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Emerging policy issues and issues of concern

Towards a broader approach to lead: expanding the scope beyond lead in paint

Submission by the Global Alliance on Health and Pollution, supported by Ghana, Mexico, Nigeria, Paraguay, Peru, Uganda and Uruguay

The annex to the present document contains a proposal entitled "Towards a broader approach to lead: expanding the scope beyond lead in paint". It is reproduced as received by the secretariat, without formal editing.

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Annex*

Towards a broader approach to lead: expanding the scope beyond lead in paint

Submission by the Global Alliance on Health and Pollution, supported by Ghana, Mexico, Nigeria, Paraguay, Peru, Uganda and Uruguay

Background

In the working document *UNEP/GFC/OEWG.1/5 – Emerging policy issues and issues of concern*, UNEP and WHO propose to continue their efforts. UNEP specifically suggests expanding the scope to additional sources of lead exposure.

Position and Recommendation

The Global Alliance on Health and Pollution (GAHP) fully support expanding the scope to adopt a broader approach to lead, encompassing additional sources of lead exposure. They welcome the opportunity to contribute to the strategic objectives and targets of the Global Framework on Chemicals by advocating for the recognition of lead as an Issue of Concern at the upcoming International Conference of the Global Framework on Chemicals.

This proposal is aligned with the decision recently adopted by the World Health Assembly (WHA) in Resolution 78.27, titled *"Galvanizing Global Support for a Lead-Free Future."* The resolution mandates the development of a Global Action Plan on Lead Mitigation, to be submitted to WHA 80 in 2027. Importantly, this initiative of the WHA adopts a comprehensive approach that goes well beyond lead in paint. In particular, Operative Paragraph 1.4 urges governments to take action to mitigate lead exposure from all sources, reflecting a global consensus on the need for broad and integrated health protection strategies. Recognizing lead as an Issue of Concern under the Global Framework on Chemicals is therefore a timely and coherent step, reinforcing commitments made in other international fora and contributing to a coordinated, multisectoral response to lead pollution.

In light of progress made and new information emerging on the health and environmental burden of lead pollution, GAHP recommend that lead be addressed as a broader Issue of Concern, extending beyond lead in paint, to include all relevant sources of lead exposure with significant health implications. This expanded focus would align with the goals of the Global Framework on Chemicals and contribute to a more cohesive global effort to reduce lead exposure and protect human health.

Based on the above and in accordance with the process established in Annex I of the GFC, we are introducing this topic for consideration by the OEWG, with a view to its potential submission for discussion and adoption at the International Conference. The proposed text for the Submission for the Nomination of "Lead as an Issue of Concern" according to the Annex I of the GFC is attached in Annex A of this document.

Rationale for a Comprehensive Approach

While lead in paint remains a recognized and preventable source of lead exposure, other significant sources of lead pollution—such as informal recycling of lead-acid batteries, contaminated consumer products and food, lead-glazed ceramics, contaminated soil and dust, occupational exposures — pose serious risks, especially to children and workers mainly in developing countries. Addressing lead exposure comprehensively would enhance coherence among existing and future interventions,

* The annex has not been formally edited.

promote multisectoral engagement (including health, environment, labor, and industry), and improve protection for vulnerable and at-risk populations by addressing cumulative and multiple exposure pathways.

Proposal for Addressing Lead as an Issue of Concern under the Global Framework on Chemicals

The Global Alliance on Health and Pollution (GAHP) propose that the Global Framework on Chemicals broaden its scope to include lead as an Issue of Concern. This expansion would encompass all major environmental and health-related sources of lead exposure, and support coordinated global action aimed at reducing and ultimately eliminating lead pollution across sectors. Such an integrated approach would strengthen international cooperation and accelerate progress toward the vision of a planet free of harm from chemicals and waste.

GAHP and urge the OEWG and relevant stakeholders to consider the following information on main sources of lead pollution and toxic exposure in the decision-making process of shaping the future implementation agenda of the Global Framework on Chemicals.

