

INVESTIGATION

Dying in instalments: How lead battery recyclers are poisoning Nigerians (Part I)

A three-month investigation uncovers how companies recycling lead acid batteries are poisoning air, soil and water sources in Ogun and Lagos states leaving workers and residents with scary levels of lead in their blood and leading experts to conclude these Nigerians are dying in instalments, writes ISAAC ANYAOGU



Pollution in Ipetoro

The air around Ipetoro and Ewurokun communities in Ogijo, Sagamu Local government of Ogun state, has the acrid taste of alkaline; the sky is soggy dripping with smoke rising from powerful kilns inside Everest Metals Nigeria Ltd and Monarch Steel Ltd, Indian-owned companies recycling lead acid batteries and pulverising metals in the community.

Every house within a thousand meters of these factories has something in common: darkened ceilings, windows that are shut both at day and night, black soot settling on furniture, inside the kitchens, in their water and inside their lungs.

“We hardly sleep, both day and night we are faced with smoke, noise and soil pollution,” said 41-year old, Rufus Noel, a local pastor, who lives three hundred and fifty meters away from Everest Metals. “My children constantly suffer runny nose, fevers from time to time, their health is at risk,”

Rufus, a widower, has taken his youngest child who is seven, to the hospital, three times in October, 2018 when we visited. The doctors say the same thing; the child is at risk of complicated respiratory problems.

Rufus blames both companies for the smoke, but holds



Noel Rufus

Everest Metals accountable for ruining soil and water sources in the community through its hazardous waste materials.

But Rufus’ family, like over 500 households live in their own house, many still without paint or plaster and others still at deck levels, as they carry a valiant struggle to hold off penury.

The community also constitute the bulk of the labour force of these companies. Jobs are few and opportunities fewer. The companies are a blessing and a curse.

With labourers earning between N42,000 and N50,000 monthly, it’s the best paying gig in the sleepy community. The other options are subsistence farming, teaching at a local school or joining the transport

business which offers a quarter of what these companies pay.

But it comes at a high cost. Half a dozen children have died in the community within the last five years suspected of respiratory complications, said Samson Onasanya, another religious cleric whose church ceiling has holes in them, for which he blames the company.

Blood tests

Following an outcry by residents, BusinessDay’s correspondent collaborated with Petra Sorge, a freelance German journalist in an investigation supported by the European Centre for Journalism, to test the residents’ claims that Everest Metals is responsible for respiratory diseases and deaths of children and livestock in Ipetoro as well as hold accountable international

companies who buy lead from these factories.

Tobias Eisenhut, a German paediatrician with experience on the subject was flown into Nigeria to conduct blood tests using Lead Care II, a medical testing device manufactured by the United States biotech manufacturer Magellan Diagnostics, capable of immediate measurement of results without sending the blood samples to a laboratory. The Ogun state ministry of health and the Lagos State Environmental Protection Agency (LASEPA) provided approvals and were duly carried along.

On October 26, at Likosi Primary Health Centre, in Ogijo, Eisenhut assisted by the Oluwaseun Akinsanya, the matron, took blood samples from 40 volunteers from the affected communities, including residents and factory workers. Six samples were taken from volunteers in Metalworld Recycling facility in Lagos and six were used as controls including an official of the ministry of environment who monitored the tests. Everyone agreed to share the results with the press but the workers pleaded for anonymity.

At above 5 micrograms per deciliter, the US Centre for Disease Control (CDC) regards it as a reference level at which it recommends initiating public health actions. The World Health Organisation (WHO) says blood

lead above 10 micrograms per deciliter, is a high level of concern and classifies it as lead poisoning.

Forty-six samples exceeded the WHO threshold of 10 micrograms per deciliter of blood. Everyone tested who lived close to Everest Metals factory or worked in Metalworld recycling had high values.

“They are killing us gradually,” said Rufus upon discovery that he has 27 micrograms of lead in his blood.

The WHO says that in adults, blood lead levels as little as 5 micrograms per deciliter can cause cardiovascular problems and reduces the immune system. In children and embryos, lead attacks brain and nerves and can lead to learning difficulties and even mental retardation. Each microgram costs a quarter to half IQ point.

