



# ADUPI

Indonesian Plastic Recycling Association

[www.adupi.org](http://www.adupi.org)

Copyrighted. 2023.

## PLASTIC CIRCULARITY

Call for Industries : Transition Towards a Sustainable Future  
BASF Sustainability Event  
*Monday, June 5th, 2023*

CLEAN  
CITY

DISASTER

## OVERVIEW

# ABOUT ADUPI

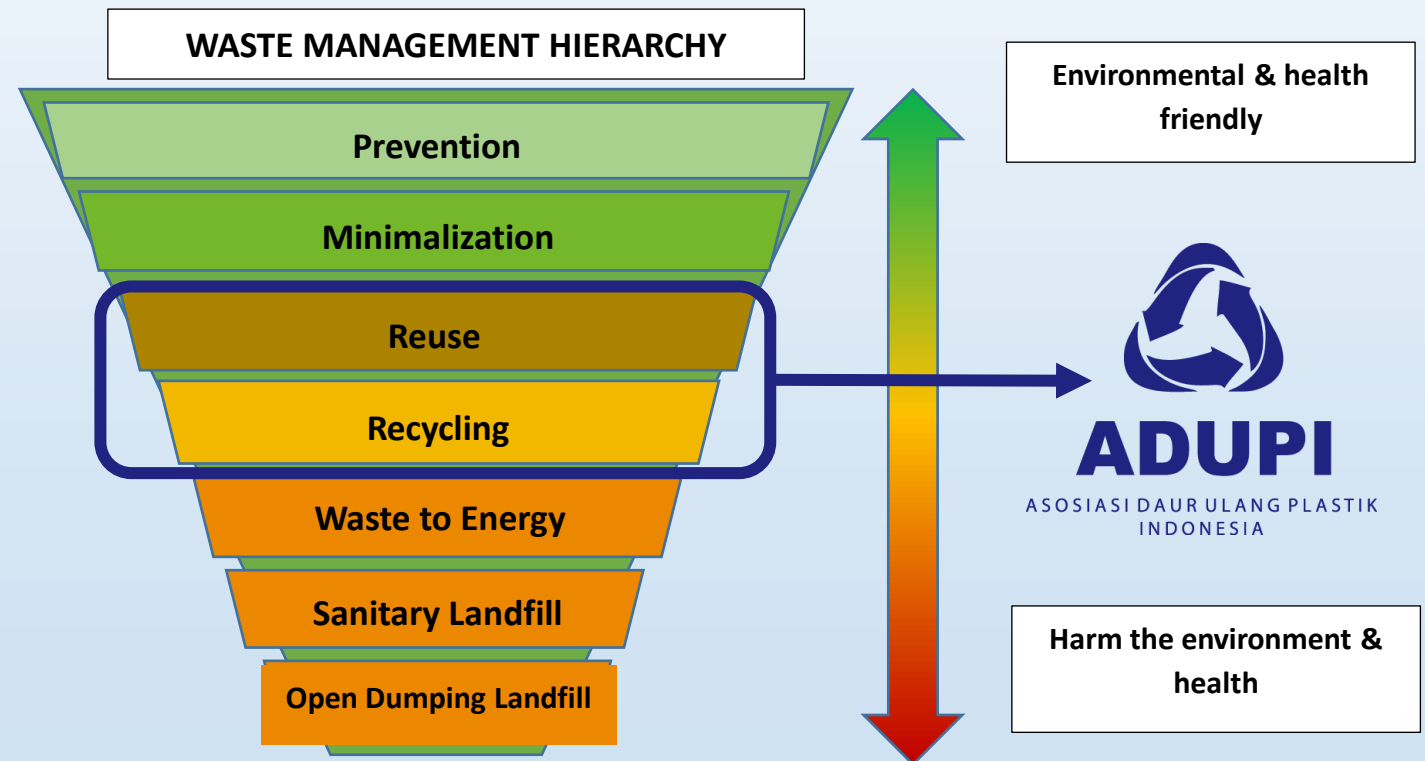
### Vision

- Become an association that is beneficial for **members** and the **government** in **environmental management**.

### Mision

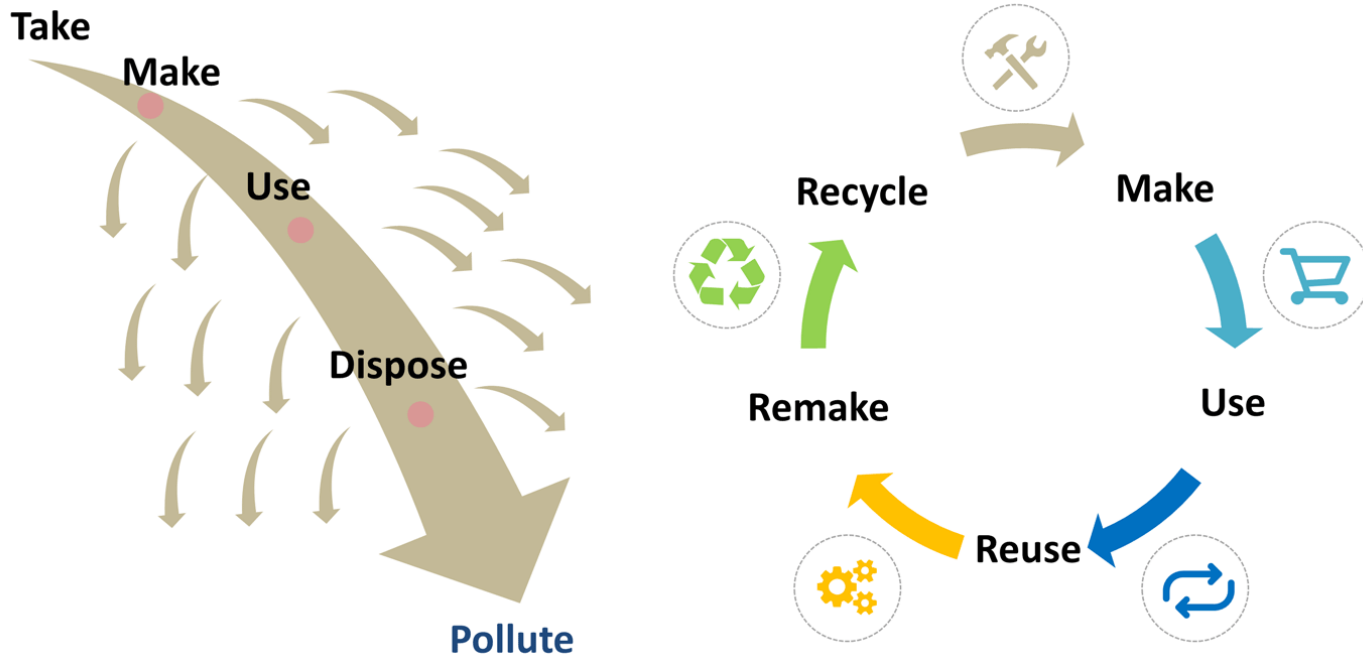
- Fighting for the aspirations of members, increasing cooperation, and communication between members and the Indonesian government.
- Improving services and assisting members in providing direction related to government policies

