The EU's Global Role

Policy Proposals for a New Era

Combatting the Hidden Epidemic of Lead Poisoning

CENTER FOR GLOBAL DEVELOPMENT

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What is the issue?

Lead exposure harms human health and welfare. It is a widely used and highly toxic metal, with neurological effects that are especially hazardous to children. Lead's effects on the human body are extensive and profound, impacting almost every bodily system. There is no safe level of lead; neurocognitive effects in children and cardiovascular health effects in adults are apparent even at very low levels of exposure.

A shared understanding of the danger of lead has already prompted global action to reduce the burden of lead exposure—specifically, the complete global phaseout of leaded petrol. Lead poisoning is preventable; most cases of lead exposure result from sources with safe and readily available alternatives. Eliminating ongoing lead exposure is needed to prevent brain damage in children and the loss of potential of entire generations. Most wealthy countries have dramatically reduced lead exposure, including the phaseout of leaded petrol and lead paint, though hot spots of lead exposure remain in some locations, particularly among vulnerable populations.

Nevertheless, lead remains a valuable and in demand commercial commodity. Some industrial applications of lead are still considered "essential" by certain stakeholders—most notably use within lead-acid batteries, which account for more than 85 percent of lead in current circulation.

SUMMARY

Half of children in poor countries have lead poisoning which undermines their lifelong health and education. Prevention of lead exposure can be highly cost-effective and yet is grossly underfunded.

We propose that the European Commission should:

- Pledge to end lead poisoning within the European Union (EU).
- Improve regulation on imported recycled lead to the EU from countries without adequate systems for safely recycling lead.
- Review and prohibit unnecessary exports of lead products from the EU, particularly lead chromate (which is banned for use within the EU).
- Generate new evidence on blood lead levels and sources of exposure in poor countries.
- Help build surveillance systems to monitor blood lead levels in poor countries.
- Provide technical assistance on regulation to poor countries.
- Invest in new technology to measure lead levels.

Lead poisoning remains widespread across low- and middle-income countries (LMICs). Current estimates suggest that the scale of lead poisoning today impacts an estimated 815 million children—one in three children worldwide. Within LMICs, significant sources of lead exposure remain and continue to be introduced into natural and home environments.

Sources of exposure across LMICs include battery recycling, spice adulteration, ceramic and aluminum cookware, cosmetics, paint, environmental contamination, and traditional medicines, among others. The relative contribution of these different sources is not yet well characterised.

Relative to its scale and impact, lead poisoning is extraordinarily neglected; many LMIC leaders are unaware of how widespread lead poisoning is in their own countries, most have no systems in place to detect and prevent lead exposure, and there is just $11 million in annual philanthropic funding for preventing and mitigating lead exposure in LMICs.

Why should the EU address it now?

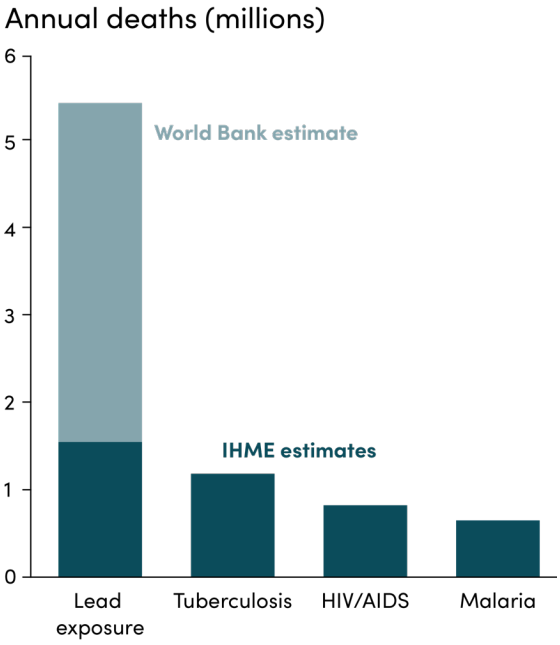
Lead poisoning has been largely forgotten about in the EU as regulations on leaded petrol and other consumer products have been effective in reducing lead exposure. Yet lead exposure remains a problem both in the EU and for most poor countries that the EU supports. There is no cure for lead poisoning, and so to prevent lifelong cognitive damage urgent preventative action is needed. The EU continues to tighten regulation on lead exposure, bringing in new rules in 2021 to tighten limits on lead in food and in 2024 to reduce harm to workers from chemical exposure. Promoting similar regulation through EU development cooperation could have huge benefits in low- and middle-income countries.

The green transition is resulting in more demand for batteries to power vehicles and for green energy storage, which raises risks for communities in poor countries which do not have safe infrastructure for battery recycling.

Evidence of the harms of lead poisoning continues to grow. Recent estimates by World Bank researchers found that lead poisoning accounts for 5.5 million deaths annually—more than tuberculosis, malaria, and HIV combined—and the health and productivity costs of lead poisoning amount to 6·9 percent of global GDP. What's more, new estimates from the Center for Global Development found that lead poisoning could be responsible for up to 20 percent of the gap in learning outcomes between rich and poor countries.

