Rina Kuusipalo

From: OHCHR-Right to Environment
Sent: 02 February 2024 16:17
To: Rina Kuusipalo
Subject: FW: Comments on the impact of loss and damage from the adverse effects of climate change on human rights

From: Mark Engman <markengman@pureearth.org>
Sent: Tuesday, January 30, 2024 6:17 PM
To: OHCHR-Registry <ohchr-registry@un.org>
Cc: OHCHR-Right to Environment <ohchr-right2environment@un.org>
Subject: Comments on the impact of loss and damage from the adverse effects of climate change on human rights

Thanks for the opportunity to comment, apologies for the lateness, and hope this adds value to your considerations:

The discussion on impacts of climate change recognizes that climate change affects human health. One issue missing from the discussion is role of climate change in increasing exposure to toxic chemicals. Pure Earth will address lead poisoning specifically in this response.

The adverse health effects from lead exposure are well documented and begin at the lowest levels of exposure yet measured. A cumulative toxicant, lead impacts multiple body systems, including neurological, cardiovascular, gastrointestinal, hematological, and renal systems. Globally, 5.5 million premature deathsfrom heart disease are attributed to lead exposure annually, and a loss of 750 million IQ points in children, with a social cost of $6 trillion. Children are particularly vulnerable due to their size, higher rate of lead absorption, and hand-to-mouth behavior. An estimated 1 in 3 children is poisoned by lead, as many as 800 million globally. The permanent brain damage that childhood lead poisoning can cause often results in reduced IQ, behavioral problems, and learning difficulties.

Levels of lead in children's blood peak during the warmest months of the year, late summer and early fall. This rise in lead exposure is significant and apparent across multiple populations, locations, and time periods.

A warming climate increases extreme weather events, including droughts, wildfires, and flooding, which have direct impacts on lead exposure. Dryness and drought have been found to mobilize lead-polluted soil, increasing risks of ingesting and/or inhaling lead particles in dust. Wildfires increase lead levels in an environment through the volatilization of soil, which remobilizes lead particles, and through smoke dispersion. A 2021 study found that following a series of wildfires in California, air lead levels increased to 50 times the average level for communities in a surrounding 20-mile radius. Further, wildfires have been found to double air lead levels up to 200 miles away from the fire site. Groundwater is impacted by extreme weather events, particularly high rainfall and resulting floods. During these periods of high

saturation, soil particles, including lead, are mobilized by highly-conductive topsoil, resulting in the spread of metal contaminants through groundwater systems, which enters people's homes and bodies as drinking water.

In addition, responses to climate change also increase risks of lead contamination. The shift from fossil fuels leads to more batteries, including lead-acid batteries, by far the cheapest form of battery. While lead-acid batteries are viewed as an essential tool in adapting to climate change, they also pose a significant risk of lead exposure. Lead-acid batteries contain large amounts of lead, with a standard battery containing over 9 kilograms. Almost all of this lead can be recovered and recycled: in the U.S. and Europe, more than 95% of lead from used lead-acid batteries is recycled. However, in low- and middle-income countries (LMICs), appropriate laws and enforcement mechanisms are lacking and a significant percentage of lead-acid batteries are recycled through informal or poorly-regulated operations that release considerable lead pollution, poisoning surrounding communities. Exposure to such toxic sites has repeatedly caused acute lead poisoning in local children.

There are examples of countries taking action to address lead poisoning exacerbated by climate change. In Ghana, for example, the Government of Ghana issued a "Declaration of National Action to Reduce Lead Poisoning" that included a crackdown on improper lead-acid battery recycling. Bangladesh is addressing the impacts of improper lead-acid battery recycling and its pollution of land and water by implementing regulations on recycling. Philippines is moving to include blood lead level testing in its National Nutrition Survey. These and others are good examples, but there is a serious global lack of attention and funding to help lower-income countries address lead poisoning.

There are proven effective solutions to lowering lead contamination and preventing lead poisoning:

1. Health Surveillance: Conduct baseline blood lead level (BLL) testing and analysis to understand prevalence, severity and location of exposure.
2. Source Analyses: Measure likely sources in homes where people have elevated lead levels, to determine the most significant sources of exposure.
3. Source-specific Interventions: Design and implement a range of interventions to reduce exposures and the use or release of lead in products and industrial processes, including site remediation.
4. Communications: Disseminate findings and recommendations to inform and build support with governments and funders for action.
5. Institutional Strengthening: Enhance the capabilities of government institutions to plan, implement, and sustain effective public health programs to reduce lead poisoning.
6. Community support: ensure that children already lead poisoned have the supports they need to achieve their best possible futures.

Mark Engman
Director, Policy and Advocacy
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