- Founded in **1989** under the name **AIDUPI** and in **2015** changed its name to **ADUPI** in Surabaya, East Java.
- To create **the best recycling business, competitive, conducive, and able to compete both locally and abroad** by cooperating with all actors involved.
- Together with the government to build **standards for plastic recycling raw materials** and make a **major contribution to accelerating the circular economy** in the plastics sector in Indonesia.

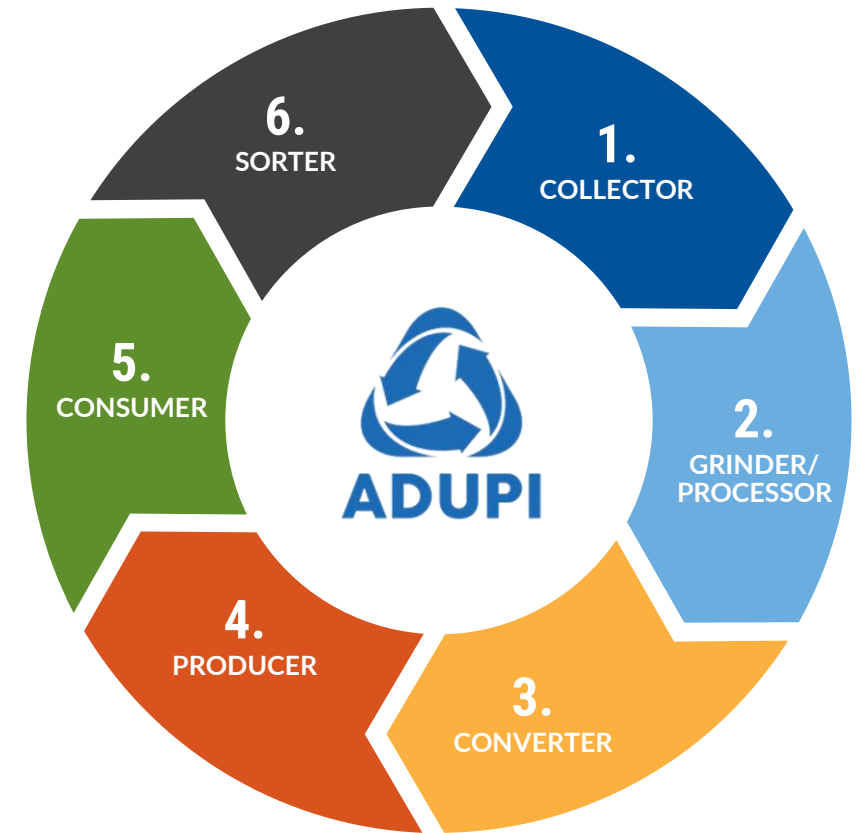


# CIRCULAR ECONOMY

## LINEAR ECONOMY VS CIRCULAR ECONOMY



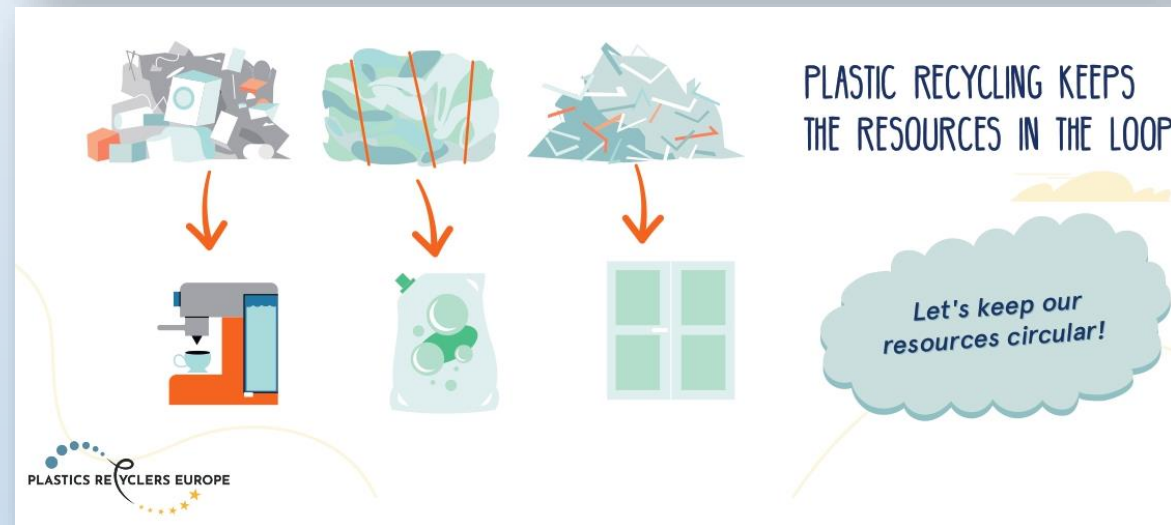
## INDONESIAN PLASTIC RECYCLING ECOSYSTEM



# CIRCULAR ECONOMY BACKGROUND

The circular economy is a major concern for governments around the world for the following main reasons:

1. Experiencing limited natural resources for the welfare of the country.
2. Overcoming environmental problems resulting from the industrialization process in this case, environmental pollution on land, waters, sea, and air.
3. Tackling the growing problem of climate change



# CIRCULAR ECONOMY

## BASIC PRINCIPLES

- Efficiency of the use of natural resources as a source of industrial raw materials
- Energy use efficiency in the production process
- Design systems in the production process so that waste and pollution are minimized, and even become a resource for the production process itself.





