



Fact Sheet

“Accelerate implementation of dental amalgam provisions and strengthen country capacities in the environmental sound management of associated wastes under the Minamata Convention” (GEF7 Phasing Down Dental Amalgam project)

The UNEP-led GEF7 Phasing Down Dental Amalgam project operating in Senegal, Thailand and Uruguay is a \$13-million initiative, designed to phase down the use of dental amalgam, improve the management of mercury-containing waste and raise awareness on the health and environmental risks associated with mercury use in the oral health sector.

In alignment with the Minamata Convention on Mercury, the project, funded by the Global Environment Facility (GEF), is executed by the World Health Organization (WHO) with support from UNEP’s Global Mercury Partnership.

WHO is mandated by Member States, through two World Health Assembly resolutions,^{1,2} to support countries in the implementation of the Minamata Convention on Mercury. This is further reinforced through ongoing work by WHO to mobilize political action towards universal health coverage for oral health, grounded on several guiding principles including a ‘public health approach to oral health’ which focuses on dental caries prevention and health promotion, thereby minimizing the need for dental restoration, in alignment with the first measure of Annex A Part II of the Minamata Convention.

The three-year project will align Senegal, Thailand and Uruguay with international best practice in phasing down the use of dental amalgam, improving technical capacity on mercury disposal and waste management methods, convening environmental and health professionals and creating an enabling environment for the use of quality mercury-free materials to prevent and control dental caries (tooth decay).

Estimates suggest 30-40 per cent of mercury in amalgam [enters solid waste streams](#), accumulating in water, soil and the atmosphere without breaking down. In this context, encouraging the environmentally sound management of dental amalgam waste alongside prevention is key to reduce the risks to human health and the environment.

UNEP’s Global Mercury Partnership is one of the many working hard to reduce the use of dental amalgam and mitigate negative impacts during its use, removal and disposal. With several questions raised by partners, stakeholders and other actors within the Mercury community, the following key facts are presented to provide clarification on project activities and dispel misconceptions.

The project is fully aligned with and supports the Minamata Convention on Mercury

¹ World Health Assembly, 67. (2014). Resolution WHA67.11:
<https://www.who.int/publications/i/item/resolution-wha67.11.-public-health-impacts-of-exposure-to-mercury-and-mercury-compounds-the-role-of-who-and-ministries-of-public-health-in-the-implementation-of-the-minamata-convention>

² World Health Assembly, 74. (2021). Resolution WHA74.5:
https://apps.who.int/gb/ebwha/pdf_files/WHA74/A74_R5-en.pdf



The project's objective is "to protect human health and the environment from harmful effects of mercury through implementation of policies and improved practices to phase down the use of dental amalgams", which is consistent with the Objective of the Minamata Convention, and the provisions of Article 4 (and Annex A Part II) on mercury-added products. The project also supports the implementation of the recent amendments to Annex A Part II, related to eliminating use of amalgam in deciduous teeth, children below age 15, and pregnant and breastfeeding women, and against the use of mercury in bulk form by dental practitioners. These provisions are not part of the approved project documents because the project was submitted prior to formal adoption of these provisions at COP4. However, the project document has been designed in a way that it can incorporate results of intersessional work and COP decisions, made over the durations of the project lifecycle, into the implementation of activities. Therefore, the project will integrate in the mainstream workplan the 2 additional mandatory measures adopted at COP4, as well as any future decisions taken by the COP.

Through support from co-financing partners, the project will provide amalgam separators to target countries based on country requests

Some of the private sector co-financing partners have agreed to provide amalgam separators free of charge to project countries, with two of the three project countries expressing interest in amalgam separators during project preparation. ISO 11143-compliant amalgam separators have been shown to significantly reduce the releases of mercury into the wastewater / sewage system, by capturing amalgam particles carried by the wastewater from the dental treatment centre,^{3,4,5} and their installation is one of the potential measures that parties can take to implement Annex A Part II and Article 11 (mercury wastes) of the Minamata Convention. The project will document and support the process of procuring, installing, training and maintaining such equipment, as well as the collection, treatment and disposal – in an environmentally sound manner – of dental mercury waste, including associated operational research on cost-effectiveness and sustainability aspects of amalgam separators. Beyond the use of amalgam separators, the project will also broadly disseminate other best practices that can be done to reduce generation and to implement proper management of dental amalgam waste and other associated wastes, and promote the integration of dental amalgam waste management within broader mercury waste management processes at national health care system. This work will ensure that countries have the necessary information to make informed decisions and a sustainable mechanism be in place in target countries after the project ends.

