



Session 3: Promoting the ESM in Asia

Asian Network Workshop 2022

1-3 November 2021

The Secretariat of the Asian Network

Background

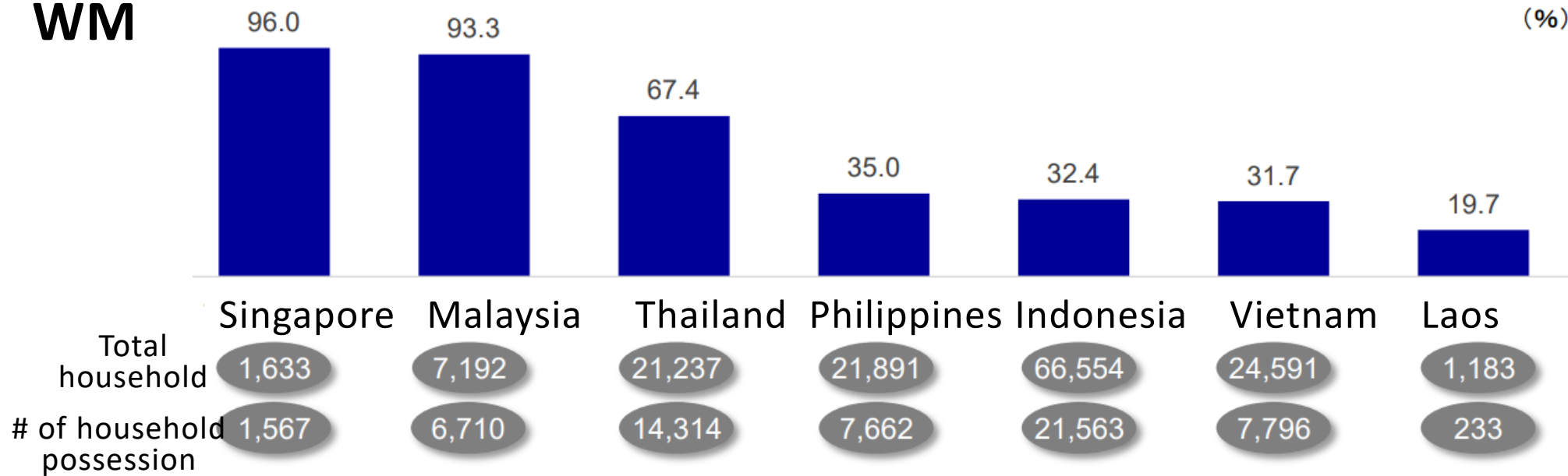
- Increasing demand for the environmentally sound recycling and disposal of wastes along with the sufficient formalized collection, **especially plastic waste and E-waste.**
- In Asia, several countries have started the implementation EPR based **legal mechanism** for managing E-waste environmentally sound manner. There should be some lessons and practices that can be shared among the region so that the region can be more resilient for such waste stream.
- Proper **trade control** at the national and international level in response to the recent increase of such wastes is becoming important.

Background

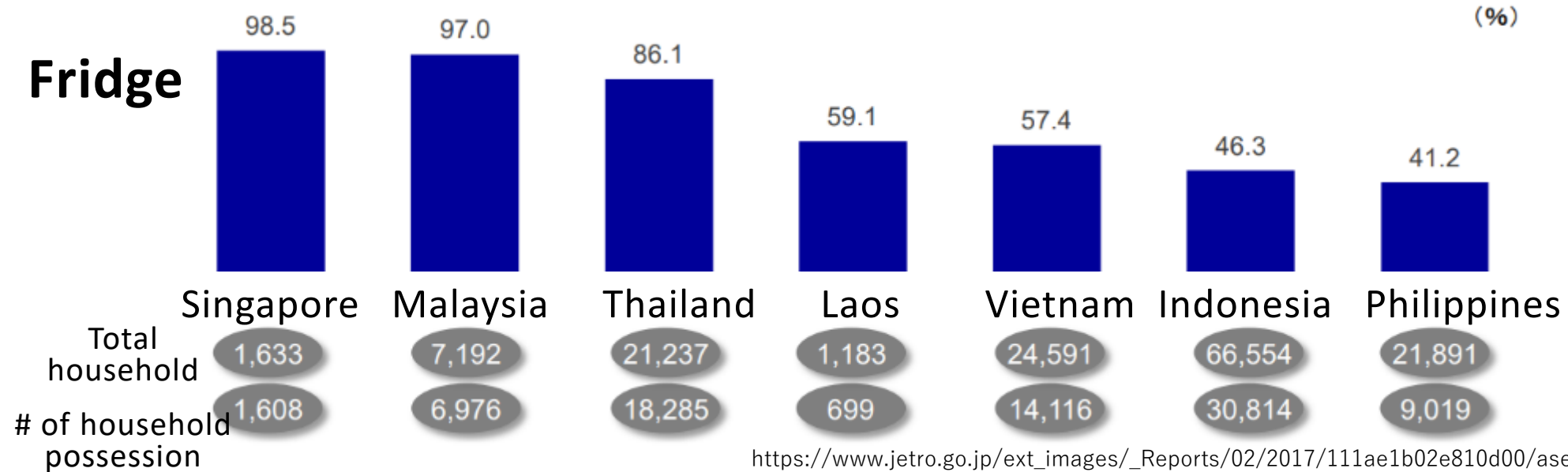
- Mindful of great importance in addressing the **marine litter and plastics**, some integrated approach is necessary including the minimization of plastic generation, proper collection and recycling, creation of demand for recycled materials and prevention of flow into ocean.
- Recognizing the Asian region is the largest **contributor to the plastic waste** in the ocean, it is important for the region to share best practices and experiences in addressing this issue in a collective manner.
- **Technical guidelines** on the ESM of specific waste streams developed under the Basel Convention, which provide the best knowledge and techniques countries are encouraged to refer/apply for promoting the ESM.
- Basel Convention **Annexes amended** for plastic waste and E-waste in recent years.

