

A RESPONSIBLE INDUSTRY: MATERIAL STEWARDSHIP IN ACTION



Hywel Jarman
Communications Director

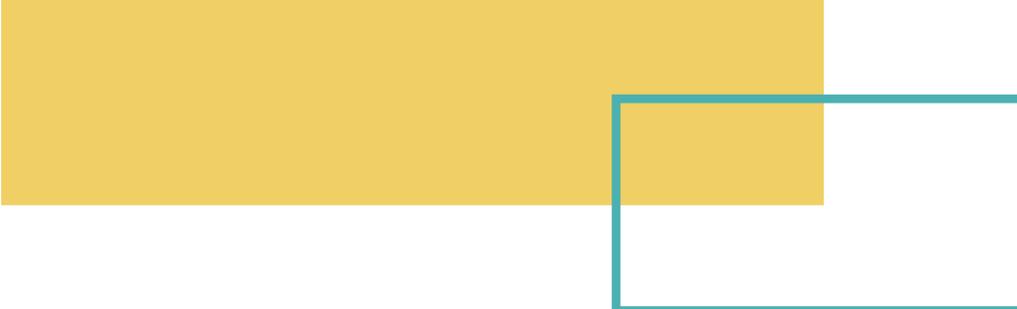


International
Lead Association



Lead Battery 360° is a global programme established by four associations representing the lead and lead battery industries – the International Lead Association (ILA), Battery Council International (BCI), the Association of European Automotive and Industrial Battery Manufacturers (EUROBAT) and the Association of Battery Recyclers (ABR).





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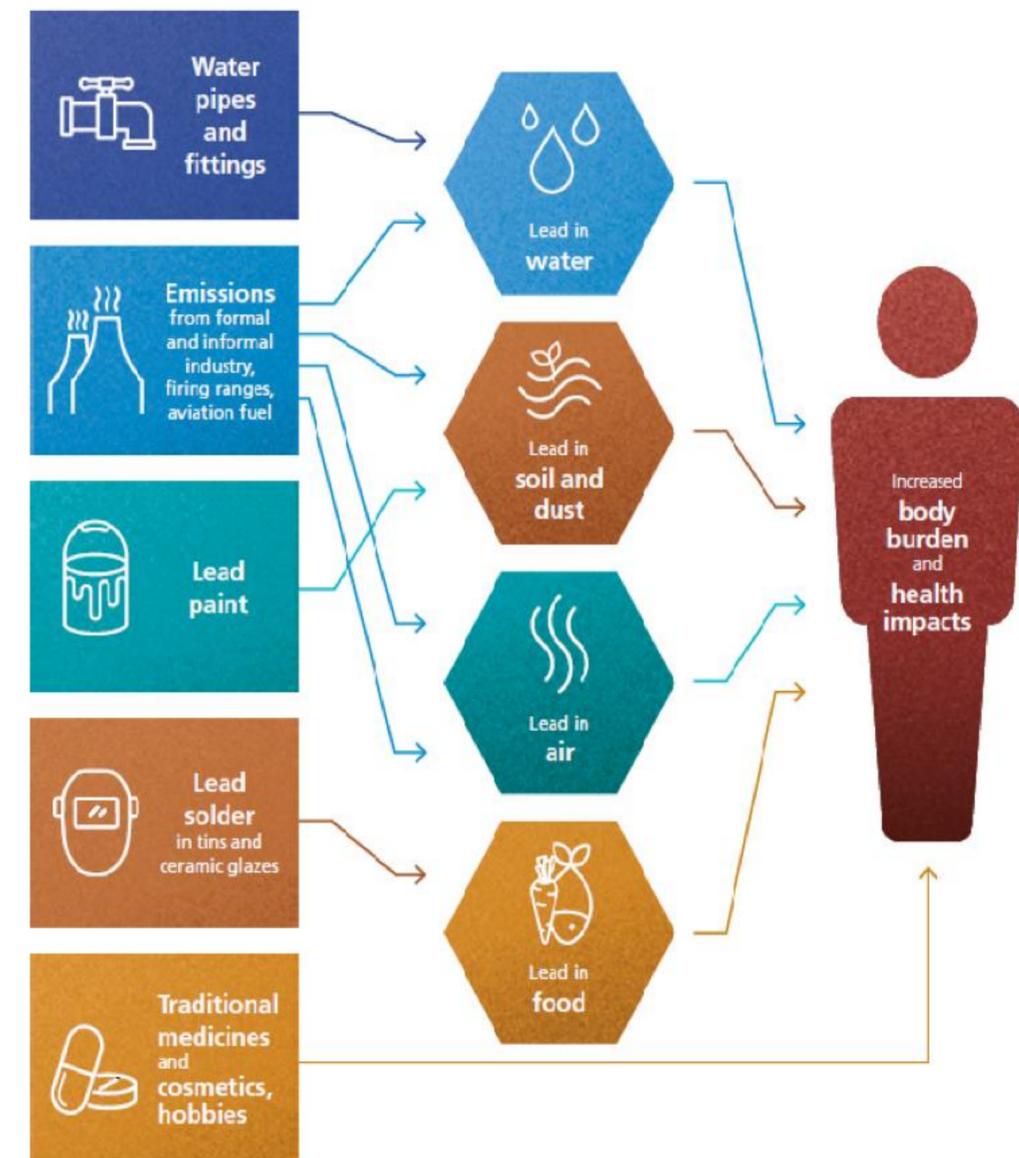
**Why this project
matters: policy
makers are
identifying lead
pollution as a global
health challenge**

WHY THIS PROJECT MATTERS?