Address lead in a more comprehensive manner by incorporating it under the category of Issues of Concern with an integrated approach.

GAHP and support addressing lead more comprehensively by incorporating broader exposure risks under the categories of Issues of Concern. This position is grounded in technical evidence showing that lead-acid batteries account for approximately 86% of total global lead use, while other applications—including pigments, glass, ceramics, and paints—make up the remaining 14%.[1] Within this 14%, the specific share attributable to lead in paint is not explicitly disaggregated. On its own, lead-based paint represents a relatively small fraction of overall global lead consumption.

From an environmental and health perspective it is essential to highlight that the production and recycling of lead-acid batteries are not only the largest consumers of primary lead but also the most significant sources of lead pollution, particularly when improperly managed—especially in developing countries. The technical rationale supporting UNEP's proposal is based on the following key points, outlined below:

1.- The industry with the highest demand for primary lead is, by far, the battery manufacturing sector—particularly for lead-acid batteries (LABs)—as shown in the following breakdown of primary lead consumption by sector[2]:

Sector	Share of Lead Demand	Key Products
Battery manufacturing	~85%	Automotive and industrial LABs
Construction & infrastructure	~5–7%	Cable sheathing, roofing, shielding
Ammunition & defense	~3–5%	Bullets, shot, radiation shielding
Pigments, glass, ceramics	~2%	Specialty glass, ceramics
Chemicals and others	~1–2%	Stabilizers, catalysts

[1] Statista 2025. Chemicals & Resources. Mining, Metals & Minerals. Distribution of global lead consumption 2022, by end-use. Published by Madhumitha Jaganmohan, Dec 9, 2024
https://www.statista.com/statistics/891778/distribution-of-global-lead-consumption-by-end-use/?utm_source=chatgpt.com

[2] Statista 2025. Chemicals & Resources. Mining, Metals & Minerals. Distribution of global lead consumption 2022, by end-use. Published by Madhumitha Jaganmohan, Dec 9, 2024
https://www.statista.com/statistics/891778/distribution-of-global-lead-consumption-by-end-use/?utm_source=chatgpt.com

2.- Global refined lead production—including both primary sources (lead extracted from mined ores) and secondary sources (such as recycled lead)—amounted to approximately 11.9 million metric tons in 2022[3]***. Notably, approximately 85% to 90% of this recycled lead comes from Waste Lead-Acid Batteries (WLABs)*** *or* ***Used Lead-Acid Batteries (ULABs)*** [4]***.***

As of 2023, global annual primary lead production was estimated at around 4.5 million metric tons**,** referring to lead derived directly from mined ores in a single year[5].

In contrast, secondary lead production (recycled lead) for the same year was estimated at between 7 and 8 million metric tons (approximately 85% to 90% of this recycled lead) coming from Used Lead-Acid Batteries (ULABs)**.** This means that secondary lead production alone accounts for more than half of the total refined lead produced globally—exceeding that from primary sources[6].

While primary production remains important, secondary lead production plays a critical role in meeting global demand, particularly for applications such as lead-acid batteries. However, despite high recycling rates, informal and unsafe recycling practices—especially in low- and middle-income countries—pose severe health and environmental hazards[7]**.**

3. Informal Management of Used Lead-Acid Batteries (ULABs) is a significant global concern, with severe impacts in developing countries[8]***.***

While precise figures are challenging to determine due to the informal nature of these activities, studies suggest that informal ULABs recycling occurs in at least 90 countries worldwide**.** A substantial portion of global ULABs recycling is carried out by the informal sector, particularly in regions such as Africa, South Asia, and parts of Latin America**.**

Estimates suggest that up to 50% of ULABs are recycled informally**,** often without adequate environmental controls or health protections. This practice poses significant pollution problems, with high- risks to human health and biodiversity. It adversely affects local production and economies**,** underlining the urgent need for formalized, safe, and regulated recycling systems aligned with circular economy principles.

