



जनस्वास्थ्य तथा वातावरण प्रवर्द्धन केन्द्र

Center for Public Health and Environmental Development

Bridging people with science and technology for healthy living and environmental development

PRESS RELEASE

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Civil Society Organizations sign “Dhaka Declaration,” A call for Asia to end of dental amalgam

Kathmandu, Nepal

More than 137 Civil Society Organizations (CSOs), individuals and professionals from Bangladesh, India, Nepal, Sri Lanka, Pakistan and Thailand have signed a declaration calling for Asia to be the largest population on the planet to end the use of mercury in dental care. Amalgam fillings are 50% mercury, a major neurotoxin. Its continuous use is not justified because alternatives are now affordable, effective, and available in Asia. The restriction of its use is demanded worldwide in the Minamata Convention on Mercury, adopted by more than 140 governments and the EU in 2013, in Kumamoto, Japan. Signed by 128 nations and ratified by 8.

The call is contained in the Civil Society Organizations (CSOs) declaration made in Dhaka in November 2014, and adapted by the CSOs and the individual in beginning of January 2015 towards Mercury-Free Dentistry for Asia. The declaration advocates for Asia to become the largest and most densely populated continent to phase out dental amalgam. The declaration highlights that mercury, which is used in dental amalgam, is a restorative material that is approximately 50% elemental mercury,ⁱ and is a notorious heavy metal of global concern that is known to be a potent poison of the human nervous system.ⁱⁱ

By adapting this declaration South and Southeast Asian CSOs, professionals express their concern and said, “We are calling on Asia to end the use of mercury-based dentistry. Asia is the most densely populated continent on the planet and therefore risks incredible harm to human health and the environment.”

Mercury-free dentistry is growing in Asia. Recent studies in India and Pakistan show that, already, over 50% of dentists are using alternatives to dental amalgam in India, while in Pakistan 42.86% dental professionals strongly recommend to phase down the use of mercury/dental mercury amalgam.ⁱⁱⁱ In Nepal and Bangladesh, the dental association and society of the dentist groups are also supporting the phase out of amalgam.

Asian countries are requested to declare that the children of Asia -- and all the people of Asia -- have a basic human right to mercury-free dental care and a mercury-free environment. The request follows the existence of sound scientific evidences that mercury can damage children’s developing brains and nervous systems even before they are born.”^{iv} In addition to the literature, the Minamata Convention on Mercury adopted in October 2013, noted that the world recognizes dental amalgam as a major environmental pollutant which requires each participating nation “to phase down the use of dental amalgam.”^v

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The CSOs concern is raised based on the fact that dental mercury accounts for 10% of annual global mercury consumption^{viii} and 260-340 metric tons of mercury pollution around the world each year.^{ix}

The dental amalgam mercury enters the environment via many pathways, polluting *air* via cremation, dental clinic releases, and sewage sludge incineration; *water* via human waste and dental clinic releases to septic systems and municipal wastewater; and *soil* via landfills, burials, and fertilizers.^x Once dental mercury is in the environment, bacteria in soils and sediments may convert it to methylmercury,^{xi} “a highly toxic form that builds up in fish, shellfish and animals that eat fish, thereby making fish and shellfish the main sources of methylmercury exposure to humans.

In the dental workplace, uncontrolled mercury vapours are a major occupational risk, especially to young women of childbearing age.^{xii}

The CSOs are also reminding Asian countries of their efforts during negotiations of the Minamata Convention. They worked very hard to make sure that reduction in dental amalgam use specifically be included in the treaty, forcefully arguing for the phase out of amalgam generally and for an end to amalgam in milk teeth specifically.

The phase down is possible since Mercury-free dental restorative materials are far less expensive than dental amalgam when environmental and societal costs are factored in.^{xiii} The costs of using mercury-free options (including retreatment) is about half the cost of amalgam without retreatment, making this mercury-free technique significantly more affordable in low-income communities, particularly in areas without electricity or dental clinics.^{xiv}

World Health Organization report *Future Use of Materials for Dental Restoration*, says that “recent data suggest that RBCs [resin-based composites] perform equally well” as amalgam^{xv}— 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.

The CSOs call the Asian countries to work together and make Asia the first continent with mercury-free dentistry – considering that Asia is more densely populated than any other continent and the health and environmental costs will therefore be more significant.