# ADUPI'S AND MEMBERS' INITIATIVES IN ENCOURAGING IMPLEMENTATION OF CIRCULAR ECONOMY IN INDONESIA



Work with the government: Coordinating ministry for maritime affairs and investment (Kemenko Marves), ministry of environment and forestry of the republic of indonesia (KLHK), ministry of industry (Kemenperin)] socializing the circular economy



Facilitate a coaching clinic with the ministry of environment and forestry of the republic of indonesia (KLHK) for large-scale members and non-members regarding the roadmap for waste reduction by producers (Regulation of The Minister of Environment and Forestry Number P.75 of 2019)



# ADUPI'S AND MEMBERS' INITIATIVES IN ENCOURAGING IMPLEMENTATION OF CIRCULAR ECONOMY IN INDONESIA



Cooperate with various parties to increase the collection rate of used plastic packaging

Support and initiate the development of a "from bottle to bottle" plastic recycling factory (e.g., PT Bumi Indus Padma Jaya in Jombang). We hope that several large-scale beverage industries in Indonesia will cooperate in to achieve higher recycling rate and incorporating recycled content in the packaging.

# NATIONAL CIRCULAR ECONOMY PROGRAM

## with Brand Owner

TOTAL COLLECTION OF PLASTIC RECYCLED MATERIALS  
FROM 14 PARTNERS  
APRIL 2021 - DESEMBER 2022 (21 MONTHS) : 1 4 . 4 2 3 T O N

### Program Objectives



Increase the collection rate therefore increase recycling rate and hopefully can decrease marine debris.



Assist members in implementing the minister of environment and forestry regulation no. 75 / 2019 regarding the waste reduction roadmap by producers.



Capacity building and upscaling plastic recycling supply chain.

INCREASING COLLECTION RATE  
=  
INCREASING OF DOMESTIC RECYCLED RAW MATERIALS



UD. Mulia Jaya Plastik – Jakarta Utara



UD Raisa Naura - Serang



UD. Indah Plastik - Tangerang



PT. Kita Bumi Global - Bogor



UD. Badak Benteng - Tangerang



UD. Tamara Jaya - Tangerang

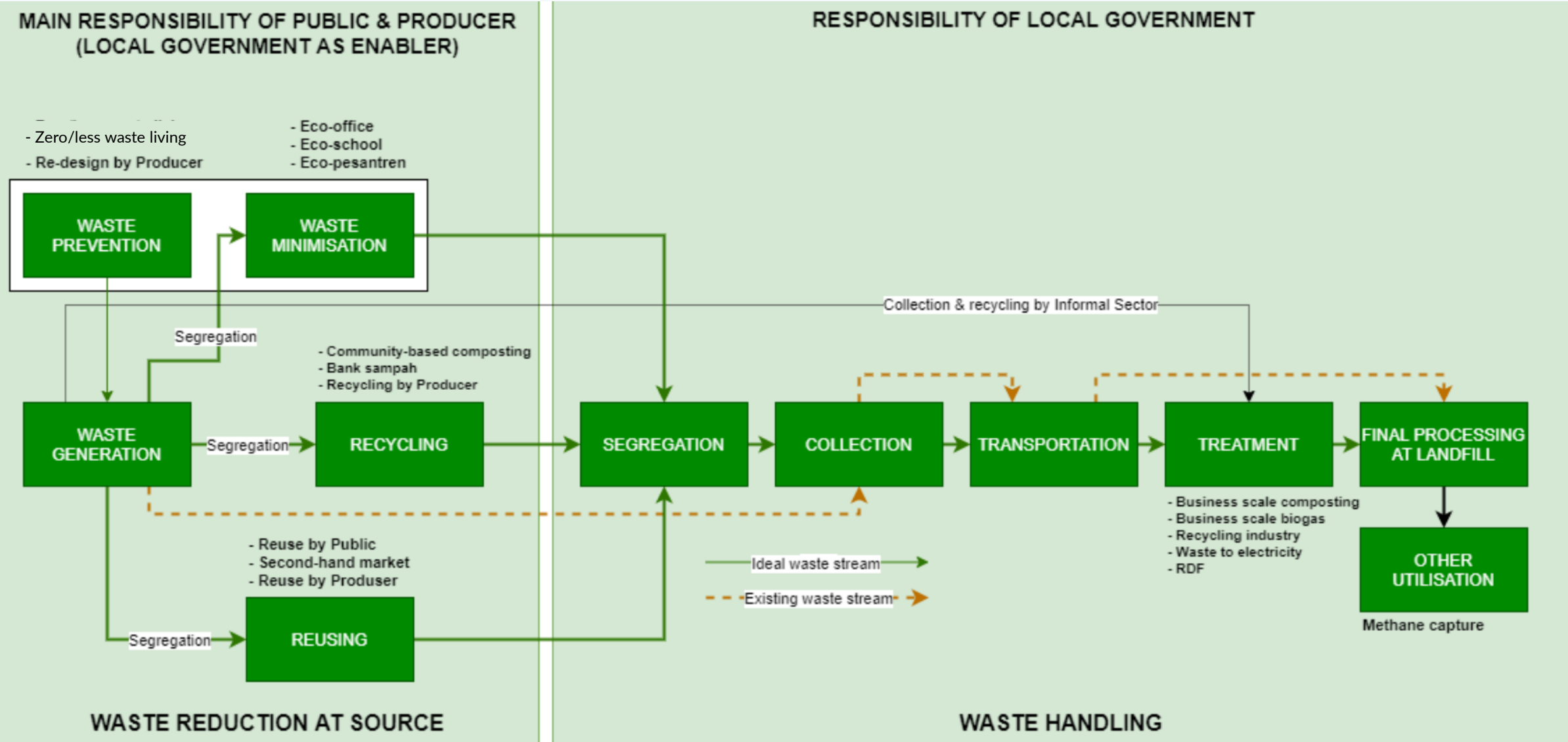


Bank Sampah Bersinar - Bandung

- ### GOAL 2022
- Achieved the target of collecting recycled raw materials of **1,500 tons/month**.
  - **Digitization** of data collection (collection rate) through the **application**.
  - Added **13 new partners** such as from the Main Waste Bank, TPS3R and collectors.
  - **Expanding the program** coverage area to **West Java, East Java, Bali, and NTB-Lombok, Maluku**.
  - **Strengthening campaign and educational** materials through social media, short videos, webinars, and podcast broadcasts.



