

PUBLIC AWARENESS CAMPAIGN TO STOP WASTE COLONIALISM AND TO REDUCE MICROPLASTIC POLLUTION IN INDONESIA

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RIVER WARRIOR INDONESIA

2023

PROJECT ACTIVITY REPORT 2023
MICROPLASTICS RESEARCH AND PUBLIC AWARENESS CAMPAIGN
AESHNINA A. AQILANI
January – December 2023

A. BACKGROUND

Excessive and unnecessary plastic consumption has turned into a microplastic catastrophe all over the world. Microplastics have contaminated our food chain, they have not only been found in the Arctic, but also in the Mariana Trench, the deepest ocean trench in the Western Pacific, and on Mount Everest, the highest mountain on earth, and in the clouds. Microplastics are found in our blood, breast milk, placentas, lungs, and brains. In Indonesia, microplastics have contaminated seafood from Madura Straits East Java and in the remote islands of Raja Ampat Papua.

Microplastic pollution in the Brantas River Basin has reached alarming levels, affecting water, sediment, groundwater, and marine life. Plastic contamination originates from multiple sources, including littering, illegal dumps, waste burning, drainage, and plastic and paper recycling industries. The issue is compounded by excessive plastic production and consumption and low government capacity for effective waste management. Moreover, there exists a significant gap in understanding plastic pollution problems, their root causes, and viable solutions.

This project aimed to build awareness regarding the danger of microplastics contamination in human body and promote collective action to reduce excessive and single-use plastics, and also to monitor microplastic pollution in the environment. The community can join or organize river clean-up actions as interim measures and promote zero-waste solutions to reduce plastic waste production and consumption.

The program involves educational outreach, citizen science training, microplastic sampling and analysis, action learning, advocacy, awareness campaigns, press engagement, and local solution projects. The activities also included a call for Single-Use Plastics (SUP) Ban regulations in several municipalities in the river basin. These results highlight the importance of community participation in environmental monitoring from microplastic pollution.

B. GOALS

The goals of this project are

- a. To collect data and information related to microplastic pollution in the wastewater and air in the community in East Java
- b. To raise awareness of the danger of microplastic pollution and its impacts on human health
- c. To promote the reduction of single-use plastic consumption in the young generations
- d. To demand government policy in preventing microplastic pollution and

C. TIMELINE OF PROJECT ACTIVITIES

The project activities were implemented in January to December 2023 and the timeline is shown below.