UNEP/EA.3/Res.9 [2017] “Encourages member States to continue their efforts for the environmentally sound management of waste lead-acid batteries, including by: (a) Developing national strategies in order to manage the collection of waste lead-acid batteries and addressing the issue of remediation of contaminated sites; (b) Adequately addressing releases, emissions and exposures from waste lead-acid batteries, including recycling, and utilizing appropriate standards and criteria; (c) Cooperating in collecting waste lead-acid batteries for environmentally sound processing at regional or national recycling facilities, consistent with the relevant provisions of the Basel Convention and relevant regional conventions, such as the Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa, as applicable; “

G7 Climate, Energy and Environment Ministers’ Communiqué [May 2022] “to reduce the disproportionate lead exposure in vulnerable communities, we encourage appropriate domestic regulation or control of lead in all countries, which can deliver societal benefits that far exceed the costs. The G7 aims to identify areas of action to strengthen the work to minimise lead pollution and exposure globally and strengthen cooperation with existing international initiatives and instruments, particularly SAICM.”

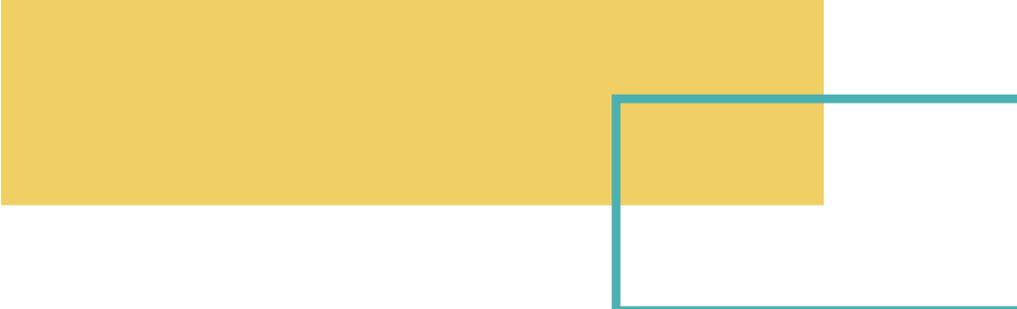
Fig. 1 Principal sources and pathways of exposure to lead



Lead Battery 360° is a global initiative to promote and recognise good practices in lead battery value chains, from lead mining through to lead battery manufacturing and recycling.

- Participants in the programme commit to following a set of **Guiding Principles** which set the global benchmark for lead and lead battery stewardship and responsible supply chain management.
- Participants also contribute to **Impact Projects** to help tackle substandard lead battery recycling, build capacity, and promote continuous improvement worldwide.





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**Lead Battery360°-A
commitment to
eradicating poor
standards in lead
battery recycling**

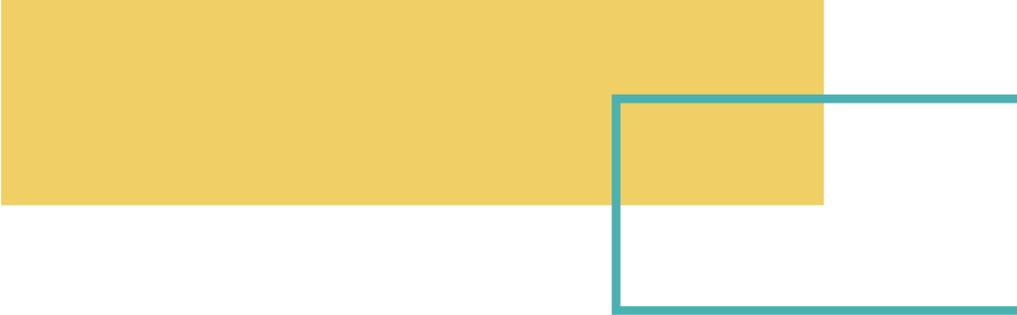


ILA Press Statement 2020

“We all want to see an end to informal and substandard battery recycling and manufacturing where it exists, and this initiative aims to help countries where this is a problem improve through practical support and sharing best practice. Through our global material stewardship program, the trade association member companies are committed to ensuring that inappropriately recycled lead does not enter our supply chains”.

