



Embassy of the United States



Kementerian Lingkungan  
Hidup dan Kehutanan RI



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KPBB

## Undangan Workshop

### Mencegah dan Memantau Pencemaran Timbel di Lingkungan

Dampak Daur Ulang Aki Bekas Ilegal

Rabu, 23 Maret 2022

*Salam lestari,*

Harapan dan doa semoga Ibu/Bapak/Rekan-rekan sehat walafiat serta senantiasa sukses dalam menjalankan aktivitas sehari-hari.

Sehubungan dengan pengendalian pencemaran lingkungan akibat daur ulang aki bekas ilegal, dengan ini kami mengundang partisipasi Ibu/Bapak/Rekan-rekan pada virtual workshop **Mencegah dan Memantau Pencemaran Pb di Lingkungan**, yang akan diselenggarakan pada:

Hari, tanggal : Rabu, 23 Maret 2022  
Jam : 09.00 - 13.00 WIB  
Tempat : Zoom Platform  
Registrasi : <https://bit.ly/Lead-Poisoning-ID>

Live: **You Tube** infokpbb

Workshop ini bertujuan (1) membagikan status terkini manajemen daur ulang aki bekas dan dampaknya terhadap lingkungan, kesehatan dan social ekonomi; (2) meluncurkan program "Mencegah dan Memantau Paparan Timbel dan Dampak Kesehatan di Indonesia"; (3) Menjalin komitmen pengendalian paparan timbel dari proses daur ulang aki bekas.

Perlu kami sampaikan, bahwa pada kesempatan ini Kedutaan Besar Amerika Serikat di Jakarta memberikan *support* untuk Blood Lead Level (BLL) test terhadap 400 anak-anak usia sekolah yang tinggal di seputar peleburan aki bekas. Penyelenggaraan BLL test diselenggarakan bulan Maret - Mei 2022.

Demikian permohonan kami, atas perhatian dan perkenan Ibu/Bapak/Rekan-rekan, kami ucapkan terimakasih.

Jakarta, 8 March 2022

*Salam hormat,*

KPBB

**Ahmad Safrudin**

Direktur Eksekutif



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KPBB

# To Monitor and Prevent Lead Exposure in Indonesia

## Health Monitoring and Mitigation Program for Lead Poisoning in Environment

A Program by Ministry of Environment and Forestry RI, Ministry of Health RI

US-Embassy – Jakarta, and KPBB

Virtual National Workshop, 23 March 2022 @09.00 - 13.00 Jakarta Time

*email:* [kpbb@kpbb.org](mailto:kpbb@kpbb.org), *Pb/WA* +62 856-7706-934

Tempat : Zoom Platform

Registrasi : <https://bit.ly/Lead-Poisoning-ID>

Live: **YouTube** [infokpbb](https://www.youtube.com/channel/UCv3v3v3v3v3v3v3v3v3v3v3)

## To Monitor and Prevent Lead Exposure in Indonesia

A Program by Ministry of Environment and Forestry RI, Ministry of Health RI, US-Embassy – Jakarta, and KPBB  
Virtual National Workshop, 23 March 2022 @09.00 - 13.00 Jakarta Time  
email: kpbb@kpbb.org, Ph/WA +62 856-7706-934

### **Rationale**

*Lead poisoning is still expose environment in Indonesia. Even though, many activities have been done such as leaded gasoline phase out, established the threshold level of lead in paint, conducted empowering and public education for ULAB recycling workers and management, clean up, etc. but main source of lead exposure has not controlled yet, which one it is lead (ULAB recycling) smelters; which are spreading in the whole country especially in major cities/regencies such as Medan, Pekanbaru, Batam, Palembang, Lampung, Tangerang, Bogor, Jakarta, Bekasi, Tegal, Lamongan, Pasuruan, Klaten, etc.*

