

# Raising Issues for Recycling Legislation in Asian Countries

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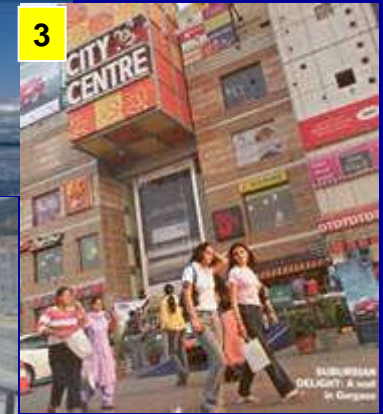
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# The World Facing a Great Turning Point and Japan's Approach

## Shift to sustainable multipolarized society <sup>1</sup>

1	Global environmental issues have become more challenging
2	Concerns about depleting resources
3	Expansion of emerging countries



## Japanese Government's Mid-and-long term image to create recycling-oriented society (around 2025)

Realizing a sustainably-developing society as achieving healthy material recycling including carbon in human society as well as trying to secure harmonious coexistence with nature.



(Excerpt from the material created by MOE)

# Vision Looking to the 100<sup>th</sup> Anniversary of Our Founding

## **No.1 Green Innovation Company in the Electronics Industry**

**Make the “environment” central to all of  
our business activities and bring forth innovation**

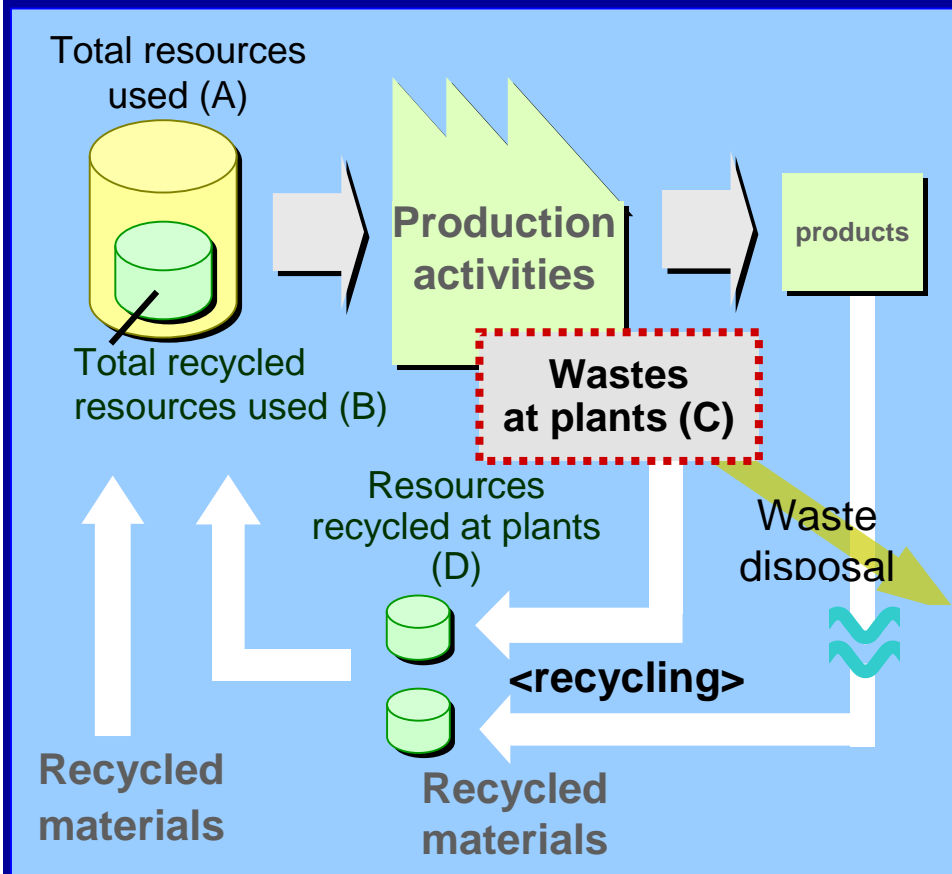
**Green Life  
Innovation**

**Green Business  
Innovation**

# Promotion of Recycling-Oriented Manufacturing

## <Future Goal>

- ▶ Maximize ratio of 'Recycled resources to total resources used'
- ▶ Pursue efforts to zero wastes from production activities