[3] OECD – Global Material Flows Database. *Provides data on secondary material recovery, including lead.* URL: https://www.oecd.org/environment/waste/material-flows.htm

[4] In a circular economy framework, **WLABs (Waste Lead-Acid Batteries)** and **ULABs (Used Lead-Acid Batteries)** are often used interchangeably because both refer to **end-of-life lead-acid batteries** that retain significant **material recovery value**—particularly lead, plastics (like polypropylene), and sulfuric acid. For the purpose of this report, and in alignment with circular economy principles, the term ULABs (Used Lead-Acid Batteries) is adopted

I.[5] **Statista 2025. Global refined lead production share 2022, by region and phase. Published by M. Garside. Dec 13, 2024**

https://www.statista.com/statistics/1546839/global-refined-lead-production-by-region/

[6] Fairfield Market Research. (2022). *Recycled Lead Market Size, Trends Analysis Report, 2022–2029*. Retrieved from https://www.fairfieldmarketresearch.com/report/recycled-lead-market

[7] International Lead and Zinc Study Group (ILZSG). *Statistical and analytical data on lead production and recycling.* URL: https://www.ilzsg.org. (Access data via "Statistical Bulletins" or "Monthly Lead and Zinc Statistics.")

[8] UNEP An Assessment Report on Issues of Concern: Chemicals and Waste Issues Posing Risks to Human Health and the Environment. 2020. https://www.unep.org/es/node/8126?utm_source=chatgpt.com

4. Environmental and Health Implications: the informal recycling of ULABs is a major source of lead pollution and poses serious environmental and health risks, contributing to:

- *Severe environmental pollution:* informal handling of lead components and unsafe disposal of highly lead polluted plastics and sulfuric acid from ULABs result in significant pollution of soil, air, water, and food.
- *Global bioaccumulation and biomagnification of lead*: as a persistent pollutant can travel long distances, penetrates the ecosystems worldwide affecting biodiversity; and concentrates in the food chain.
- *Direct and indirect lead exposure:* affecting general population, in particular vulnerable and at-risk ones (informal workers, their families, and nearby communities), with widespread impacts through environmental pathways, posing serious risks to human health and biodiversity.
- *Substantial burden of disease:* lead exposure contributes substantially to non-communicable diseases such as cardiovascular and respiratory condition. It also importantly affects neurodevelopmental with IQ loss and impaired cognitive function.
- *Long-term preventable health and economic costs:* lead exposure result in preventable long-term health consequences and economic costs in terms of demanding higher expenses in Public Health and productivity loss.

Lead exposure begins as early as conception and has neurotoxic effects that alter normal brain development, with lifelong consequences**.** It impairs intellectual functions such as memory, concentration, and reading comprehension, severely affecting learning and contributing to IQ loss. Children and other vulnerable populations are of particular concern[9],[10].

According to the World Bank, lead exposure is the third leading risk factor for mortality from cardiovascular diseases, surpassed only by high blood pressure and dietary risks, and ranking ahead of tobacco use and high cholesterol[11]. Lead is recognized as a major contributor to the burden of non-communicable diseases, including hypertension, heart attacks, and stroke, as well as renal impairment and neurotoxic effects in adults, among others[12].

Populations at risk—especially workers involved in the informal management of used lead-acid batteries (ULABs)—are disproportionately affected by lead exposure. Early exposure to lead can have lifelong health, social, and economic impacts, leading to reduced lifetime earnings, lower educational attainment, and increased public spending on education and health care. Ultimately, these effects undermine productivity, economic growth, and contribute to the persistence of poverty.