# Solid Waste Management: Ideal vs Existing



# FLOW OF POST CONSUMER RECYCLED (PCR) IN INDONESIA

## Informal

85% Collected PCR



Low recycling rate (7%)

- Absence of regulation
- Limited budget
- Poor infrastructure
- Lack of awareness

## Formal

15% Collected PCR

Source

Private/Government – Waste management service

- Collecting & Dumping
- No Segregation

Government - municipal waste Facility (TPS3R/TPST)

- Bad leadership & unskilled
- Lack of budget & infrastructure

Land, water, air

Open dump landfill - forever waste

Waste picker

Long chain

Recycle industry

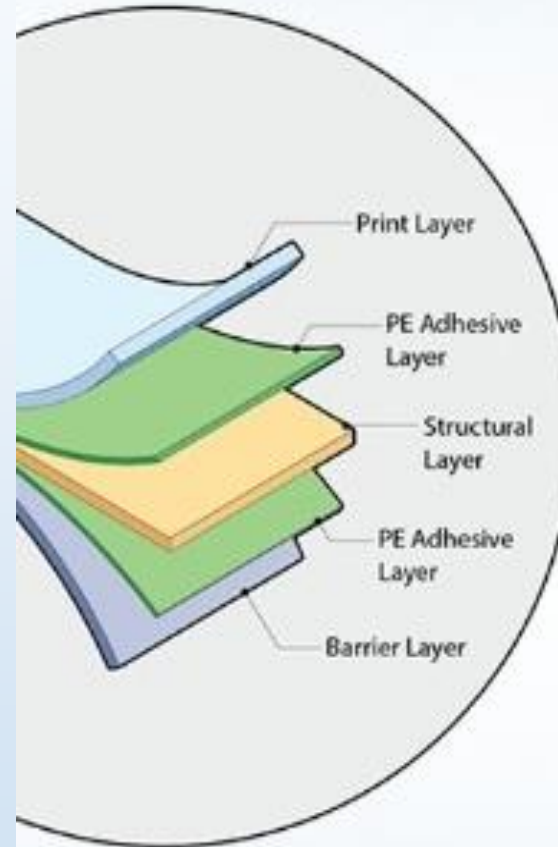


# RELEVANT REGULATION ON PLASTICS IN GENERAL

<b>National Laws (UU)</b>	UU 18/2008 Law in Solid Waste Management		UU 32/2019 Law Environmental Protection and Management			
<b>Government Regulations (PP)</b>	PP 81/2012 Government Regulations on Management of Household and Household-like waste	PP 101/2014 Government Regulation in Hazardous Waste Management	PP 46/2017 as Environmental Economic Investments	PP 27/2020 Government Regulation on Spesific Waste	Draft Governmement Regulations on Plastic Waste	
<b>Presidential Regulations (Perpres)</b>	Perpres 97/2017 on National Policy and Management Strategy on Household and Household-like waste		Perpress 15/2016 on Acceleration of Damage and Pollution Control on Citarum River Based West Java	Perpress 63/2018 on Maritime Debris Management	Prepres 35/2018 on Acceleration of Developmentog Waste to Energy Using Environmentally Sound Technology	
<b>Presidential Decrees</b>	Keppres 61/1993 and 47/2006 on Ratification of the Based Convention on the Control of the Transboundary of Hazardous Waste and Their Disposal					
<b>Ministrial Decrees</b>	Ministry of Home Affairs 33/2010 on Guidelines on Waste Management	Ministry of Environment Regulation 13/2012 on Waste Bank	Ministry of Public Works Regulation 3/2013 on Implementations of Solid Waste Infrastructure Facilities	Ministry of Transportation Decree 29/2014 on Marine Environmental Pollution Prevention	Ministry of Trade Regulation 48/2015 on General Provisions in the Import Sector	Ministry of Trade 70/2015 on Identification Number
	Ministry of Trade Regulation 31/2016 on Non-hazardous Waste Import		Ministry of Environment and Forestry Regulation 75/2019 on Roadmap in Waste Reduction by Producers		Ministry of Tourism and Economy Creative 5/2020 Guidelines on Plastic Waste Management on Marine Tourism Destinations	
<b>Regional/ Local Regulations</b>	41 Regional / Local Regulations on Plastic Waste (3 Provinces and 38 Districs/Cities) List of Provinces, districs and cities attached			309 Regional/Local Regulations on Action Plan on Waste Management		

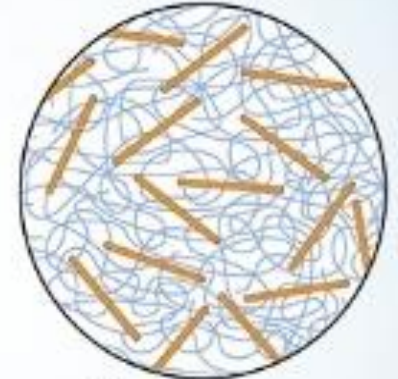


- **Skills**  
Circular economy would require technical skills which are currently not easily achieved.
- **Flexible / Multi Layered Packaging**  
Very few recyclers willing or have the ability to recycle Multi Layered Materials, due to lack of collections, lack of incentives, lack of products or markets opportunity which can be made out of these materials.
- **Finance**  
Transition to a circular economy would involve considerable transition costs – investments.
- **Consumer behavior and business models**
- **Multi-level governance**
- **Green Washing**



**Print Layer**

PE Structural Color without Dye or Pigment



**Structural Layer**

PE-Reinforced PE



**Barrier Layer**

Highly Crystalline PE

# Potential opportunities of moving towards a more circular economy

- **Reduced pressures on the environment.**
- **Innovation**  
a circular economy could trigger a large innovation drive across sectors of the economy because of the need to redesign materials and products for circular use
- **Solve problems with raw materials supply**
- **Growth and jobs**  
a circular economy would overall have a positive impact on employment by creating new jobs and increasing GDP.