Household appliances possession rate (2015)

WM

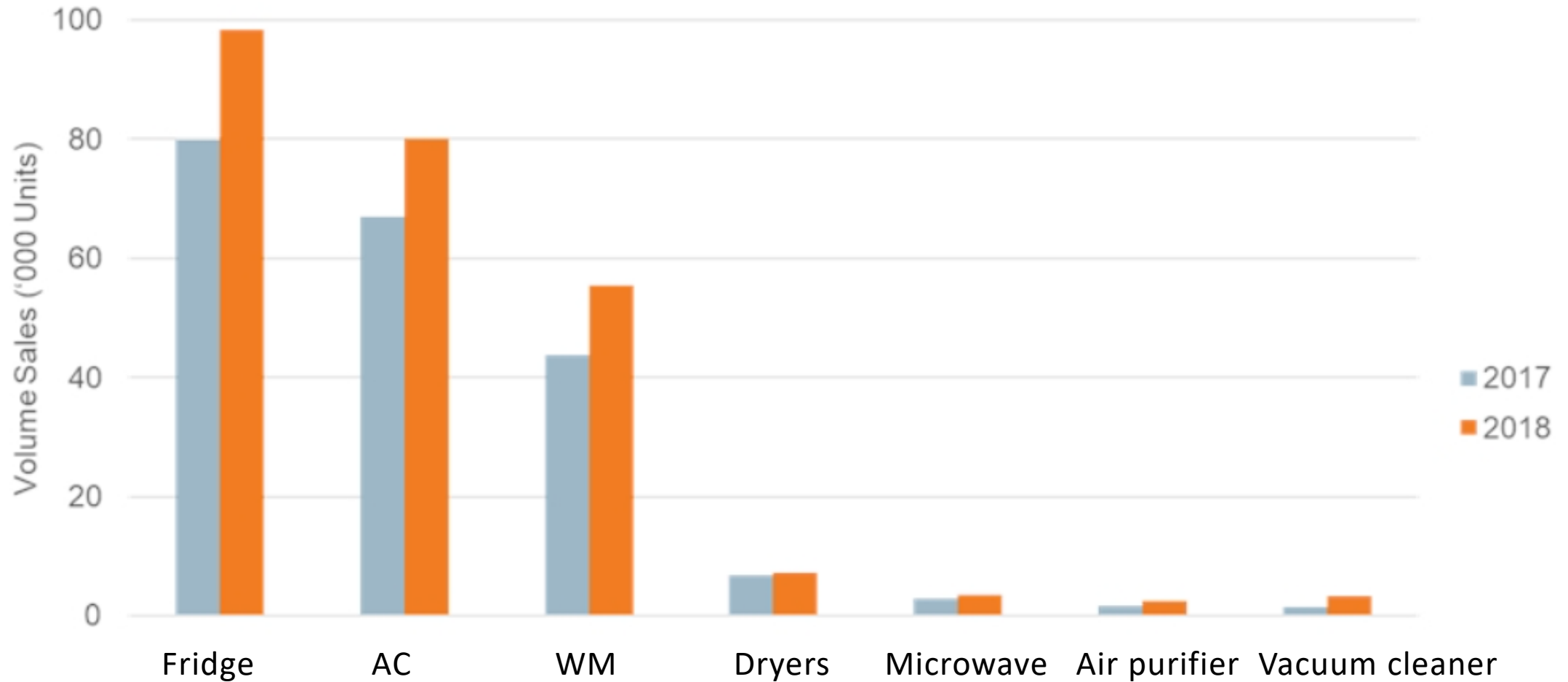


Fridge



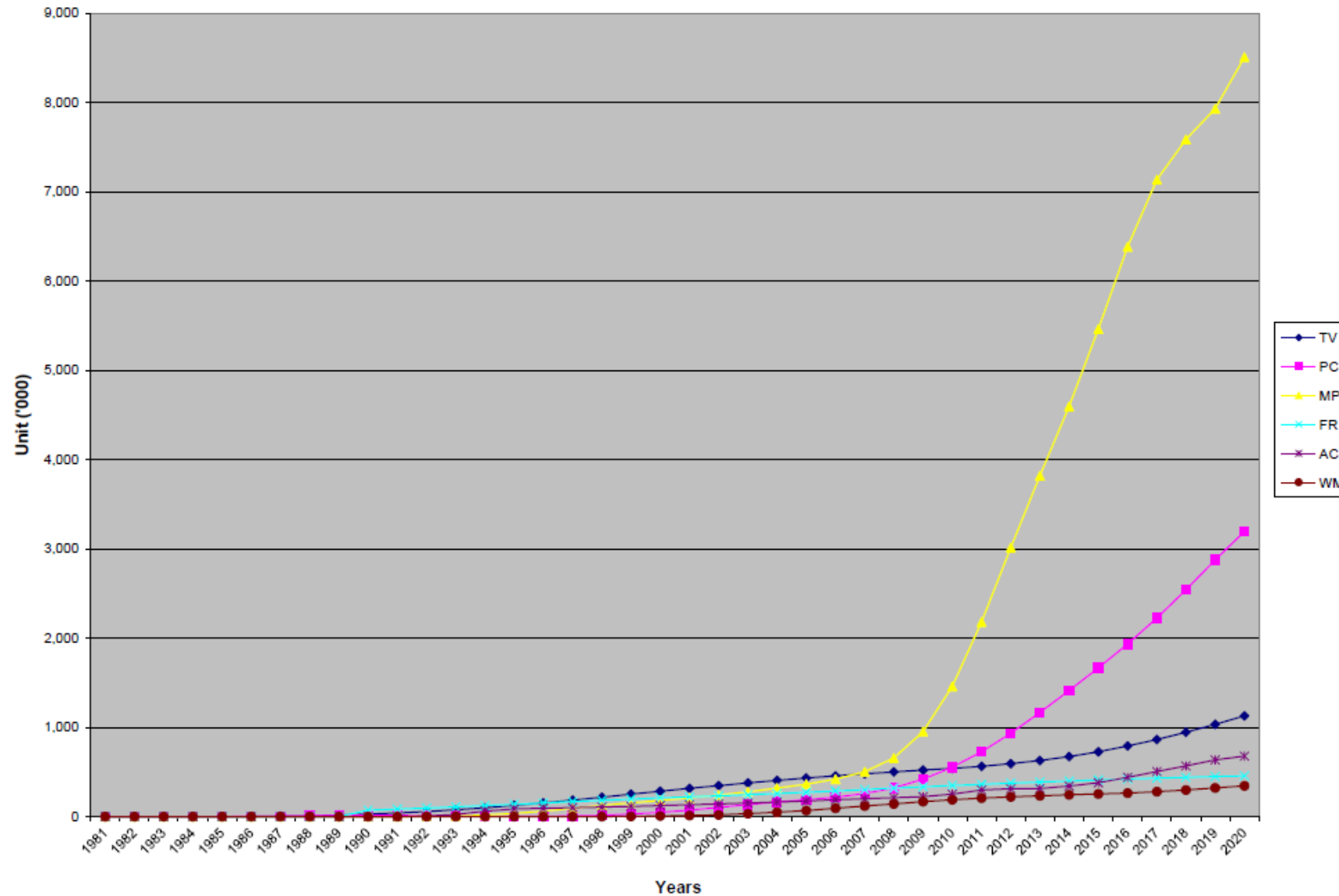
Household appliances sales amount increasing