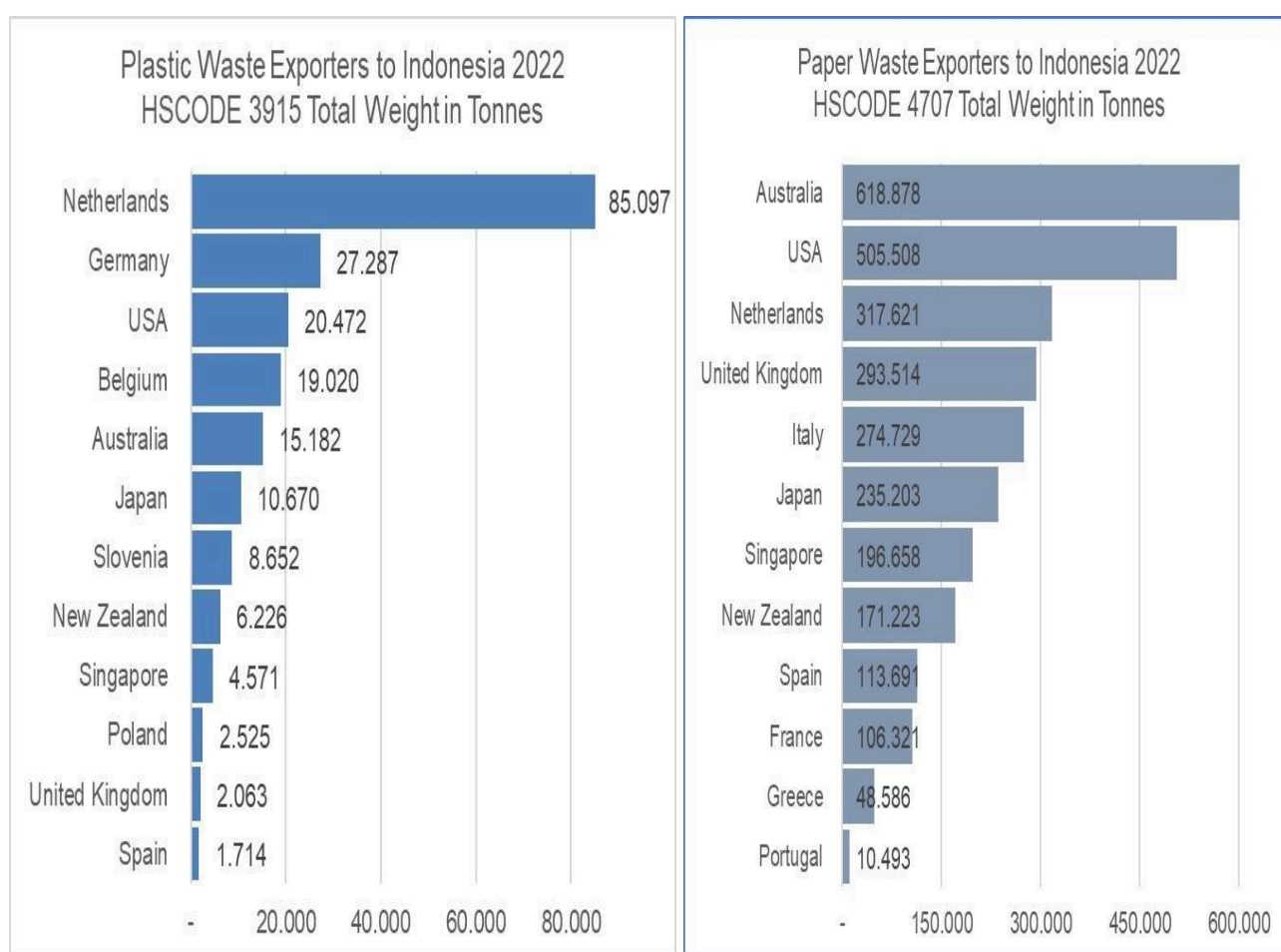
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10. Analysis of the Impact of Imported Plastic Waste in the Food Chain in the Brantas Watershed, East Java

