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Why your car battery may be as bad as malaria for the developing world

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Somewhere in the world, a car battery dies. It finds its way to a developing country, where a local man is hired to extract the lead for reuse. He splits the battery open with an axe, sending dust particles flying and sulphuric acid spilling, and removes the lead plates, melting them in an open pan.

A few weeks later, children from the local village begin to fall ill. They have lead poisoning.

This is just one scenario demonstrating how toxic pollution is making people sick in the developing world, according to Stephan Robinson with Green Cross Switzerland, an environmental cleanup group. [On Tuesday, his organization published a report with the Blacksmith Institute](#), a non-profit group based in New York.

The report marks a first serious attempt at measuring the disease burden caused by industrial sites polluting low- and middle-income countries.

It estimates that toxic pollutants, such as lead from batteries, are endangering the health of nearly 125 million people in 49 developing countries. The result is a staggering global health burden — on par with major diseases such as malaria and tuberculosis, according to the report.

“What always surprises me is how little people really care about pollution issues,” said Robinson, who notes that the report’s estimates are actually conservative. “There’s a very limited understanding of environmental impacts and (the idea) that a bad environment has a direct connection to human health.

“Simply dumping things comes at an enormous cost for society at the end.”

The report drew heavily from data collected by the Blacksmith Institute, which has spent the past four years investigating approximately 2,600 industrial sites in developing countries.

Health impact was measured using “disability adjusted life years” (DALYs), a metric that estimates potential life lost due to disease, disability or premature death. One DALY equals one lost year of healthy life. And according to the report, the DALY for industrial pollutants was more than 17 million.

For comparison’s sake, the DALYs for malaria and tuberculosis are about 14.3 million and 25 million, respectively.

But whereas malaria receives billions of dollars in funding (last year alone, \$2 billion U.S. was committed to the fight against malaria, according to the World Health Organization), little attention is paid to combating diseases caused by pollution from battery recycling operations, mines, chemical plants or tanneries.

This is something John Keith, lead technical adviser with the Blacksmith Institute, hopes to change through reports such as this one.

But capturing the necessary data has been a gargantuan task. After first identifying which countries to investigate, Blacksmith has to convince governments to approve their work (some said no), hire and train local teams (usually people with degrees or scientific expertise), collect samples from industrial sites (such as water and soil samples) and evaluate the evidence in a scientifically credible way.

“That’s one reason why other people have not done this; it’s a lot of work,” Keith said.

He readily acknowledges, however, that gaps exist in the report. For instance, the groups were not able to capture the disease burden of pesticides,



A child jumps plays in a tannery in Dhaka, Bangladesh. A new report sheds light on diseases caused by pollution from battery recycling operations, mines, chemical plants and tanneries in the developing world.

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which are a major health concern but come in many different forms and have impacts that are often difficult to quantify.

The report also relied heavily on educated assumptions and extrapolations. But that is a common problem when it comes to capturing global statistics, Keith said.

"You have to start with an estimate someplace," he said. "If you wait until you have comprehensive data, then you're waiting many years, decades maybe, before you can raise awareness of the issue and get some action."

For Robinson, this report lends some much-needed weight to the belief that industrial pollution is making people sick in the developing world.

"It's the first time, through this report, that we can quantify (the impact of industrial pollutants) and not simply say, 'Oh yes, it must have a price but I'm not sure how high it is,'" Robinson said.