ASEAN, 2018

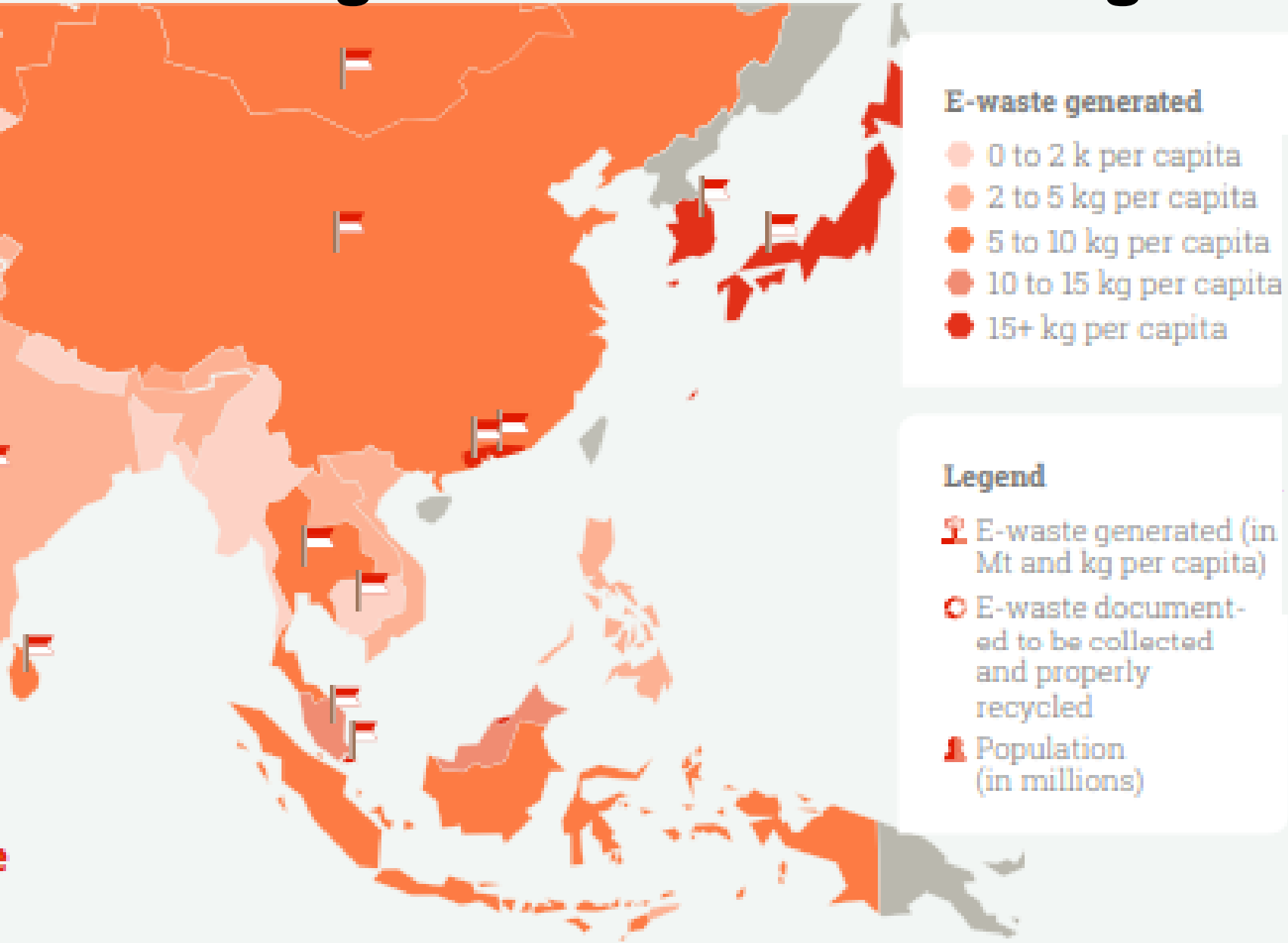


Waste products generation predicted to be increasing

Projection of WEEE Generation for Household for the Year 1981 - 2020



E-waste generation is increasing in Asia



E-waste generated

- 0 to 2 k per capita
- 2 to 5 kg per capita
- 5 to 10 kg per capita
- 10 to 15 kg per capita
- 15+ kg per capita

Legend

- 🇮🇩 E-waste generated (in Mt and kg per capita)
- 🗑️ E-waste documented to be collected and properly recycled
- 👤 Population (in millions)

