Call for Action on Africa's Lead-acid Battery Recycling Industry

Driven by the rise of a growing middle class, increased vehicle ownership, decentralized energy storage systems, and other emerging trends and use cases, the demand for lead-containing batteries is steadily increasing across the African continent. While the use of such batteries is known to be relatively save, end-of-life management is associated with severe risks to human health and the environment if not conducted properly. Despite various regulatory efforts, unsound lead-acid battery recycling is widespread in African countries and includes informal activities in battery collection and reverse logistics, as well as large scale sub-standard industrial lead smelting and refining. While not being the only source of lead emissions and human exposure, numerous pollution cases in the African region suggest that unsound lead-acid battery recycling is a major contributing factor with severe health implications for workers and local communities.

According to the World Health Organization, lead exposure contributed to over 1.5 million deaths worldwide in 2021 (WHO 2024) and recent health studies conclude that it is one of the most relevant environmental factor impacting public health globally (Brauer et al. 2024). Children are known to be the worst affected population group as childhood lead exposure causes severe and permanent damage to the brain and central nervous system. While the world community via the United Nations Environment Assembly has committed to take effective steps to reduce lead-exposure from unsound battery recycling in 2017 (UNEP/EA.3/Res. 9[1]), the situation is still far from being resolved on the continent.

While acknowledging the need for recycling capacities for lead-acid batteries in African countries, this call for action aims at stimulating a systematic push for improvements in this field and calls upon all stakeholders to join forces towards the common goal for a safe and healthy environment, as well as fully responsible end-of-life management of batteries in Africa.

Battery recyclers

- Companies and investors active or planning to get active in the recycling of used lead-acid batteries shall apply best practices to mitigate emissions of lead to the workplace and the environment and to provide safe and healthy working conditions.
- Companies and investors should strive for continuous improvement as well as full compliance with the *Basel Convention Technical Guidelines for the Environmentally Sound Management of Waste Lead-acid Batteries*, as well as other recognised industry guidance documents such as the *Standard Operating Procedures for Environmentally Sound Management of Used Lead-acid Batteries*.
- Companies and investors are responsible for the occupational health of their employees as well as the health of communities living and working close to the plant. In that context battery recyclers shall organise regular health monitoring of workers' and neighbouring communities – including blood-lead testing – through capable independent bodies. Results must be provided to the respective persons and – in case elevated blood-lead levels are detected – appropriate action must be taken to reduce exposure and to restore the affected

[1] The resolution of the United Nations Environment Assembly on eliminating exposure to lead paint and promoting environmentally sound management of waste lead-acid batteries can be accessed here: https://docs.un.org/en/UNEP/EA.3/Res.9.

persons' health. In the case of any harm caused to persons' health, adequate compensation shall be paid to the affected persons and their relatives.

- Companies and investors must engage with and inform all their workers (including casual workers) as well as neighbouring communities on the nature and hazards of involved materials and processes. Companies and investors must have adequate systems in place where stakeholders can voice concerns and where these concerns lead to meaningful action to address them.
- In countries with strong informal waste and recycling networks, companies shall ensure that interlinkages with these networks encourage informal operators to refrain from own battery recycling and/or battery breaking and (acid) draining operations.
- Companies and investors shall have financial and logistical reserves to finance and conduct clean-up and remediation activities during or after closure of their operations. It is the companies' responsibilities to keep the environment free from lead and any other pollutant that may emit in the course of their operations.
- Companies and investors must be willing to use (part of) their profits to finance all investment needs and operational costs required to achieve the points above.
- Best performing ULAB recyclers are encouraged to engage in a multistakeholder initiative (sketched below) and play an active role in sector reform strategies.

Governments

- Governments are called to prioritise the ULAB recycling sector and – if not yet available – introduce ambitious and binding minimum standards and enforceable national policy frameworks for ULAB recycling based on the *Basel Convention Technical Guidelines for the Environmentally Sound Management of Waste Lead-acid Batteries*, as well as other recognised industry guidance documents such as the *Standard Operating Procedures for Environmentally Sound Management of Used Lead-acid Batteries*.
- Governments should introduce strict import policies to prevent the dumping of second-hand lead-acid batteries in Africa.
- Government agencies in charge of environmental and health related licensing, monitoring and enforcement shall enforce minimum standards and ensure that non-compliant informal and formal ULAB recycling is effectively sanctioned and banned. Type and level of sanctions must ensure that non-compliant ULAB recycling turns significantly less competitive than high standard compliant recycling.
- Government agencies involved in industry planning and licencing shall ensure that activities around ULAB recycling and lead processing are well removed from populated areas and sensitive functions such as agriculture and food processing. Moreover, government agencies shall apply a sector strategy aiming at a limited number of high standard ULAB recycling facilities. Highly competitive situations with many competing plants are commonly prone to eroding standards and a growing number of contaminated sites.
- Government agencies in charge of environmental and health related licensing, monitoring and enforcement shall be equipped with adequate know how and resources to fulfil their monitoring tasks, which should include (but may not be limited to) repeated unannounced plant inspections.
- Government agencies in charge of environmental and health related licensing, monitoring and enforcement should be aware that – by the act of issuing operating licenses – they take co-responsibility in a way that they confirm that a plant operates according to legal requirements and industry standards.