D. PROJECT RESULTS

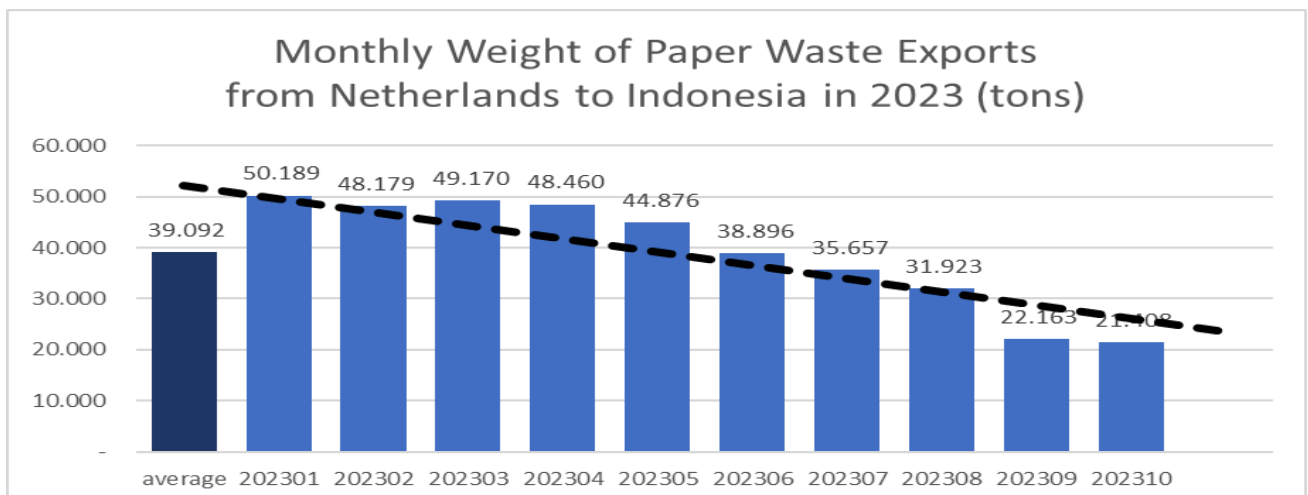
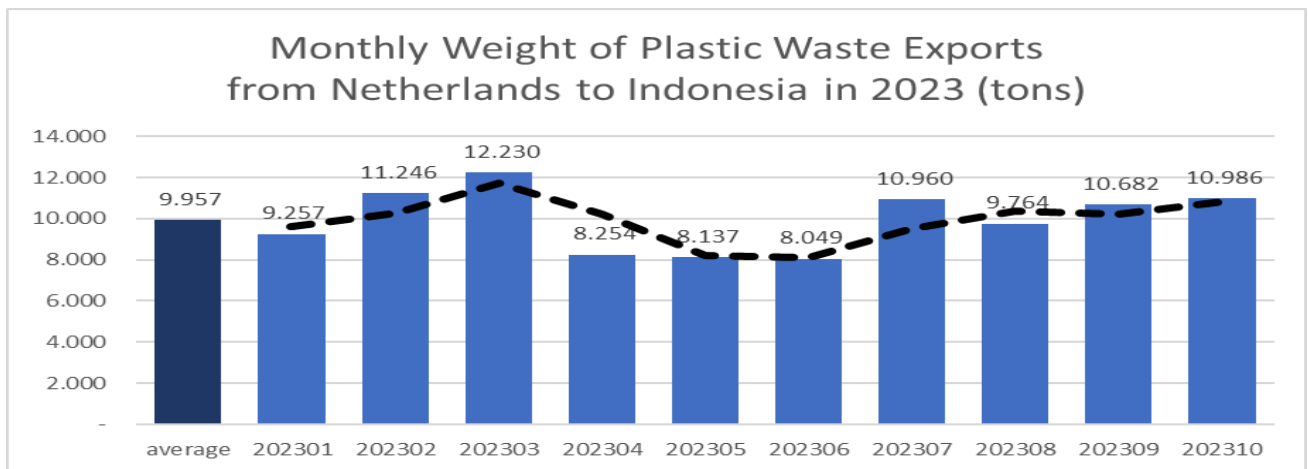
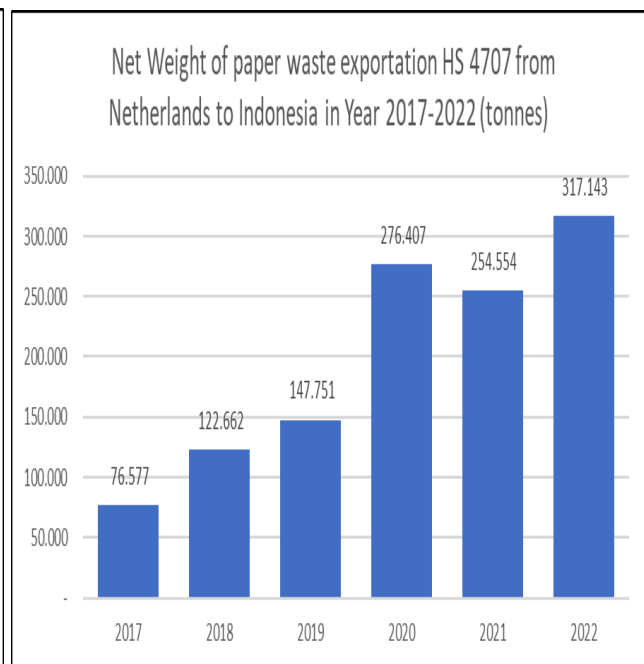
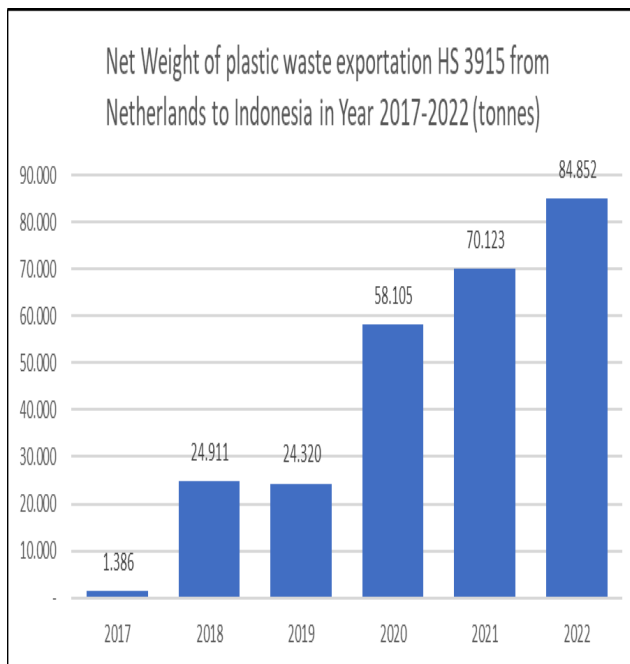
I. Monitoring Paper and Plastic Waste Exports for Recycling