Tackling Informal Lead Battery Recycling, Together





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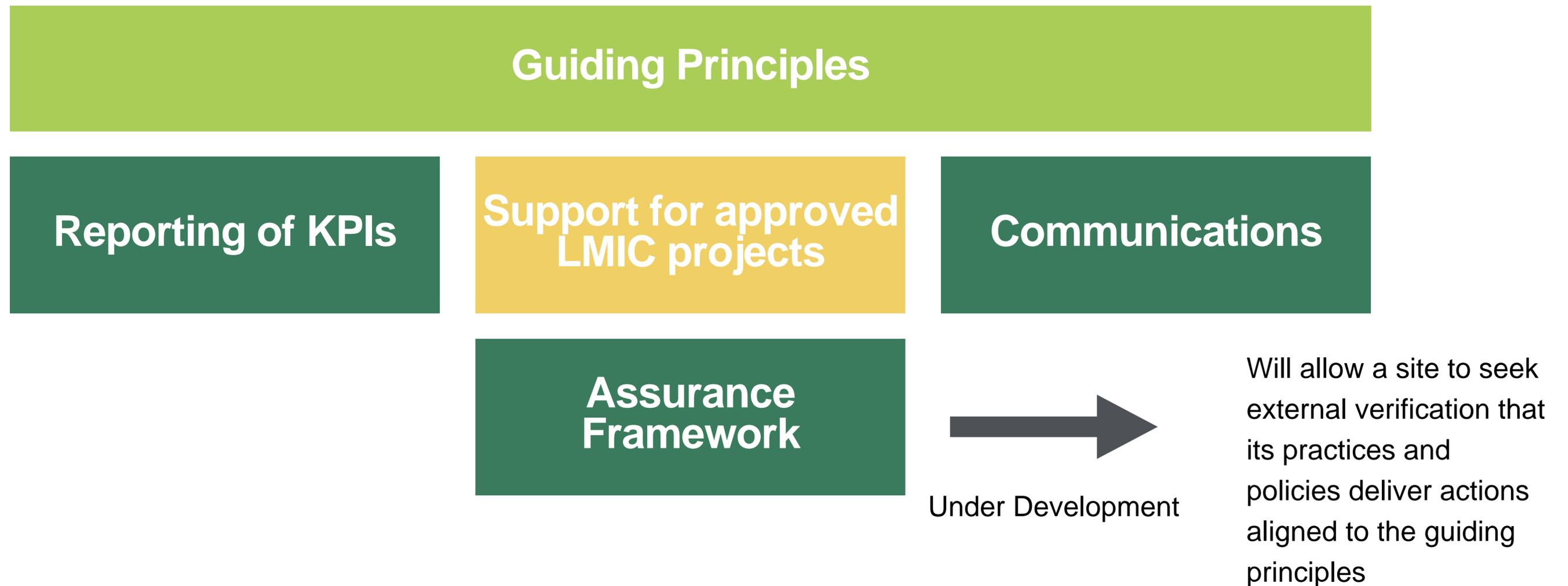
Guiding Principles

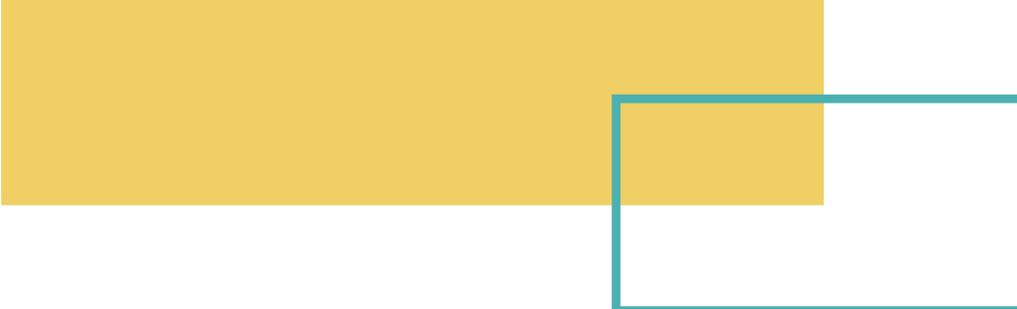
Guiding Principles - the strong foundation for delivering the lead battery value chain's commitment to responsible production practices

Companies participating in the programme commit to:

1. The Guiding Principles:
2. Support responsible battery manufacturing and recycling by placing environmental health and safety excellence at the heart of our operations.
3. Promote the sound management of lead exposure and emissions by setting continuous improvement targets and sharing best practices.
4. Adopt responsible sourcing policies for lead containing materials, seek to identify risks in the supply chain, and use our influence to promote best practices for EHS performance in suppliers' operations.
5. Minimise the environmental impact of our products by encouraging the development of programmes that ensure effective collection, transportation and environmentally sound recycling of used lead batteries.
6. Adopt business practices that consider the communities impacted by our operations, respect the human and labour rights of our employees and work against corruption in all its forms.
7. Proactively engage key stakeholders in an open and transparent manner.
8. Partner with key stakeholders and government agencies to share our expertise and promote environmentally sound recycling of lead batteries in low and medium-income countries.

About the Lead Battery 360 °Program-Organisation



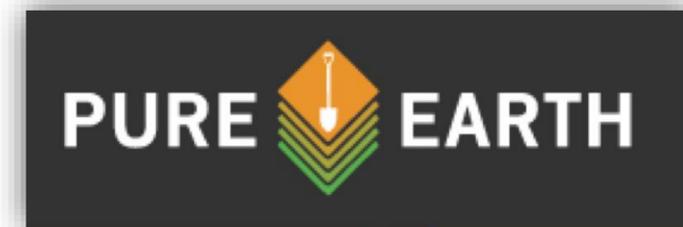


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Partnering with
others & Projects

LB360° IS CONSIDERED A CREDIBLE INDUSTRY PROGRAM TO PARTNER WITH OTHERS TO FIND SOLUTIONS



2022 PROJECTS SUPPORTED BY LB360°



Attended the COP and advocated for update to BTG on ULAB recycling. Participating in guideline development task-force



Finalised OECD aligned standard to support LME due diligence requirements



Delivered in country training for regulators and audited two facilities [PECP commitment]



Delivered in country training for regulators and participating in development of National lead strategy [PECP commitment]



Invited to participate in G7 workshop "Lead as a major threat for human health and the environment - an integrated approach strengthening cooperation toward solutions"