In addition, the CSOs call the countries to adopt effective amalgam phase down strategies that have been proven in nations that have already phased out or significantly reduced dental mercury use by raising awareness about dental mercury to parents, consumers, dental workers, health professionals, and educators and achieve the following priorities;

1. Make it an immediate priority to stop the use of mercury amalgam in the treatment of children and pregnant women by June 2015.
2. Develop an alternative dental curriculum with a specific chapter on the dental restoration process of amalgam and its harm to dental staff, patients and the environment by 2015.
3. Pass national regulation to ban the use, import and sale of mercury amalgam by 2016-2020 as per country situation.
4. Promote alternative restoration materials and ensure they are affordable and accessible.



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Furthermore, the CSOs call Asian countries to reject the double standard mentality which infers that Asians must accept toxic chemicals that the rest of the world is rejecting.

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ⁱU.S. FDA, *Final Rule for Dental Amalgam*,

<http://www.fda.gov/downloads/MedicalDevices/ProductsandMedicalProcedures/DentalProducts/DentalAmalgam/UCM174024.pdf>, p.86.

ⁱⁱ UNEP, <http://www.unep.org/chemicalsandwaste/Mercury/tabid/434/Default.aspx> ("Mercury is a notorious heavy metal of global concern and known to be a potent poison of the human nervous system since Greek and Roman times.")

ⁱⁱⁱ Mahmood A. Khwaja and Sadaf Nawaz, *TOXIC MERCURY/MERCURY AMALGM USE IN DENTISTRY*(Sustainable Development Policy Institute, April 2014)

^{iv}United States Environmental Protection

Administration, <http://yosemite.epa.gov/opa/admpress.nsf/d0cf6618525a9efb85257359003fb69d/a640db2ebad201cd852577ab00634848!OpenDocument> (2010).

^v Minamata Convention (2013)

^{vi}U.S. FDA, *Final Rule for Dental Amalgam*,

<http://www.fda.gov/downloads/MedicalDevices/ProductsandMedicalProcedures/DentalProducts/DentalAmalgam/UCM174024.pdf>, p.86.

^{vii} UNEP, <http://www.unep.org/chemicalsandwaste/Mercury/tabid/434/Default.aspx> ("Mercury is a notorious heavy metal of global concern and known to be a potent poison of the human nervous system since Greek and Roman times.")

^{viii} UNEP/AMAP, *Technical Background Report to the Global Atmospheric Mercury Assessment* (2008), p.20

^{ix} Data from UNEP.

^xConcorde 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

^{xi} <http://www.epa.gov/hg/exposure.htm>

^{xii} Mahmood A. Khwaja and Maryum Shabir Abbasi, *Mercury Poisoning Dentistry: High level indoor air mercury contamination at selected dental sites*.REVIEWS OF ENVIRONMENTAL HEALTH (New York Academy of Sciences, April 2014)



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^{xiii} Lars D. Hylander & Michael E. Goodsite, *Environmental Costs of Mercury Pollution*, SCIENCE OF THE TOTAL ENVIRONMENT 368 (2006) 352-370; Concorde East West, *The Real Cost of Dental Mercury* (March 2012), pp.3-4

^{xiv} Pan American Health Organization, *Oral Health of Low Income Children: Procedures for Atraumatic Restorative Treatment (PRAT)* (2006), http://new.paho.org/hq/dmdocuments/2009/OH_top_PT_low06.pdf, p.xii. ("The costs of employing the PRAT approach for dental caries treatment, including retreatment, are roughly half the cost of amalgam without retreatment. PRAT as a best practice model provides a framework to implement oral health services on a large scale, and it can reduce the inequities for access to care services."); S. Mickenautsch, I. Munshi, & E.S. Grossman, *Comparative cost of ART and conventional treatment within a dental school clinic*, JOURNAL OF MINIMUM INTERVENTION IN DENTISTRY (2009), <http://www.miseeq.com/e-2-2-8.pdf> ("ART is also a cost-effective means of oral health care within a modern dental clinic. The ART approach can be undertaken at approximately 50% of the capital costs of conventional restorative dentistry.")

^{xv} World Health Organization, *FUTURE USE OF MATERIALS FOR DENTAL RESTORATION* (2011), http://www.who.int/oral_health/publications/dental_material_2011.pdf, p.11