*In Tegal Regency for instance, before cleaned up last year, there was an open dumping of lead slag, whose volume reaches 16,200 m<sup>3</sup> cover 2,500 m<sup>2</sup> of dumping ground. With refer to the area lead level which has max 45 ppm, increased the contaminated volume 33,925 m<sup>3</sup>. While, referring to PP No. 101/2014 (max 1500 ppm), contaminated volume 25,722 m<sup>3</sup>. In addition, the Cu, and Zn exposures in ground water covers 43.903 m<sup>2</sup>, and 55,885.33 m<sup>2</sup> respectively. Currently, the village still produces ~1 ton/day of slag of various heavy metal hazardous waste, and sulfuric acid, and emits PM to the air 5,429.97 µg/m<sup>3</sup> (standard 230 µg/m<sup>3</sup>), and lead soil concentration reach 128,672 ppm. Sure, people who live at surrounding areas of ULAB recycling smelter are at hi-risk.*

*Data in 2010 showed that blood lead levels (BLL) in children in Pesarean Village were on average 32.27 µg/dL, with the lowest number 8.2 µg/dL and the highest above 65 µg/dL (very high). While according to the WHO, the threshold for normal BLL, maximum is 10 µg/dL which has now been revised to 5 µg/dL. We also found school children living around smelting area in 8 cities (including Tegal / Pesarean) had a minimum BLL range of 2 µg/dL and a maximum of 65 µg/dL with an average of 25.63 µg/dL (KPBB, 2016). While the data for Pesarean Village in 2016 showed an average of 32.2 µg/dL with the lowest number of 5 µg/dL and the highest*

Keracunan timbel di lingkungan masih mengekspos wilayah Indonesia. Meskipun banyak kegiatan yang telah dilakukan seperti penghentian bensin bertimbel, penetapan ambang batas timbel dalam cat, melakukan pemberdayaan dan pendidikan masyarakat untuk pekerja dan manajemen daur ulang ULAB (aki bekas), remediasi kawasan terkontaminasi, dll. Namun sumber utama paparan timbel belum terkontrol dengan baik, di mana smelter timbel (ULAB daur ulang) illegal masih tersebar di berbagai wilayah tanah air terutama di kota/kabupaten seperti Medan, Pekanbaru, Batam, Palembang, Lampung, Tangerang, Bogor, Jakarta, Bekasi, Tegal, Lamongan, Pasuruan, Klaten, dll.

Di Kabupaten Tegal misalnya, sebelum diremediasi tahun lalu, terjadi open dumping terak timbel yang volumenya mencapai 16.200 m<sup>3</sup> meliputi 2.500 m<sup>2</sup> kawasan *dumping ground*. Dengan mengacu pada kadar timbel alami tertinggi di permukaan tanah kawasan setempat yang mencapai maksimal 45 ppm, volume tercemar menjadi 33.925 m<sup>3</sup>. Sedangkan mengacu pada PP No. 101/2014 (maks 1500 ppm), volume tercemar 25.722 m<sup>3</sup>. Selain itu, paparan Cu, dan Zn di air tanah masing-masing mencakup Kawasan seluas 43,903 m<sup>2</sup>, dan 55.885,33 m<sup>2</sup>. Saat ini, desa tersebut masih menghasilkan ~1 ton/hari terak berbagai limbah berbahaya logam berat, dan asam sulfat, serta mengeluarkan PM ke udara 5.429,97 µg/m<sup>3</sup> (standar 230 µg /m<sup>3</sup>), dan konsentrasi tanah timbel mencapai 128.672 ppm. Tentu, orang yang tinggal di sekitar smelter daur ulang ULAB memiliki risiko tinggi.

Data tahun 2010 menunjukkan kadar timbel dalam darah (BLL) pada anak-anak di Desa Pesarean rata-rata 32,27 µg/dL, dengan angka terendah 8,2 µg/dL dan tertinggi di atas 65 µg/dL (sangat tinggi). Sedangkan menurut WHO, ambang batas normal BLL adalah 10 µg/dL yang kini telah direvisi menjadi 5 µg/dL.

was 61  $\mu\text{g}/\text{dL}$ . This number decreases according to the BLL test conducted as of 30 November 2018 which is an average of 21.4  $\mu\text{g}/\text{dL}$  with the lowest number 6.1  $\mu\text{g}/\text{dL}$  and the highest 73.4  $\mu\text{g}/\text{dL}$ . Up dated data in Cinangka Village, Bogor Regency (2019) shows the average 19.2  $\mu\text{g}/\text{dL}$ ; is decreased compared to the data on 2010, and 2013 are 25.2  $\mu\text{g}/\text{dL}$ , and 23.9  $\mu\text{g}/\text{dL}$  respectively.