In adults, chronic exposure to low doses of lead is associated with adverse health effects. Even blood lead levels (BLLs) as low as less than 3 µg/dL in adults are associated with hypertension, renal dysfunction, and other non-communicable diseases. In particular for populations of adults at-risk, BLLs should be frequently monitored to not exceed the recommended thresholds. In children, according to the most recent studies, it is now widely recognized that there is no safe level of lead

[9] World Health Organization. (2024). *Lead poisoning and health*. Retrieved from https://www.who.int/news-room/fact-sheets/detail/lead-poisoning-and-healthWorld Health Organization+2

[10] Centers for Disease Control and Prevention. (n.d.). *Blood Lead Level Guidance*. Retrieved from https://www.cdc.gov/niosh/lead/bll-reference/

[11] World Bank. (2023). *How the World Bank is Addressing Lead Pollution*. Retrieved from https://www.worldbank.org/en/topic/environment/brief/how-the-world-bank-is-addressing-lead-pollution

[12] Volume 6, Issue 6E535-E547June 2022. Download Full Issue. Pollution and health: a progress update. Richard Fuller, Philip J Landrigan, Michael Brauer, et al.

exposure[13],[14]. Health effects from lead exposure during developmental stages (from conception and early pregnancy onward) can have irreversible and lifelong consequences.

5. Economic Cost:

According to The World Bank, lead exposure imposes substantial economic costs worldwide—particularly in low- and middle-income countries (LMICs), where informal recycling of ULABs is widespread. A 2023 study published in *The Lancet Planetary Health,* supported by The World Bank, estimated that in 2019 lead exposure resulted in a global economic cost of USD 6.0 trillion, equivalent to 6.9% of the global GDP with more than 90% of this burden affecting LMICs. [15]

The economic burden primarily stems from two major health impacts:
- Cardiovascular disease (CVD) mortality: approximately 5.5 million adult annual deaths attributed to lead-induced CVDs, accounting 77% of the total economic cost.
- Neurodevelopmental impairments: children under five years old experienced an estimated loss of 765 million IQ points, leading to future income losses that accounted for 23% of the total cost.

According to The World Bank, LMICs bore a disproportionate share of this burden, including 90.2% of global cardiovascular diseases deaths from lead exposure and 95.3% of total IQ losses. This amounted to an estimated *USD 3.2 trillion in economic costs, equivalent to 10.1% of their combined GDP.*

6. Conclusions:

To effectively reduce lead pollution and the global burden of lead-related disease, it is essential to broaden the focus beyond lead in paint and to include other significant sources of lead pollution and exposure. These include the informal recycling of ULABs, lead polluted and lead containing consumer goods, lead in spices and cosmetics, and lead-glazed ceramics, among others. While addressing *lead in paint* has been instrumental in raising awareness and driving regulatory action, it represents only one narrow pathway of lead exposure among many exposure routes.

All sources of lead pollution contribute to low chronic exposure, affecting in particular vulnerable population (such as children, pregnant women and young in reproductive age) in developing countries as well as at-risk population as informal workers.

Expanding the scope of action would facilitate a more comprehensive, preventive approach to lead management, aligning health objectives with environmental protection, and supporting international efforts to effectively eliminate lead exposure across all major pathways.

ANNEX A

Draft 18 June - 2025

Submission for Nomination: Lead as an Issue of Concern

[13] Menke, A., Muntner, P., Batuman, V., Silbergeld, E. K., & Guallar, E. (2006). *Blood lead below 0.48 μmol/L (10 μg/dL) and mortality among US adults*. Circulation, 114(13), 1388–1394. doi:10.1161/CIRCULATIONAHA.106.628321

[14] World Health Organization. (n.d.). *Chemical safety: Lead poisoning*. Retrieved from https://www.who.int/news-room/questions-and-answers/item/chemical-safety-lead-poiso

A.[15] The Lancet Planetary Health. Volume 7, Issue 10, October 2023, Pages e831-e840. Global health burden and cost of lead exposure in children and adults: a health impact and economic modelling analysis. Author links open overlay panel. Bjorn Larsen MBA [a], Ernesto Sánchez-Triana PhD [a]

According to Annex I – Issues of Concern (Global Framework on Chemicals)

Submitted by: GAHP and XXX

(a) Why the Framework is best placed to advance lead as an issue of concern

The Global Framework on Chemicals (GFC) is uniquely positioned to advance lead as an Issue of Concern owing to its inclusive, multi-sectoral governance and legacy from SAICM. The GFC provides an ideal platform to address the complex nature of lead exposure—including informal recycling of Used Lead-Acid Batteries (ULABs), contaminated consumer products, and legacy lead in soil and paint, among others.