We monitor the volume of paper and plastic waste exportation by collecting waste trade data from the website UN Comm Trade. The average weight of plastic waste imports with HS CODE 3915 is 200.000 tons per year. The Netherlands sit at the top rank of plastic waste exports to Indonesia with a total weight of 85.097 tons in 2022. If we convert the total weight to volume of a 40 feet shipping container, the Netherlands shipment to Indonesia is equivalent to 1.578 containers of plastic waste in 2022, or 4 containers of plastic waste per day.



The paper waste exports to Indonesia is still increasing, due to high demand of waste paper as raw material by recycled paper mill industries in Indonesia and the domestic paper waste collection in Indonesia is very low and too dirty because there is no policy on mandatory waste segregation at source being implemented. The average weight of paper waste imports with HS CODE 4707 by Indonesia for recycling is 3 million tons per year. Netherlands sits at 3rd rank of paper waste exporters to Indonesia with total weight exported was 317.621 tons in 2022. If we convert the total weight to volume of 40 feet shipping container, the Netherlands shipment to Indonesia is equivalent to 6.255 containers of paper waste in a year, or 17 containers of plastic waste per day.

The paper waste is contaminated with impurities especially flexible plastic packaging, dirty plastic bottles, tapes and metals.



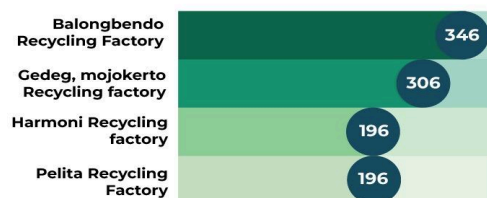
II. Monitoring Microplastics and Environmental Impact of Plastic and Paper Recycling

The imported paper and plastic are used as raw material for paper and plastic recycling in East Java, but the recycling activity does not implement environmentally sound practices. The dirty paper and plastics have to be washed which consume plenty of fresh water from the rivers or groundwater sources, and discharge untreated or poorly treated wastewater into our waterways.

