- Measuring Devices:
 - As compared to the Minamata Convention, more categories of mercury-added measuring devices are prohibited in the EU market as per Directive 847/2012, because mercury-free alternatives are available. The EU export ban should be aligned with this Directive, whose economic impact was carefully studied before the Directive was implemented.
 - The use of mercury-added measuring devices for calibration of sphygmomanometers is not necessary, as per the 2009 SCENIHR opinion^{iv}, and not allowed in the EU and therefore their export should also be banned, for similar reasons as above.

Thank you for supporting amendments 44-48 and 93, as well as 15

II. The use of mercury in dentistry should be phased out by 2020; in the interim the mercury use in dentistry for children and pregnant women should be phased out by 2018 at the latest. (Art. 10)

- Mercury-free dental restorations are available, affordable, effective and preferred by most EU citizens^v.
- SCHER (2014) has confirmed that amalgam poses environmental risks – there is a ‘*risk for secondary poisoning due to methylation*’, while SCENIHR(2015) recommended amalgam restrictions among other, for children and pregnant patients.
- Phase out is the most cost-effective way to prevent dental mercury pollution as already demonstrated by several Members States (Sweden, Denmark, etc.) and also advised by the EC’s independent consultant already since 2012^{vi}.
- Many dentists prefer mercury-free fillings^{vii}: As researchers explain, “Tooth-friendly features of [mercury-free] resin based composites make them preferable to amalgam, which ... now should be considered outdated for use in operative dentistry”^{viii}. All dental schools have been teaching dental students how to place mercury-free fillings for years, so dentists are prepared to stop amalgam use and increasingly expect amalgam will be phased out.
- Amalgam is not the cheapest solution, and medical insurance schemes’ costs do not necessarily need to increase
 - *Experts show phasing out amalgam use will lower costs*: The EC’s own impact assessment states: “The fact that Hg-free dental restorations are more expensive than dental amalgam restorations can be seen as a market failure in the sense that negative externalities associated with the use of dental amalgam (e.g. management of dental waste and effluents) are not factored in the market price of dental amalgam restorations”^{ix}. As one study explains, due to the high costs of dental mercury pollution, amalgam is now recognized as “more expensive than most, possibly all, other fillings when including environmental costs.”^x Another study, conducted by Concorde East/West, concluded that an amalgam filling can cost up to \$87 more than a composite filling after costs to the environment and society are taken into account.^{xi}
 - *Many national insurance schemes already cover mercury-free fillings*: Even not taking into account the national insurance scheme, in some countries – like France and Italy – the actual cost of amalgam and mercury-free fillings is the same^{xii}, so phasing out amalgam use will not increase insurance costs there. Additionally, many national insurance schemes are already paying for mercury-free fillings. For example, the national insurance schemes in Bulgaria, Finland, and Slovenia reimburse a similar or same amount whatever filling material is used. Likewise, in Hungary, “in conventional dental offices (i.e. not private clinics), the national insurance scheme reimburses 100% of standard treatment costs, whatever the filling material used.” In France, mercury-free fillings cost the same as amalgam: “National insurance scheme reimburses 70% of standard treatment costs whatever the filling used. Conventional treatment costs range between 17 and 41 EUR depending on cavity size (but regardless of the material used).” In Poland, mercury-free fillings are reimbursed for children and pregnant women. Similarly, in Estonia, fillings are free for children up to age of nineteen regardless of which filling material is used and in Belgium, mercury-free fillings are reimbursed between 75%-100% depending on age and socioeconomic situation^{xiii}. As a result, the dental restoration costs borne by patients is reported to be the same regardless of what filling material is used in Bulgaria, Finland, Hungary, Italy, and the UK.^{xiv}

Furthermore, the responses to a survey questionnaire confirm previous findings that traditional health insurance schemes often contain an inherent financial incentive in favour of amalgam. Therefore, where appropriate, countries should examine how national insurance practices may be revised to help phase down amalgam use.

Likewise, third-party payment systems for dental care can also be adapted so as to help phase down amalgam use^{xv}.