“Statistically lead blood lead levels of 10 micrograms and above in about half of the children can lead to developmental delays,” said Eisenhut.

The children come to an average of 19.8 micrograms while adults recorded an average of 21.1 micrograms. For instance, seven year old, Azizat Adokoya, had 21.6 micrograms and ten-year old Faruk Balogun, who often plays football near the factory had blood lead levels of 27 micrograms. Even toddlers are not spared with Kehinde and Taiwo, twins of one-year and ten months recording 19.2, and 24.4 micrograms respectively.

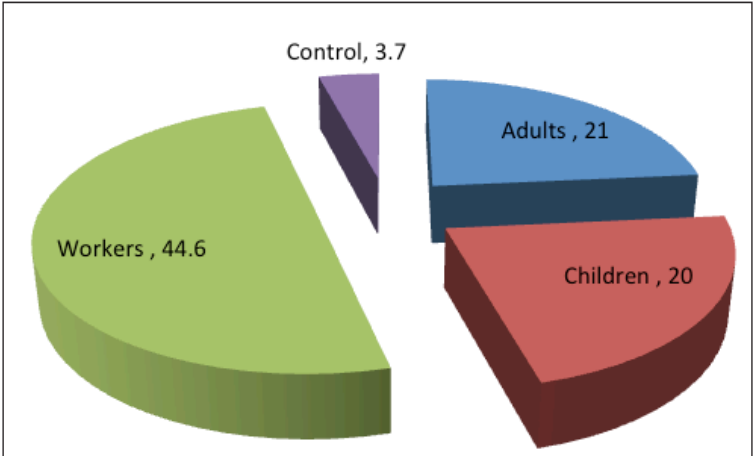
Eisenhut explains the level of exposure and capacity of the immune system could account for differences.

Everest Metals is located less than 500 meters away from Christeirs Nursery and Primary school, which had over 200 students, who are between 2 and 14 years. The head teacher who didn’t want to be named said she sometimes considers sending the children home when the smoke becomes intense.

“But then their homes are also in the community,” she said.



LeadCare II device



Average blood lead levels of volunteers tested

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Eisenhut said the results from children who attend the school indicating high levels of lead in their blood were not surprising.

There’s only so much the children can learn with the haze of smoke and the rotten smell from the factories, Blessing Olaiya, a class teacher said.

Akinsanya, the matron at Likosi primary healthcare centre said complaints from residents in the community includes coughing, persistent headaches, anaemia, irritability, fatigue, and general weakness.

As control for the test, Tobias Eisenhut, Leslie Adogame, the founder of non-profit, SRADEV who had conducted soil tests in the community, his staff and the journalists were tested and reported average blood lead levels of 3.7 micrograms.

Lead pollution in Lagos

A blinding haze of smoke from a factory will surely not go unnoticed by the Lagos State Environmental Protection Agency (LASEPA), but lead poisoning, more insidious even if subtle, happens in Oshodi, only 18 kilometres away from their office at Alausa.

Metalworld Recycling Limited in Oshodi, along with smaller recyclers in Ojota, Agege, Ijora, Festac and Apapa engage in activities to separate lead inglots from car batteries but their operations violate safety standards.

We observed at Metalworld Recycling that workers were not wearing adequate protective gear, lead dust easily drifts into the atmosphere, and the facility is sited close to residential and business areas.

“We buy from the local surrounding areas,” Vinod Jindal, the managing director of the company told us. “We simply ask the buyer to bring without the acid. They bring it after removing the acid.”

But our investigation showed that the company’s suppliers who are mostly Nigerian firms discharge the battery acid unfiltered into the environment. Individuals also are in the trade like Oluchi Olehi, who buys used lead acid batteries from solar energy companies and sells to Metalworld and Everest Metals.

Soiled soil

Last year, Adogame, took soil samples around the Ipetoro as well in the premises of Metalworld Recycling and the result showed three of the four test tubes taken exceeded the permissible lead limits.