Microplastics in the **water outlet of the Recycling Plant** (particles/100 Liters)

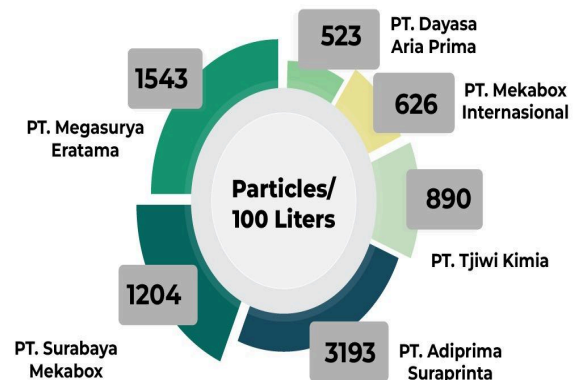


Microplastics in the **sediment of the Recycling Plant** (Particles/50 grams)



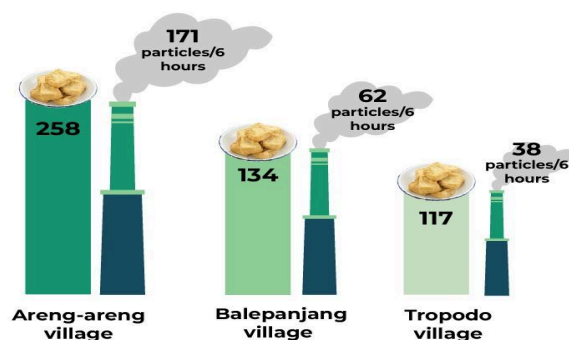
Recycling plants also contribute to the presence of microplastics in rivers by disposing of their waste directly into the water. In some instances, the waste is not adequately treated, leading to the presence of small plastic fragments in both the water and sediment.

Microplastics in the wastewater outlet of a paper mill



In 2022, Indonesia continued to import plastic and paper waste from developed countries. In East Java, paper industry companies such as PT Tjiwi Kimia Tbk, PT Dayasa Aria Prima, PT Eratama Megasurya, PT Mekabox Internasional, and PT Adiprima Suraprinta utilized imported waste as raw materials for production, ranging from 49% to 85%. Additionally, recycling companies processed imported plastic waste, including PET bottles, PP, and packaging plastics. The story begins with the importation of paper and plastic waste.

Microplastics in the **air and tofu** in the Tofu industry center in Tropodo



Microplastics are polluting the air and tofu in the Tofu industry area in Tropodo, Sidoarjo. The presence of microplastics is caused by the smoke from burning plastic as fuel in tofu production. Microplastics are most commonly found in factories that use pure plastic fuel without any wood mixture.

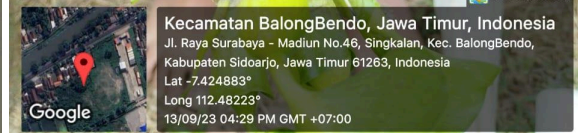
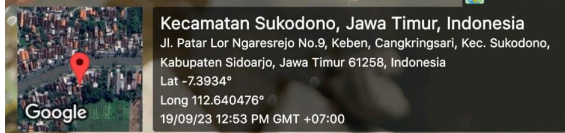
ATTACHMENT. PHOTO DOCUMENTATION OF PROJECT ACTIVITIES

1. Monitoring illegal dump sites of imported paper waste mixed with plastic waste by some paper mills in Sidoarjo, Gresik, and Malang East Java Province





2. wastewater sampling and analysis from paper mills in Brantas River that import foreign paper waste mixed with plastics



3. microplastic sampling and analysis in air samples near waste open burning sites



4. Demonstration to the Governor of East Java to stop plastic waste imports and to improve waste management service for all communities in cities along the Brantas River





Komposisi Bahan *Popok* sel

sumber : Program Brantas Bebas Plastik - DLH Propinsi Jawa Timur

No	Nama Bahan (t)	Bentuk/Senyawa Kimia	%	Dampak
1	Polimer Polietilena (SAP) (Bahan Beracun)	Serbuk, Micro Plastic, Microbeads	42	Sir... keracu... edera p...
		TBT (Tributiltin)		Me... mer... ber... yawa E... ritasi...
2	Styrene		27	Me... ensi... re...

ate 12

5. Sending letters to the president and governor to stop importing plastic waste, request for improvement of waste management system for all communities and enforce regulation in banning single-use plastics



6. Raise a petition to the Minister of Education to mandate the implementation of Plastic Free School Canteen all over Indonesia. The petition <https://www.change.org/p/menteri-pendidikan-dan-kebudayaan-republik-indonesia-kurangi-penggunaan-plastik-sekali-pakai-di-lingkungan-sekolah> has been raised since 2019. Due to the national election, the petition result will be delivered after the new minister of education is selected by the new president in October 2024.

change.org Start a petition My petition Search

Welcome to Change.org! There are successful petitions every hour thanks to supporters like you.

