



IMPLEMENTATION OF REDUCE-REUSE-RECYCLE CONCEPT IN INDONESIA



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Let's keep things in proper perspective...



No cookie cutter: Different geographies, economic levels, cultural habits, require different solutions, policies



Netherlands



United States



Indonesia

Population:	17 mn	325 mn	255 mn
Land area:	41,500 km ²	~9,800,000 km ²	~1,900,000 km ²
GDP per capita:	\$45,200	\$57,220	\$3,600
Main natural resources:	Foodstuffs, industrial machineries, tourism	Corn, Wheat, Oil, Coal, etc.	Coal, oil and gas, and many other natural resources, cassava, etc.
End of life solutions:	Mostly incinerators, recycling	>300 landfills, with incinerators only in big cities	>500 landfills
Impact to plastic waste policies:	Degradable less relevant, main focus on incinerators, Recycling	Corn-based plastic, Recycling	Cassava-based plastic & other degradable solutions, Recycling



How about Indonesia?



Key characteristics

Large population

Still low GDP per capita

Vast land area, spread over thousands of islands

Hot, humid, and dirty air

Rich in starch crops, i.e. cassava, sago

Implications

Huge consumption

Big mid-low buying power

Complicated distribution chain AND collection chain

Need quality packaging with good barriers, lightweight

Leverage available crops

Plastic & Waste implications

Need economically viable solutions

More difficult recycling process

More difficult waste management process

Multi laminated plastic packaging, cannot be paper / others

Cassava as bio-based plastic



Should we ban plastic?



Benefits of Plastic



- Relatively easy to form and impact resistance
- Energy efficient, it takes less energy to produce a plastic ketchup bottle than a glass ketchup bottle
- Recycling plastic recovers the raw material, which can be used to make new plastic products
- Plastics are made from fossil fuels. Pound for pound, plastics contain as much energy as petroleum or natural gas which makes plastic a good fuel for waste to energy plants.

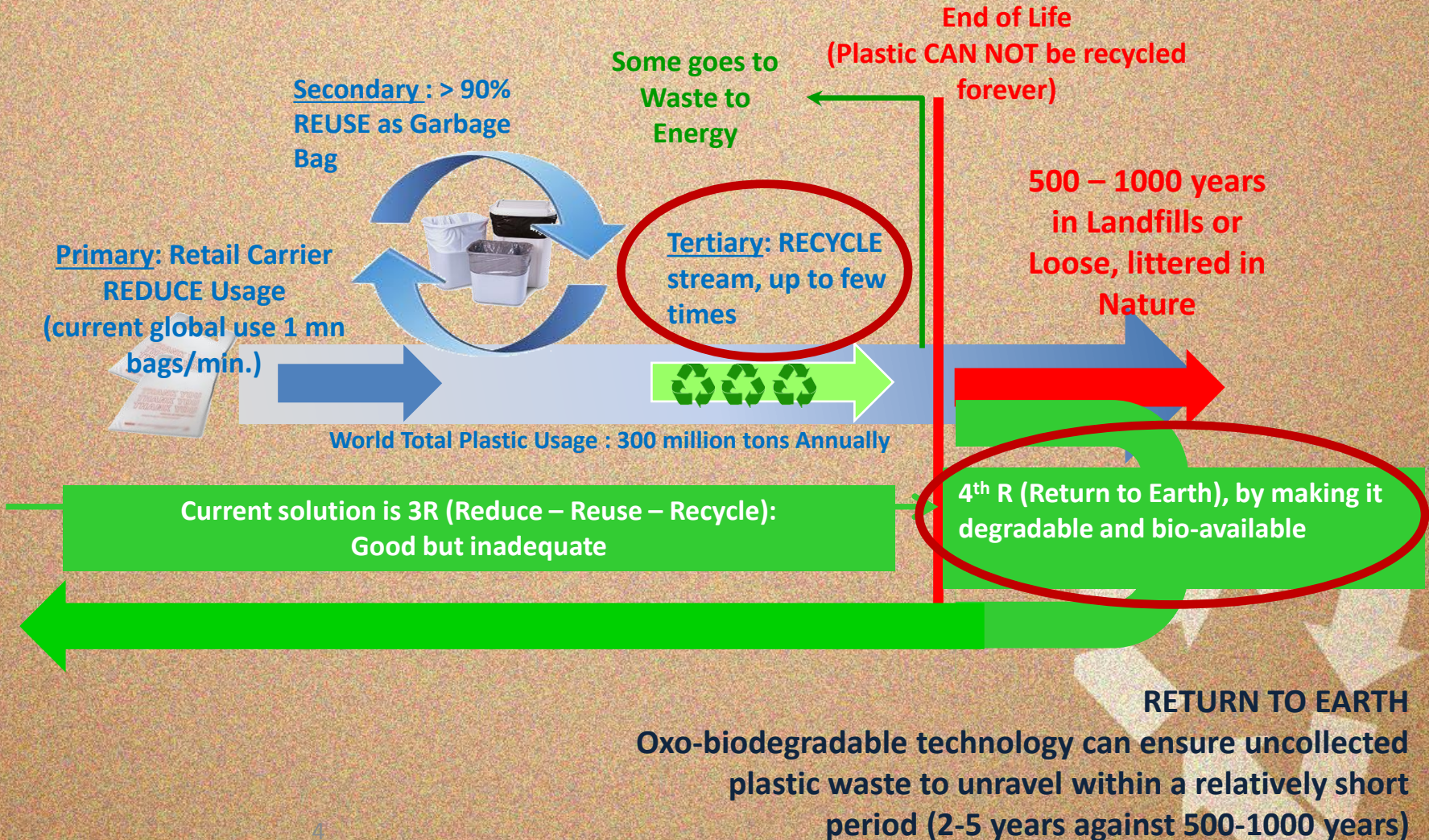


Plastic Recycling Issues

- The government is panicking due to plastic waste piling everywhere
- The main cause is the people, not the plastic.
- Not enacting Law No.18 year 2008 article 21 on giving incentives and disincentives.
- Incorporation of Value Added Tax which can not be charged by Plastic Recycling Industry.
- Waste management system and regulations especially regarding Plastic recycling has not yet exist.



A more holistic approach: 4R



Indonesia Achievements

- Act of The Republic of Indonesia Number 18 Year 2008 regarding Waste Management
- Waste bank headquarters as collection centers across Indonesia provinces
- Indonesia recycling companies have been doing proper plastic waste management to maximize material recovery to reduce the demand for new (virgin) material
- Implementation of Indonesian Presidential regulation number 97 year 2017 regarding National strategy and policy household waste management and similar waste on national, province and district/city level



Langgeng Jaya Fiberindo Profile





THANK YOU
for your time