CIRCULAR ECONOMY
CHALLENGES AND OPPORTUNITIES FOR A SUSTAINABLE FUTURE

ADUPI
ASOSIASI DAUR ULANG PLASTIK INDONESIA

ADUPI

(Indonesia Plastic Recycling Association)

Presentation by :
Christine Halim
(President of ADUPI)

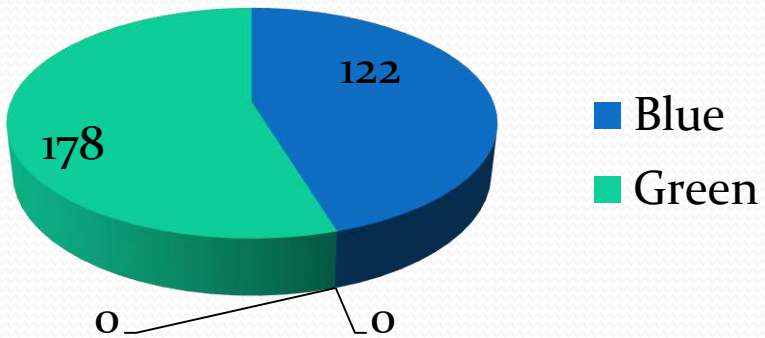
About ADUPI

ADUPI
ASOSIASI DAUR ULANG PLASTIK INDONESIA

- Established in 2015 in Surabaya, East Java.
- Previously existed as AIDUPI
- Founded by plastic recycler entrepreneur.
- To create condusive recycling business by cooperating with all the players involved.
- Currently ADUPI has 5 KPD (Regional Executive Commision) consisting Jabodetabek, West Java, Jogjakarta & Solo, Central Java and East Java.

ADUPI Member's Profile

Member's Profile Percentage



Total Members : 300

Blue:
Finish Good Manufacturer & Pelletizing Processor

Green:
Flakes & Chips Producer, Waste Bank, Scavenger

Vision & Mission ADUPI

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Vision

Become an association that benefit the members and government through better environment program.

Mission

To promote the aspirations of members, improve the cooperation and communication between members and the Indonesian government.

ADUPI Affiliation

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RED STAR machinery

NGR RECYCLING MACHINES
MEMBER OF NEXT GENERATION GROUP

Kementerian Perindustrian
REPUBLIK INDONESIA

(Ministry of Industry Indonesia)

GIATPI
GABUNGAN INDUSTRI ANEKA TENUN PLASTIK INDONESIA

epro
European Association Of Plastics Recycling & Recovery Organisations

KEMENTERIAN LINGKUNGAN HIDUP

(Ministry of Environment & Forestry)

InSWA

IWP

Indonesian Waste Platform

KEMENTERIAN KEUANGAN
REPUBLIK INDONESIA

(Ministry of Finance)

KEMARITIMAN

Strategy and Action Plan

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2015 -2016	2017 -2018	2019-2020	2021-2022
Strengthening the Organization.		Enhancing the role of the organization in determining government policy in the field of plastics recycling.	

Strategy and Action Plan

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a). Strategy on 2015 to 2016

Strengthening organization

1. Expanding Adupi throughout all provinces in Indonesia.

Current Adupi branch : West Java, Central Java, East Java, North Sumatra,

2. Cooperation with “Waste Bank” for plastic waste management.

3. Develop network to all government level for better cooperation in tackling the recycling issues.

Current support: Ministry of Environment and Forestry, Ministry of Industry, and Ministry of Maritime Affairs.

Strategy and Action Plan

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b). Strategy on 2017 to 2020

Enhancing the role of the organization in determining policy government in the field of plastics recycling.