South-Eastern Asia

🇮🇩 3.5 Mt | 5.4 kg per capita 🗑️ 0% | 0 Mt 👤 656

Indonesia	1.618 kt
Thailand	621 kt
Philippines	425 kt

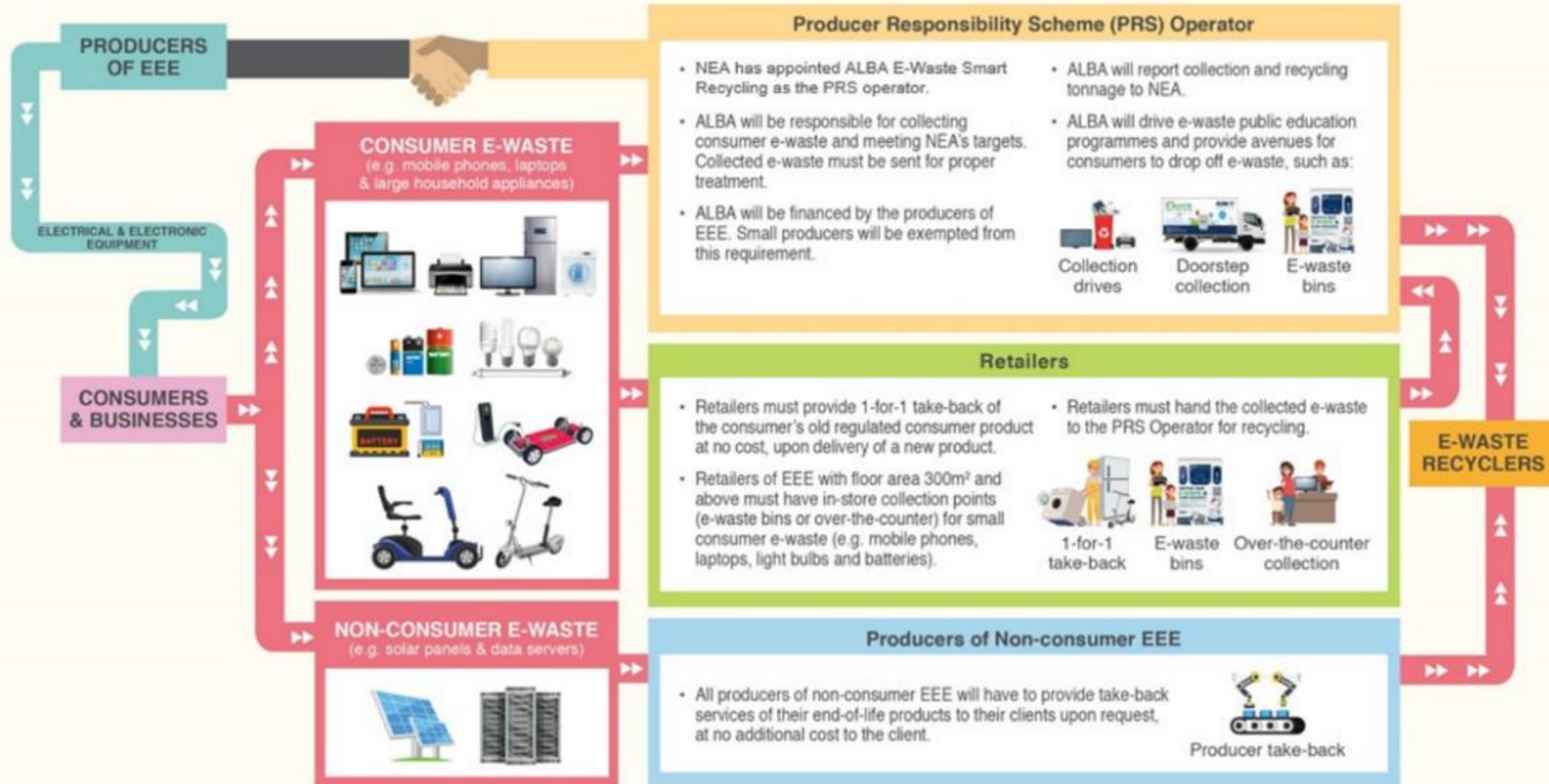
Eastern Asia

🇨🇳 13.7 Mt | 8.6 kg per capita 🗑️ 20% | 2.7 Mt 👤 1590

China	10.129 kt
Japan	2.569 kt
Republic of Korea	818 kt