Many efforts have been made in the last 5 years, especially those that have been intensively carried out in the past 6 (six) months. The activity is awareness of the community both the general public, workers/owners of smelters and metal crafts, school children etc. related to the environment around them who have a high risk for their health. Awareness efforts are carried out with various communication activities and public education while waiting for technical actions related to clean up hazardous waste contamination in the surrounding of smelters areas, and installing/operating environmentally friendly smelters. Through activities to improve the understanding, awareness and skills of the community to avoid exposure of high-risk heavy metals from the lead smelting industry, and the risk of exposure from heavy metal waste/slag landfill areas.

The most importance to stop lead poisoning from ULAB recycling smelters is formalize the illegal smelter and its supply change, thus, it would be easier for the government to monitor and control it. The formalization should be involve 5 (five) legal ULAB smelters in Indonesia which all this time take advantage of the existence of illegal supply chains (middleman), and illegal smelters; suppliers and producers of lead ingot at lower prices –because they do not implement clean methods and technology which are the obligations of hazardous waste processors– than producing them in their own legal smelters.

Of course, it is timely to force these legal smelters to build their legal supply chains to strengthen and stabilize their owned supply of raw materials, which have been undermined by middlemen directing ULAB supplies to illegal smelters. Currently, despite being illegal, middlemen are the most powerful in controlling the ULAB supply chain in Indonesia; whether ULAB is sent to legal or illegal smelters. So, the key to controlling lead pollution from the used battery recycling process in Indonesia is to improve the governance of the used battery supply chain.

Kami juga menemukan anak sekolah yang tinggal di sekitar area peleburan di 8 kota (termasuk Tegal/ Pesarean) memiliki kisaran BLL minimal 2  $\mu\text{g}/\text{dL}$  dan maksimal 65  $\mu\text{g}/\text{dL}$  dengan rata-rata 25,63  $\mu\text{g}/\text{dL}$  (KPBB, 2016). Sedangkan data Desa Pesarean tahun 2016 menunjukkan rata-rata 32,2  $\mu\text{g}/\text{dL}$  dengan angka terendah 5  $\mu\text{g}/\text{dL}$  dan tertinggi 61  $\mu\text{g}/\text{dL}$ . Angka ini menurun sesuai uji BLL yang dilakukan per 30 November 2018 yaitu rata-rata 21,4  $\mu\text{g}/\text{dL}$  dengan angka terendah 6,1  $\mu\text{g}/\text{dL}$  dan tertinggi 73,4  $\mu\text{g}/\text{dL}$ . Data terkini di Desa Cinangka, Kabupaten Bogor (2019) menunjukkan rata-rata 19,2  $\mu\text{g}/\text{dL}$ ; mengalami penurunan dibandingkan data tahun 2010, dan 2013 masing-masing sebesar 25,2  $\mu\text{g}/\text{dL}$ , dan 23,9  $\mu\text{g}/\text{dL}$ .

Banyak upaya yang telah dilakukan dalam 5 tahun terakhir, terutama yang telah intensif dilakukan dalam 6 (enam) bulan terakhir. Kegiatan tersebut merupakan penyadaran masyarakat baik masyarakat umum, pekerja/pemilik smelter dan kerajinan logam, anak sekolah dll terkait dengan lingkungan sekitar yang memiliki resiko tinggi terhadap kesehatannya. Upaya penyadaran dilakukan dengan berbagai kegiatan komunikasi dan edukasi masyarakat sambil menunggu tindakan teknis terkait pembersihan pencemaran limbah B3 di sekitar area smelter, dan pemasangan/pengoperasian smelter yang ramah lingkungan. Melalui kegiatan peningkatan pemahaman, kesadaran dan keterampilan masyarakat untuk menghindari paparan logam berat berisiko tinggi dari industri peleburan timbel, dan risiko paparan dari limbah logam berat/slag landfill.

