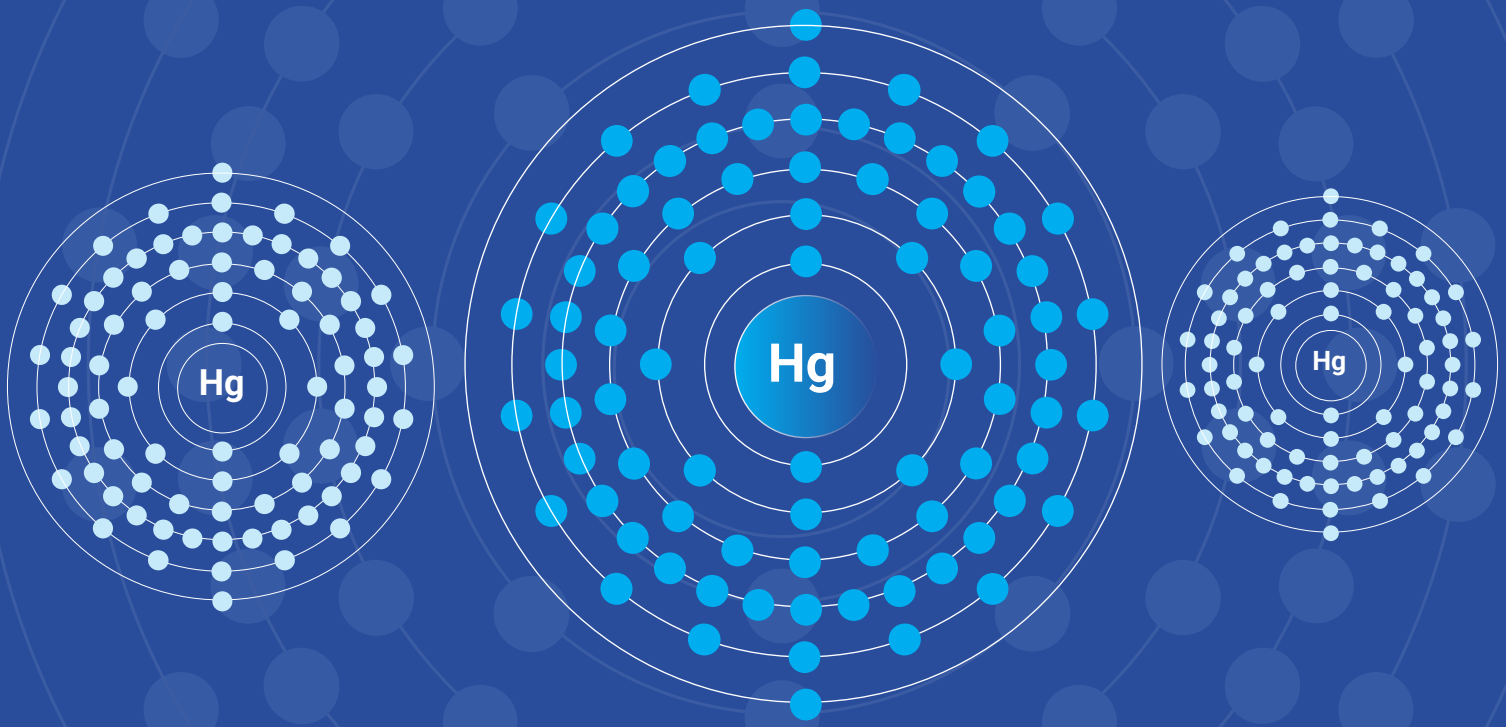
UN environment programme

Case Study

Clearing the Path to a Mercury-Free Caribbean:

Lessons from Saint Kitts & Nevis, Antigua & Barbuda, and Trinidad & Tobago



EEB European Environmental Bureau

zero Hg mercury working group

ACP MEAs 3

Ms. Marie Hinds, Permanent Secretary of the then Ministry of Planning and Development of Trinidad and Tobago (center, front row), joined by high-level representatives from the Minamata Convention Secretariat, EEB/ZMWG, CARICOM, and UNEP, along with delegates from 14 Caribbean countries, at a regional conference on phasing out mercury-added products in the Caribbean, held in Port of Spain, Trinidad and Tobago, in June 2023.