OUR INDUSTRY'S SUPPORT FOR WORK IN LMICs



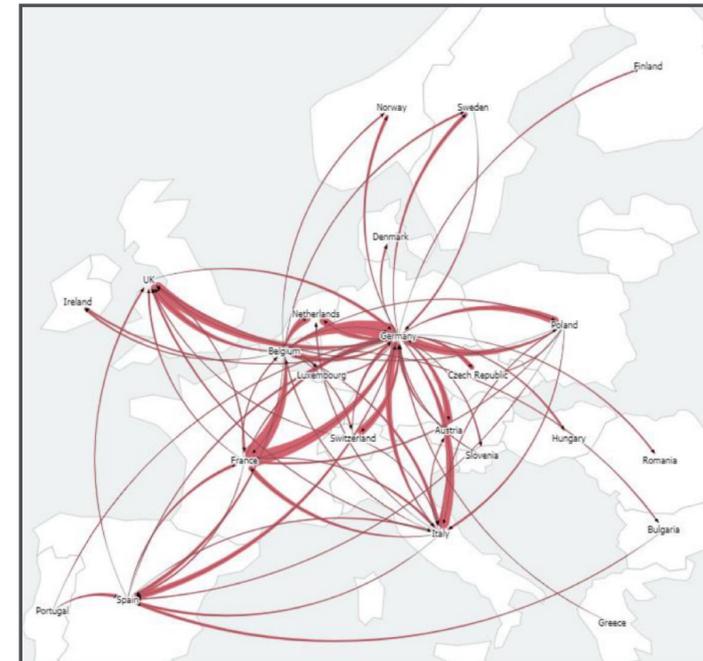
Training



In-country advocacy supporting policy and legal framework development



Good practice guidance documents

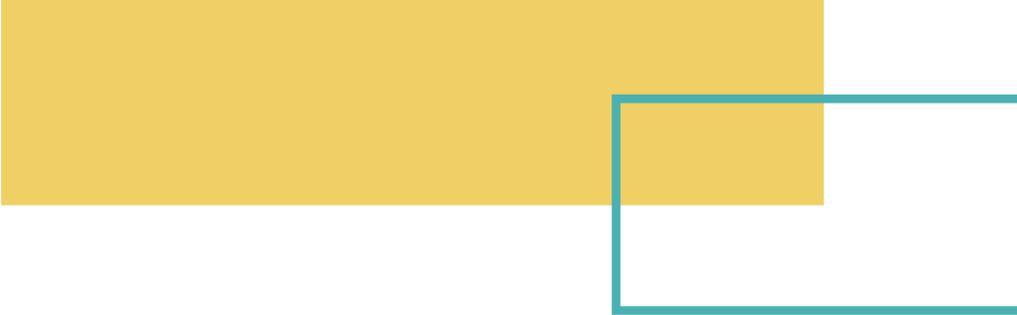


Trade analysis

Health, Safety and Environmental Performance Report on Success Africa Ghana Ltd. Using the Benchmarking Assessment Tool (BAT)

Assessment based on a facility inspection on 29.07.2022

Site auditing



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Projects we have
engaged in

PROJECT WORK IN AFRICA: LB360 IN ACTION





Upgrading recycling facilities to meet international standards in Costa Rica

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/ Upgrading recycling facilities to meet international standards in Costa Rica

From 2002 to 2012 the ILA provided technical support to the Basel Convention Regional Centre for Central America and Mexico (BCRC-CAM) to enable the Centre to deliver a project designed to improve the environmental performance of used lead battery recycling.

There was one recycler identified in Costa Rica, Recuperadora de Plomo. This small-scale secondary smelter was licensed by the Government, but by agreement with the owner and the Health and Environment Ministries, the facility needed a major upgrade to ensure it met international emission, discharge and occupational health standards.



2008 Rotary furnace



2008 Refinery

The Government designated an Industrial Zone outside of the capital, San Jose, at Cartago Ochomogo and granted the company a permit to construct a new upgraded secondary lead facility to recycle used lead batteries.



Pb Metals 2012: L to R – used batter breaker – smelter and refinery – baghouse – ETP

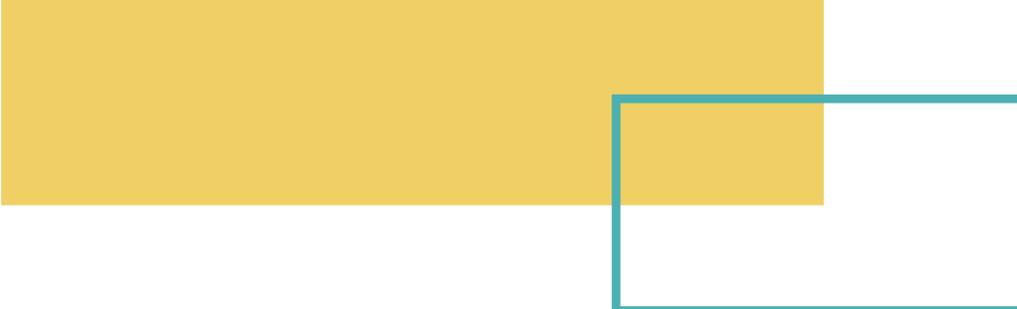
Working with the Government agencies, the ILA and Lead Metal Technologies a design for the plant was agreed by the owner of the company, Snr. Pablo Bolaños. Ahead of the 2011 smelter build site, a considerable amount of civil engineering work was required to level the land.



Pb Metals 2012: L to R – refining crucible – rotary furnace – storage bays

By early 2012, construction and commissioning were complete and the company resumed commercial operations under its new name, **Pb Metals**.

The new plant operates to international standards for the environmentally sound management (ESM) of used lead batteries and complies with the procedures contained in the Basel Convention's Technical Guidelines. It has a capacity of 12,000 tons of lead per annum.



