



**INDONESIAN  
PLASTICS  
RECYCLERS**

**PAMERINDO INDONESIA WEBINAR:  
SUSTAINABILITY IN INDONESIA'S MANUFACTURING INDUSTRY**

Thursday, 21 April 2022

**Wilson Pandhika**  
General Secretary - IPR

# About Us

IPR is a non-profit association that comprises of plastics recyclers in Indonesia. Established in 2018, IPR aims for implementation of Circular Economy model and principle in the plastics recycling sector.

## VISION

We aim to contribute to the environmental sustainability by driving the implementation of Circular Economy by means of developing the recycling of plastics in Indonesia.

## MISSION

- To improve the recycling of plastics in Indonesia by building synergy between all stakeholders
- To increase the recycling rate of plastics in Indonesia



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# Plastics Recycling in Indonesia

## HISTORY

- Started back in 1970's
- Primary drive = Economic benefit

Approximately 1.500.000 ton –  
2.000.000 ton plastics is recycled  
in Indonesia annually

Plastics consumption in Indonesia  
is about 6.000.000 ton –  
7.000.000 ton annually

Main types of plastics being  
recycled:  
PE, PP, PET

# Sustainability in Manufacturing Sector

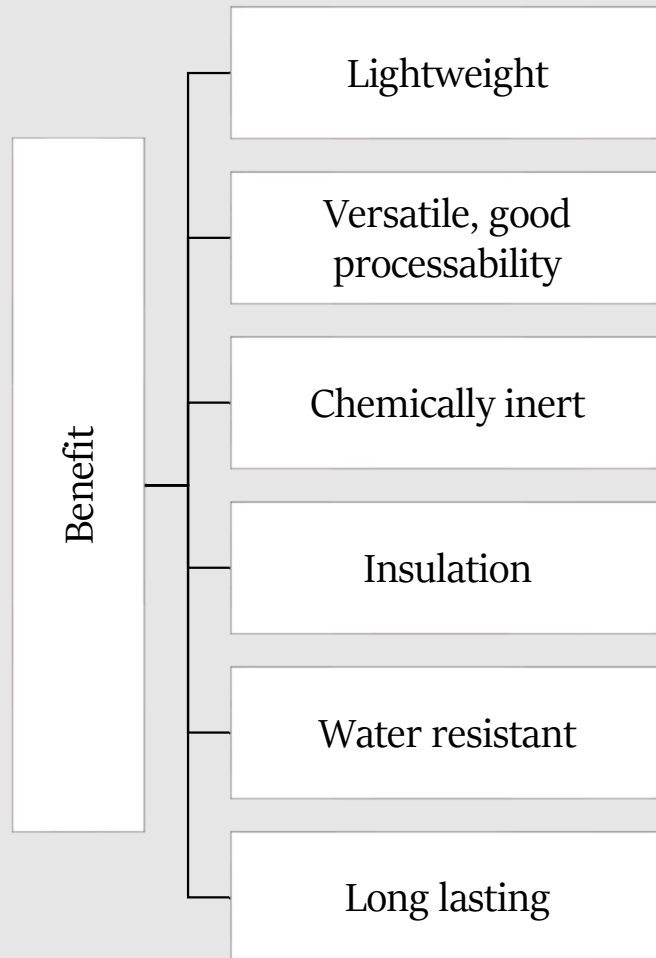
## Plastics Recycler's Perspective

Plastic as Packaging

Design for Recyclability

Incorporation of Recycled Content

# Plastics as Packaging



Switching to plastic based packaging can potentially reduce carbon footprint

# What is recyclability



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# What is recyclability



## Design for Recycling

According to The Association of Plastics Recyclers (APR) and Plastics Recyclers Europe (PRE), plastics must meet four conditions for a product to be considered recyclable:

Must be made of plastic that is collected for recycling, has market value, and/or is supported by a legislatively mandated program

Can be processed and reclaimed / recycled with commercial recycling processes

Must be sorted and aggregated into defined streams for recycling processes

The recycled plastic becomes a raw material that is used in the production of new products

