

The Risks of India's Unseen Pollution Menace

Exposure to polluted sites adversely affects society in multiple ways, from risking children to mental and neurological issues, to decreasing productivity and increasing healthcare costs

Even as air pollution is making headlines both domestically and internationally, awareness of the dangers of pollution seem to disappear when the problem lies underfoot: in the thousands of sites contaminated by industrial pollutants.

A recent pair of studies on the impact of toxic contaminated sites in Asia has arrived at a sobering conclusion - polluted sites are a large and heretofore insufficiently studied public health threat, contributing to as much death and disease as outdoor air pollution and dangerous diseases like malaria, with lead being one of the worst pollutants threatening children. India figures prominently in both studies.



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What the Studies Reveal

One study estimates that in India, Indonesia and the Philippines alone, some 8 million people are at risk of exposure to industrial pollution at toxic sites. Of the 373 polluted sites analyzed for this study, a majority – 221 sites – are in India.

Using data collected, researchers calculated the burden of disease caused by the toxic sites in the form of DALYs (Disability Adjusted Life Years), which measure the sum of years of potential life lost due to premature mortality and the years of productive life lost due to disability.

They found that contaminated toxic sites contribute to as much death and disease as air pollution and malaria in the three countries, even though the problem of polluted soil and water gets significantly less attention.

Another study of toxic sites, this time across seven countries

– India, Bangladesh, Indonesia, Kazakhstan, Pakistan, Philippines, and Thailand – pinpoints lead as the worst pollutant.

The study goes on to estimate that 20% of the population in these seven countries is at risk from lead at toxic sites, including 200,000 children under the age of four who are exposed to lead in soil and water in sufficiently high doses to produce decreases in IQ.

India accounts for about one quarter of these children – About 50,000 Indian children are estimated to be at risk of diminished intelligence. At the lower end, this means that young Indian children may suffer irreversible injury to their brain and nervous systems with no overt signs and symptoms. At the higher end of the range, children could suffer seizures, coma, and death.

These two studies show that the impact of polluted sites could adversely affect society in multiple ways: an increasing number of children suffering from mental difficulties and neurological issues, decreasing productivity and earning potential of the affected population, and increasing healthcare costs required to treat the myriad of diseases related to exposure to toxic sites.

And this is just the tip of the iceberg. The toxic sites assessed in these two studies are a fraction of the thousands of contaminated hotspots in India and around the world.

The root of the problem

The good news is that polluted sites can be cleaned

up and lives can be saved. It has already been done in many industrialized countries. But many toxic sites remain, especially in countries with large informal economies.

Many of the worst-polluted sites analyzed in the two studies are contaminated by small-scale artisanal sources, such as lead-acid battery recycling and artisanal gold mining.

Small operators work informally, often in homes and backyards, with little training, few precautions and often no regulation. They also do not have the resources to address any pollution issues, even if it sickens themselves and their families.

A large number of toxic sites are also abandoned (legacy) sites, such as former tanneries. Although the polluting industries at these sites are no longer in operation, the contaminants remain and nearby communities continue to be poisoned.

Unfortunately, clean-ups seem to happen at toxic sites only after mass poisonings and multiple deaths draw worldwide attention, such as recent events in Nigeria and Senegal. Worldwide, exposures from most toxic waste sites continue unabated, and communities continue to be poisoned.

The Indian Alliance on Health and Pollution

The two studies analyzed sites identified through the Blacksmith Institute's Toxic Sites Identification Program (TSIP), a global effort to identify waste sites,

implemented jointly with the United Nations Industrial Development Organization.

Blacksmith Institute, an international non-profit that works to solve toxic pollution problems, trained over 150 TSIP investigators to identify, visit and screen these toxic sites. They collected environmental samples, took photographs and GPS coordinates, and interviewed residents and stakeholders.

In India, the Government is working to prioritize the top ten worst polluted sites in the country for clean up, building in part on Blacksmith's data.

In addition, Blacksmith Institute-India, the Council on Energy, Environment and Water (CEEW), and the Public Health Foundation of India (PHFI) have come together to form the Indian Alliance on Health and Pollution.

The Indian Alliance on Health and Pollution will raise awareness about the problem of India's toxic sites by documenting them, tracking the progress of any remediation work done, and collecting and providing crucial information to the public and local official through a website and other sources. (www.IndiaHealthPollution.org will launch next year)

With awareness comes action and in India, things are starting to happen. 

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