EPR mechanism implemented in Singapore

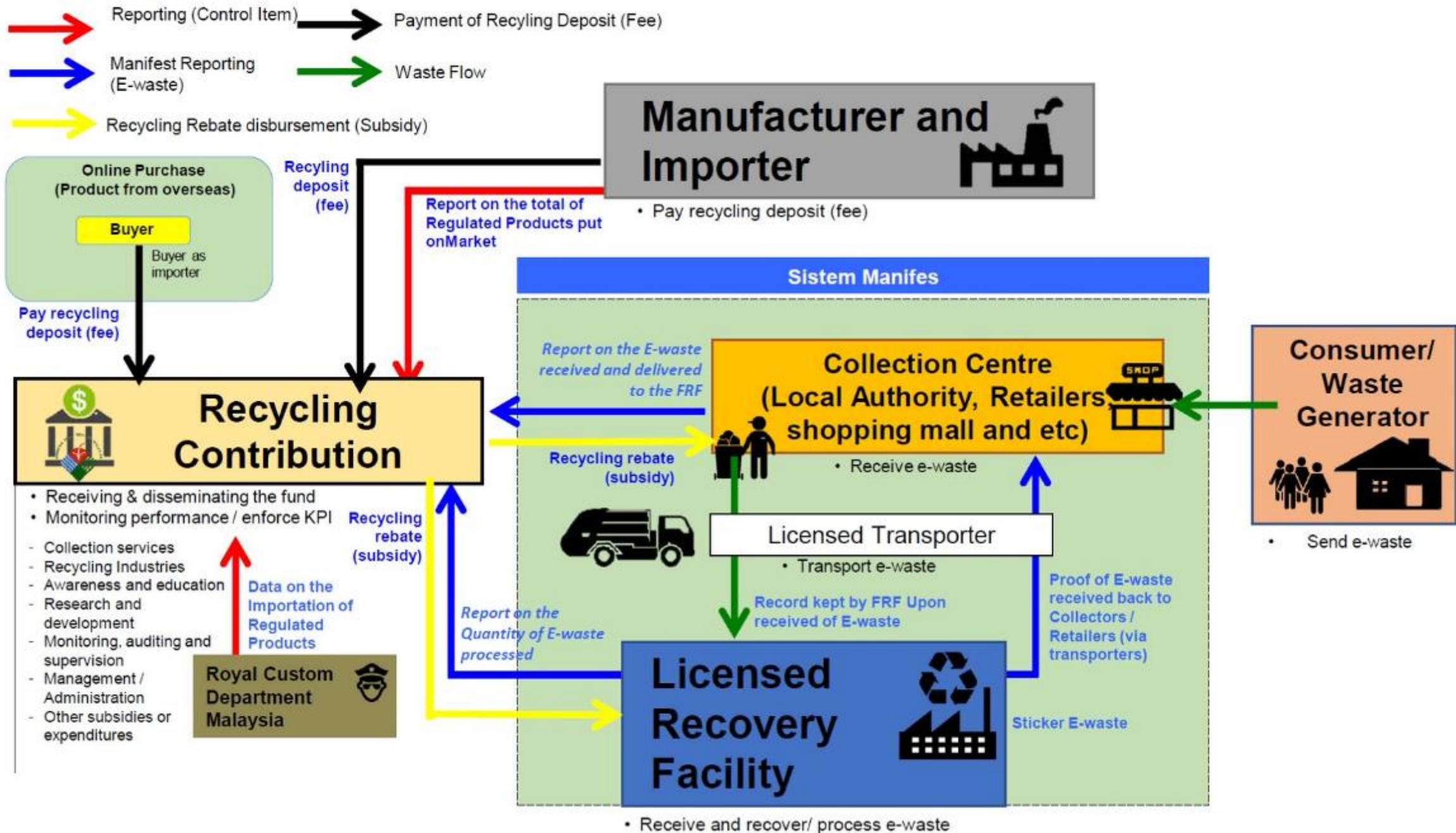
An EPR scheme assigns responsibilities for the collection and proper treatment of e-waste to Producers (i.e. companies that manufacture or import regulated electrical and electronic equipment (EEE) for sale in Singapore).