# THANK YOU



# ADUPI



[admin@adupi.org](mailto:admin@adupi.org)



+62 811 1884 482



[adupi\\_indonesiaofficial](https://www.instagram.com/adupi_indonesiaofficial)



[adupi.org](http://adupi.org)



# **Building a circular economy and a sustainable future with the Alliance to End Plastic Waste**

---

Presentation for BASF Indonesia Webinar  
Call for Industries: Transition Towards a Sustainable Future  
June 2023

Eileen Cai  
APAC Regional Projects Director, Chief Advisor

# Plastic waste is both an environmental challenge, and an economic opportunity

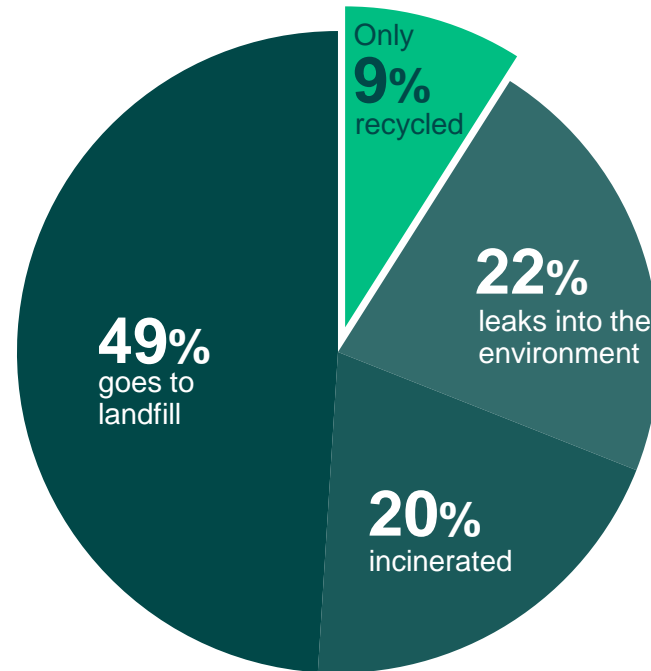


## Environmental challenge

Today, the world produces **400 million** tons of plastic a year

This amount will **Double** by 2040

**3 billion** people lack access to formal waste collection systems



**11 million** tons of plastic waste enter the oceans every year



## Economic challenge and opportunity

**USD 120 billion**

To be unlocked if managed properly







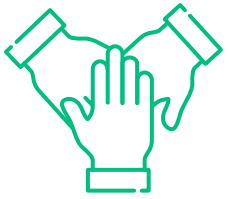
**11 million tons**

Equivalent to

**22,000  
Olympic-sized  
swimming  
pools**



# The Alliance was founded with an ambitious target to solve the plastic waste challenge

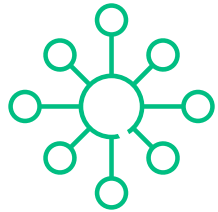


**January 2019**

Founded by

**27**

visionary CEOs



**May 2023**

**>70**

member companies



**A community  
of action**

Investing significant capital to demonstrate and de-risk solutions for a circular economy

# Convening a Global Network to Translate Commitment into Action



**Collective Intelligence + Collective Action = Impact at Scale**

# The Alliance operates in 4 strategic areas...



## Infrastructure

Many communities, mainly in Asia and Africa, do not have systems to collect & manage plastic waste or to increase recycling.

The Alliance is funding new approaches to build and deploy critical infrastructure for plastic waste management



## Innovation

We support ideas that scale new technologies and solutions for a circular economy, with funding, capacity building and incubation services



## Education

Lasting change is only possible if everyone knows why and what it takes to end plastic waste in the environment.

We work with communities at local scale to drive deeper engagement



## Clean up

Every community should have universal access to an environment free of plastic waste