## <Targets in FY2012>

Make most of recycled resources usage

$$\frac{\text{Total recycled resources used (B)}}{\text{Total resources used (A)}} > 12\%$$

Pursue zero emissions at plants

$$\frac{\text{Resources recycled at plants (D)}}{\text{Wastes produced at plants (C)}} \geq 99\%$$

Develop 3R design & recycling technologies

Through company-wide collaboration, strengthen efforts from design stage

Excerpt from Panasonic's "New Midterm Management Plan 2010"

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# Recycling Differs by Collection Infrastructure in Each Country

## A: Countries with municipal collection infrastructure



Germany: Municipal collection point



Spain: Municipal collection point



Australia: Curbside collection

## B: Countries with immature collection infrastructure



India: Collector



China: Collector



Philippine: Waste Pickers in Quezon

# Recycling Differs by Region / Country (Treatment)

Japan



PETEC  
(100% owned by Panasonic)



PETEC (Fridge)



PETEC (FTV)

EU



Germany



Germany



UK

Asia

Open Burning



China (Guiyu)



China (Guiyu)

China (Suzhou)



# The Background Japanese HARL Was Established

(TVs, Air-conditioners, Refrigerators, & Washing machines)

## Four items

1. Disposal

Difficult

Collection

- Limit of treatment by municipality
- Difficult items for proper treatment
- Growing size of home appliances
- Limit capacity for treatment with incinerator (issue of dioxin)
- Difficult to treat fluorocarbon insulator

2. Treatment

High

Treatment

- Large volume occupied by home appliances (18-20 million units / 600,000 tons annually, accounting for 15% of all oversized trash)
- Tight landfills for general waste (8.8 remaining available years as of 2000)

3. Value as resources

High

Treatment

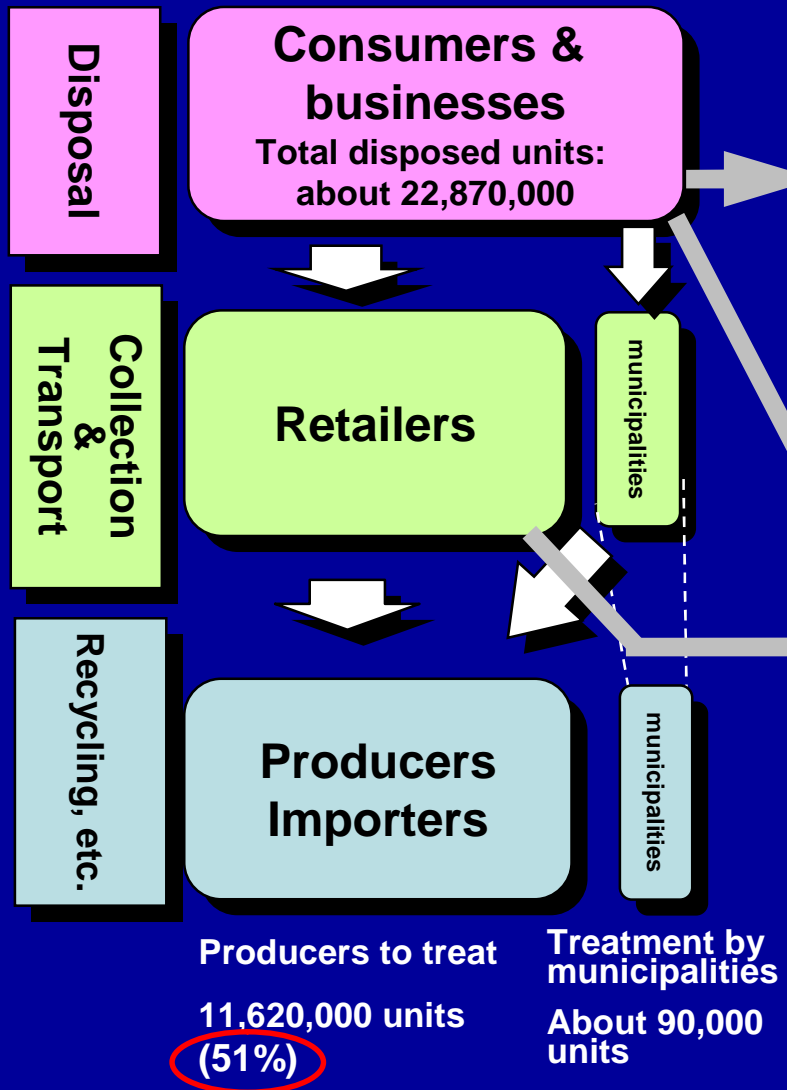
- Useful resources contained is rich
- beneficial use of resources (iron, copper, aluminum, etc.)