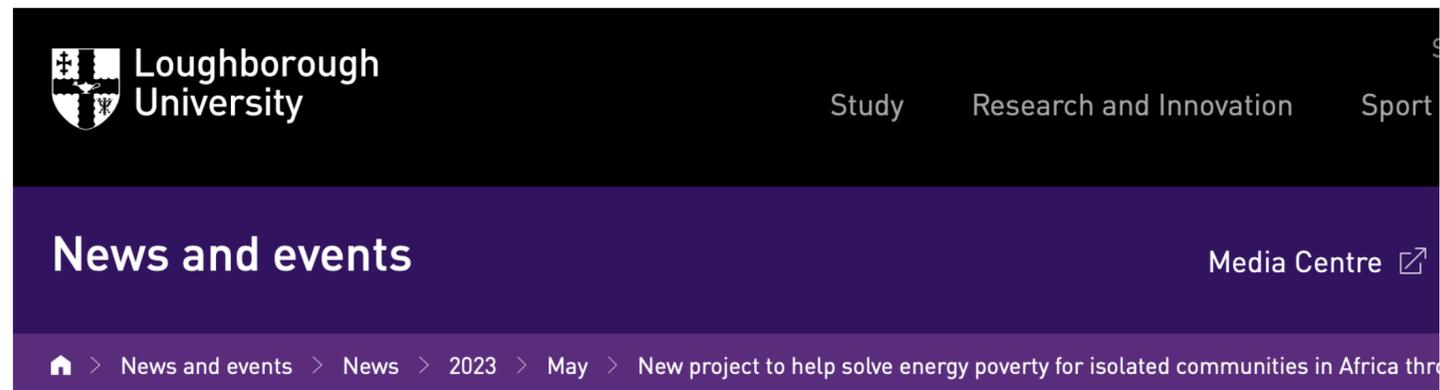
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**Projects where lead
batteries make a
difference in LMICs**



locelh2.org



NEWS

New project to help solve energy poverty for isolated communities in Africa through cooking fuel solution

Loughborough University and the Consortium for Battery Innovation are working together to pair advanced lead batteries with green hydrogen to deliver a new source of clean, reliable, and sustainable energy storage for off-grid communities in Africa.

Awarded through Horizon Europe, this collaborative, four-year project called LoCEL-H2, (or 'Low-cost, circular, plug and play, off-grid energy for remote locations - including hydrogen), combines the expertise of lead battery manufacturers, academics, national laboratories, component manufacturers, and companies who are focused on integration, microgrids and renewables.

LoCEL-H2 aims to generate renewable energy, storage, and fuel for deployment in isolated and remote regions of Africa to support communities that cannot connect to an electricity grid. Loughborough University's [Professor Dani Strickland](#), an expert in electrical powering engineering, [Dr Jonathan Wilson](#), a manufacturing expert, and [Dr Lizzie Ashton](#), a chemistry expert, will lead on developing a battolyser – a combined battery/electrolyser - to produce green hydrogen for cooking.

[The lead acid battolyser](#) was invented at Loughborough University to produce low-cost green hydrogen using solar panels and this project looks to scale-up the design - taking it from a small laboratory prototype to a useable system.

The project will also develop a battery-powered microgrid and this will be used in combination with Dr Strickland's battolyser to allow communities to access and store renewable energy.

LoCEL-H2 will conclude by piloting the innovative energy solution in remote regions of Zambia and Ivory Coast.

Professor Strickland commented: "Designing and scaling up a battolyser that can produce hydrogen for clean cooking will remove the requirement to burn charcoal. This will help with carbon reduction and has additional health benefits.

RENEWABLE ENERGY POWERING TRACTORS IN MALAWI

Aftrak – An acronym for Africa Tractor, Aftrak is a UK start-up of Dr. Jonathan Wilson of Loughborough University that will use solar and lead-acid batteries to power tractors for agriculture use. The AfTrak tractor will be trialed in Malawi, with a focus on enabling an agricultural technique, deep bed farming, while also providing microgrid off-grid power to Malawi villagers when tractor systems are not in use.

Solar microgrids, tractors among semifinalists in sustainable electricity for Africa contest

The Milken Institute and the Motsepe Foundation announced 20 semifinalist recipients for a prize in green energy, with \$20,000 in initial awards and the potential for five teams to compete for a \$1 million grand prize.

JUNE 6, 2023 **MICHAEL SCHOECK**

COMMUNITY ENERGY STORAGE MARKETS MARKETS & POLICY PRODUCTS RESEARCH SUB-SAHARAN AFRICA
UNITED STATES WESTERN EUROPE



An off-grid solar photovoltaic system powers a water tank system in the Ormoti Business Hub, Tanzania.

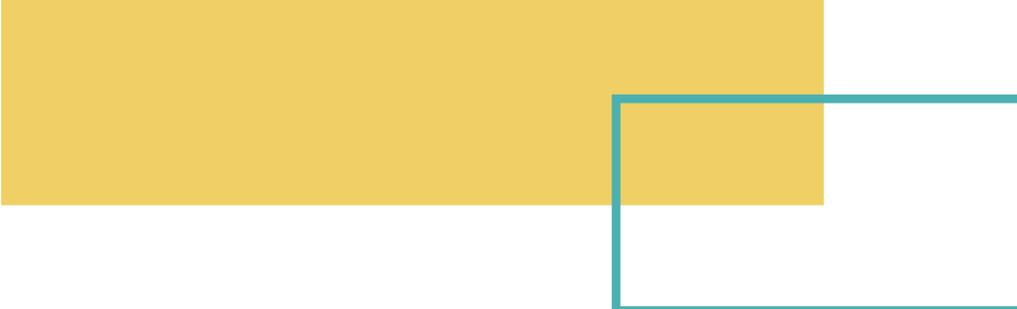
About 12 countries and some 11 technologies that use solar photovoltaic (PV) systems were represented among semi-finalist start-up enterprises standing to receive grant funding from two international organizations for clean energy projects to be deployed in Africa.