What's new Petition details Comment Find it

Support Reducing the Use of Single-Use Plastics in the School Environment



Ayo! Dukung Sekolah Bebas Plastik Sekali pakai!

Started March 29, 2021
Petition [Minister of Education and Culture of the Republic of Indonesia](#)

22.160 25.000
Signature Next destination
Support now

Thanks to your support, this petition has a chance to win! We only need 2,840 more signatures for the next target milestone - can you help?

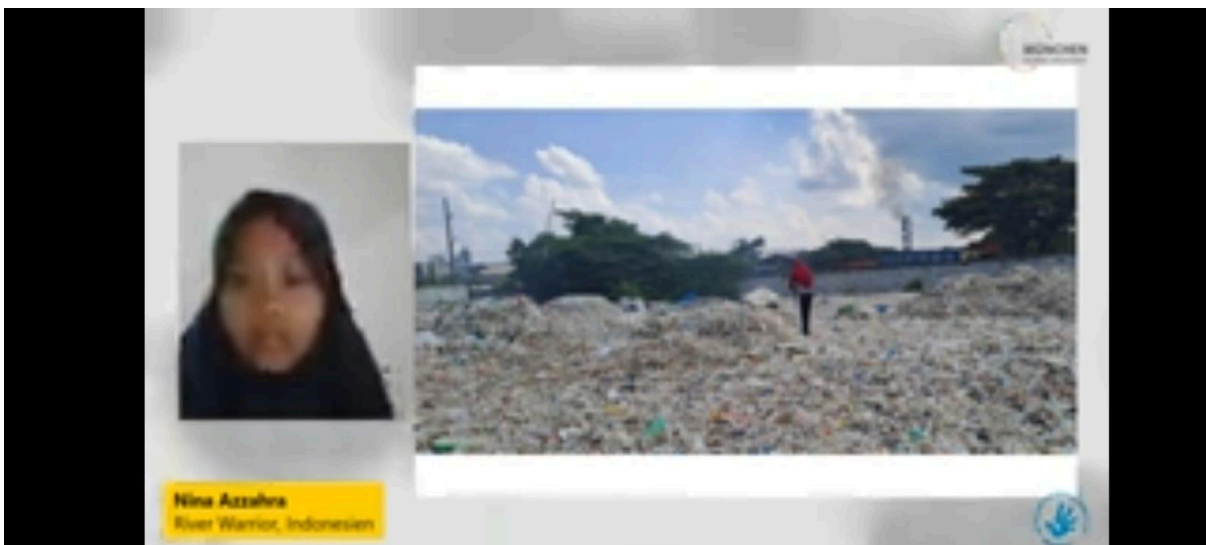
Take the next step!