**~60%** investment allocation

**~20%** investment allocation

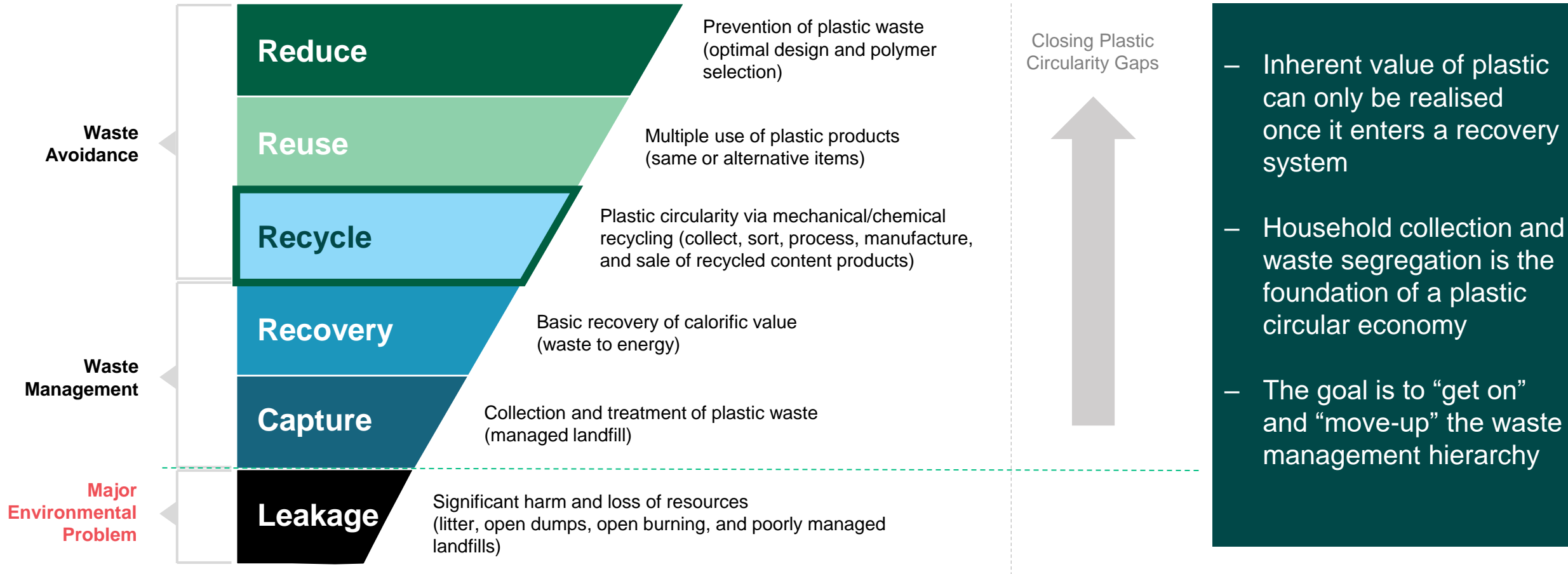
**~15%** investment allocation

**~5%** investment allocation



# A circular economy of plastic must start with collection

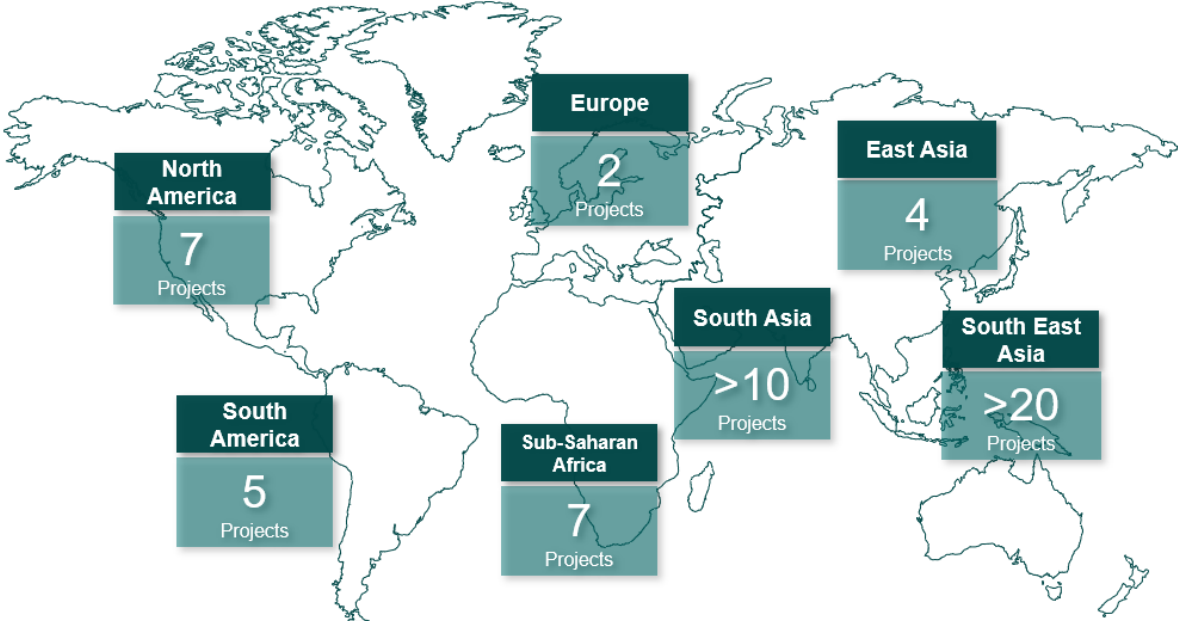
Addressing the challenge of plastic waste is dependent on capture and segregation



# Project Portfolio Impact and Case Studies

# Meaningful progress to date, Mar 2023

We have **>50** active projects located in **30+** countries  
*Majority in priority regions*



Since inception, we have cumulatively achieved...



**48.4** kilotonnes reduced of plastic waste



**48.6** kilotonnes valorised of plastic waste

Our target for 2023 is to reduce **100,000 tonnes** of unmanaged plastic waste, and to capture value from **100,000 tonnes** of plastic waste

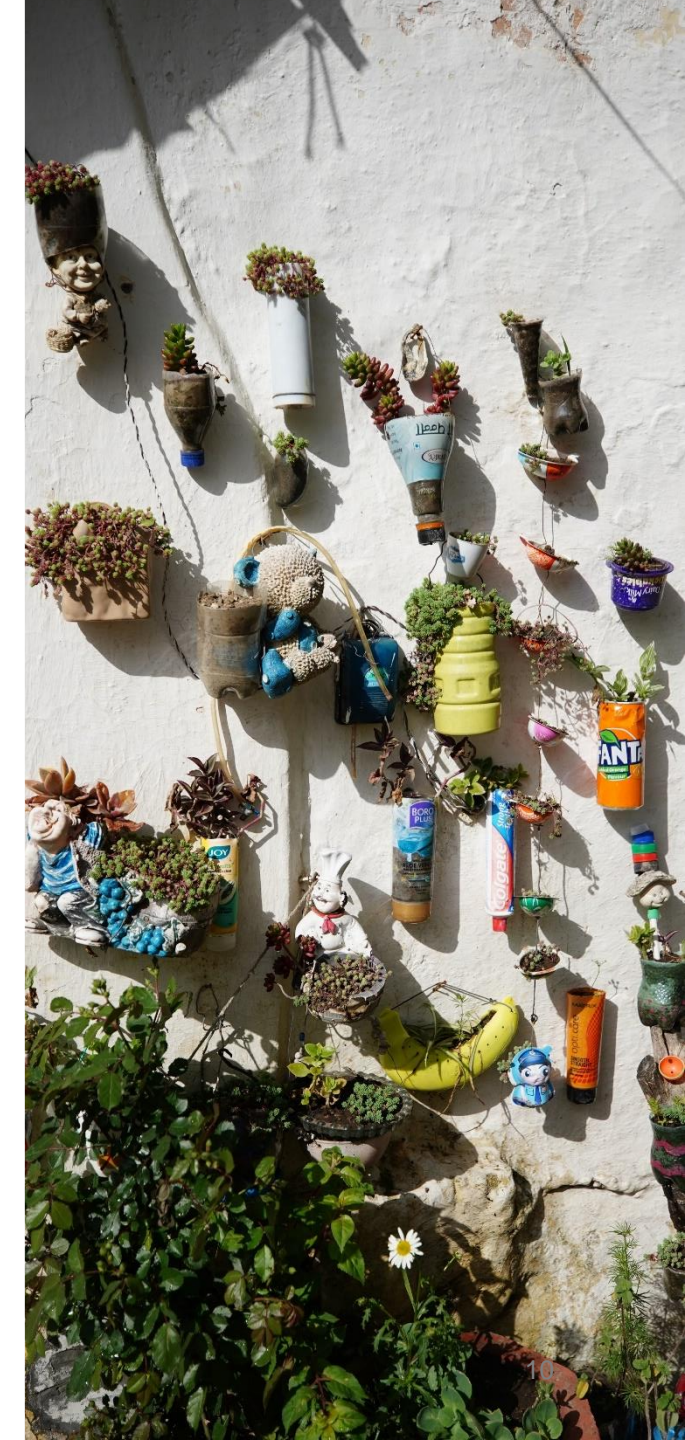
The Alliance focus is on **improving collection, sorting, processing, recycling, and valorisation of plastic waste**, especially in underserved regions like:

- Southeast Asia
- India
- Africa
- South America



# Developing a balanced portfolio of projects

	Early Impact	Solution Building Block	Flagship
<b>Risk</b>	Low	Medium - high	High
<b>Focus</b>	Leveraging proven capabilities Often enabling future collaboration and impact	Focus on de-risking Develop solution pathways Scaling/replication	Large-scale, high impact, system focused Geographically targeted, holistic interventions
<b>Example</b>	Buat Bumi Malang Clean Ups	Ocean Stewards Project STOP Jembrana	Bersih Indonesia





# Multi-Layer Packaging collection and processing in Tangerang

- ~ **600 tons** of MLP collected for co-processing
- Target ~**1,750 tons** of MLP to be collected in Phase II
- Recycle **400 pallets**

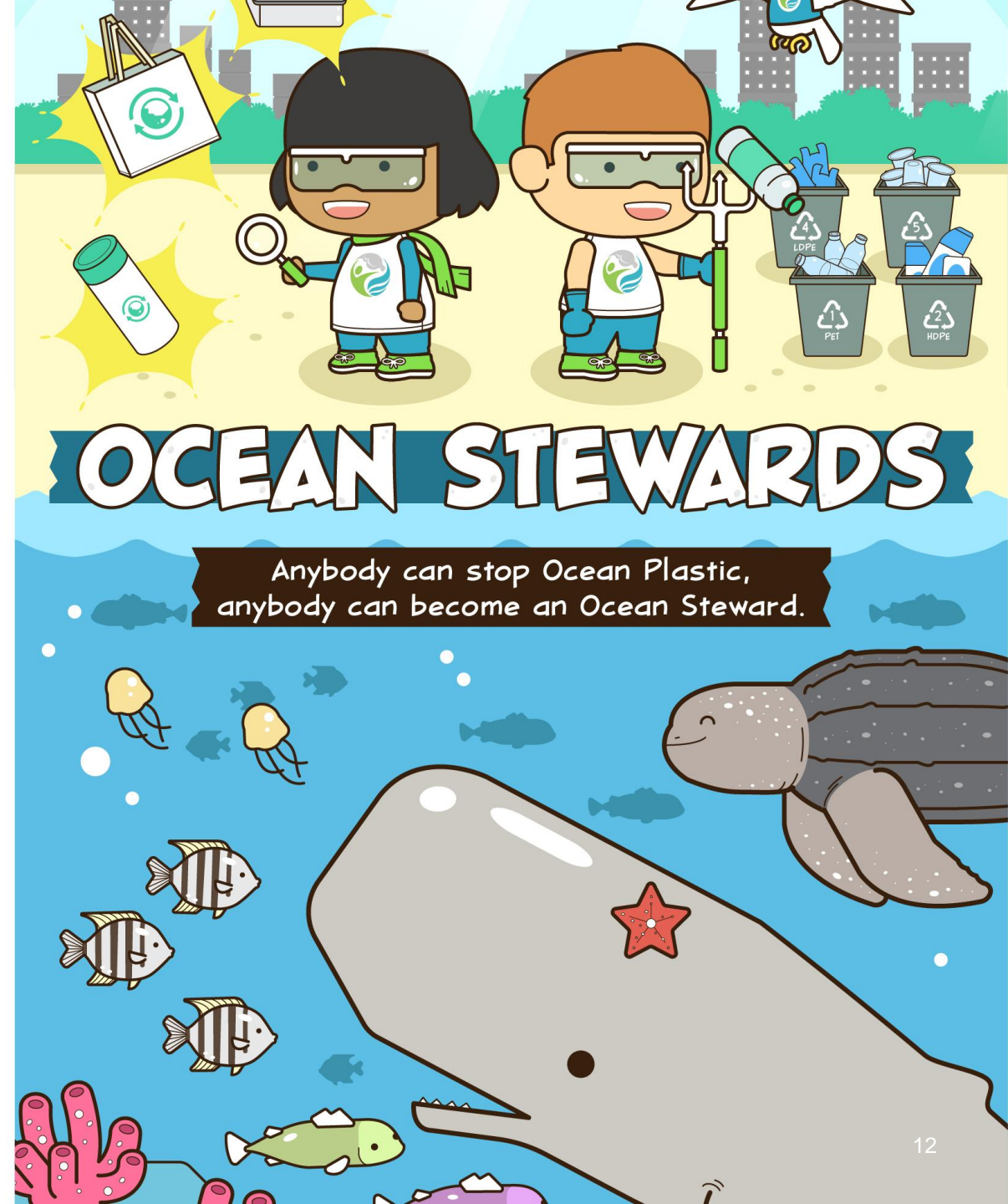


PT. TRIDI OASIS GROUP



# Stopping Ocean Plastic with Schools in Bali

- Bilingual educational modules
- **20 schools** in Bali
- **5,000 students** and their communities engaged
- **~6.84 tonnes** of plastic waste collected for recycling