Collaboration with the private sector is solely on alternatives to amalgam and on dental waste management

The project is also working with a private sector co-financing partner to research and promote quality mercury-free alternatives and minimally invasive intervention approaches to prevent and treat dental

³ UNEP, 2016, Lessons from countries phasing down dental amalgam use. UNEP Chemicals and Waste Branch, Geneva, Switzerland. <https://wedocs.unep.org/handle/20.500.11822/31212>

⁴ ISO. 2008. ISO 11143:2008(en) Dentistry — Amalgam separators. <https://www.iso.org/obp/ui/#iso:std:iso:11143:ed-2:v1:en>

⁵ Simon D. Fairbanks, Sumit Kumar Pramanik, Jim A. Thomas, Amitiva Das & Nicolas Martin (2021) The management of mercury from dental amalgam in wastewater effluent, Environmental Technology Reviews, 10:1, 213-223, DOI: [10.1080/21622515.2021.1960642](https://doi.org/10.1080/21622515.2021.1960642)



caries,⁶ and improve waste management practices. The sale or provision of dental amalgams is not part of project collaboration nor co-financing in any way. The project will not collaborate with partners that demonstrate a different objective in their business models and are not fully aligned with the guiding principles of both the Minamata Convention on Mercury and project.

Addressing waste management is part of the solution to minimize health and environmental impacts of mercury in dental amalgam

An estimated 3000-5000⁷ tonnes of mercury are currently stored in people's mouths in the form of dental amalgam fillings. Without proper waste management, a large amount of this mercury will be released to the environment during amalgam removal, tooth extraction, burial and cremation procedures. Once in the environment, mercury can undergo methylation in sediments and water bodies, bioaccumulate in fauna, ultimately harming humans and ecosystems. For this reason, waste management is an important part of the project, and without this focus a key source of risk would be missed.

“Even if we completely eliminate the use of dental amalgam, the profession will be removing dental amalgam restorations for decades to come, which is why environmentally sound management of the associated dental amalgam wastes is so important” International Association for Dental Research CEO Christopher Fox said.

Minimizing and managing amalgam waste must go hand in hand with measures to support the use of quality mercury-free alternatives and improve access of affordable, safe and environmentally sound interventions to the population and tailored to their national context. This in no way conflicts with the overall commitment to accelerate phasing-down the use of dental amalgam.

The project will engage chief dental officers, dental schools and health insurance providers to ensuring lasting, systemic change, and broad support for the phase-down of dental amalgam among dental practitioners

To complement the project's work on waste management, it engages with the oral health community to promote and enable reductions of amalgam use. Reforms in dental curriculum and health insurance schemes are powerful ways to reduce amalgam use and scale up best practices at the national level. Focusing on public health principles applied to oral health care through health promotion and integrated disease prevention will contribute to reducing the need for restorative treatment. Such a strategy is the optimal way to reduce amalgam use and achieve population-based health benefits. Through its engagement with oral health professionals, the project will generate buy-in amongst the oral health community, making them more comfortable with alternatives and foster sustainable behaviour changes that will persist long after the project ends. In addition, through collaboration with academic co-financing partners, the project will contribute to a paradigm shift in terms of education for the new generations of oral health professionals.

⁶ Prevention and treatment of dental caries with mercury-free products and minimal intervention: WHO oral health briefing note series. Geneva: World Health Organization; 2022. Licence: CC BY-NC-SA 3.0 IGO.

<https://apps.who.int/iris/rest/bitstreams/1414029/retrieve>

⁷ Estimated during project development and presented in the project document



Several organizations active on the issue of dental amalgam, including some members of the Global Mercury Partnership, were listed in the baseline section of the project document. Note that only those actors who express interest will be engaged in the project

In GEF projects, a key part of the initial phase is identifying the most significant actors and organizations concerned with the topic of the project. This is reflected in the baseline section of the project document to ensure that all relevant stakeholders are identified and can be engaged, based on their interests, in the implementation phase. It is also done to avoid duplicating efforts. Actors who are identified in the project's baseline but were not involved during the project development phase are not mentioned in further sections in the project document; however, collaboration is still possible should these organizations express interest. Separately from the organizations identified in the baseline, many organizations, including several members of the Global Mercury Partnership, are actively contributing to the project as co-financing partners.

As a result of the global project kick off meeting conducted on 28 April 2023, the project received reconfirmation from all three target countries with their strong commitment to reinforce and improve their existing efforts to phase down the use of dental amalgam.

Several quotes are captured below:

“Congratulations to the WHO organizers for the excellent work” said Senegal Focal Point for the Minamata Convention Dr. Pathé Diéye. “Senegal will do everything possible to obtain excellent results for the Specific International Program and the GEF project for the progressive reduction of dental amalgams”.

Senegal's Ministère de la Santé Chief Dental Officer Dr. Codou Badiane Mané said during the meeting, “it's an opportunity to shed light on everything we have been doing in relation to the Minamata Convention in Senegal.”

“Prevention at all levels is our priority and that people change their behaviour” said Dr. Adriana Otheguy, Chief Dental Officer at Uruguay's Ministerio de Salud Pública.

“When we go back, I will set up plans to accelerate this GEF project” said Thailand Bureau of Dental Health Director from Dr. Warangkana Vejvithee.