- Mercury free fillings are safer than amalgam.
Dental associations, governments, and scientific organizations around the world agree that composite is safe for humans and the environment. Here are a few examples also relevant to concerns around Bisphenol A (BPA):
 - *European Commission Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR)*: In its 2015 final *Opinion on the Safety of the Use of Bisphenol A in Medical Devices*, SCENIHR concludes that "From the available data, concerning exposure via the oral route it can be concluded that the oral long-term exposure via dental material is far below the current oral t-TDI of 4µg/kg b.w./day and poses negligible risk for human health."^{xvi} In fact, it found that BPA could not even be detected in the vast majority of dental composite brands.^{xvii}
 - *European Commission Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR)*: In its 2015 final *Opinion on the Safety of Dental Amalgam and Alternative Restoration Materials for Patients and Users*, SCENIHR concludes "There is no evidence that infants or children are at risk of adverse effects arising from the use of alternatives to dental amalgam."^{xviii}
 - *World Health Organization & Food and Agriculture Organization of the United Nations Expert Meeting*: "BPA levels in saliva from dental materials were low. The Expert Meeting determined that there was no need to collect additional data on BPA levels from dental materials, as exposure is short term and unlikely to contribute substantially to chronic exposure."^{xix}
 - In 2012, a risk assessment comparing amalgam and the alternatives was released by the Health Care Research Collaborative of the University of Illinois at Chicago School of Public Health, the Healthier Hospitals Initiative, and Health Care Without Harm. These researchers conclude, "there is no current evidence of significant personal or environmental toxicity" from the non-mercury alternatives.^{xx}

See also our [letter from 26 October 2016](#) and information on the [technical advantages of mercury free dentistry](#).

Thank you for supporting [amendments 29-32 and 59-66](#)

III. **A comprehensive mercury use and trade tracking system needs to be developed, effectively implemented, and become publicly accessible. (Art. 15)**

- It is absolutely necessary to gather and record information on use, exports and imports of elemental and compound mercury between MS, between the EU and external countries and also within the industry sector, in order to accurately monitor trade and assure compliance with the regulations
- Improved mercury use, production and trade data are also necessary to understand the current global mercury supply situation and trends over time, and to measure progress in reducing the global mercury supply.
- Improved data collection will also facilitate detection of illegal mercury trade through better accounting of the legal materials flow. Addressing illegal mercury trade will also be a critical component in reducing mercury use in artisanal and small scale gold mining (ASGM), and incidents like the illegal DELA mercury exports from Germany to Switzerland will more likely be avoided.
- Establishment of such a system would create a level playing field for mercury importers and traders, giving them an incentive to take responsibility for their commerce.

The EU needs to enact relevant regulatory changes, including:

- Member States and the respective industries operating in their territory should provide information on the mercury and mercury compounds used and produced by:
 - the chlorine industry,
 - the by-product production from oil/gas production and non-ferrous metals processing/mining,
 - the waste recycling facilities
 - the alcoholate, vinyl chloride monomer and polyurethane elastomer production
 - the manufacturing of mercury added products
- The movement of mercury and mercury compounds within the industrial sector and within MS should also be recorded and reported to the Commission.
- Member States/Industries should also report on waste containing mercury and their mercury content (e.g. via the E-PRTR)

Thank you for supporting amendments 6, 83-88 as well as 89 and further strengthening language on reporting as per above.

IV. The use of mercury in industrial facilities located in the EU, where mercury is used as catalyst or electrode, should be prohibited as early as possible. (Art. 7 and Annex III)

- Mercury free processes for many industries have existed since the seventies in many cases (e.g. chlor-alkali, polyurethanes, VCM)
- Mercury free technologies are also commercially available for the production of sodium methylate and sodium ethylate.
- Since potassium methylate can also be produced commercially with mercury-free processes, and potassium ethylate can be produced with a mercury-free process at laboratory scale, more time can be allowed until a phase out of the mercury use in this sector, to ensure the availability of quantities and quality of these products – if indeed market demand remains.