- Country judicial systems shall ensure that victims from unsound ULAB recycling (employees, communities…) can present their cases in court and file for remediation and compensation of caused harm and in accordance with the polluters-pay-principle. Cases are to be treated according to high legal standards. Adequate systems must be implemented to address limitations and support underprivileged groups, such as providing access to scientific experts for investigating and presenting findings in court, as well as ensuring legal representation to effectively argue cases during hearings.
- Whistle blowers informing about shortcomings in the sector are to be protected so as to encourage reporting of illegal or unsafe recycling practices.

Producers, traders and owners of batteries

- Players placing batteries on the African markets should introduce consumer buyback programs, offering incentives to return used batteries to best performing recyclers in the respective country or region[2].
- Owners of large battery volumes (e.g. government agencies, telecom providers, corporates) shall ensure that all their waste batteries are exclusively given to and treated by recycling companies that have been proven to be best performers in the respective country or region.
- In case such best performers are not available, shipments of batteries to high standard facilities in other countries shall be considered. All transboundary shipments shall fulfil the requirements of transboundary movement of hazardous wastes as specified in the Basel Convention.
- Companies shall keep track off used and disposed battery volumes, including evidence for sound management and recycling.

Buyers of lead and lead-alloys

- Buyers of lead, lead-alloys and any other commodity produced from used lead-acid batteries should conduct due diligence of their supply chains, including but not limited to occupational health, safety of workers and environmental aspects. Buyers shall follow a strict no-buy policy for lead from informal and unregulated operations.
- Purchasing practices shall be tailored to benefit best performing lead-acid battery recyclers in a country or region. Buyers of lead and lead alloys should push for higher environmental and health standards.
- Buyers of lead and lead-alloys shall keep track of bought volumes, sources and related risk assessments and mitigation measures to ensure responsible sourcing.
- Buyers of lead and lead-alloys are encouraged to engage in a multistakeholder initiative as sketched below and play an active role in sector reform strategies.

Civil society

- It is acknowledged that civil society groups act as important interlink between workers, affected communities, and national, regional, and global attempts to reduce human lead exposure.
- Civil society organisations are encouraged to maintain and expand networks with affected communities and workers and to support them to understand associated risks, to voice their

[2] Best performers in the fields of occupational health, safety, and environmental aspects.

concerns and to articulate demands for protecting human and environmental health as well as people's livelihoods.
- Civil society shall continue to engage for sector improvements and guide sector reform strategies and implementation on a national, regional, and international level.

Academia

- Academia shall support sector upgrades by applied research that is based on the vast already existing knowledge on waste management, metallurgy, emission controls, human- and eco-toxicity and economics.
- Scientific support-needs appear to be particularly relevant in the field of time and cost-effective monitoring methods for recycling processes and their potential human and environmental health impacts (e.g., through remote monitoring of emission controls).
- Academia should prioritize research into environmentally sound energy storage solutions that are free from hazardous substances.

Call for a multistakeholder initiative:

- The actions to be taken by the various stakeholder groups can be catalysed by a multistakeholder initiative with the following goals and characteristics:
    - Support governments, government agencies and ULAB recycling plants in developing, adopting, and implementing ambitious industry standards.
    - Support civil society groups in their work with local communities and workers and with a view to act as an interlink between affected people and the regional and global debate around human lead exposure reduction.
    - Develop, implement, and continuously update an independent benchmarking system that informs the public about best performing ULAB recycling plants operating in the African region (positive listing).
    - Facilitate the cross-boundary exchange between stakeholders working on ULAB recycling sector reform and advocate for policy alignment to prevent pollution from moving across borders due to weak national policies and enforcement.
    - Document and publish regional sector reform updates, including case studies on effectiveness of measures.
- The initiative should be based around a core group of active stakeholders with due representation of perspectives from the African region, as well as sector expertise and may be attached to the African Union or similar regional bodies.
- The initiative should be equipped with adequate resources to fulfil the tasks above over a minimum period of five years.

References

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The Call for Action is a joint initiative of the SRADeV Nigeria and PAN-Ethiopia developed under the framework of the Partnership for Responsible Battery and Metal Recycling (ProBaMet) project.

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Nr.	Name	Organization	Position
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