

2022 Round-Up and 2023 Plans

LOOKING BACK | MOVING FORWARD



By working together with partners like you, Pure Earth Bangladesh has made significant progress in addressing the lead pollution issue on national and global platforms. Our strong commitments, combined efforts, and **5-phase strategic steps** towards building a 'lead safe' Bangladesh have brought meaningful, measurable, and sustainable results in protecting children from lead exposure. And the efforts continue...

As we move forward together in 2023, please take this moment to look back and appreciate our shared achievements, while looking forward to new developments for the year ahead.

Highlights from 2022





Testing Children's Blood Lead Level

Pure Earth's activities and interventions are intended to significantly reduce the Blood Lead Levels (BLLs) of children. The generated evidence also supports the Directorate General of Health Services (DGHS) to develop national-level surveillance to monitor BLL. Pure Earth Bangladesh is also working on including BLL studies in National Health and Nutrition Surveys. Pure Earth Bangladesh is working collaboratively with Stanford University and icddr,b to collect blood samples for BLL analysis using atomic absorption spectrometry among 1300 pregnant women and children living in urban and rural districts of Bangladesh.

A baseline BLL analysis has been conducted among 200 children in Mirzapur, at both remediation and control sites. Published results on intervention impacts on BLLs are to ensure the credibility of the intervention and increase the justification for, and the likelihood of replication of such interventions.

Analyzing Potential Sources

As of 2020, Pure Earth Bangladesh together with the Department of Geology, University of Dhaka has identified more than 300 toxic sites under the Toxic Site Identification Program (TSIP). These informal factories of Used Lead-Acid Battery (ULAB) recycling are one of the major sources of lead pollution. In 2022, Pure Earth identified 30 highly polluted toxic sites where the local population is at risk. 24 of these sites were assessed by environmental experts, and 6 were selected for the next level of study to determine future lead remediation sites. Expanding the investigation for potential sources of lead exposure and poisoning, our team participated in the Rapid Marketplace Screening (RMS) project in 2021-2022.

The RMS took place in four major districts: Dhaka, Rajshahi, Khulna, and Barishal. The investigators visited markets to purchase a wide array of consumer goods and tested the samples with XRF. Some of the samples like vegetables, rice, and aluminum cookware went through a leaching test in the laboratory. The preliminary findings show that 96 samples are lead-positive among 367 samples, where the major sources were aluminum cookware, ceramic foodware, local paints, toys, amulets, pigments, and other non-food items.



Taking Source-specific Risk Reduction Interventions

The first known lead remediation was conducted in Kathgora, Savar in 2017 which resulted in a 35% decline in children's blood lead levels. In May 2022, Pure Earth has conducted the second remediation project in Mirzapur, Tangail with the support from Department of Geology, University of Dhaka, under the supervision of the Department of Environment (DoE), and funding from the TAUW Foundation, Clarios Foundation, and USAID. The risk-mitigation strategy for Mirzapur included: Pre- and post-project environmental and blood lead level sampling and analysis, an education, awareness, and advocacy campaign, collection, packaging, transportation, and disposal of residual battery wastes, scraping, and stockpiling of lead-impacted soil and leaf matter, pit excavation, phosphate amendment and burial of lead impacted soil, house cleaning, and yard remediation.



[Watch Mirzapur Remediation Video](#)

This remediation project has ensured a lead-free, safe environment for more than 600 villagers. With support from icddr,b, 200 children's blood lead levels were tested and environmental samples were collected and analyzed to understand the contributing sources of lead pollution further.

Raising Awareness and Advocating for Solving Lead Pollution



The online and offline campaign and advocacy strategy successfully reached about 50 million people and mobilized community members, youth, and different stakeholders to take unified actions to solve lead pollution. Public events like national and district-level seminars, awareness-raising rally, film show, art competition with youth groups, media talk show during International Lead Poisoning Prevention Week (ILPPW) 2022, seminar during World Environment Day, and social media and print media campaigns have secured a commitment from the stakeholders to prioritize and work together to protect the environment and human health from lead poisoning.

Courtyard sessions, school sessions with youth groups, meetings with health workers, and community gathering events have sensitized the community members, youth, and health workers, and reduced the risk of lead exposure. Pure Earth's lead work has been covered in more than 250 local and international print and electronic media.

Taking Measures for Sustainable Solutions

The lead work in Bangladesh has been strengthened by forming a coalition with more than 10 organizations and institutions including Dhaka University, ESDO, icddr, International Lead Association (ILA), Stamford University, UNEP, and UNICEF. Pure Earth Bangladesh is taking a multi-stakeholder approach to work collaboratively with local and national governments, NGOs, civil society organizations, research institutes, universities, and media agencies to reduce lead exposure, raise awareness, and design and implement innovative solutions to save lives.

Together with UNICEF, and DGHS, Pure Earth Bangladesh is working on the National Guidelines for Case Management, Monitoring, and Surveillance. Specialized training to improve industrial and regulatory practices - Benchmarking Assessment tools (BAT) - was organized with the support from ESDO and ILA; attended by the Department of Environment (DoE), battery companies, and NGOs to build capacity and knowledge on environmentally sound management of used lead-acid batteries.



Moving Forward...

Pure Earth Bangladesh will continue the efforts to protect children from lead poisoning by engaging multiple stakeholders and working collaboratively with local partners to raise awareness, advocate for legislation, and set and enforce standards that properly regulate the safe manufacture, usage, and most importantly, smelting of lead-acid batteries.



Pure Earth Bangladesh will also share the results of BLL studies, source analyses, case studies, and relevant guidance with local, national, and international stakeholders to roll out public/consumer education and producer training programs, sensitize governments to potential intervention strategies and develop joint action plans; provide technical assistance (training, communications, joint investigations) to governments to enforce regulations.

In 2023, Pure Earth Bangladesh will lead several key interventions:

- The launch of a two-year project, **Building Capacity to Reduce Childhood Lead Poisoning in Bangladesh**, funded by the French Facility for Global Environment.
- **Environmental remediation programs** in communities with high levels of lead pollution.
- **Awareness and education programs** in the community and schools at the priority sites.
- **An endline analysis of the BLLs** of 200 children in Mirzapur after the cleanup.

Please follow us and stay updated at @PureEarthBD on [Facebook](#), [Twitter](#), and [YouTube](#).

Videos

- [One in 36 million: Childhood Lead Poisoning in Bangladesh](#)
- [Change Maker Pannu | Community taking action to stop informal lead-acid battery recycling factory](#)
- [Public Questions, Expert Answers: Lead Pollution in Bangladesh](#)
- [See More](#)

News

- [Lead poisoning: Pure Earth wants us to be worried](#)
- [Lead poisoning: 35.5m children affected in Bangladesh](#)
- [Lead poisoning: The next big threat for Bangladesh](#)
- [Read More](#)

Publications

- [Pure Earth's Annual Report 2021](#)
- [Mirzapur Lead Remediation Report 2022](#)
- [Rapid Marketplace Screening \(RMS\) Study Report](#)

OUR MISSION

Pure Earth partners with governments, communities, and industry leaders to identify and implement solutions that stop toxic exposures, protect health, and restore environments.

We prioritize actions to protect the developing brains and bodies of children and pregnant women living in toxic hot spots. We work to stop the multigenerational cycle of poisoning that is endemic in many low and middle-income countries.

Solve Pollution. Save Lives. Protect The Planet.

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