Singapore Case

- Extended Producer Responsibility (EPR) framework for e-waste in Singapore started to be implemented on 1 Jul 2021.
- Resource Sustainability Act 2019 (RSA), gazetted on 4 Oct 2019, gave legislative effect to the regulatory framework.
- Under the EPR framework, producers **bear the physical and financial responsibility for the collection and proper treatment** of discarded regulated E-waste
- One **Producer Responsibility Scheme (PRS) operator** has been appointed by NEA to coordinate the collection and proper treatment of consumer E-waste on behalf of producers.

FRAMEWORK OF E-WASTE MANAGEMENT MECHANISM IN MALAYSIA



Asia is a large contributor to the plastic waste

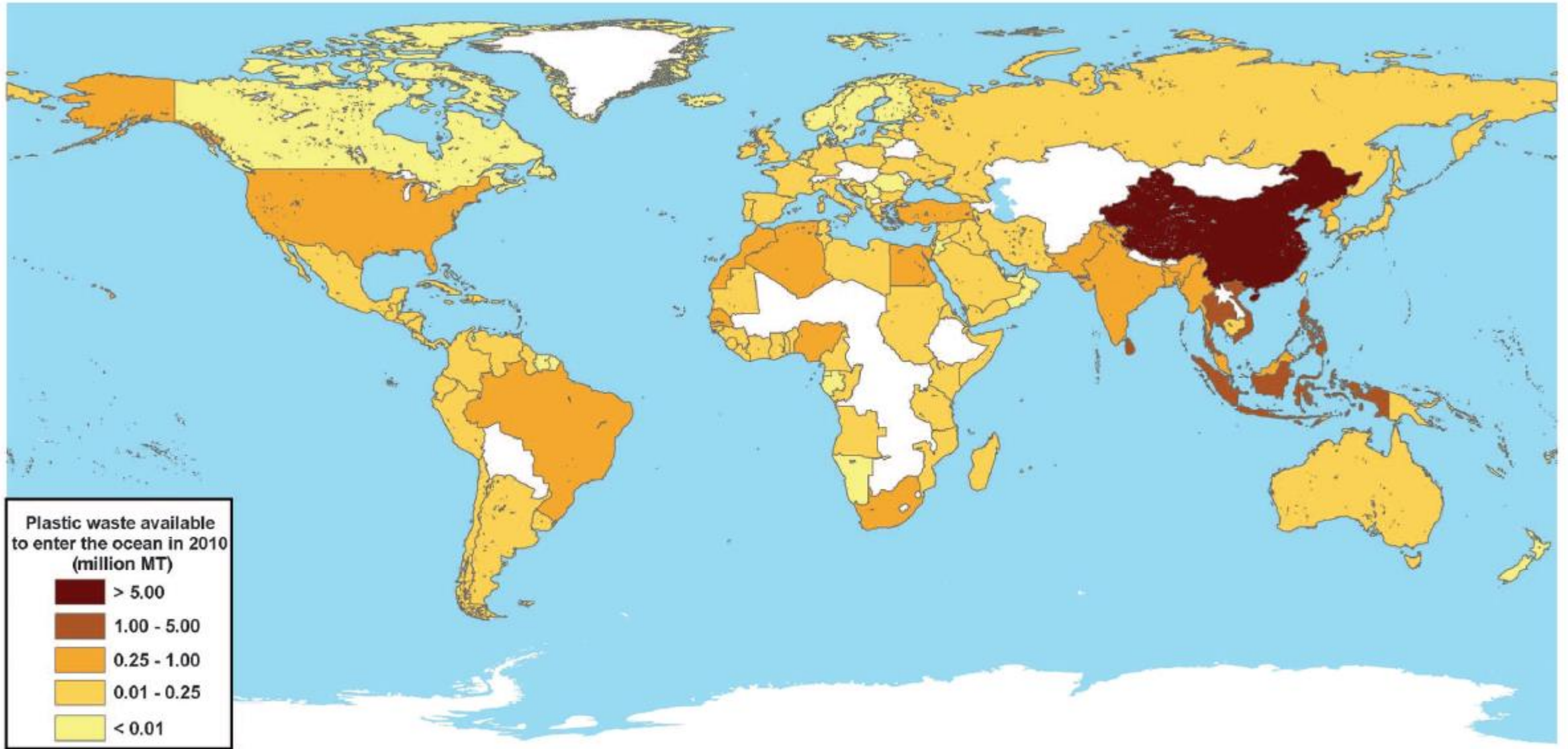


Fig. 1. Global map with each country shaded according to the estimated mass of mismanaged plastic waste [millions of metric tons (MT)] generated in 2010 by populations living within 50 km of the coast. We considered 192 countries. Countries not included in the study are shaded white.