Thank you for supporting amendments 94-101 as well as 3 and 20

V. Mercury waste should be solidified before disposal in underground facilities. Temporary storage of mercury waste should be allowed for a short period of time (3-5 years maximum), in appropriate above ground facilities. (Articles 11, 12 and 13)

- Solidified mercury (e.g. mercury sulphide) does not exhibit relevant mercury vapour pressure, is practically insoluble, and provides for additional safety during handling and disposal.
- EC independent study (BIPRO 2010^{xxi}) recommended only underground storage for disposing solidified mercury waste, based on an economic and environmental assessment. Solidification and underground disposal in salt rock “is considered to be the most beneficial solution from an environmental point of view”. On the other hand, ‘the permanent above ground storage of stabilised mercury has been assessed as less favourable as the underground storage options. The risk of an interaction with the environment (e.g. penetrating rain water, floods) with a subsequent release of mercury from the storage site has been assessed higher compared to underground storage. Although in case of unforeseen incidents potential emissions can be detected and counter measures could be applied the risk of mercury entering the environment is still very high. Once the protection barrier of the site is destroyed the possibility to stop mercury entering the environment is very limited. The retrievability of the waste is given but on the other hand the risk of unauthorised retrieval of the stabilised waste is higher compared to underground storage’.^{xxii}

- There is little potential for retrieving solidified mercury from final underground disposal and putting it back on the market in liquid form.
- The capacity for solidification of around 6000 tonnes of liquid mercury (expected from the decommissioning of the EU chlor-alkali facilities – latest by end 2017) is estimated to around 2000 tonnes per year (400 tns/y by Remondis^{xxiii}, 600 tns/y by MAYASA^{xxiv xxv}, around 1000tns/y by Econ Industries^{xxvi}). Therefore 3-5 years for temporary storage appear sufficient.
- Given the relatively short period of temporary storage needed, liquid mercury waste should be stored only in appropriate above ground facilities, under specific conditions.
- Information on the movement of waste containing mercury and their mercury content should also be required.
- Conditions for environmentally safe disposal of solidified metallic mercury need to be established and should be stricter than those for temporary storage to minimise risks, including:
 - Acceptance control/Certification of mercury purity by an independent expert (in order to avoid situations like the pseudo-Hg waste shipped by DELA to Switzerland)
 - Use of crash/impact and fireproof double wall containers to transport and permanently store stabilized mercury (considering that an underground fire on a transport vehicle is the most serious accident, containers must withstand the thermal impact until the fire can be extinguished by the fire brigade of the mine)
 - Disposal in separate areas of the underground storage, organized in stages, after which the storage cells or galleries are finally closed.
 - Open storage cells/galleries have to be inspected at least daily (for corrosion/ damage of containers, Hg concentration in air, etc.).

Thank you for supporting amendments 70, 71, 73-1(a)(b), 75, 76, 77, 78, 79, 80, 81, 11, 23, 33, 34, 36, but rejecting 73 (c), (d), (e), 74, 81

VI. The scope of the export ban should be expanded; Annex I should include three additional mercury compounds (Mercury(II) sulphate, mercury(II) nitrate and mercury sulphide) and waste containing mercury. (Art. 3 and Annex I)

- The US has recently also banned (June 2016) the export of these compounds, effective in 2020^{xxvii}.
- The rationale – in line with the ban on exports of commodity mercury – is to ban the export of any compound from which elemental mercury may be recovered with relative ease.
- According to EU legislation, mercury-containing wastes can be exported with the consent of the receiving country only to OECD countries. The EU has the capacity to treat such waste and should avoid loopholes and cases like DELA^{xxviii} which can lead to ‘illegal’ liquid mercury export (e.g. mixed with soil/waste).

Thank you for supporting amendments 92 but rejecting 19, 42

VII. The regulation should be based on Art. 192(1) with regard to the Treaty on the Functioning of the European Union and allow Member States to implement stricter measures, as early as appropriate (Citation)

- The proposed measure is driven by the objectives of protecting the environment and human health, not by commercial policy considerations. The legal basis should therefore refer to the environment and allow Member States to adopt more stringent measures (as per Art. 192 and 193 of the TFEU).

Thank you for supporting amendment 1, 16, 18 as per the Opinion of the Committee on Legal Affairs on the Legal basis.