Working without the right protection, Everest Metals



Children had average lead levels of 19.8%



Unsafe working environment

The US Environmental Protection Agency (EPA) allows no more than 400 milligrams per kilo near the settlement. In Ipetoro the values were 1900, 2700 and 130,000 milligrams. In Metalworld Recycling the values range between 12,000 to 140,000 mg/kg.

“The soil is totally destroyed and is unsafe for agricultural purpose,” says Adogame who accompanied us to Ipetoro community. Adogame said that what needs to be done is move the people away and carry out remediation activities on the land.

Dangerous work

Everest Metals refused to grant us access to the facility to speak to them or inspect the claims of residents of Ipetoro while Metalworld Recycling provided access. We decided an undercover operation as a last resort to get into Everest Metals.

To get a job at Everest Metal Nigeria Ltd, you only need to show up. Work hours are between 7am and 6pm with a thirty minutes break by 10 am and an hour break by 1pm.

You are then sent into a ware-

house filled with all sorts of metals, zinc, aluminium or lead and told to sort like materials. If you’re not adept even at that, you are then told to help someone who is sorting. No one is turned away on account of their intellectual inadequacy; this is not a job where high intellect is highly priced, you only need to have a pulse.

“When you enter here, you will look at others, the way they are doing, you copy them,” an experienced worker said. This we soon learn is the only orientation you get until you graduate working the furnace.

Everest Metal Nigeria Ltd, incorporated on May 12, 2009, has as key sections: battery demolition, lead furnace, raw material storage area, crucible, bailing machine section, administrative blocks and staff residential quarters.

We counted a dozen staff in the most critical sections – battery demolition, lead furnace, crucible and storage sections with scant personal, protective equipment. In the yard, half the size of football field, car batteries



Working in a dangerous environment, Everest Metals

are stacked on unpaved surface.

In the workshop, workers chop and saw without a breathing mask. At the rotary kiln, in which the battery plates are melted to lead, a man pierces the liquid metal as blue gas escapes at several points.

“This is absolutely negligent,” says Andreas Manhart, environmental scientist, at the Öko-Institut when he reviewed our pictures.

Manhart has visited several lead factories in developing countries and knows that the liquid, glowing lead that escapes uncontrollably during this step is hazardous.

“The worker should actually be fully equipped with special protective clothing and visor in front of the face,” says Manhart. The environment is “probably highly contaminated,” he said.

Metal sheets covering the furnace at Everest have been eaten away by corrosive sulphuric acid. A test on 16-year old Omisore Abiodun, who breaks battery to discharge the acid content showed the highest blood level of 65 micrograms.

Everest Metals staff working in the furnace section refused to be tested. But five others in related sections who agreed to the test but wished to remain anonymous, and who frequently complain of headaches, persistent cough, dizziness and even anaemia, have the following values: 21.8, 32, 38.1, 41.4, and 42.3 micrograms.

Thriving industry

According to research by Recycling and Economic Initiative Development of Nigeria (RE-DIN), an environmental non-profit, supported by the Heinrich Boll Stiftung (HBS) Nigeria, over 500,000 tons of used lead acid

batteries (ULABs) are generated in Nigeria annually from the automobile and renewable energy sectors.

The retail cost of used lead acid batteries ranges between N4,000 and N10,000 per unit. Each ton is sold at N340,000 translating to a market value of N170bn. The cost of transporting each ton is put at N11,000 and at the rate of 500,000 tones, the estimated cost is put at N5.5billion. This puts the estimated value of the sector in Nigeria to over N175billion.

The real money comes in hard currency when it is shipped abroad. Depending on their size and lead content, agents for the vehicle battery in Nigeria pay between 12 and 24 euros. The kilo price is around 82 cents, the ton at 820 euros. At the London Metal Exchange, raw lead is traded for about 1.70 euros per kilo - 1700 euros per ton.

Everest Metals buys lead batteries repurposed from vehicles and solar energy components from local suppliers within Lagos, Onitisha and Abuja who may or may not have drained the battery of acid. Three residents of the community including Rufus say the company disposes of the acid water into the community whenever it rains.