Action Plan:

1. Fighting for VAT reduction for plastic recycling business.

2. Improving waste management system for better recycling quality in Indonesia.

3. Assist to implemented EPR (*Extended Producer Responsibility*) program.

4. Launch of ADUPI web site **in September 2017**. **www.adupi.org**

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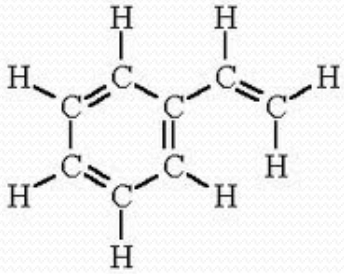
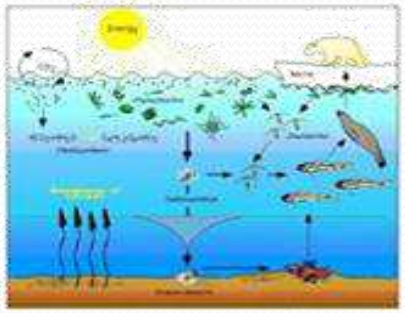
What is PLASTIC made from ?

Plastics



Hydrocarbon Chain



Organic Materials

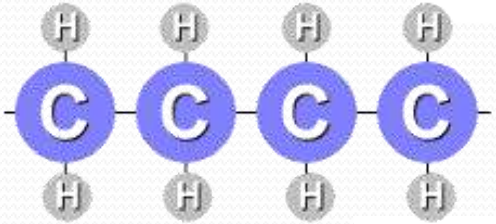
What are the **MOLECULES** that make up of the following materials ?

Rice

Sugar

Plastics

Answer



Hydrocarbon Chain

Myth Buster

Plastic is ORGANIC

Fundamental and Comprehensive Change in Economic Activities

Primary thesis

The current economic system does not provide any real incentive for recycling; almost all products; almost all products are manufactured to be ultimately disposed of.

Status quo: linear economy

Take, make, dispose -> ***WASTEFUL***

The future : circular economy

Reuse, refurbish, remanufacture, recycle, return to earth. → ***HOLISTIC CIRCULAR ECONOMY***

In 2015 the EU implemented a new Circular Economy Package, designed to
encourage the system by funding implementation efforts as well as setting up regulations on waste that incentive recycling programs.

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SDGs atau *Sustainable Development Goals*

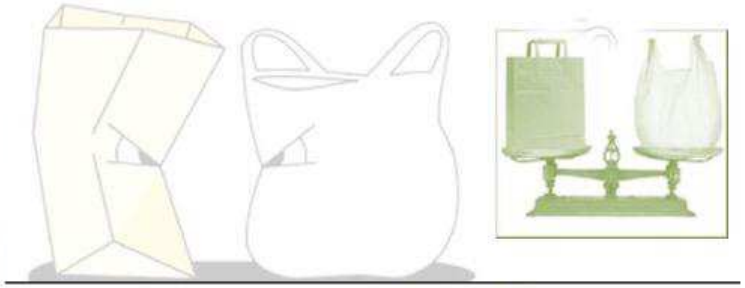
Why Circular Economy is needed ?

Because we need a more sustainable economy for reaching these SDG's.

Plastic Bags VS Paper Bags

Kantong Plastik vs Kantong Kertas

Soure: British Plastic association



Hemat energi , Kebutuhan energi dalam proses industri (KWH Kg^{-1}) :

- Aluminium : 74.1
- Baja : 13.9
- Gelas : 7.9
- Kertas : 7.1
- Plastik : 3.1

Dalam banyak parameter , plastic lebih "Hijau" daripada kertas

Item	Unit	1000 Kantong Belanja	
		Paper	Plastic
Berat	kg	63.5	6.8
Volum	m^3	0.12	0.016
Harga	USD	230	16.5
Ongkos Distribusi	USD	28	3
Emisi Gas	kg	1.47	0.74
Bahan Bakar	kg	1.66	0.73
Energi yang Digunakan	KJ	1.718.595	684.695