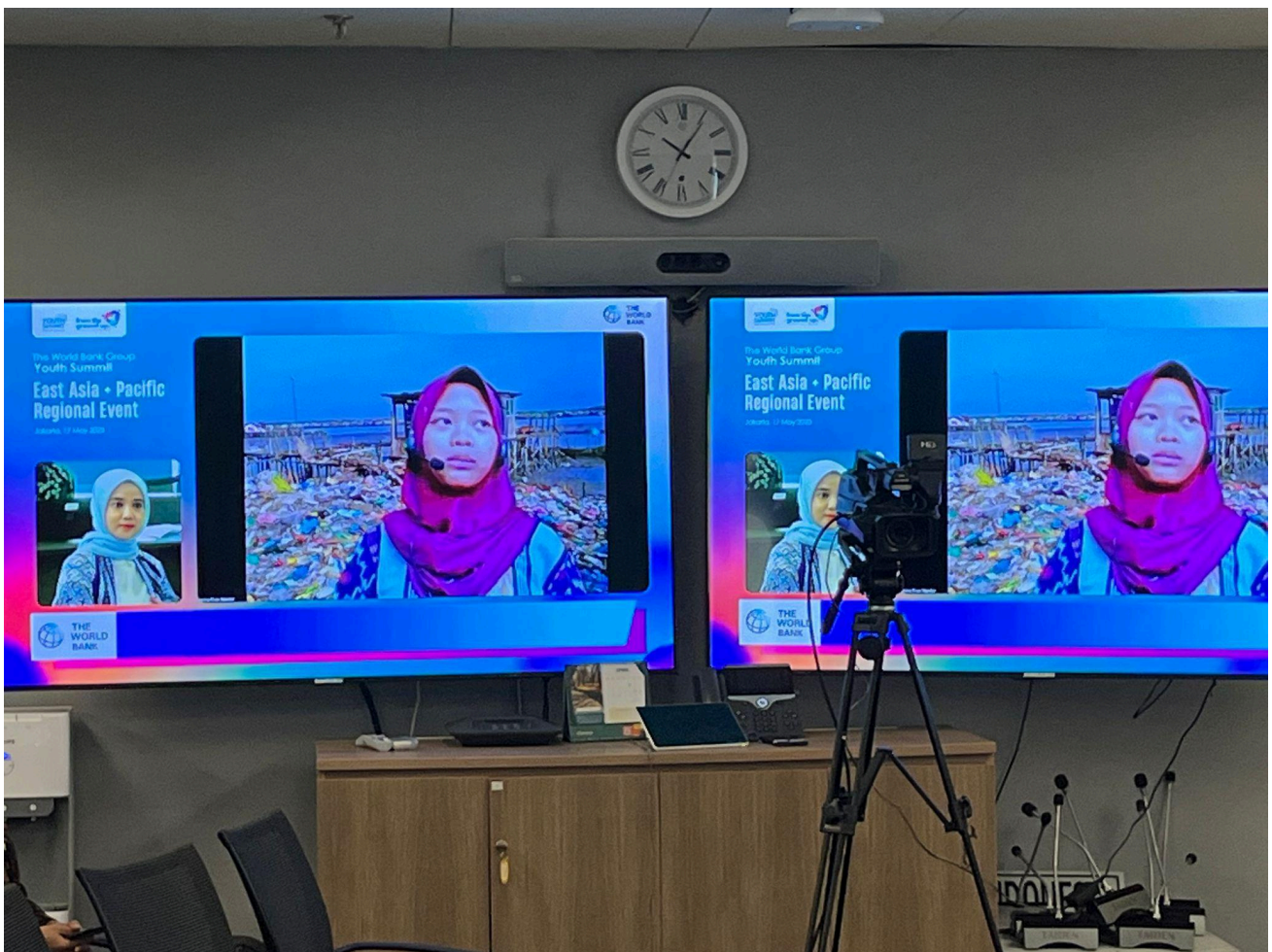
Reasons why this petition is important

Started by [Aeshninna Azzahra](#)

To meet you, my name is Nina, I'm currently studying at SMPN 12 Gresik. I really salute Mr. Nadiem, Minister of Education and Culture. **He made a rule about not using single-use plastic at the Ministry of Education and Culture. Check SE No.12/2019.**

7. International forum to raise awareness on environmental and health impacts of plastic pollution and plastic waste trade colonialism







8. Public awareness campaign on microplastic hazards to human health and the environment











FLACE

Foreign Language Space

How to Conduct Ourselves to be The Source at International Conference?

 Jumat, 11 Agustus 2023

 Cordoba Convention Hall, Smamio

 13.05-14.50 WIB

Aeshnina Azzahra

- Environmental Activist
- Siswa kelas XI-5 Smamio





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9. Promoting zero waste lifestyle and reusable products