The GFC allows for coordinated international action across sectors, including health, environment, labor, and industry. The Framework supports vulnerable countries through technical cooperation, awareness, and capacity-building efforts to mitigate this preventable yet persistent chemical hazard.

(b) Impacts on Human Health and/or the Environment

Lead is a highly toxic metal with profound and irreversible impacts on human health, particularly in children. It impairs neurodevelopment, reduces IQ, increases risk of attention and behavior disorders, and is linked to cardiovascular disease and kidney failure in adults. According to recent publications, over 800 million children globally have elevated blood lead levels. Lead pollution is especially prevalent in developing countries, due to informal management and recycling of Used Lead-Acid Batteries (ULABs), reuse and informal management and disposal of highly lead-polluted plastics, as well as exposure from items such as cookware and traditional medicines. In some developing countries, over 85% of ULABs are processed informally, beyond the lead parts (plates) other components (such as sulfur acid and plastics) are also highly lead polluted; plastic waste from used battery cases can contain lead levels up to 10,000 ppm. Environmental risks include persistent pollution of air, soil and water leading to bioaccumulation and biomagnification in the food chain. Lead adversely affects ecosystems, biodiversity and human health. Vulnerable populations (such as children, pregnant women, individuals in reproductive age, and others) along with at-risk groups (like workers, and communities living near informal recycling sites) are disproportionately affected.

(c) Relevance to the Vision of the Framework and National Circumstances

The issue of lead pollution and hazardous exposure aligns fully with the GFC's vision of a planet free from harm caused by chemicals and waste. Lead pollution remains a significant, widespread, underregulated hazard, posing substantial challenges to achieving safe and sustainable chemicals management, particularly in developing countries, and it underscores the urgent need for enhanced global efforts to mitigate the impact of environmental pollution caused by chemicals and waste.

Despite longstanding global recognition of its risks, exposure persists and expands, particularly in developing countries. This is largely due to fragmented responses, weak regulatory enforcement, and limited technical and financial capacity, especially in informal economies.

Advancing this issue under the GFC will enable countries to implement tailored strategies and policies, promote voluntary actions, substitute hazardous materials, when possible, formalize the management of dangerous materials, and strengthen monitoring systems in accordance with national capacities.

(d) Contribution to Achieving the Sustainable Development Goals (SDGs)

Environmental lead pollution is a cross-cutting issue that affects all dimensions of sustainable development, with varying degrees of relevance across the different SDGs. Below, we highlight the most directly related goals as examples. Addressing lead exposure supports multiple SDGs:

- **SDG 3 (Good Health and Well-being)**: reducing morbidity and mortality from neurological and cardiovascular diseases.
- **SDG 6 (Clean Water and Sanitation)**: preventing lead leaching into water sources.
- **SDG 8 (Decent Work)**: improving worker safety in battery recycling and manufacturing.
- **SDG 11 (Sustainable Cities)**: promoting soil remediation and safe housing.
- **SDG 12 (Sustainable Production and Consumption)**: encouraging safer material flow and waste treatment.
- **SDG 13 & 15 (Climate Action & Life on Land)**: mitigating environmental degradation from informal lead recovery.

(e) Cross-Cutting and Sectoral Relevance

Lead is a cross-cutting issue involving many sectors and actors, particularly health, labor, industry, trade, environment, education and socioeconomic development, among others. Informal management and recycling practices, along with food and environmental pollution contribute to ecosystem degradation, biodiversity loss, and toxic human exposure beginning at conception and continuing throughout life.

This situation requires integrated and coordinated responses across various governmental areas, the private sector and other stakeholders and its management intersects with child protection, housing, food and water safety, air pollution, and waste management regulation, underscoring the need for comprehensive policy coordination grounded in principles of sustainable by design and circular economy approaches.