Source : USA Plastic assosiciation

Current picture: Much waste, not enough recycling, no end of life plan

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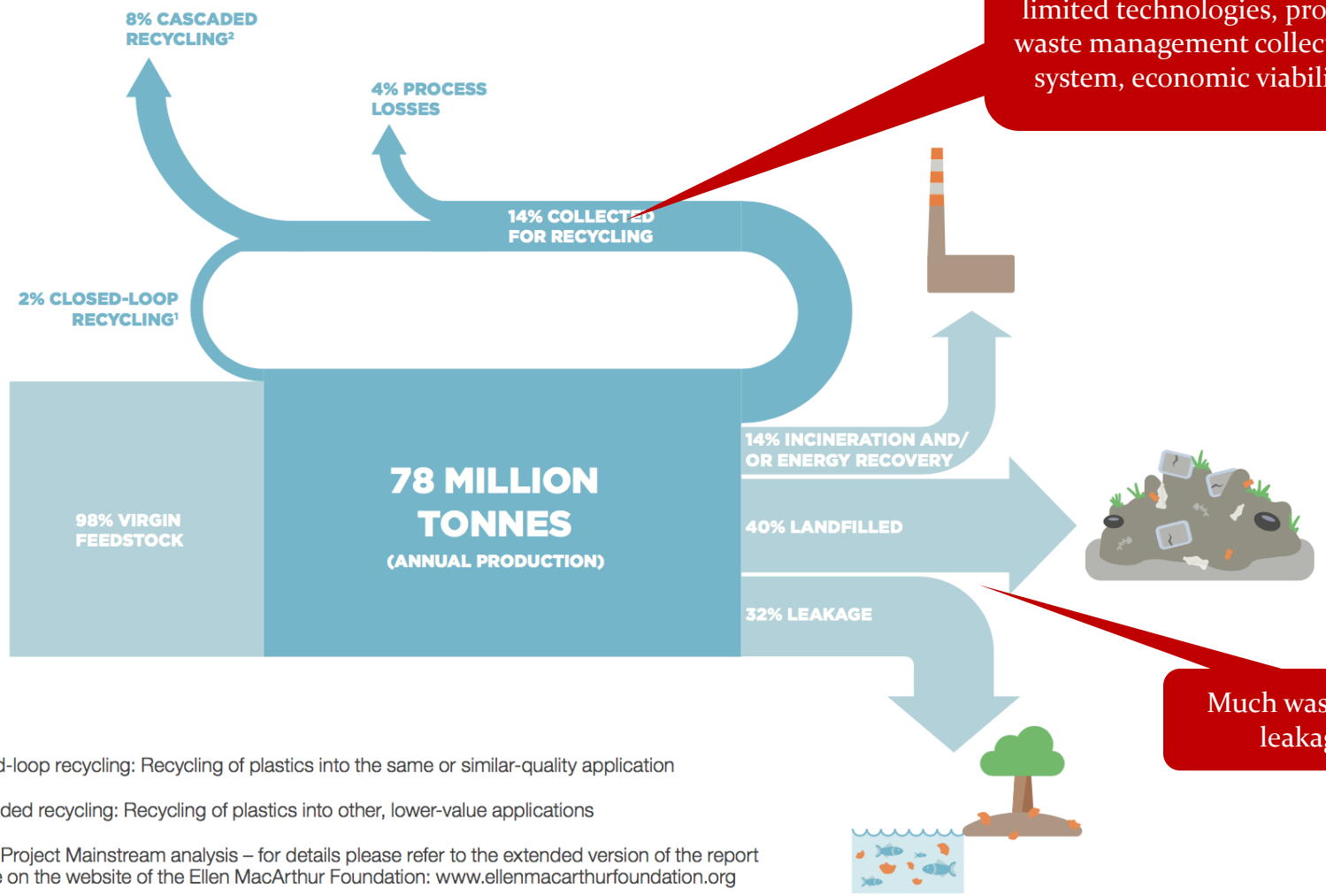
Figure 4: Global Flows of Plastic Packaging Materials in 2013



Very low recycling rate due to limited technologies, proper waste management collection system, economic viability