# Integrated waste management for communities in Bali

- Serving **150,000** people
- Addressing **18 KTA** of MSW
- Up to **2 KTA** of plastic waste



Project  
**STOP Jembrana**



# Building on learnings for our flagship programme in Indonesia

- \$29M
- 5 MRFs
- 5 Transfer Stations
- ~1100 vehicles
- >3,000 jobs
- >3,500km<sup>2</sup>
- *Badan Layanan Umum Daerah (B.L.U.D.)*
- [Cleanups in Malang](#)



**Bersih Indonesia**  
Eliminasi Sampah Plastik



# Delivering On-ground Impact

## Bersih Indonesia Cleanups in Malang

31 dumpsites, over 3,000 tons of plastic waste cleared



Powered by the Alliance to End Plastic Waste





**ALLIANCE  
TO END  
PLASTIC  
WASTE** 

**THANK  
YOU!**





# BASF & Plastic Circularity

Joshua Lau

*Head of Performance Materials Indonesia*

5<sup>th</sup> June 2023

 **BASF**  
We create chemistry

# How do we drive Plastic Circularity?

## Close the loops


## Extend the loops

Renewable based 


Recycled based 

Circularity drivers 

Save resources and reduce waste along the value chain 

Higher durability (for product sharing and less maintenance) 

### Mechanical Recycling



### Chemical Recycling (e.g. ChemCycling®)



### Durable and Efficient Materials



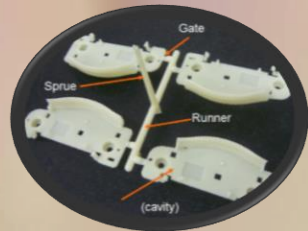
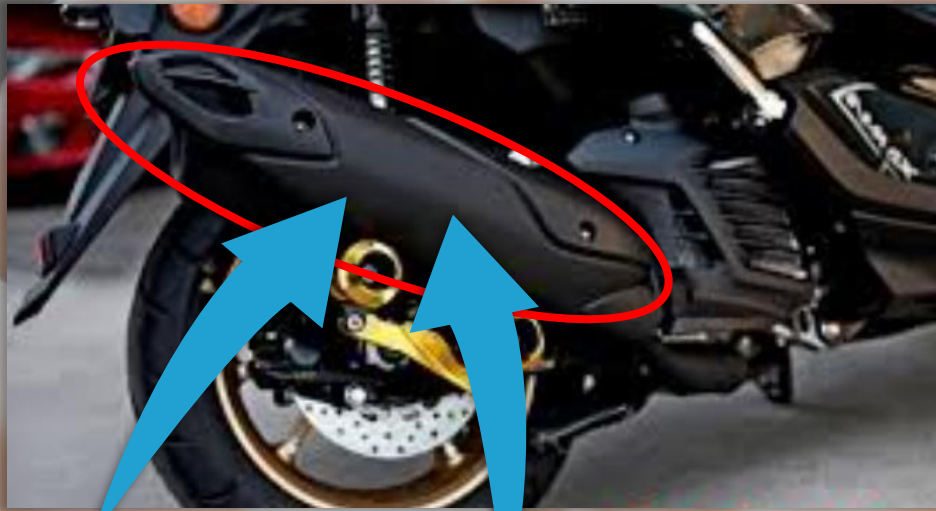
### Measurable Product Carbon Footprint (e.g. SCOTT™)





# We collaborate successfully with our partners to recycle and manage waste

## Recycling production waste



Runner & Sprue

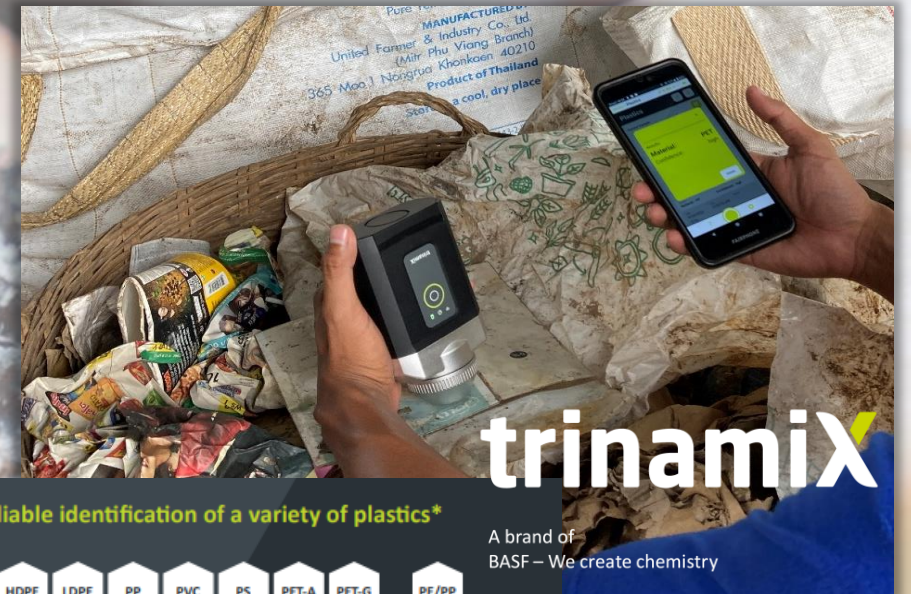


Plastic lump

20-25%  
recycled material



## Enabling better waste management



Reliable identification of a variety of plastics\*

HDPE	LDPE	PP	PVC	PS	PET-A	PET-G	PE/PP
PAG	PAG.6	POM	PB	PBT	PEEK	PU	Foils (PE/PA)
ABS-PA	PC	PC-ABS	SAN	SBS/SEBS	ASA	PAI	PPS
PEI	PESU	PSU	PPSU	PI	PVDF	PMMA	PLA

A brand of  
BASF – We create chemistry



We create chemistry