The Milken Institute and the Motsepe Foundation announced 20 teams would receive semifinalist prizes for the [Milken-Motsepe Prize](#) in Green Energy, with \$20,000 in initial awards and the potential for five teams to compete for a \$1 million grand prize.

Selected teams will now have four months to create a demonstration project to show the effectiveness of their proof of concept.

Since launching in November 2022, more than 3,800 candidates from over 120 countries have registered in the competition. Over 160 of the registrants representing 36 countries submitted technical design and business model proposals. From the proposals, judges from the California-based Milken Institute and Johannesburg-based Motsepe Foundation selected the 20 most transformative concepts.

Clean energy projects are being evaluated by three main criteria based on their ability to generate off-grid electricity using green energy sources; provide affordable and reliable electricity to energy-poor communities, including in rural areas; and develop a technological and business approach that is scalable across Africa.



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**Support for Low &
Middle Income
Countries in 2023**

SUPPORT FOR LOW & MIDDLE INCOME COUNTRIES IN 2023

- Post pandemic we are looking for new opportunities to sponsor projects in LMICs
- We will be working with Pure Earth to provide in-country training in Bangladesh and Indonesia in the second half of 2023
- And building on the successful development of standard operating procedures to improve recycling in Ghana, further African nations are being targeted under the sustainable recycling industries initiative



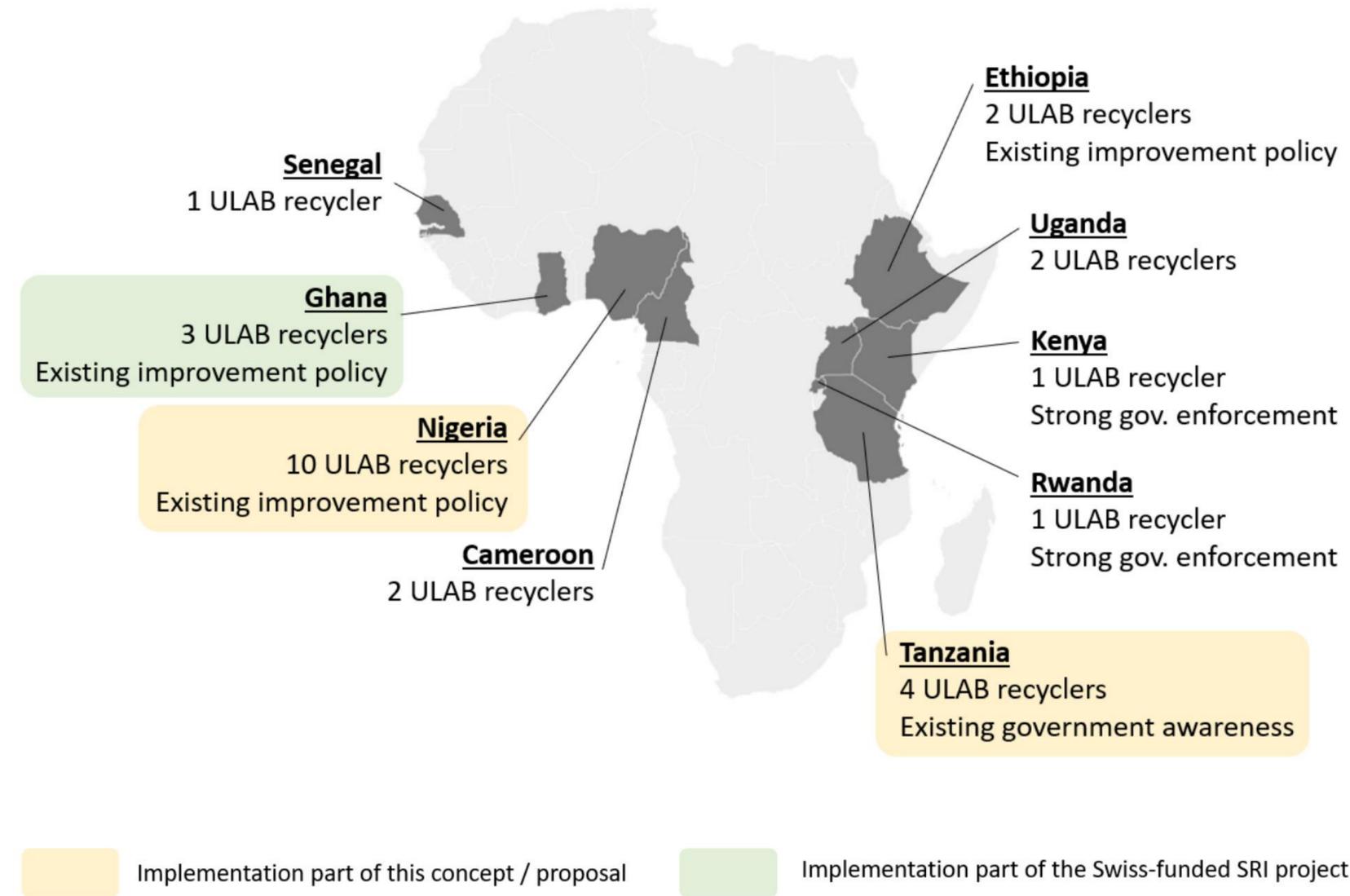


We have started to work with a broad and growing coalition of stakeholders focusing on lead issues in Bangladesh. Our partners include Pure Earth, the University of Dhaka Department of Geology, the International Centre for Diarrheal Disease Research Bangladesh, and Stanford University.