Termasuk penyadaran pada hal yang paling penting, yaitu untuk menghentikan pencemaran timbel dari smelter daur ulang ULAB/aki bekas ilegal, dengan usulan legalisasi rantai pasok aki bekas dan menghentikan smelter ilegal aki bekas tersebut. Dengan demikian akan lebih mudah bagi pemerintah untuk memantau dan mengendalikannya.

Legalisasi tersebut harus melibatkan 5 (lima) ULAB smelter legal di Indonesia yang selama ini memanfaatkan keberadaan rantai pasok, baik dropping point maupun pengumpul aki bekas; dan harus berkompetisi dengan produsen timbel batangan dari illegal smelter berikut jaringan



rantai pasoknya yang memiliki harga lebih murah karena tidak menerapkan metode dan teknologi bersih yang menjadi kewajiban pengolah limbah B3.

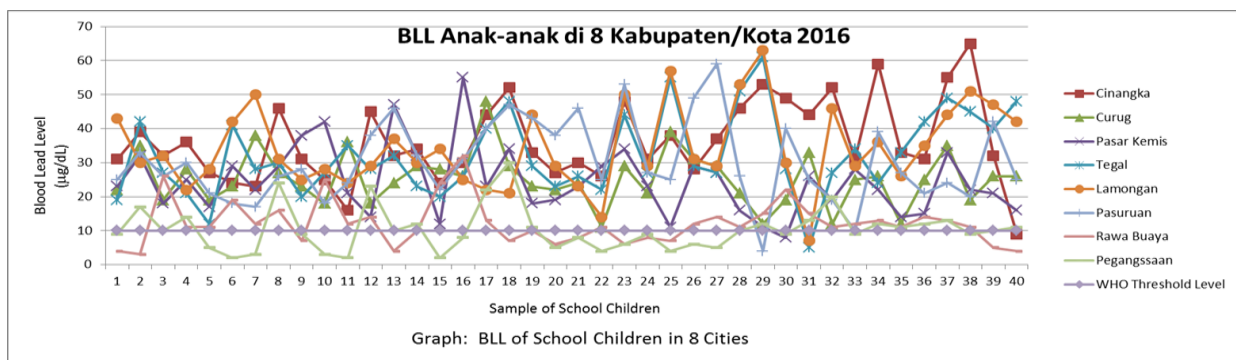
Tentu saja, ini adalah waktu yang tepat untuk mendorong pabrik peleburan legal (berizin) untuk membangun rantai pasokan resmi mereka guna memperkuat dan menstabilkan pasokan bahan baku mereka sendiri, yang telah dirusak oleh perantara yang mengarahkan pasokan ULAB ke pabrik peleburan ilegal. Saat ini, meskipun ilegal, perantara adalah yang paling kuat dalam mengendalikan rantai pasokan ULAB/aki bekas di Indonesia. Perantara yang menentukan apakah aki bekas dikirim ke smelter legal atau ilegal.

Jadi, kunci pengendalian pencemaran timbel dari proses daur ulang aki bekas adalah dengan memperbaiki tata kelola rantai pasok aki bekas. Dan agar lebih efisien dan efektif, tugas tersebut harus diserahkan sebagai kewajiban kepada 5 (lima) smelter legal.

*And to be more efficient and effective, the task must be submitted as an obligation to 5 (five) legal smelters.*

*To manage the above efforts, with support from US-Embassy - Jakarta, KPBB will carry out a series of activities to control lead pollution in the environment in Indonesia in 2021/2022. The activities would cover the schoolchildren Blood Lead Level (BLL) test, public campaign and proposing policy reform to legalize ULAB supply chain and smelter.*

Untuk mengelola upaya tersebut di atas, dengan dukungan dari Kedutaan Besar AS - Jakarta, KPBB akan melakukan serangkaian kegiatan pengendalian pencemaran timbel di lingkungan di Indonesia pada tahun 2021/2022. Kegiatan tersebut meliputi uji Kadar Timbel Darah (BLL) anak sekolah, kampanye publik dan usulan reformasi kebijakan untuk melegalkan rantai pasokan dan smelter ULAB.