Everest Metals pays good price to its suppliers, and Oladimeji Ojewale-Azeez, an artisanal recycler confirms this. He has a workshop - Metal Made Recycling - in Agege. The car batteries are stacked in one corner and the sacks of uncovered scrap in the other. Metal Made consists of him and his three brothers.

Azeez, who wears rubber muffs and plastic boots, puts on a surgical mask, grabs a long knife, a rusty metal bar, and attacks the car battery. Local collectors, like Azeez break open car batteries and empty the acid water into gutters, canals and rivers and supply to exporters like Everest Metal Nigeria Ltd. But it is also another very dangerous part of the work. Azeez had a blood lead level of 50.6 micrograms.

Everest Metals along with other exporters in Nigeria are making a fortune from the export of lead from an unregulated Nigerian environment to markets in Europe, India, and China but are unwilling to make the investments to carry out their operations in an environmentally sound and safe way.



Unsafe working environment, Metalworld Recycling Ltd/Photos: Adetona Omokanye

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Dying in instalment: Foreign buyers pile pressure on polluting company (2)

Two weeks after blood tests confirmed a link between lead acid battery recycling by Everest Metals Nigeria Ltd is poisoning Ipetoro community in Ogun state, the investigation shifts to foreign car makers who buy lead ingots from the company. When confronted with evidence of the company's dangerous operations, they rethink their business relationships, writes ISAAC ANYAOGU.

When confronted with evidence of the company's dangerous operations, the buyers of lead ingots from Everest Metals Nigeria Ltd, the company whose lead battery recycling operations in Ogijo is contributing to lead pollution in the community, have begun to rethink their business relationships with Everest.

We tracked the final destination of lead ingots recycled from Everest Metals in Ipetoro, Ogijo, Ogun state to car makers in Europe. The company operates as part of the Indian conglomerate, Kejriwal Group, which incorporated Suryadeep International FZC in Dubai, as a sister company involved in the lead business.

Everest Metals ships its lead ingots sourced from Nigeria majorly to WITL Ltd registered in Manchester, UK. Posing as dealers, we contacted Philip Gottlieb, the company CEO who said he gets lead from Nigeria. He said he delivers to Germany through Weser Metall.

Weser Metall, based in Nordenham, Lower Saxony, is part of the Paris-based Recyclex Group and is the third-largest European lead recycler processing over 100,000 tonnes annually. The raw material for the lead paste is mainly sourced from Nigeria. In 2017, it sourced 109,700 tonnes and 2018; it fell to 62,600 tonnes, company's records show.

Weser Metall is also one of the largest suppliers of US-based Johnson Controls who in turn supplies car makers like BMW, Daimler and Volkswagen. Having established the route through which Everest Metals Nigeria ships its lead, we presented the buyers with proof of the company's poor practices.

Shock, outrage

Upon receiving evidence of the company's dangerous operations including secret pictures of unsafe work practices, tests carried out by an environmental non-profit indicating contaminated soil, and results from blood tests conducted in the community, the reactions were fast and furious.

"Johnson Controls was just made aware of the relationship between one of its lead suppliers purchasing a portion of lead from a Nigerian source. We immediately initiated an investigation with the supplier and will take appropriate actions," the company responded on November 27.

Heike Rombach, international business communications Mercedes-Benz Cars responded on November 27 saying Daimler supply chain is complex, "However, we take your advice very seriously and consider it our social responsibility as a global mobility provider to take immediate action here, even if Weser Metall and Everest Metal Nigeria Limited are not direct suppliers of Daimler AG."

Matthias Compes, managing director of Weser-Metall wrote on November 27 claiming it was no longer doing business with Everest Metals.

"Weser-Metall GmbH has identified only one of its suppliers based in the United Kingdom, which is owned by Everest Metals Nigeria Ltd., had related material. We did not engage in direct commercial transactions with this Nigerian company and



Rain water mixed with lead acid flows into Ipetoro community. Photos: Adetona Omokanya



Acid waste from Everest Metals drips into Ipetoro community.

have not been notified by our supplier of any infringement or misconduct of this company. For your information, we do not buy any more material from this supplier."