- VIII. **Any country with artisanal small scale goldmining (ASGM) should develop a national action plan (NAP), which includes steps towards eventually phasing out mercury use in ASGM; commitments for technical assistance to help with the transition should be ensured. (Art. 9 and Annex IV)**

Thank you for supporting **amendments 22, 24-28, and 58**

- IX. **Consider prohibiting the import of mercury, mercury compounds and mixtures unless they are intended for environmentally safe disposal. (Art. 4)**
- To ensure that EU mercury supplies are reasonably balanced with EU demand, mandatory storage obligations and policies should encourage mercury recovery from wastes and products.
 - It would also help 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.
 - Such measures would also reduce EU and overall mercury demand, potentially speeding closure of existing primary mercury mines, with the various environmental benefits that this entails.

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.

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.

Thank you for supporting **amendments 14, 43 but rejecting para 2, on the derogation about homeopathic medicinal products.**

- X. **Contaminated sites should be identified, assessed and classified according to the degree of contamination and urgency of remediation. The polluter pays principle should apply; areas contaminated by mercury need to be further restored and brought to a reasonable condition in an environmentally sound manner. (New Article)**

Such a measure is relevant to the provisions of the Minamata Convention, article 12.

Thank you for supporting **amendments 71, 72, 4, 35**

- XI. **An expert assessment should be undertaken, as a minimum, to determine the extent to which mercury can be appropriately eliminated from vaccines to better protect public health. (New element)**

Mercury use as a preservative in vaccines, called thimerosal or thiomersal, was not addressed in the 2005 EU Mercury Strategy; however, the Council Conclusions (June 2005) on the Commission's Mercury Strategy highlighted the need to address vaccines.^{xxix}

Thank you for supporting **amendment 48**

XII. Mercury emissions from crematoria should be further investigated, including relevant technologies or other effective approaches, for eventual control at EU level. Emission limit values or other adequate measures or techniques for this source should be proposed by the European Commission as soon as possible. (New element)

Emissions from crematoria are not covered by Community law, but are regulated in several Member States, and are also the subject of OSPAR Recommendation 2006/2 amending Recommendation 2003/4 on controlling the dispersal of mercury from crematoria which applies only to the OSPAR countries. Although mercury emissions from crematoria were discussed during the Extended Impact Assessment carried out for the 2005 EU mercury strategy, no actions were proposed and implemented at EU level. Our comments from our 2005 publication are therefore still relevant.^{xxx}

Thank you for supporting amendment 90

Furthermore we would **support the following amendments:**

New product and processes	50-57, 21, 37
Review	89
Entry into force (Art.20)	91
General	39, 40, 41, 82, 2, 7, 8, 9, 10, 11, 12, 13,

ⁱ Impact Assessment – Ratification and Implementation by the EU of the Minamata Convention on mercury, p.27

ⁱⁱ Assistance to the EC on Technological Socio –Economic and Cost Benefit Assessment Related to Exemptions from the Substance Restrictions in Electrical and Electronic Equipment, 7 June 2016,

http://rohs.exemptions.oeko.info/fileadmin/user_upload/RoHS_Pack_9/RoHS-Pack_9_Part_LAMPS_06-2016.pdf

ⁱⁱⁱ <http://www.miit.gov.cn/n11293472/n11295091/n11299314/n15219389.files/n15219357.pdf>.

^{iv} http://ec.europa.eu/health/ph_risk/committees/04_scenihhr/docs/scenihhr_o_025.pdf

^v <https://ec.europa.eu/eusurvey/publication/MinamataConvention>

^{vi} 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 19

^{vii} *Letter signed in June 2016 by 87 German dentists*, Letter signed in October 2016 by 29 dentists from FR, SWE, IT, UK, FIN, DK, D,

^{viii} Christopher D. Lynch, Kevin B. Frazier, Robert J. McConnell, Igor R. Blum and Nairn H.F. Wilson, *Minimally invasive management of dental caries: Contemporary teaching of posterior resin-based composite placement in U.S. and Canadian dental schools*, J AM DENT ASSOC 2011; 142: 612-620, <http://jada.ada.org/content/142/6/612.abstract>

^{ix} <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016SC0017&from=EN> , p. 146

^x Lars D. Hylander & Michael E. Goodsite, *Environmental Costs of Mercury Pollution*, SCIENCE OF THE TOTAL ENVIRONMENT 368 (2006) 352-370.