Thankfully there has been a recent surge in interest in addressing lead poisoning globally. The Indian Secretary of Health Rajesh Bhushan and USAID Administrator Samantha Power have both highlighted the issue and called for increased global action. The EU should not be left behind but should instead become a leader in raising awareness and promoting global action on highly effective interventions to prevent lead exposure.

FIGURE 1 Lead exposure causes more deaths than HIV/AIDS or malaria



Note: IHME estimates for tuberculosis, HIV/AIDS, and malaria, are estimated for 2019. The IHME and World Bank estimates for lead exposure for lead exposure are for 2022.

What can the EU do about it?

There are several steps that the European Commission can take to combat lead poisoning at the global level, within the EU, and alongside partner countries.

Global action

- **Elevate lead poisoning on the global agenda.** The EU should call on other leaders through the G7, G20, OECD, and other forums to urgently address the hidden epidemic of global lead poisoning.
- **Invest in new technology.** There is a need for research and development for further solutions, including improved and lower cost technologies for exposure detection, source evaluation, and remediation. More research is needed to evaluate and compare the efficacy and cost-effectiveness of environmental, policy, and medical interventions. For example, researchers from the University of Amsterdam developed and commercialised a new low-cost, user-friendly test for detecting environmental sources of lead. Innovation such as this can reduce the cost of ongoing surveillance and should be considered by the EU's key funding programme for research and innovation, Horizon Europe.

Action within the EU

- **Pledge to end child lead poisoning within the EU.** There are an estimated 2.5 million children in Western Europe with elevated blood lead levels. Sources of exposure are diverse and poorly characterised. The European Commissioner for Health and Food Safety should work with member states to encourage adoption of best practice approaches to manage lead exposure. This should include (i) universal screening of children for blood lead levels, (ii) follow-up with home-based assessments for affected children to identify the source of exposure, and (iii) a public database of exposure sources, allowing authorities in both the EU and internationally to identify and investigate contaminated consumer products. The public database in New York has been used to identify contaminated consumer products imported from countries including Bangladesh and Georgia, alerting authorities to products in need of investigation.
- **Improve regulation on imported recycled lead to the EU.** At present, recycled lead imported into European countries is often handled at unsafe recycling plants in Africa that are poisoning local populations. Existing regulation, designed to ensure goods imported to the EU don't cause harm in source countries, simply isn't working.
- **Review and prohibit unnecessary exports of lead products from the EU, particularly lead chromate.** Following a tribunal in 2019, the use of lead chromate was banned in the EU due to its high toxicity and the availability of affordable alternatives. However, EU companies are still able to export the compound to poorly regulated markets outside the EU, where lead chromate has been found in household paints and even spices. The EU should support the addition of lead chromate to Annex III of the Rotterdam Convention and prohibit its export from the EU.

Action in partner countries

- **Fund new data on blood lead levels and sources of exposure in poor countries.** Few countries have nationally representative data on current lead levels, though our best estimates are that they are extremely high. New data has been highly effective at making this invisible epidemic visible and galvanising action by national governments—for example, a nationally representative survey by UNICEF in Georgia found higher than expected blood lead levels that led to new government regulation. Opportunities for effective intervention remain constrained by serious data and evidence deficits. There

is an urgent need for the EU to work with partners to instigate and fund further research and data collection, including on the local and global prevalence, severity, and impact of lead poisoning; the relative contribution of different sources of lead exposure at the global, regional, and local levels; and the effectiveness and cost-effectiveness of interventions to reduce lead exposure and blood lead levels.

- **Help build surveillance systems in poorer countries** to monitor blood lead levels and identify sources of exposure. The EU is the largest donor of development aid in the world. In partner countries where there is no donor currently providing technical assistance on lead exposure, the EU and member states should take the initiative. This should include assistance on building national surveillance systems, providing financial and technical support, including building laboratory and field sampling capacity. Where laboratory capacity is absent European countries can help fill the gap in the short-term—for example, samples from the first nationally representative blood lead survey in Georgia were sent to laboratories in Italy for analysis.
- **Provide technical assistance on regulation** to poor countries, supporting capacity to develop new regulation and enforce existing regulation to eliminate lead in spices, paint, and consumer goods, and reduce lead exposure from battery recycling. This could build on existing programmes such as the Chemical, Biological, Radiological and Nuclear (CBRN) Risk Mitigation Centres of Excellence Initiative.

Lead poisoning remains a silent epidemic threatening millions of children worldwide, particularly in low- and middle-income countries. The European Union has a unique opportunity to lead global efforts in combating this crisis through decisive action within its borders, regulating trade, supporting research, and providing technical assistance to partner countries. By implementing the proposed measures—from pledging to end child lead poisoning within the EU to funding critical data collection and surveillance systems abroad—the new European Commission can demonstrate its commitment to global health and sustainable development. These actions will not only prevent lifelong cognitive damage and improve health outcomes, but also contribute to a more equitable and prosperous future for all. The time to act is now, turning this hidden epidemic into a visible priority on the global agenda.

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This brief is part of series, The EU's Global Role: Policy Proposals for a New Era. The series will set out a suite of policy proposals designed to shape the international development agenda of the European Union's leadership during the 2024-2029 term.

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