But on November 30 Volkswagen, who gets supplies from Johnson Controls, who in turn is supplied by Weser-Metall, responded, "We were not aware of the connection and business relationship in the 4th stage of our supply chain...We do not accept these violations, and the practices are a clear violation of our contractually-defined sustainability requirements."

"Due to the seriousness of the allegations, an immediate stop of the purchase of lead from the subcontractor in Nigeria was obtained. Until the end of the investigations, Volkswagen will be in constant communication with the main supplier and will be informed about all steps and results."

'Please let's meet'

Faced with threat to its bottom-line, Everest Metals invited us for a meeting and an inspection of the factory. We agreed to the meeting but

the inspection was no longer necessary. On November 24, Vikas Das, the company's managing director and the BusinessDay reporter met at Mama Cass Restaurant in Palm Grove, Lagos where he presented the company's side.

Das denied his company was responsible for the lead in the blood of residents of Ipetoro claiming there were other companies around the area also recycling lead batteries and his factory is farther.

However BusinessDay has established that this is not true, as the company is in an industrial area that is right inside the community.

Das showed pictures of a tank where he claimed the acid content of the recycled batteries were deposited. He was shown a picture of watery acid content dripping into the community behind the factory.

Das further presented a picture of a borehole project his company was planning to build for the community this December. We confirmed assertion by residents that the project was initiated two years ago and had been abandoned.

Das further presented four different environmental monitoring reports prepared by Batmol Environmental Consultancy Services that basically said the company's operations were within the limits set by the Ogun State Environmental Protection Agency (OSEPA).

"The state does not have the resources to fund the tests, so we paid for it," Das said in response to a question on how the tests were funded.

OSEPA mandates manufacturing companies to submit environmental monitoring report every quarter but regulation is weak. Residents in Ipetoro remember only two visits in the last four years and after the officials visited the company, they hear nothing again about their complaints.

Everest Metals further presented an exporter registration certificate issued by the Nigerian Export Promotion Council (REF. NO 0003356) valid till 16/02/2020 and several receipts of purchases of PPE equipment which were mostly dated between October and November this year and an environmental approval by OSEPA which expired March 18 this year.

Das pointed out that his company only resumed operations in August this year after being shut for most of the year due to lack of batteries.

Andreas Manhart, environmental scientist, at the Öko-Institut, who has carried out audits of battery recycling facilities saw pictures of working conditions taken inside Everest Metals and said, "This is totally improper storage and handling of used lead-acid batteries, an extremely lax handling of occupational safety up to a probably highly contaminated working environment."

Das was asked for response and he countered, "We provide workers with personal protective equipment but you know workers, some rarely use it."

In 2011 Das, along with four other officials of the company were arrested in Nigeria for illegal exports of scrap metal. The company boss said it was a misunderstanding.

"Yes, we were arrested and charged to court but the case was straightened out in three days. What happened was, the metals we exported had mud on them and the authorities thought perhaps they contained lead. So they seized the container but when it was tested and clarified the case was dropped. In a few months we were given our license to operate. The matter is over for a long time," Das said.

Curiously, Vikas Das presented an envelope filled with cash begging that he be 'assisted.' This was promptly rejected.

'I challenge the authenticity of your report'

On his part, Vinod Jindal, the managing director of Metalworld Recycling, in Oshodi, whose battery recycling facility had workers without personal protective equipment and had high levels of lead in their blood, fired an angry mail refusing to accept responsibility.

"If that is a report from my factory I challenge the authenticity of your report, and if it is from our warehouse, then you have to tell me from which part of land you have taken a sample. Did you know within the compound there (is) two units working in battery scrap. Moreover the pictures you send of my warehouse some does not belong to us. I expect truthful behaviour at your end about our company."

"If you have taken the soil sample from the gate of our warehouse near the scale you may understand what shall be the result. Check your findings first before to conclude my dear friend of environment," Jindal said.