# Case Study: HDPE vs Carton for Beverage Packaging



VS



Source :  
<https://www.bizcommunity.com/Article/196/178/206433.html>

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# Case Study : HDPE vs Carton for Beverage Packaging

## HDPE Natural Milk Bottle

- Widely used and recycled
  - Recycling rate above 80%
- In Indonesia almost exclusively used for small sized product (200ml)
- Has the potential to be source of Food Grade PCR material
- Relatively high value

## Carton

- Comprises of (typically): 75% paper, 20% plastic, 5% aluminium
- Usually gets into the paper recycling stream, but the 20%+5% non paper content are not recovered
- Theoretically recyclable, but not commercially and widely recycled
- Relatively low value

Source :  
<https://www.letsrecycle.com/news/over-70-of-hdpe-milk-bottles-now-recycled/>  
<https://www.bizcommunity.com/Article/196/178/206433.html>  
<https://drinkpathwater.com/blogs/news/10-sad-truths-about-cartons-like-tetra-pak%C2%AE-why-they-are-not-a-sustainable-solution-for-bottled-water>

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# Design for Recycling

Performance polyethylene

**ExxonMobil**



PT Indoceria Plastik introduces full-PE recyclable\* packaging in Indonesia



Source : <https://www.exxonmobilchemical.com/dfsmedia/f743208d804841f6ab89a60202cc3f56/90798-source/options/download/case-study-pt-indoceria-plastik-introduces-full-pe-recyclable-packaging-in-indo?extension=pdf>

green  VATION

 WINDMÖLLER & HÖLSCHER

**ALL PE POUCH**

ALL PE POUCH designed for recyclability, packaging performance and production efficiency



Source : [https://www.wh.group/int/en/company/k2019/one\\_pager/one\\_pager\\_all\\_pe\\_pouch.pdf](https://www.wh.group/int/en/company/k2019/one_pager/one_pager_all_pe_pouch.pdf)

- By using monomaterial plastic as raw material, the packaging post consumption can be recycled

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# Recycled Content

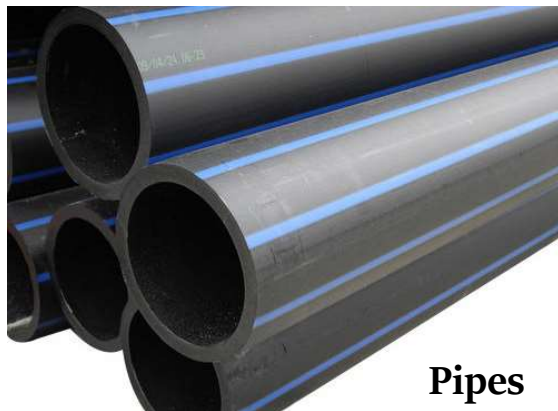
Ways recycled material can be incorporated :

In the Product

In the Primary Packaging

In the Secondary Packaging

# Product Using Recycled Content



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# Recycled Content in Primary Packaging

Example :



**rPET Bottle**



**rPET Cups**



**rHDPE Bottle**

# Recycled Content in Secondary Packaging



Collation Shrink Film



Pallet Wrap



Source :

<https://packagingeurope.com/news/dow-launches-pcr-shrink-film-for-bottled-water-with-lotte/7657.article>

[https://www.dow.com/en-us/pdp.xus-6092101-experimental-polyethylene-resin.505756z.html?utm\\_source=Vanity&utm\\_medium=Vanity\\_URL&utm\\_campaign=p-BC\\_c-GLOBAL\\_1-EN\\_ct-Branded\\_m-05/2020&utm\\_content=PCR\\_Shrinkfilm\\_Vanity&UTM\\_term=#overview](https://www.dow.com/en-us/pdp.xus-6092101-experimental-polyethylene-resin.505756z.html?utm_source=Vanity&utm_medium=Vanity_URL&utm_campaign=p-BC_c-GLOBAL_1-EN_ct-Branded_m-05/2020&utm_content=PCR_Shrinkfilm_Vanity&UTM_term=#overview)

- Secondary Packaging used to transport goods, that usually arrive at factories are recyclable
- Important source of waste for recyclers

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**Talk To Us to Improve  
The Sustainability in Your Action**



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