PHOTO: MDP TTO

Background

Mercury is a highly toxic heavy metal that poses severe risks to human health and ecosystems. Exposure can lead to neurological disorders, kidney damage, and developmental defects, while environmental contamination accumulates in fish and enters the food chain. In response to these global health and environmental risks, the Minamata Convention on Mercury was established in 2017 to, among others, phase-out of mercury-added products (MAPs) and promote safer alternatives. Yet across the Caribbean, many countries continue to use MAPs—such as mercury-based thermometers, fluorescent lamps, dental amalgam and even skin lightening creams —largely due to limited public awareness, affordability constraints, and regulatory gaps.

To address this challenge, the Phasing Out Mercury-Added Products (MAPs) project was launched under the broader Africa, Caribbean, and Pacific (ACP) Multilateral Environmental Agreements (MEAs) Programme. This initiative, supported by the European Union, United Nations Environment Programme (UNEP), Food and Agriculture Organization (FAO), and the Organisation of African, Caribbean and Pacific States (OACPS), advances the implementation of the Minamata Convention by helping countries eliminate hazardous MAPs from circulation.

In the Caribbean, the European Environmental Bureau (EEB), in partnership with the Zero Mercury Working Group (ZMWG) and national governments, has led targeted efforts to phase out MAPs. The project aims to support countries to eliminate mercury-added products by pursuing three key objectives. **First,** it focuses on developing comprehensive national strategies and action plans to guide the phase-out of these products. **Second,** it involves conducting in-depth market assessments to identify and promote the use of mercury-free alternatives. **Finally,** the project seeks to strengthen institutional capacity and enhance stakeholder engagement, ensuring that all relevant actors are equipped and involved in the transition toward a mercury-free future.

This case study presents key insights from the market assessment of mercury-free products and the development of three targeted mercury-free procurement policies—for medical measuring devices, dental amalgam, and lighting products—in the three participating countries: St. Kitts and Nevis, Antigua and Barbuda, and Trinidad and Tobago. St. Vincent and the Grenadines joined the initiative at a later stage. The findings and progress from both the market studies and procurement policy development directly informed the development of National Action Plans (NAPs) to phase out MAPs, which forms the second and most important focus of this study.

> ***With a strong National Action Plan and inclusive institutional collaboration, Saint Kitts and Nevis is forging a sustainable path forward—where gender equity, informed citizens, and coordinated action come together to eliminate mercury pollution and protect the health of our people and planet for generations to come,"***
>
> **Franklyn Connor,**
> MEAs Focal Point, Ministry of Trade, Saint Kitts and Nevis.

The fight against mercury pollution is a demanding and ongoing journey that requires the united efforts of decision-makers, civil society, and business partners at national, regional, and global levels. While we stand ready to provide support, national governments take the lead in driving the implementation of the Convention. Their commitment to curbing mercury pollution—both within their borders and worldwide—is invaluable, and we extend our gratitude in advance for their dedication to this critical cause.

Elena Lymberidi-Settimo, EEB's Senior Advisor on Mercury and ZMWG' s International Co-coordinator

Objectives

- Assess the availability of mercury-free alternatives.
- Promote mercury free procurement and product phase-outs.
- Develop a roadmap and National Action Plan to Phase out MAPs.
- Enhance stakeholder awareness and institutional capacity

Participating countries and methodologies

Three Caribbean states participated in this regional initiative to phase out mercury-added products, each committing through a formal Memorandum of Understanding signed with the EEB/ZMWG. This agreement outlined four key project objectives, forming the foundation for all subsequent national activities.

