Lead Acid Battery Working Group

Chatham House Rules – OK to share ideas outside the group, but no attribution.

Open and frank discussion, no press

Ideal Outcome – consensus opinion on way forward
The Toxic Truth: Children’s Exposure to Lead Pollution Undermines a Generation of Future Potential

ASSESSMENT OF LEAD IMPACT ON HUMAN AND INDIA’S RESPONSE

NITI Aayog
Council of Scientific and Industrial Research (CSIR)
Lead poisoning – India is #1

275 million India children are above 5 ug/dL

Lead poisoning responsible for 230,000 premature deaths in India
BRAIN DAMAGE

IN BABIES.

Exposure prenatal, or in first year of life:

Permanent damage to frontal cortex

Permanent IQ loss—3 to 5 points

Increase in disability, learning disorders
Other Health Impacts

Lead exposure can also cause

Loss of intelligence
Cardiovascular diseases
Stroke
Kidney diseases

Lead during pregnancy can cause

Miscarriage
Stillbirth
Premature birth & low birth weight
After Gasoline Ban, India has gone backwards

Rate of Death from Lead in India vs UK (per 100K, 1990-2017). (IHME)
Major Sources of Lead Exposure in India

- Substandard Informal Battery Recycling
- Adulterated Spices
- Cookware (Metallic alloys & Glazed Ceramics)
- Local Paint
- Cosmetics (Kumkum)
Case Study: Bihar, India

Prevalence of elevated blood lead levels and risk factors among children living in Patna, Bihar, India 2020

135 kids below 6 years tested & houses surveyed in Patna

87% had BLLs ≥5 µg/dl.

Battery recycling and adulterated spices are identified as the major sources of high BLL

https://journals.plos.org/globalpublichealth/article?id=10.1371/journal.pgph.0000743
Car Battery Recycling Interventions

Minimum standard for clean smelters

Economic policy incentives to clean (formal) recyclers – Reverse Logistics

Level the playing field – GST

Regulatory and Enforcement control informal sector

Clean-up legacy sites
What are our priorities?

Battery manufacturers/recyclers
- Realistic solutions for ERP - GST, reverse logistics
- Minimum standards for smelters

Dealers/retailers
- Effective measures supporting manufacturers

OEMs – avoid ‘diesel-gate’

Government
- Policies that work for clean recycling
- Enforceable regulations
Effective Minimum Standard for Smelters needed
Operating Standards for the Environmentally Sound Storage, Transportation, and Recycling of Used Lead Acid Batteries

DRAFT FOR STAKEHOLDER REVIEW

Please see the “notes for reviewers” section on the following page for details regarding the document’s rationale, potential use, desired content, and review process.
Thank You
Physical Collection of Scrap Batteries

Prof. Yamini Gupt
Department of Finance and Business Economics
University of Delhi
The existing battery recycling (formal and informal) in India

BMWR 2022 require handover of WB to Regd. R & R.

Gaps
1. WB from retailer to producer/ RR & R.
2. DRS/Buy Back/ Any other details (implementation)
3. DD/SS mismatch for EPRCs
4. EPRCs in initial years of BWMR implementation
Thank you for your attention!!
Lead acid batteries reversal logistic

The Brazilian experience
Most of core collection was done by illegal collectors.

Biggest core quantity was sent to illegal smelters.

These illegal smelters fed illegal batteries factories.

Good smelters did not have enough core to operate.

First tiers factories faced unfair competitiveness due tax and licenses demands not followed by second tiers.

Factories could not participate in core collection cycle due illegal collector advantages.

It was impossible to the government to control the process as it there is not consolidation (closed cycle).
Brazil government had the following objectives:

1- Eliminate illegal smelters.

2- Increase tax collection.

3- Improve environment.

4- Create a simple system to control all the process.

It was created a team to study the problem that, after 2 years of work, proposed the following solution:
Create the concept of *reversal logistic* responsibility:

• In this concept the manufacturer is responsible for all the product cycle (closed loop).

• Government requires the manufacturer and their supply chain to swap cores for new batteries, one for one, Whenever a new battery is sold.

• This requirement passes down through the supply chain.

• Manufacturers set up systems to deliver new batteries at the same time as picking up cores.

• Penalties apply at each stage to those who do not comply.

• The manufacturer has the responsibility to keep the government informed regarding the quantity sold for after market and the quantity of cores that went to smelter.
Create the concept of reversal logistic responsibility Cont..

- This simplified the government controls:
  - Instead to control thousands of shops, distributors and smelters, government must control only the manufacturers.
  - The government increased significantly tax collection because all battery is sold through legal manufacturers.
  - The system improve environment because the factories use only legalized smelters.
Logistic reversal system

- Factory
- Distributor
- Specialist
- Retail
- IBER
- Smelter
- Government

- New product
- Core
- Lead
- Report to government based on factory account system
In order to make this control possible, for the manufacturer, the government issued the following laws:

1- The core invoice has not value as it is mandatory return to manufacturer.
2- It is mandatory for the retailer to send back the battery collected to the distributor.
3- It is not necessary license to transport cores. The cores must be palletized, it is mandatory keep the cores with acid and the trucks and drivers must follow the rules.
4- It is mandatory the battery distributor send the core collected to the legal smelter indicated by the manufacturer.
5- The manufacturers must contract only legal smelters to receive the core collected.
6- The manufacturer must have all core movement controlled in a reason of 1kg of battery sold per 1 kg of core collected (government create a curve for the first years in order to give time to achieve the target and support volume growth).
Reasons to core do not have commercial value

• The tax over core collection incentives the retail to sell the core to illegal collectors that sell to illegal smelters and the lead goes to illegal manufacturers.

• The government analyzed the amount of tax collect (in advance) from cores and realized was very low.

• The material was already taxed when it was used for the first time.

• After the action was implemented the total tax collection, in the sector, increased around 50% because the cores started go to legal manufacturers and these invoice all batteries.

Without this action it would be impossible to implement the reversal logistic in Brazil.
Central law guarantee that, following the rules below, you can transport cores in all Brazil crossing States.

Transport rules (law # 96004):

**CAN TRANSPORT CORES WITH NEW BATTERIES**

1- Batteries must keep the acid.
2- Trucks must have the plates indicating the product number and it has corrosive material.
3- Truck must carry first aid kit and individual protection kit
4- Driver must have the MOPP certificate (valid for all Brazil states).
5- Trucks must have the instruction manual for emergency.
6- Trucks must be covered with canvas or metal.
IBER

• Based on the Brazilian reversal logistic law, the representatives of manufacturers must sign a specific agreement with their objectives agreed with the government.

• Part of the agreement was to create a non profitable organization which must control the reversal logistic process, report the results and issue certificates for the participants.

• The ABRABAT (battery manufacturers association) created the IBER association which receive the reports from manufacturers, smelters and distributors in order to guarantee that the process has been followed in the Market.