Jambeck et al: Plastic waste inputs from land into the ocean, Science (2015)

In this session

- Secretariat explains a recent status of plastic waste and E-waste management in Asia.
- BRS Secretariat introduces the decisions adopted by the COP15 relevant to the theme of this Session and ongoing discussion on update of TGs under the Basel Convention (e.g., plastic, E-waste, POPs, mercury, battery, tyre, etc.)
- Some countries introduce the latest initiatives such as;
 - Development of laws/regulations to promote the recycling of plastic waste and E-waste after Basel Convention Annexes amendment
 - Initiatives to promote the ESM by industry
 - Introduction of EPR and how it works
 - Experience of using TGs on the ESM of specific waste stream under the Basel Convention
- BCRC-China and BCRC-SEA will be invited to report the current progress on the projects related to the promotion of the ESM in Asia.

What to discuss....

- What is an important element to be focused for promoting the ESM in your country/region?
- What should be controlled or prohibited before introducing ESM?
- What are the challenges?
- What are the good practices?
- How successful cases can be replicated?
- How can the engagement of private sector be enhanced for pursuing the ESM of plastic waste and E-waste?
- How can the Asian Network contribute to this issue?

Expected goals

- Some necessary measures to overcome the viability gaps are identified for legal framework development and institutionalization to promote the sustainable ESM of plastic waste and E-waste.
- Some elements and activities are identified Asian Network can contribute to promote the ESM at the regional level.

Some ideas from Secretariat

ESM in Basel definition

-Annex I of the Recommendation contains the following “Core Performance Elements” for ESM of facilities-

- **CPE1:** The facility should have an applicable environmental management system (EMS) in place;
- **CPE2:** The facility should take sufficient measures to safeguard occupational and environmental health and safety;
- **CPE3:** The facility should have an adequate monitoring, recording and reporting programme;
- **CPE4:** The facility should have an appropriate and adequate training programme for the personnel;
- **CPE5:** The facility should have an adequate emergency plan;
- **CPE6:** The facility should have an adequate plan for closure and after-care

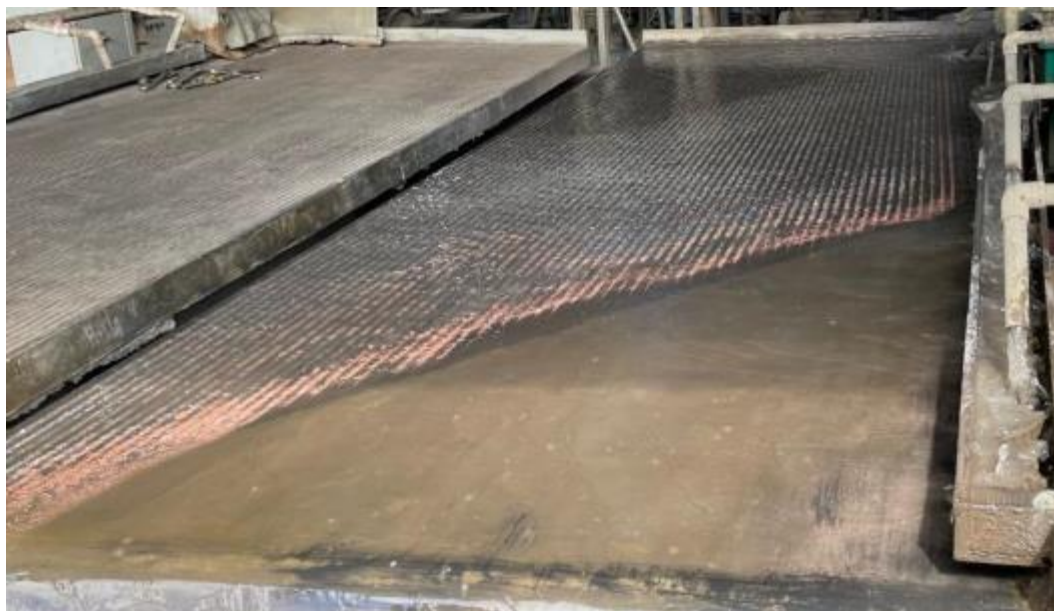
ESM in reality for plastic waste recycling