Our investigation however, showed his claims are false. Both companies operating from the same vicinity are culpable. Vincent Nwodo, a Nigerian and the head of Battery Recyclers Association of Nigeria, who operates the second unit, admitted their operations could be improved and submitted for the test which indicated blood lead levels of 44.6 micrograms. However, Metalworld has the biggest operation. Soil samples taken by non-profit SRADEV also showed high volumes of lead in the soil.

'We've fixed the problem'

By December, Everest Metals and its parent company Kejriwal were feeling the heat. Their biggest customers, European car makers were cancelling contracts; banks were calling their loans, and Anil Kejriwal, the global managing director, sent a panic mail.

"Following your mail concerning environmental, health, safety and other issues raised by you, we have taken additional measures to fix all issues in our factory," Kejriwal wrote in an email sent on December 6.

"We invite you and your team to inspect our facilities at the soonest possible. If any additional corrective measures need to be taken, we will implement the same immediately."

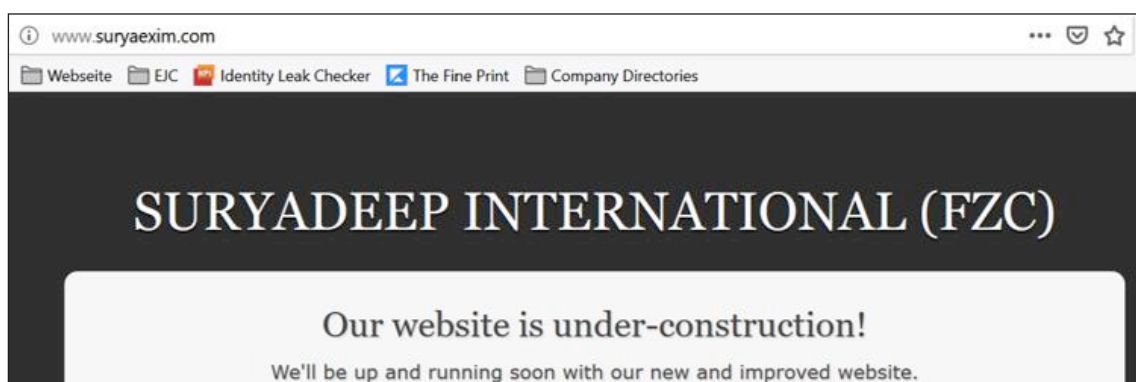
"Our orders from our clients have been suspended in the meantime and this will affect the direct and indirect employment given to hundreds of people of local area in addition to stress on our company to repay bank loans."

"We are willing to make any and all corrective changes in our company so that we comply with all local and international norms. We request your kind cooperation and guidance," he wrote.

Residents in the community say they were yet to see changes. The only change is that the company has shut down its website.

The next part of this investigation will highlight the regulatory failures that led to the tragedy in Ipetoro.

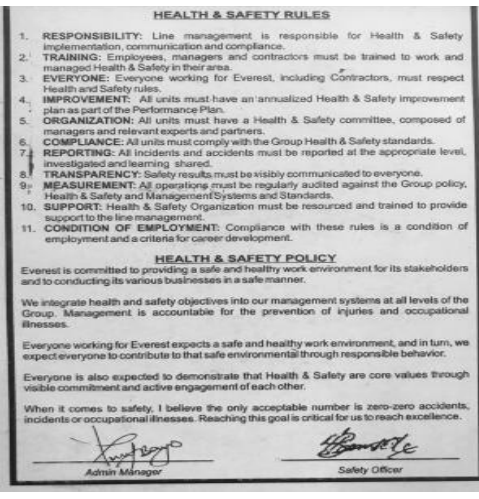
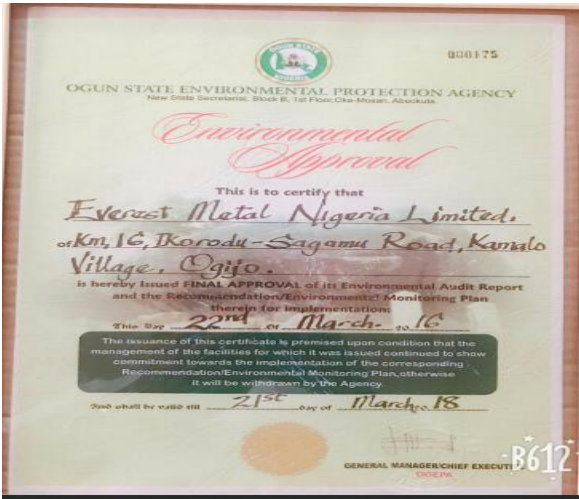
This investigation was supported by the European Centre for Journalism and the Bill and Melinda Gates Foundation. Petra Sorge, freelance journalist from Germany assisted with the research for the story.