^{xi} 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, pp.3-4

^{xii} 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 197.

^{xiii} 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 198-99.

^{xiv} 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 196.

^{xv} *Lessons from countries phasing down dental amalgam use* , p. 22

<http://www.unep.org/chemicalsandwaste/Portals/9/Mercury/Dental%20Amalgam/Dental.Amalgam.10mar2016.pages.WEB.pdf>

^{xvi} SCENIHR, *Opinion on the Safety of the Use of Bisphenol A in Medical Devices* (18 February 2015),

http://ec.europa.eu/health/scientific_committees/emerging/docs/scenihhr_o_040.pdf, page 120

^{xvii} SCENIHR, *Opinion on the Safety of the Use of Bisphenol A in Medical Devices* (18 February 2015),

http://ec.europa.eu/health/scientific_committees/emerging/docs/scenihhr_o_040.pdf, page 31

^{xviii} 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.73

^{xix} Joint FAO/WHO Expert Meeting to Review Toxicological and Health Aspects of Bisphenol A, Summary Report (2010), http://www.who.int/foodsafety/chem/chemicals/BPA_Summary2010.pdf

^{xx} Health Care Research Collaborative of the University of Illinois at Chicago School of Public Health, the Healthier Hospitals Initiative, and Health Care Without Harm, *Mercury in Dental Amalgam and Resin-Based Alternatives: A Comparative Health Risk Evaluation* (June 2012),

http://www.noharm.org/lib/downloads/other/Mercury_in_Dental_Amalgam.pdf, p.6

^{xxi}

http://ec.europa.eu/envhttp://ec.europa.eu/environment/chemicals/mercury/pdf/bipro_study20100416.pdf
[environment/chemicals/mercury/pdf/bipro_study20100416.pdf](http://ec.europa.eu/environment/chemicals/mercury/pdf/bipro_study20100416.pdf) p.276-277

^{xxiii} REMONDIS-stabilisation facility in Dorsten (x-DELA), has a capacity of 400 tons p.a. turning pure liquid mercury into the near-natural cinnabar (HgS) for environmentally responsible disposal. (communication with Remondis, <http://www.remondis-aktuell.com/en/remondis-aktuell/022015/recycling/mercury-back-to-nature/> and email exchanges.

^{xxiv} Ministerio de agricultura, alimentacion y medio ambiente, Spanish technology for the stabilisation and micro encapsulation of metallic mercury and certain mercury containing wastes.

^{xxv} MAYASA, 2014, Mercury Stabilisation Plant and additional technical explanations from the company,

<http://mayasa.es/comercializacion-mercurio.aspx>

^{xxvi} EconIndustries, On site mercury stabilisation, www.econindustries.com

^{xxvii} Report to Congress: Potential Export of Mercury Compounds from the United States for Conversion to Elemental Mercury, 14 October 2009, United States Environmental Protection Agency, Office of Pollution Prevention and Toxic Substances, Washington, DC 20460

^{xxviii} A now defunct German waste recycling company, DELA GmbH, was found in recent years to have illegally exported over 1,000 tons of excess metallic mercury mostly from the EU chlor-alkali industry, circumventing the EU export ban, with the illicit mercury making its way on to the global market. DELA disguised the mercury as "waste" and exported around 500 tonnes to Switzerland, Greece, the Netherlands and other countries. DELA was reportedly able to get around the EU mercury export ban regulation by not solidifying/stabilising the mercury for storage and disposal as they were required by contractual obligation. The authorities still do not know where all the mercury went, but it is clear that many of the destination countries are known to trade with countries where there is significant use of mercury in artisanal and small-scale gold mining (ASGM). ASGM operations are among the highest emitters of mercury to the environment, as well as exposing miners and their families to this dangerous neurotoxin.

^{xxix} Council Conclusions on the Community strategy concerning mercury, 2670th Environment Council meeting, Luxembourg, 24 June 2005.

^{xxx} http://www.zeromercury.org/Zero_Mercury_Policy_Paper_EN.pdf, p.59