



Lead poisoning is affecting children on a massive and previously unknown scale. Pure Earth implements solutions to lead pollution, and advocates for action to protect children, enabling them to reach their full potential.

SOLVE  
**POLLUTION.**  
SAVE  
**LIVES.**  
PROTECT THE  
**PLANET.**



## MAGNITUDE OF THE PROBLEM

**Bangladesh is one of the most lead-impacted countries in the world.**

It has the 4th highest rate of death from lead exposure (nearly 4% of all deaths in the country)<sup>3</sup>

**Bangladeshi children have an average of approx. 7.5 µg/dL of lead in their blood.<sup>3,4</sup>**

This exceeds the blood lead reference value (BLRV) of US CDC, 3.5 µg/dL by more than 50%.<sup>1</sup>

**>690,000 years of healthy life lost annually due to lead exposure** across the population of Bangladesh<sup>3</sup>

### 60% of Children

36 million Bangladeshi children are estimated to have blood lead levels indicative of lead poisoning (>5 µg/dL); 10 million are above 10 µg/dL.<sup>2</sup>

### 70% of intellectual disability

in Bangladesh is due to lead poisoning.<sup>3</sup>

### Widespread Sources of lead

Based on desk review, rapid marketplace screening, and home based assessment study, lead is found in many household products including spices (turmeric powder), aluminum cookware, ceramic foodware, paints, toys, amulets, pigments, non-food items and more. Pure Earth has identified 300+ toxic sites, majority of them were informal used lead acid battery (ULAB) factories.

1. World Health Organization. (2019). Lead Poisoning and Health. <https://www.who.int/news-room/fact-sheets/detail/lead-poisoning-and-health>
2. UNICEF and Pure Earth. (2020). The Toxic Truth.
3. Institute for Health Metrics and Evaluation. (2019). GBD Compare. Seattle, WA: IHME, University of Washington. <http://vizhub.healthdata.org/gbd-compare>.
4. Ericson, B., Hu, H., Nash, E., Ferraro, G., Sinitsky, J., & Taylor, M. P. (2021). Blood lead levels in low-income and middle-income countries: a systematic review. The Lancet. Planetary health, 5(3), e145–e153.

# UNDERSTANDING THE IMPACT

## Health Impact

Lead is a cumulative toxicant that affects multiple body systems, including the neurological, hematological, gastrointestinal, cardiovascular and renal systems.



## Children

are particularly vulnerable to lead poisoning due to their smaller size and higher rates of lead absorption. Lead poisoning has been associated with:

- brain damage, reduced IQ, decreased intelligence
- learning difficulties
- lower lifetime earnings
- increased incidence of heart and kidney disease later in life
- increased tendency for violence



## In Adults

lead exposure increases the risk of ischaemic heart diseases and stroke.



## In Pregnant Women

lead exposure can cause miscarriage, stillbirth, premature birth and low birth weight.



## CALL FOR ACTION

- Enforce law and regulation to prevent lead chromate use in consumer products including spices, aluminum cookware, and ceramic foodware.
- Enforce law and regulation to shut down the informal Used Lead-Acid Battery (ULAB) operations.
- Expand Toxic Site Identification Program (TSIP) to track and remediate ULAB sites.
- Put more attention to occupational health and safety hazards of working with lead
- Develop a time-bound, holistic national action plan which considers existing legislation and should include provisions for monitoring, reporting, and enforcement.
- Ensure effective waste management across all sectors, especially industrial waste because contaminated waste ends up affecting health through different pathways, including the agricultural chain.
- Conduct more research to confirm sources - Agricultural fields, chemical fertilizers, culture fish and fish feed.
- Establish blood lead monitoring process nationally, integrate blood lead data into the MOHFW's existing routine health information system