Everest Metals European affiliate shuts website.

Dying in instalment: How failure of regulation contributed to lead pollution (3)

The third part of this investigation uncovers how regulatory failure allowed lead acid battery recyclers without even the requisite government approvals to operate with reckless abandon and endanger the lives of many Nigerians, writes **ISAAC ANYAOGU**.



Confronted with test results showing high levels of lead in the blood of people living close to its lead battery recycling operation in Ipetoro, Sagamu, local government area of Ogun State, Everest Metals Nigeria Ltd's first line of defence was that it had all the government registrations required for the business. This is not true. Nigeria is signatory the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, an international treaty that was designed to reduce the movements of hazardous waste between nations and specifically to prevent transfer of hazardous waste from developed to less developed countries. Therefore to be eligible to move hazardous waste, of which used lead acid batteries (ulabs) are part of, the Ministry of Environment issues a company dealing with hazardous waste a certificate to export the waste material. Without this certificate, when a container carrying waste material arrives in a different country, it is seized and returned to the country of origin. So to ascertain the company's claim of having the right registrations, we visited the Ministry of the Environment in Abuja and secured a list of approved lead battery recyclers permitted to export lead recycled locally and found that it does not include Everest Metals Nigeria Ltd. However, a source inside the ministry informed us that the

company's registration was withdrawn after a non-profit, Sustainable Research And Action For Environmental Development (SRADEV) published a study last year, indicating high levels of lead in the soil samples taken from the company's facility. One senior official of the ministry confirmed that Everest Metals Recycling was operating illegally because they have not been awarded clearance to export hazardous waste. The same is true for Metalworld Recycling in Lagos, the official said. Recently, Metalworld Recycling Ltd's consignment was reportedly sent back from Spain to Nigeria because it was not issued an approval from the ministry, a source in the ministry told us. The ministry of environment is yet to respond to requests for comments at the time of publication. Yet Everest Metal was issued an export license by the Nigerian Export Promotion Council (NEPC) for the same waste it did not secure approval to export by the Ministry of Environment. Vikas Das, managing director of Everest Metals presented an exporter registration certificate issued by the NEPC (REF. NO 0003356) valid till 16/02/2020 raising questions about coordination and synergy in the ministries. The NEPC has not responded to questions on the process that led to awarding Everest Metals an export license as at the time of publication. **'We will do something about it'** Environmental monitoring

falls under the jurisdiction of the ministry of environment through the Ogun state environmental Protection Agency (OGEPA). We sought the opinion of Bolaji Oyeleye, the state commissioner of environment on how the company could be allowed to carry on with its dangerous activities in the state. "We have had problems with those companies in that community in the past, but it is something we are looking into. We will definitely do something about it." Oyeleye said by phone. However, civil servants who didn't want to be named confirmed that the ministry is seeking to balance attracting investments and protecting the people's health. It is not difficult to see that business clearly is winning. "It is clear the community is seriously polluted, this should call for an emergency," said Leslie Adogame, executive director of SRADEV. "What needs to be done is to carry out remedial activities on the land and move everyone out." However, Vikas Das, the managing director of Everest Metals Ltd presented an environmental approval issued by the Ogun State Environmental Protection Agency (OGEPA) as evidence that it was complying with the state's laws. The only problem is, it expired in March this year. Enquiries at OGEPA showed that when the company was being established, it was compelled to install facilities that will mitigate the consequences from its activities. According to the statutes setting up the agency, it has to serve series of notices before it can seal up a defaulting company. While the government agency checks off each box on its bureaucratic forms, residents in the community endure lead pollution. Blood tests conducted on residents showed children had average blood levels of 19.8 micrograms per decilitre, adults had average levels of 21 micrograms per decilitre and workers in the factory had average levels of 44.6 micrograms per decilitre. At above 5 micrograms per decilitre, the US Centre for Disease Control (CDC) regards it as a reference level at which it recommends initiating public health actions.