Much waste and leakage

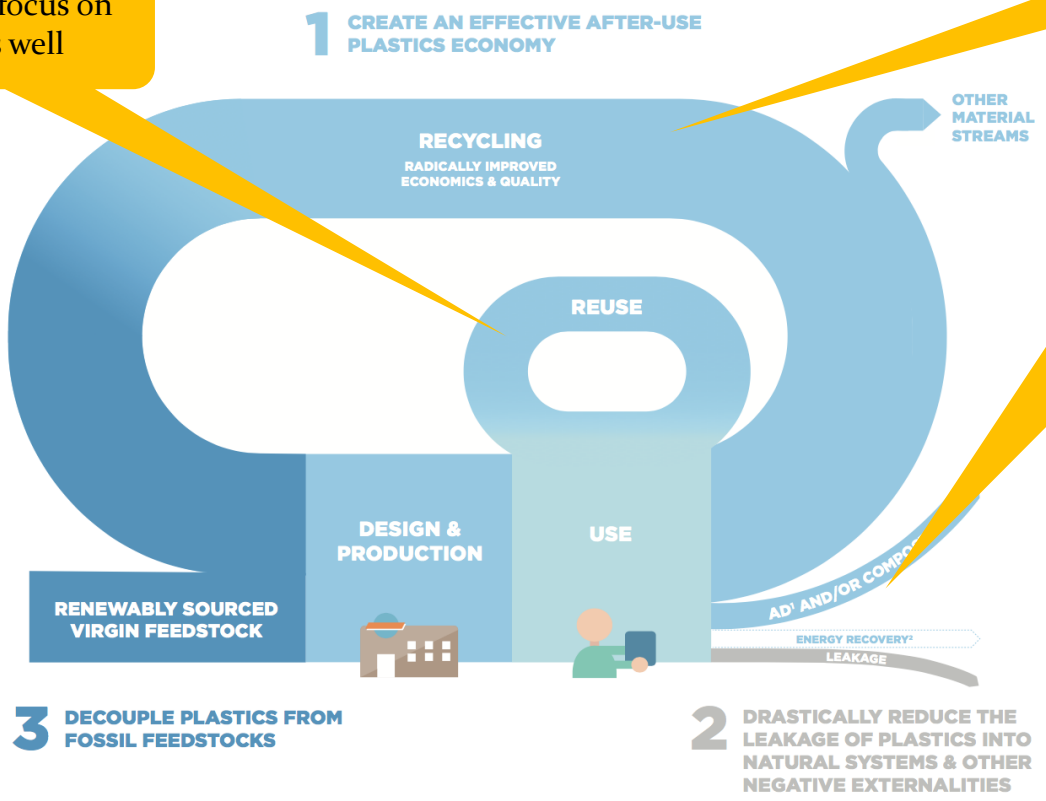
1 Closed-loop recycling: Recycling of plastics into the same or similar-quality application

2 Cascaded recycling: Recycling of plastics into other, lower-value applications

Source: Project Mainstream analysis – for details please refer to the extended version of the report available on the website of the Ellen MacArthur Foundation: www.ellenmacarthurfoundation.org

New ambition: Better than current picture, but is it realistic and holistic enough?