To support these objectives, a national consultant was engaged in each country to lead market studies on mercury-free alternatives. Methodologies were adapted to reflect local contexts and ensure broad stakeholder engagement, even under the constraints of the COVID-19 pandemic. Research activities included comprehensive desktop reviews and the design of targeted online questionnaires covering key product categories: Dental, Electrical Switches and Relays, Lighting – Retailers and Users, Medical Measuring Devices, and Topical antiseptics. Relevant stakeholders were identified, and data collection was carried out through online surveys, phone follow-ups and in-person interviews.

In parallel, mercury-free procurement policies were developed for dental amalgam, measuring devices, and lighting products. This involved additional tailored surveys, engagement with relevant government agencies, and collaborative drafting processes. The resulting policies were finalized and officially adopted at the regional and national level, as relevant.

Findings from the market studies and procurement policy development directly informed the creation of each country's National Action Plan (NAP). The process followed the ZMWG Guide and Checklist for phasing out MAPs, beginning with stakeholder engagement and progressing through a national situation assessment. This included a structured review of institutional, legislative, infrastructural, capacity, data, and awareness frameworks, as well as identification of key gaps. Based on this assessment, targeted measures and concrete activities were formulated to shape each NAP.

Insights gained from the national implementation process also contributed to the revision of the original 2017 ZMWG Checklist—initially developed under the ACP MEA2 programme—resulting in an updated 2023 version that better reflects current challenges and opportunities.

National Working Groups were reactivated and strengthened in each participating country. These groups were engaged from project inception through final review, met several times, contributing critical input to each element of the process.

Additionally, collaboration with CARICOM proved instrumental. A key outcome of this partnership was the co-organization of a regional conference titled "Phasing Out Mercury-Added Products in the Caribbean: Engagement, Steps, and Tools Towards Implementing the Minamata Convention on Mercury," held on 6–7 June 2023 in Port of Spain, Trinidad and Tobago. Opened by the Permanent Secretary of Trinidad and Tobago's Ministry of Planning and Development, alongside high-level representatives from the Minamata Convention Secretariat, EEB/ZMWG, CARICOM, and UNEP, the conference brought together over 38 in-person and more than 30 virtual participants from 14 Caribbean nations. Attendees actively contributed to discussions and drafted national roadmaps for phasing out MAPs, which were submitted to EEB/ZMWG for follow-up.

One notable success story came from St. Vincent and the Grenadines, which continued its momentum post-conference by refining its roadmap into a draft full NAP. The country subsequently shared its experience and progress during a dedicated Minamata Secretariat online webinar

Representatives of the National Working Group on Mercury during the National Validation Meeting in Trinidad and Tobago.
PHOTO: MDP TTO

Key findings by product category from the market studies

The findings revealed both progress and persistent gaps across product categories associated with MAPs in each country.

Product Category	St. Kitts & Nevis	Antigua & Barbuda	Trinidad & Tobago
Lighting devices	LEDs available and increasingly used; CFLs still in market; street lights replaced	LEDs dominate; government has implemented several LED initiatives	LEDs dominate; compliant HIDLs still imported
Switches, Relays, Thermostats	Lack of clear data; part of larger products	Classification issues hinder data accuracy; Lack of clear data; part of larger products	Hard to track due to integration in systems
Medical devices	Digital devices dominate; minor imports of mercury versions	Fully adopted in public healthcare	Digital devices mainstream in both public and private sectors; 1 supplier imports mercury versions
Dental fillings	Composite preferred; 2/8 dentists still use amalgam but one is at an animal lab	Private sector uses composites; public may still use amalgam	58–75% use composites; c Of 25-42% the number of procedures in which dental amalgam is used is minimal
Topical antiseptics	Not studied	Not studied	Local manufacturer phasing out Mercurochrome; Mercury-based antiseptics rare;