The World Health Organisation (WHO) says blood lead above 10 micrograms per deciliter, is a high level of concern and classifies it as lead poisoning. Funmilayo Kuti, the general manager of OGEPA when contacted requested for a letter before she can issue a response. This was sent to her through her email, but she did not respond until publication date, almost one week later, through her press officer. "She wants you to come to her office and submit it physically," Kemi Oyeleye, the press officer said on the phone. It was understandable why the community leaders said they made representations to the National Environmental Standards and Regulations Enforcement Agency, (NESREA) office in Ibadan. The officials merely visited the community and went into the company and nothing has since been done. Antonio Ayodele, general manager of Lagos State Environmental Protection Agency (LASEPA) in an interview identified funding as one of the challenges militating against the organisation's efforts to enforce provisions of Lagos environmental regulations guiding the practice as well as other infractions by operators but said the state will continue to ramp up enforcement of environmental laws. Since state officials were not permitted to speak on record to the press, we visited NESREA office in Abuja to meet with the director general. But on the agreed date, he was summoned by the national assembly and the meeting could not hold. However, the result of this investigation was shared with a senior director of the agency. The response mirrors the same remarks made by the director general Lawrence Anukam, when I interviewed him in his office in February last year on a related story about hazardous artisanal lead acid battery recycling. He mentioned poor funding to effectively monitor the state and inability of operators to operationalize and Extended Producer Responsibility (EPR). The Federal Government has developed a National Environ-

mental Regulations with provision for the EPR. The EPR shifts the responsibility for waste management from government to private industry, obligating producers, importers and/or sellers to internalise waste management costs in their product prices and ensure safe handling of their products. The battery producer is tasked with monitoring of their products from cradle to cradle and administers recovery and recycling programmes through the PRO. On the other hand, the government would monitor compliance, ban designated hazardous materials from use in products and/or disposal, establish relevant environmental standards, register and accredit recyclers as Authorised Treatment Facilities (ATF), and issue permits. NESREA has developed operational guidelines that explore the use of economic instrument to ramp up compliance but enforcement as regards ULABs has not received the attention it required leading to the pollution in Ipetoro. Over a year after, Anukam, said sector players have now nominated a PRO and would soon operationalize the EPR, operators are yet to fully agree on the modalities for setting up the organisation. In November, President Muhammadu Buhari signed a new NESREA amended law which empowered the agency to tackle perceived environmental threats, pollutants as well as impose stiffer penalties and fines on illegal trafficking in wildlife, endangered species and poaching. "In the past, environmental crimes attract paltry fines and levies, with the amendment, the courts are now at liberty to impose stiffer fines that are commensurate to the gravity of the crime committed," says a statement by Oyofe Sule, deputy director of information of NESREA. So it seems the only thing holding back the agency now is money to buy petrol for their cars. **•This investigation was supported by the European Centre for Journalism and the Bill and Melinda Gates Foundation. Petra Sorge, freelance journalist from Germany assisted with the research for the story.**

| S/N | Approved Companies |
|-----|--------------------------|
| 1. | Zero Transport Ltd |
| 2. | Zeta Power Ltd |
| 3. | Marken Industries Ltd |
| 4. | Charzom concept Ltd |
| 5. | Sangshin Metal Ltd |
| 6. | Chiwet Resources Ltd |
| 7. | Investrade Ltd |
| 8. | ADFAP Metal Ltd |
| 9. | Optimex Global Solutions |
| 10. | Mtalbros Ltd |

Companies approved to export hazardous waste in Nigeria