Figure 6: Ambitions of the New Plastics Economy



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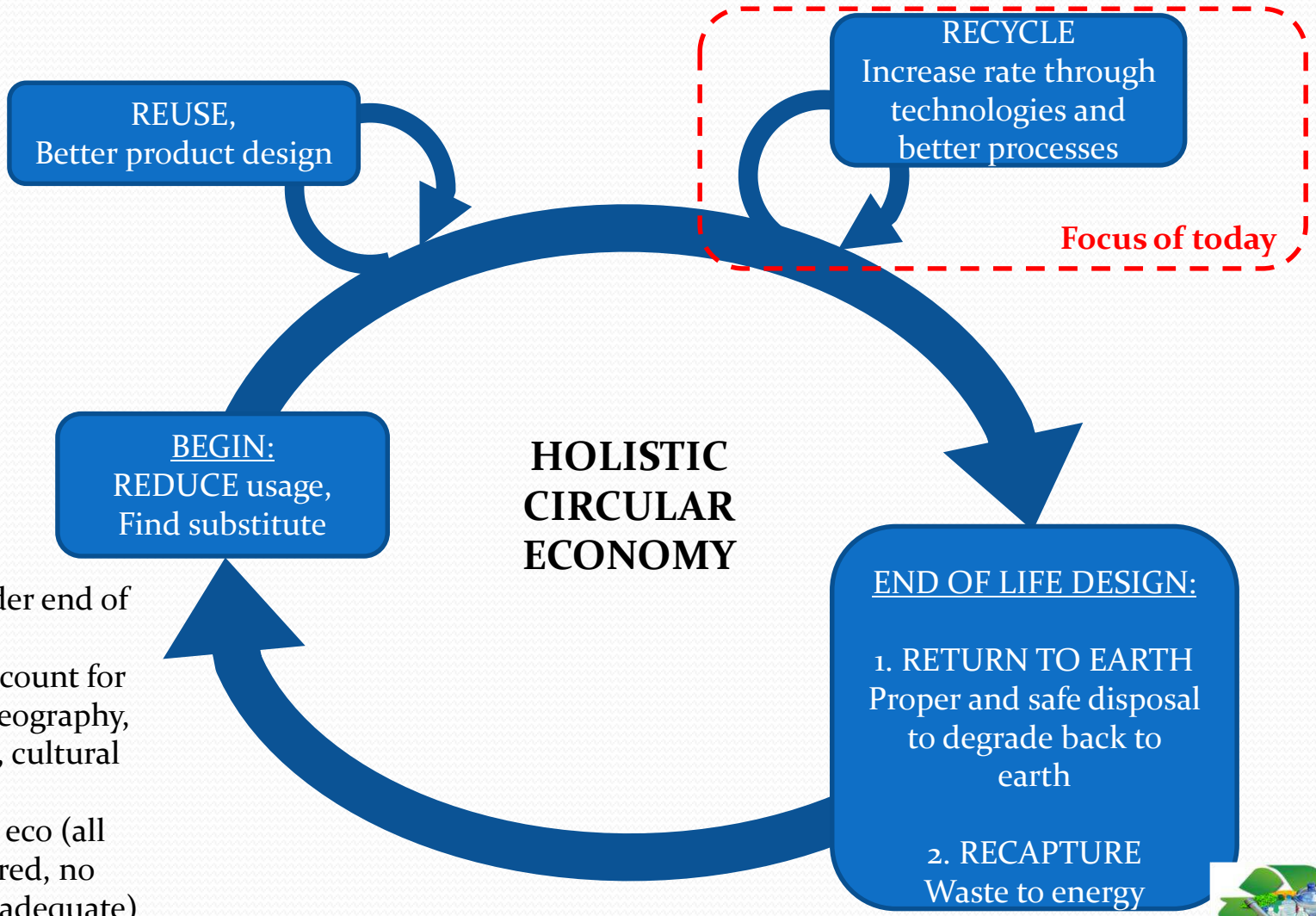
Need more focus on Reuse as well

Not many commercial "closed loop" recycling techs available, most available recycling is "down cycle"....

..therefore need more focus on: 1. improving recycling technologies and economic viability
2. Improving waste management & collection system, to also prevent leakage
3. Designing proper end-of-life (Return to Earth / degradable, Recapture / waste to energy)

Proposed: Holistic Circular Economy

Use the product as long as possible through many circle of lives (Reuse, Recycle), then return it back to earth making a full loop/circle



Need to be:

1. Holistic, consider end of life loop
2. Contextual (account for local climate, geography, economic level, cultural habit, etc.)
3. Less ego, more eco (all solutions required, no single solution adequate)

Objective of Recycling and Reuse (Circular Economy)

- Reduce the use of natural raw materials or natural resources.
- Assist the government in the prevention of pollution due to plastic waste.
- Energy Saving.
- Provide income to the participating stakeholders (scavengers and their families, garbage banks and members, labor-intensive recycling workers).
- Savings of foreign exchange.
- The raw material will never run out because it keeps coming back into the cycle.

Plastic Recycling Issues

- The government is panicking with a pile of plastic waste everywhere.
- The main cause is human behavior, not plastic.
- The imposition of Value Added Tax which can not be burdened by the recycling industry.
- The neutralization of liquid waste from the plastic recycling process can not afford the load of grinders.
- Plastic recycling management system does not yet exist.
- Not enacting Law No.18 /2008 article 21 about giving incentives and disincentives.

Expectations from ADUPI

- VAT Reduction from
- The Government is expected to activate and protect the activities of Plastic Recycling
- Implementation of Law No.18 /2008 Article 21 (About Provision of Incentives)
- Simplify the permissions.
- Encourage industry to use "recycle content" at least 30%.
- Arrange Collection system from plastic waste, and conduct early education in schools and establish plastic schools
- Educate people to be proud of using plastic recycling products.

