



# Kisiwani Conservation Network

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June 20th, 2020

## **Availability of alternatives to dental amalgam in Mombasa County, Kenya**

*Dear Executive Secretary Stankiewicz:*

The Kisiwani Conservation Network is a community-based organization in Mombasa, Kenya. Our organization is an alliance of residents, voters, taxpayers and users of coastal resources who champion sustainable urbanization. As a coastal city, our community is characterized by high fish consumption, a vast aquatic environment and rich cultural sites. Nonetheless, they also define our vulnerability to mercury pollution. We have been concerned about the risk to public health and the natural environment posed by mercury leakages from the use of dental amalgam. Since the year 2017, we committed to a broad assessment to determine the availability and accessibility of alternatives. We undertook a series of field visits, interviews with dental professionals, clients, and an analysis of annual health budgets of our County Department of Health.

So far, our assessment finds that alternatives exist, are in active use and affordable in both public and private clinics. We found the following alternatives: Tooth-coloured composites; Glass ionomer cement (GIC); artificial dental crowns; Porcelain; and Gold. We also found that practitioners were well trained and possessed requisite infrastructure. They also reported that composites and some crowns were cheaper to the client than amalgam and that their adoption could not undermine public access to oral healthcare. Lastly, the budget analyses revealed that the County Department of Health had offered fair fiscal investments for GIC, composites and crowns as well as requisite equipment, materials and human resources.

In 2018, the County Department of Health admitted that dental amalgam was a critical source of persistent organic pollutants and adopted guidelines towards its minimization. Thereafter, it suspended the use of dental amalgam on expectant and breastfeeding mothers and children less than 12 years of age in all public healthcare facilities. The Coast General Hospital, home to the largest public dental clinic in the region, has scaled-up the adoption of alternatives to almost 100% and increased access for residents from underserved counties at the coast. Private clinics such as St. Thomas Dental Clinic, operated by the Likoni Catholic diocese, have also adopted the use of alternatives successfully.

We also observed that amalgam separators were very rare among clinics that used amalgam due to the costly infrastructure required to collect waste and weak enforcement to ensure compliance. Such options cannot stop amalgam's mercury from getting into the environment including other sources such as cremation (which is increasing in the African region).<sup>1</sup> Mercury pollution is costly; for example, it costs up to \$160,000 to rehabilitate a hectare of seagrass a critical marine ecosystem. That's why we are against mercury use in healthcare (among other land-based pollutants that may necessitate such rehabilitation).

It is out of these findings, therefore, that we urge your office to strongly consider policy proposals that favour cleaner non-mercury alternatives to amalgam, which are not only safer for the environment but possible to implement at the grassroots.<sup>ii</sup>



Daniel Maina  
Chairperson  
Kisiwani Conservation Network

<sup>i</sup> <https://apnews.com/e4d90cbac6b84d2d95e74e357f2b8c16>

Serap Erdal, *Mercury in Dental Amalgam and Resin-Based Alternatives: A Comparative Health Risk Evaluation* (2012),

<sup>ii</sup> [https://www.wfpha.org/tl\\_files/images/Newsletter%202012/July/Res%20Colab%20Amalgam%20Risk%20Final.pdf](https://www.wfpha.org/tl_files/images/Newsletter%202012/July/Res%20Colab%20Amalgam%20Risk%20Final.pdf), p.6  
("other than individual allergies to components of one or another composite, there is no current evidence of significant personal or environmental toxicity.")