Source:
- Trinidad and Tobago (2023)
- Antigua and Barbuda (2023)
- St. Kitts and Nevis (2023)

Mercury free / Convention compliant alternatives

Aneroid Barometer

Digital Thermometer

Aneroid Sphygmomanometer

Batteries

LEDs

Conclusion from the market studies

The market studies reveal a promising landscape: Caribbean countries are well-positioned to capitalize on the global shift toward mercury-free products. Alternatives such as LED lamps and mercury-free medical measuring devices are already widely available and increasingly preferred and used across the region. Even dental amalgam, once a staple, is steadily phasing out. However, this positive market trend is not yet matched by policy readiness. The absence of robust regulatory and policy frameworks remains a critical gap. To truly capitalize on the momentum, the immediate priority must be to strengthen national legislation and align it with the Minamata Convention's requirements. Following this, the development of clear communication and coordination strategies will be essential to ensure effective implementation and sustained progress.

Accelerating the Transition: Mercury-Free Procurement Policies

Recognizing that market availability alone would not drive rapid change, the project adopted a dual approach: Assisting on the establishment of legal frameworks while simultaneously implementing bottom-up procurement reforms for faster impact. To this end, three targeted mercury-free procurement policies were developed, focusing on:

- Medical measuring devices (including dental amalgam)
- Dental amalgam
- Lighting products

The process began with the development of tailored surveys to engage key public-sector stakeholders and professional bodies responsible for largescale procurement. These included Ministries of Health, Regional Health Authorities, Public Pharmacies, dental associations, and Ministries of Utilities and Energy. Based on this input, draft policies were created, reviewed, and finalized in close consultation with government representatives. The resulting mercuryfree procurement policies were officially adopted by the relevant regional authorities and national ministries in Saint Kitts and Nevis and Trinidad and Tobago. In Antigua and Barbuda, the policies informed the development of the NAP. These policies have already begun contributing to the accelerated phase-out of mercury-containing medical devices, dental amalgam, and fluorescent lighting across the public sector—demonstrating how targeted, practical interventions can drive immediate change alongside broader regulatory reform.

Development of a National Action Plan to phase out Mercury Added Products

To systematically eliminate mercury-added products, the three countries implemented a structured three-phase approach using the ZMWG checklist:

These steps ultimately led to the formulation of concrete activities forming the basis of each NAP.

The stakeholder engagement strategy played a pivotal role in reactivating National Mercury Working Groups (NMWG) in each country. These groups convened to discuss MAP-related priorities, clarify roles and responsibilities based on product-specific contexts, and align around the shared goal of eliminating MAPs—a particularly urgent issue in the Caribbean, where such products are often the main source of mercury pollution.

A comprehensive assessment followed, covering institutional, legislative, infrastructural, capacity, data, and awareness frameworks. Building on insights from the earlier Minamata Initial Assessments, countries identified areas of progress, but also highlighted significant gaps that must be addressed to ensure effective and sustainable phase-out of MAPs.

Challenges across countries

While country contexts differ, several cross-cutting challenges emerged:

- **Institutional Gaps:** Limited inter-agency coordination, including limited in-person engagement and slower stakeholder response.
- **Legislative Gaps:** Lack of legislation putting in place the Convention provisions, classification issues as HS codes do not distinguish MAPs from mercury free alternatives, complementary legislation such as on online sales (e.g. for mercury added skin lighting creams) missing
- **Infrastructural Gaps:** Lack or inadequate laboratory facilities, portable screening devices such as XRFs, and lack of environmentally sound disposal solutions for MAPs.