Additionally bringing together technical, social and environmental experts from UNEP, Eco-Social Development Organisation (ESDO), UNICEF and SMEP, the group aims to build a common understanding of the challenges around lead exposure, share data and insights. The group has brought together local, national and international stakeholders including the Ministry of Health and Environment for educational workshops and to collaboratively find solutions to lead pollution sources while proposing interventions which will unlock the opportunity of improved lead battery recycling practices for the country.

WORKING WITH THE OEKO INSTITUTE ON AFRICAN PROJECTS

Figure 5-1: Country overview



ULAB = Used Lead-Acid Batteries

Source: © Oeko-Institut e.V.



BC

UNEP/CHW/OEWG.13/INF/8

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**Open-ended Working Group of the Basel Convention
on the Control of Transboundary Movements
of Hazardous Wastes and Their Disposal
Thirteenth meeting**
Geneva, 21–23 February 2023
Item 3 (b) (i) of the provisional agenda*

**Matters related to the work programme of the
Open-ended Working Group for the biennium
2022–2023: scientific and technical matters:
technical guidelines**

Technical guidelines on the environmentally sound management of waste lead-acid batteries

Note by the Secretariat

As is mentioned in the note by the Secretariat on technical guidelines (UNEP/CHW/OEWG.13/4), the annex to the present note sets out the draft updated guidelines on the environmentally sound management of waste lead-acid batteries (draft updated version of 31 January 2023). The present note, including its annex, has not been formally edited.

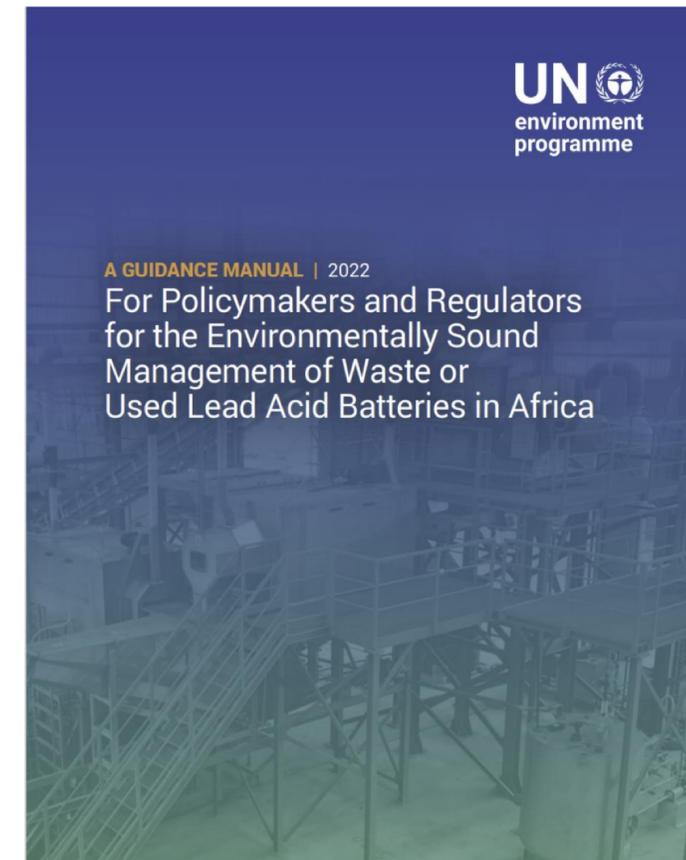
G7 Workshop on Lead as a Major Threat for Human Health and the Environment – An Integrated Approach Strengthening Cooperation Towards Solutions

9-10 November 2022, in Berlin, Germany and virtual

Workshop Summary Report¹

1. Introduction

- In their May 2022 Communiqué², G7 Climate, Energy and Environment Ministers collectively expressed a strong commitment to reduce lead in the environment and to reduce the disproportionate lead exposure in vulnerable communities.
- In November 2022, in line with that commitment, the European Union (EU) and the United States of America (USA) under the 2022 German G7 Presidency co-hosted a workshop in that regard. Many of the leading experts in reducing lead exposure from around the world were invited to meet with officials from G7 members and other stakeholders in Berlin and online (see participant list in Appendix 1). Their goal was to develop possible options for future work and cooperation to reduce lead poisoning in low and middle-income countries (LMICs)³. The workshop agenda has been attached to provide more information on the specific topics discussed (see Appendix 2).
- The workshop was informed by a stocktaking report⁴ by the Center for Global Development (CGD) which noted that “lead poisoning may be among the most pressing public health challenges faced by low- and middle-income countries (LMICs) and is certainly one of the least recognized and most neglected.”
- Further underscoring the importance of addressing lead, at the workshop the World Bank presented its most recent assessment of the global cost of the health effects of lead exposure which is estimated to be 4.6% of the global GDP (as purchasing power parity), or 3.5 trillion US dollars a year.⁵
- The present report contains a summary of the evidence, experience and recommendations as shared by the technical expert participants at the workshop. It also contains some content from the CGD report used as input for workshop discussions.
- The information of the workshop may also serve to inform others seeking to address the challenges of lead exposure globally.