(f) Extent of Existing International Action and Complementarity

Lead is addressed in several UN forums, some of them are highlighted here:

- **WHO**: Blood lead level surveillance and public health guidance.
- **Basel Convention**: Management of ULABs as hazardous waste.
- **UNEP's Lead Paint Alliance**: Promotes lead paint phase-out.
- **UNICEF**: Conducted mass balance assessments in LMICs.

Despite this, no single platform coordinates comprehensive global action on lead across all sources of emissions and forms of toxic exposure, particularly the most important one: informal management of ULABs. The GFC could fill this gap by ensuring policy coherence, catalyzing national action plans and international and regional strategies, promoting voluntary actions, and harmonizing data collection to monitor progress and successful interventions.

(g) Summary of Existing Knowledge, Relevant Past Activities, Scientific Uncertainties, and Gaps in Understanding and/or Action

There is broad scientific consensus on the toxicity of lead and its extensive global burden on human health and the environment. The World Bank has quantified the enormous economic and

health costs of lead exposure, highlighting its contribution to premature deaths, IQ loss, and productivity losses.

WHO, UNEP, and other international agencies have supported pilot projects, awareness campaigns, and regulatory efforts to address specific lead sources, particularly lead in paint. Major assessments—such as UNICEF's 2020 report—have documented elevated blood lead levels in children and mapped informal lead recycling flows, especially in developing countries.
The Global Alliance on Health and Pollution (GAHP), along with other non-governmental organizations, has led initiatives and demonstration projects in regions severely affected by lead pollution.

Despite these efforts, critical gaps persist in the enforcement of regulations, data transparency, and cross-sectoral coordination.

Informal activities—particularly those related to the processing of used lead-acid batteries (ULABs) and the reuse of highly lead-polluted plastic, remain largely unregulated and under the radar, yet they pose a significant risk of direct exposure for vulnerable populations.

Similarly, consumer products that contain or are contaminated with lead (e.g., toys, kitchen utensils, paints) continue to circulate widely.

Scientific understanding of the health and environmental risks of lead is extensive and conclusive. Lead is a potent neurotoxin with no safe level of exposure, particularly harmful to children, pregnant women, young in reproductive age and adults (informal workers). It causes irreversible damage to neurological development, contributes to cardiovascular disease, and renal failure and impairs multiple bodily systems, even at very low doses. Despite significant progress in phasing out lead in gasoline and limiting its use in paints, major sources of exposure persist and remain under-addressed.

Globally, the largest demand for lead—around 85%—comes from the battery sector, primarily in the form of lead-acid batteries (LABs). Informal management and recycling of Used Lead-Acid Batteries (ULABs) is a dominant source of environmental pollution and human exposure, especially in developing countries. It is estimated that informal ULABs recycling takes place in over 90 countries, with up to 50% of ULABs being recycled without adequate safety measures, leading to widespread soil, air, water, and food contamination and significant health hazards.

Refined lead production reached 11.9 million metric tons in 2022, with secondary lead (recycled) accounting for 7–8 million tons, mostly from ULABs. However, the recycling process, particularly in informal settings, is a major lead pollution source, releasing highly lead-polluted plastics and sulfuric acid, and exposing workers, nearby communities, and ecosystems globally, as lead migrate long distances (by water, air and in food and products).

Children are particularly vulnerable to lead’s neurotoxic effects (exposed since conception), altering the organization of the brain which impairs cognitive development, memory, learning capacity and IQ loos. The World Bank ranks lead as the third most important risk factor for cardiovascular mortality, ahead of tobacco use. Recent studies show that over 800 million children have elevated blood lead levels. Even low-level chronic exposure contributes to lifelong impacts, including diminished educational attainment, reduced earnings, and increased public health costs.

A 2023 study published in *The Lancet Planetary Health* estimated the global cost of lead exposure in 2019 at USD 6 trillion, equivalent to 6.9% of global GDP, with 90% of this burden falling on LMICs. Cardiovascular mortality accounted for 77% of this cost, and IQ loss among children under five contributed the remaining 23%.