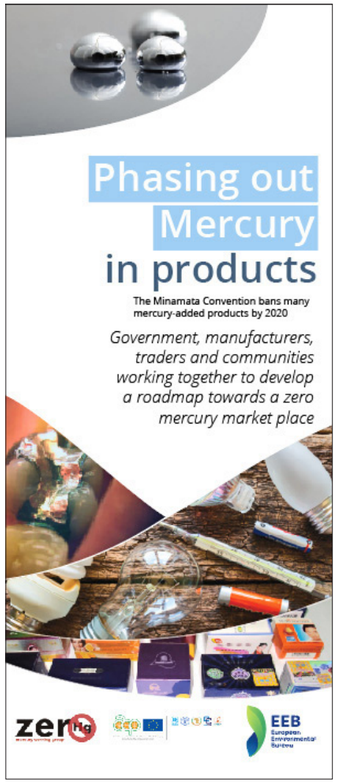
- **Data Gaps:** Limited national data, tracking imports, as well as data for specific MAPs such as cosmetics
- **Capacity Gaps:** Lack of training of relevant authorities (e.g. customs, laboratory staff), lack of capacity to handle mercury waste in an environmentally sound manner
- **Awareness Gaps:** Stakeholders unsure of mercury content in products, lack of risk and communication initiatives.

Addressing the challenges

Government representatives with the support of EEB/ZMWG identified several measures to address the challenges:

1. Organizing regular interagency/NMWG meetings and establishing subsidiary groups per specific MAPs as relevant.
2. Revising and updating or proposing new regulations to meet the legal requirements of the Convention, including its recently adopted amendments
3. Looking at complementary legislation e.g. on labelling, licensing, sales as well as on relevant voluntary measures
4. Purchasing XRFs and enhancing laboratory capacities
5. Establishing overarching data management mechanisms for data collection and collecting data for specific MAPs.
6. Training of customs, professional personnel
7. Identifying target populations and developing relevant awareness raising programs.

PHOTO: EEB, ZMWG



Lessons learnt

The project highlighted several critical factors for successful implementation, ranging from cross-sector collaboration to regulatory reform, capacity building, and public education.

- National Stakeholder Collaboration is key—early involvement of different government agencies, also considering MAP specificities, healthcare professionals, importers, and retailers ensures broader buy-in and faster transition.
- Regulatory and Customs Reform is essential for identifying and managing MAP imports.
- Capacity building and training of government agents needs to be in place
- Public Education about the health and environmental risks of mercury is crucial for behavioral change.

Phasing out mercury-added products is more than a legal obligation under the Minamata Convention - it is a moral imperative to protect the health of our people and environment. We appreciate the assistance under this project to develop a National Action Plan for catalysing this critical work, which with regional collaboration, gives us the roadmap to close gaps, build capacity, and lead our countries into a mercury-free future,"

Ms. Keima Gardiner
Waste Management Specialist, Ministry of Planning, Economic Affairs and Development and Chair of the National Working Group, Trinidad and Tobago

Recommendations

To maintain momentum and enhance the effectiveness of implementation, the following key measures are recommended:

- On-the-ground support for governments is essential for implementing Article 4 of the Minamata Convention and for effective participation in Convention meetings.
- Enhanced coordination and collaboration among international projects and partners fosters synergies, maximizes resources, and strengthens policy and technical support.
- Ongoing engagement from NGOs and regional partners—through studies, technical advice, and shared experiences—is highly valued by governments. However, this support must be consistent and sustained to ensure long-term impact and progress.

Conclusion

The MAPs Phase-Out Project in the Caribbean demonstrates the critical need for sustained support to ensure effective public engagement, policy and regulatory alignment, and multi-stakeholder collaboration. While notable progress has been achieved in transitioning to mercury-free alternatives—driven by both market availability and government action—further work is needed to modernize customs systems, address data gaps, and secure long-term compliance with the Minamata Convention. Importantly, the country-level engagement not only advanced national outcomes but also contributed to improving tools and methodologies, which are now part of the Minamata training pack for use by other countries embarking on similar efforts. For more information, visit https://www.zeromercury.org/the-eeb-zero-mercury-working-group-and-caricom-rally-to-phase-out-toxic-mercury-products-in-the-caribbean/