Map Spread Industrial Plastics and Recycling Plastics Companies in Indonesia

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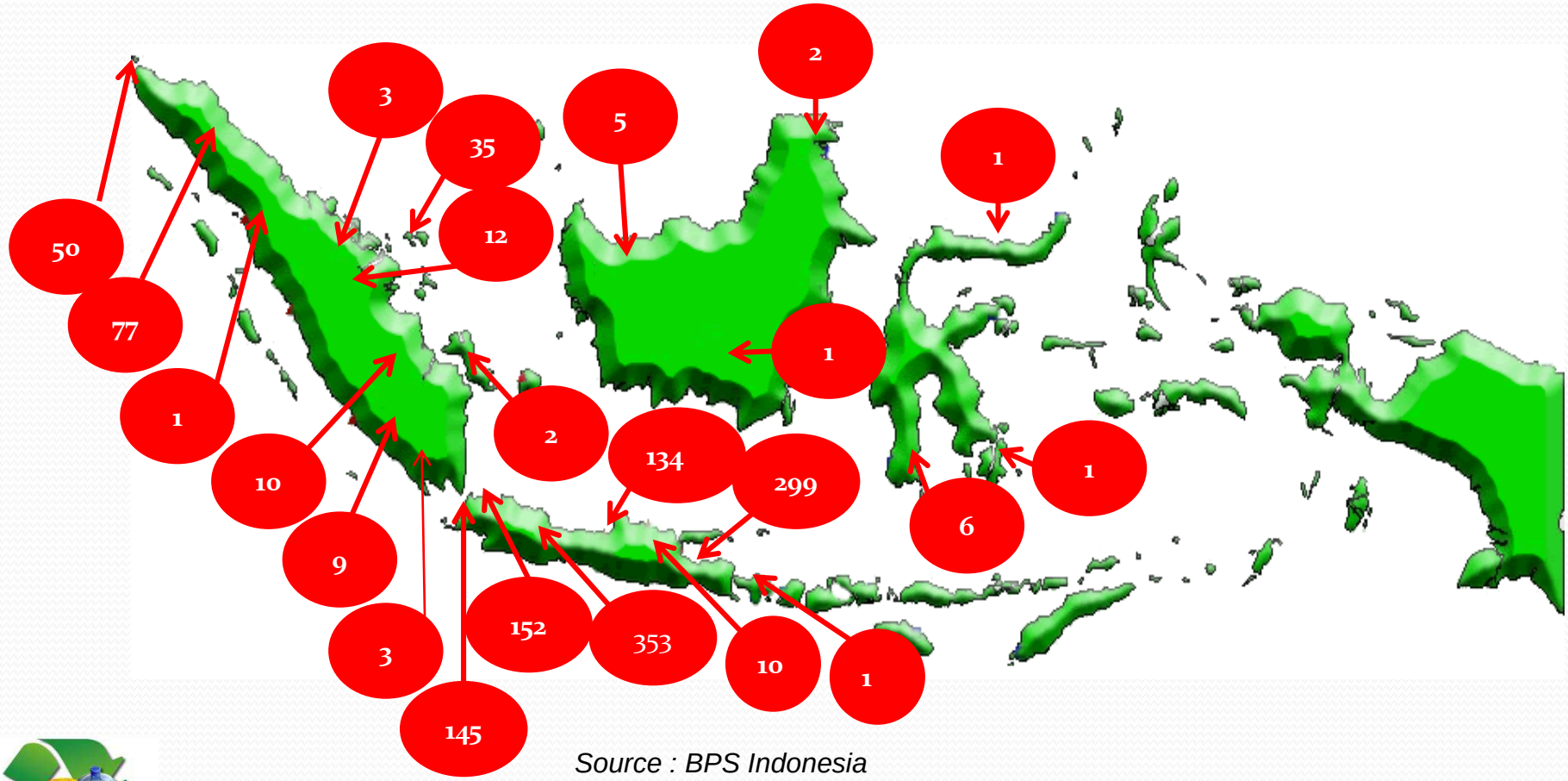

Source : BPS Indonesia

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THANK YOU

Indonesia Plastic Recyling Asociation