Despite efforts by UNEP, WHO, and the Global Alliance to Eliminate Lead Paint, regulatory and implementation gaps persist. Lead in paint represents only a small fraction of overall lead use, and other sources of exposure —including ULABs, lead-glazed ceramics, spices, cosmetics, toys, and consumer products made with lead-polluted recycled plastic—remain largely unregulated. Informal workers (informal ULABs recyclers) and surroundings communities continue to face uncontrolled exposure due to poor enforcement of environmental and occupational safety regulations, lack of awareness, and insufficient technical capacity.

There is no significant scientific uncertainty about the hazards and consequences of lead exposure or the effectiveness of prevention measures. The main gaps lie in the lack of coordinated global action, or poor financing, incomplete monitoring systems, and the failure to address emerging and cumulative sources of exposure. Addressing these gaps under the GFC, guided by circular economy principles and extended producer responsibility aligns with the Framework's vision and presents an opportunity to strengthen international cooperation and integrate health and environmental strategies to eliminate lead exposure globally: a win-win outcome.

(h) Proposed workplan, targets, and timeline (2025–2030)

2026–2029:

- Global mapping of lead exposure sources and vulnerable and high-risk populations.
- Stakeholder engagement in priority regions (Africa, South Asia, Latin America).

2026–2028:

- National and regional strategies developed in at least 10–15 countries.
- Implementation of at least two pilot projects per region on lead substitution strategies in consumer products and on strategies to recover the ULABs as sealed units returned to the producers.

2026–2028:

- Launch of regional monitoring systems to collect information in a harmonized and comparable way, developing indicators to track interventions effectiveness and identify the gaps.
- Implementation of a Public Health strategy involving the Ministries of Health to establish surveillance of exposed communities, including registration and reporting. Adoption of ILO indicators on Blood Lead Levels (BLL) (levels of tolerance of lead in blood) in workers based on current scientific knowledge regarding health effects, especially (in particular cardiovascular and renal impacts in adults.

2028–2030:

- Integration of lead indicators into national chemicals policies.
- Evaluation and scaling up of best practices.

Indicators:

- Number of national lead action plans adopted
- Reduction in average BLL in children
- Number of informal ULABs sites remediated or formally regulated
- Decrease in lead-contaminated products on the market

(i) Lead Organizations and Opportunities for Engagement

Potential lead international organizations:

- **UNEP**: Coordination and governance of Lead as an Issue of Concern including coordination of various chemical processes (existing Conventions and emerging ones such as the Plastic Waste Convention or other related).
- **WHO**: Health surveillance and technical guidance, capacity building of health professionals and Public Health administrators, and strengthening early diagnosis and laboratory capacity of Poison Centers.
- **UNICEF:** Child-focused initiatives, BLL monitoring, and training for communities, family doctors, pediatricians, and clinical toxicologists to treat lead poisoning and prevent exposure.
- **UNICEF**: Child-focused initiatives and BLL monitoring and training communities and family doctors, pediatricians and clinical toxicologists to treat poisoned children and prevent exposure.
- **Basel Convention Secretariat**: Developing guidelines for the environmental management of Waste/Used Lead Acid Batteries (including all the components: lead, highly lead polluted plastics and sulfuric acid). Raising awareness of highly polluted plastic waste under the Plastic Waste Partnership ("forgotten plastics").
- **ILO**: improving surveillance of BLL in workers and training specialist to detect early toxic exposure and updating BLLs standards formal workers

Engagement opportunities:

- Ministries of Environment, Health, Labor, Industry, Production, Customs, and other relevant ones.
- Private sector: Lead Acid Batteries (LABs) producers, formal ULABs recyclers, formal plastic waste recyclers, sulfuric acid recyclers and the industries trading these materials for reuse.
- Worker associations in ULABs recycling, LABs manufacturing, and other sectors involving lead or lead polluted waste or components.
- Academic institutions and NGOs.
- Regional bodies (e.g., ASEAN, MERCOSUR, African Union).

Potential funding agencies

- E.g., GEF, World Bank, bilateral and private donors.