ESM in reality for E-waste recycling



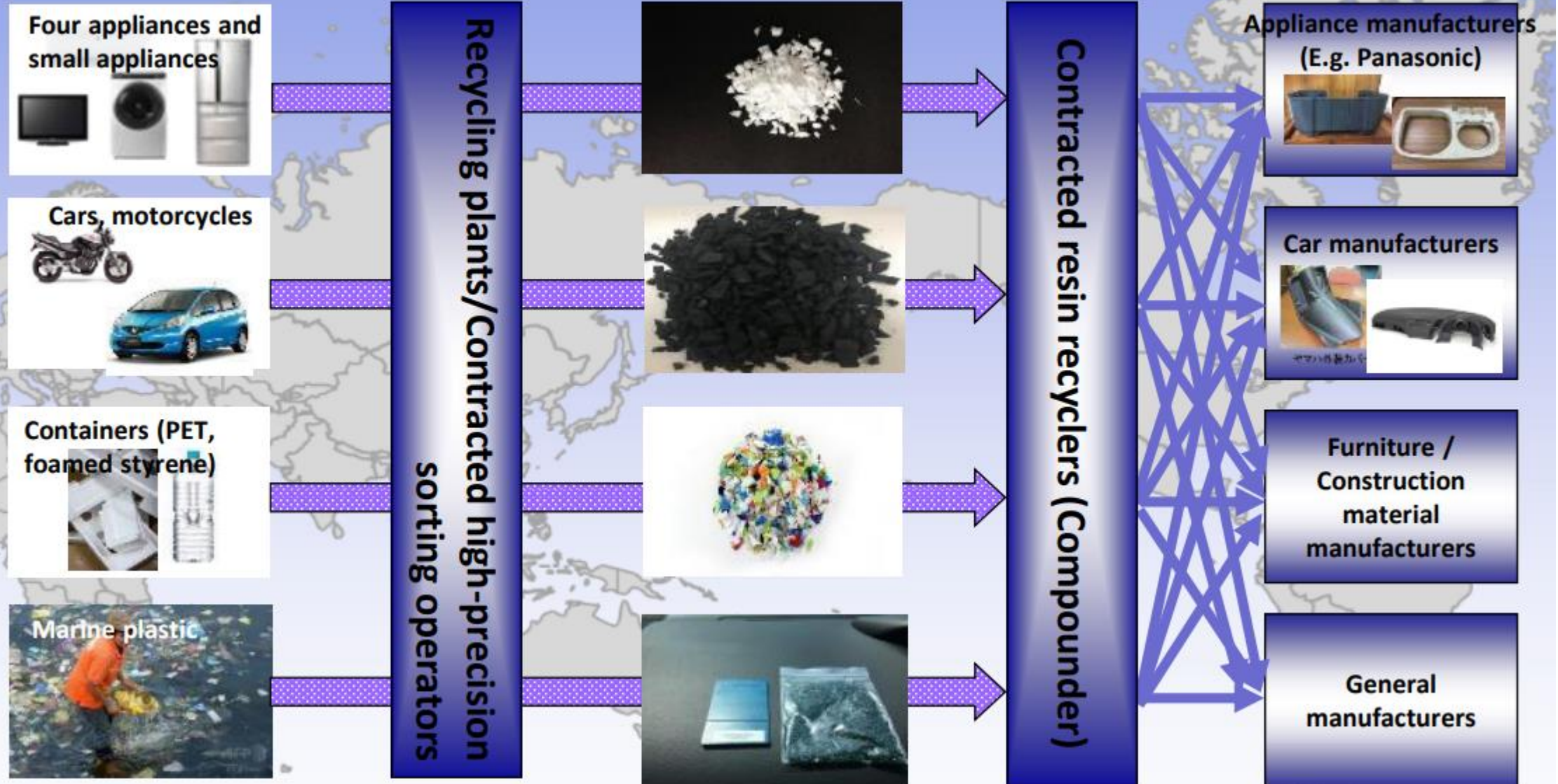








Producers effort for “Closing the green loop”



Waste plastic becoming the resources for high ends

- Japan: Product made from used refrigerator gaskets (rubber seal)



Used refrigerator gasket
(rubber seal)

Recycle in
Japan



Recycled plastic pellets

Use in
products



(Example) Mats used in
cars

- Low-quality mixed resin was exported to a contractor in Malaysia to be used in products



Scraps from shredded used
appliances

Recycle
outside
Japan



Recycled plastic pellets

Use in
products



(Example) Washing machine
frame

Ocean Bound Plastic utilization

Henkel

ビーチ等で収集された廃棄
プラスチックから製造した
ウェアやシューズ
©アディダスジャパン株式会社

Adidas



Nike



http://www.oceansplasticcleanup.com/Cleaning_Up_Operations/Nike_Shoes_Ocean_Plastic_Recycled_Recycling_Sports_Rubber.htm



<https://www.henkel.com/sustainability/sustainable-packaging/plastic-bank-partnership>

ESM in reality.. as a summary

- Some EMS measures are in place to control for treating wastewater originated from waste plastic rinsing process
- Some facility practices high-grading non-ferrous metals without chemical reaching process
- Some facility only segregates items that have market value, sometime “cherry-picking” with no control on hazardous items
- Producers/brands are becoming active to use recycled plastic as the alternative raw materials. ESM facility can supply materials to such off-takers

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Have a good discussion!