- Presented at Basel Convention OEWG in Feb
- Tabled at Basel COP in May 2023 but unlikely to be ratified until 2025
- LB360 consultant selected as author and we are active members of the technical working party

- Published March 2023
- Contributions from LB360

- Published February 2023
- Authored by ILA consultant Brian Wilson with contributions from LB360

Get involved: support the work, provide technical support, sponsor a project

A Programme for All

Lead Battery 360° is based on the core values of Collaboration, Inclusivity, Accountability
and Transparency.



Collaboration



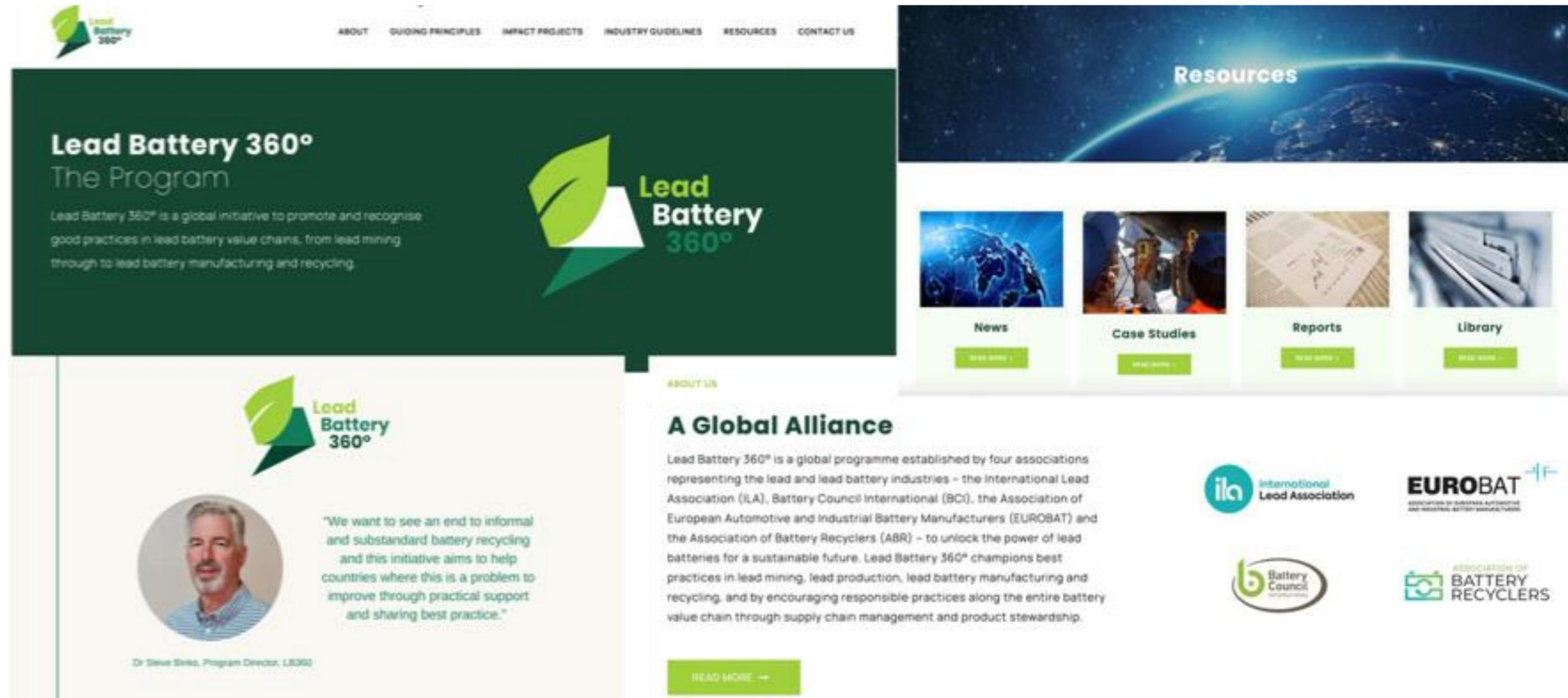
Inclusivity



Accountability



Transparency



The screenshot shows the homepage of the Lead Battery 360° website. At the top, there is a navigation menu with links for ABOUT, GUIDING PRINCIPLES, IMPACT PROJECTS, INDUSTRY GUIDELINES, RESOURCES, and CONTACT US. The main header features a large green banner with the text "Lead Battery 360° The Program" and a description: "Lead Battery 360° is a global initiative to promote and recognise good practices in lead battery value chains, from lead mining through to lead battery manufacturing and recycling." To the right of this banner is a "Resources" section with a background image of Earth from space, containing four sub-sections: News, Case Studies, Reports, and Library, each with a "READ MORE" button. Below the main banner is a section titled "A Global Alliance" with a quote from Dr. Steve Birks, Program Director, LE360: "We want to see an end to informal and substandard battery recycling and this initiative aims to help countries where this is a problem to improve through practical support and sharing best practice." This section also includes a "READ MORE" button and logos for the four partner organizations: International Lead Association (ILA), Battery Council International (BCI), EUROBAT (Association of European Automotive and Industrial Battery Manufacturers), and the Association of Battery Recyclers (ABR).

Leadbattery360.org



Thank You!