**Objective:**

- *To share current status of ULAB recycling management, and its effects on public health, environment, and socio-economy.*
- *To launch the program “To Monitor and Prevent Lead Exposure in Indonesia”.*
- *Binding commitment to control lead of ULAB recycling exposure in the environment.*

**Organizer:**

- *Ministry of Environment and Forestry*
- *Ministry of Health*
- *US-Embassy – Jakarta*
- *KPBB*

**Event Details:**

*The Workshop will be conducted on 10 March 2022 at 09.00 – 13.00 Western Indonesian Time through virtual meeting*

**Maksud dan Tujuan:**

1. Untuk membagikan status terkini dari manajemen daur ulang aki bekas dan dampaknya terhadap lingkungan, kesehatan dan social ekonomi.
2. Meluncurkan program “Mencegah dan Memantau Paparan Timbel di Indonesia”.
3. Menjalin komitmen pengendalian paparan timbel dari proses daur ulang aki bekas.

**Penyelenggara:**

- Kementerian Lingkungan Hidup dan Kehutanan
- Kementerian Kesehatan
- Kedutaan Besar AS – Jakarta
- KPBB

**Detail acara:**

Workshop akan dilaksanakan pada 23 Maret 2022 pukul 09.00 – 13.00 WIB melalui *virtual meeting* Zoom Platform.

Registrasi:

<https://bit.ly/Lead-Poisoning-ID>

Live: **You Tube** infokpbb



## AGENDA

TIME	AGENDA	PIC
08.30 – 09.00	REGISTRATION	OC
09.00 – 09.45	OPENING: <ul style="list-style-type: none"> <li>• Report from KPBB</li> <li>• Speech by US Embassy – Jakarta</li> <li>• Speech by Director General for Public Health, Ministry of Health</li>   <li>• Speech by Director General for Waste, Hazardous Waste Management, Ministry of Environment and Forestry</li>   <li>• Speech and Opening by Director General for Environmental and Forestry Law Enforcement, Ministry of Environment and Forestry</li> </ul>	MC <ul style="list-style-type: none"> <li>• KPBB</li> <li>• US-Embassy</li> <li>• Director General for Prevention and Control Dises</li>   <li>• Director General for Waste, Hazardous Waste Management, Ministry of Environment and Forestry</li>   <li>• Director General for Environmental and Forestry Law Enforcement, Ministry of Environment and Forestry</li> </ul>
09.45 – 09.55	Launching Program: To Monitor and Prevent Lead in Indonesia	MOEF, MOH, US Embassy
09.55 – 10.40	Panel Discussion: To End Lead Poisoning in the Environment: <ul style="list-style-type: none"> <li>• Legalizing the Sustainable Lead Recycle and Its ULAB Supply Chain</li>   <li>• Law Enforcement for the Sustainable Lead Recycle and Its Supply Chain.</li>   <li>• To Prevent Health Effect of ULAB Recycling</li> </ul>	<ul style="list-style-type: none"> <li>• Director for Hazardous Waste Verification, Ministry of Environment and Forestry</li>   <li>• Director for Environment and Forestry Criminal Law Enforcement Ministry of Environment and Forestry</li>   <li>• Director for Environmental Health, Ministry of Health</li> </ul>
10.40 – 12.00	<ul style="list-style-type: none"> <li>• Self-Capacity Building of ULAB Recycle Supply Chain</li>   <li>• Self-Capacity Building of Legal Lead Supply Chain of Lead Acid Battery Production.</li> </ul>	<ul style="list-style-type: none"> <li>• PT Non Ferindo Utama</li> <li>• PT Muhtomas</li> <li>• PT Karabha Wiratama</li> <li>• PT IMLI</li> <li>• PT Hidup Makmur Steel</li>   <li>• NS Batter</li> <li>• GS Battery</li> <li>• Yuasa Battery</li> </ul>
12.00 – 13.00	Q/A and Workshop	
13.00	Closing	