# Scheme under HARL and Manufacturer's Role

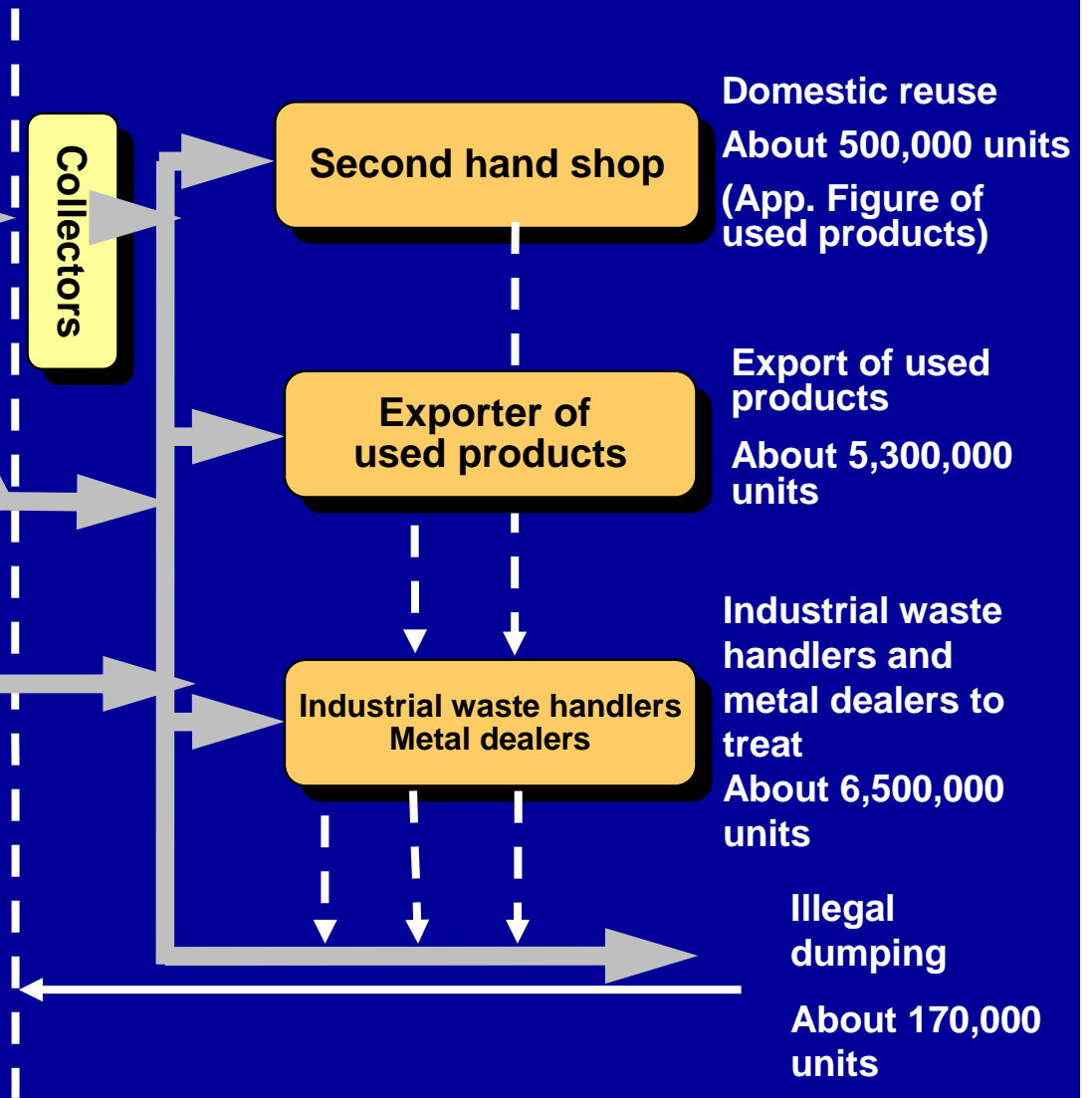


# Waste Stream in Japan and Collection Rate

## <Legitimate home appliances recycling channel>

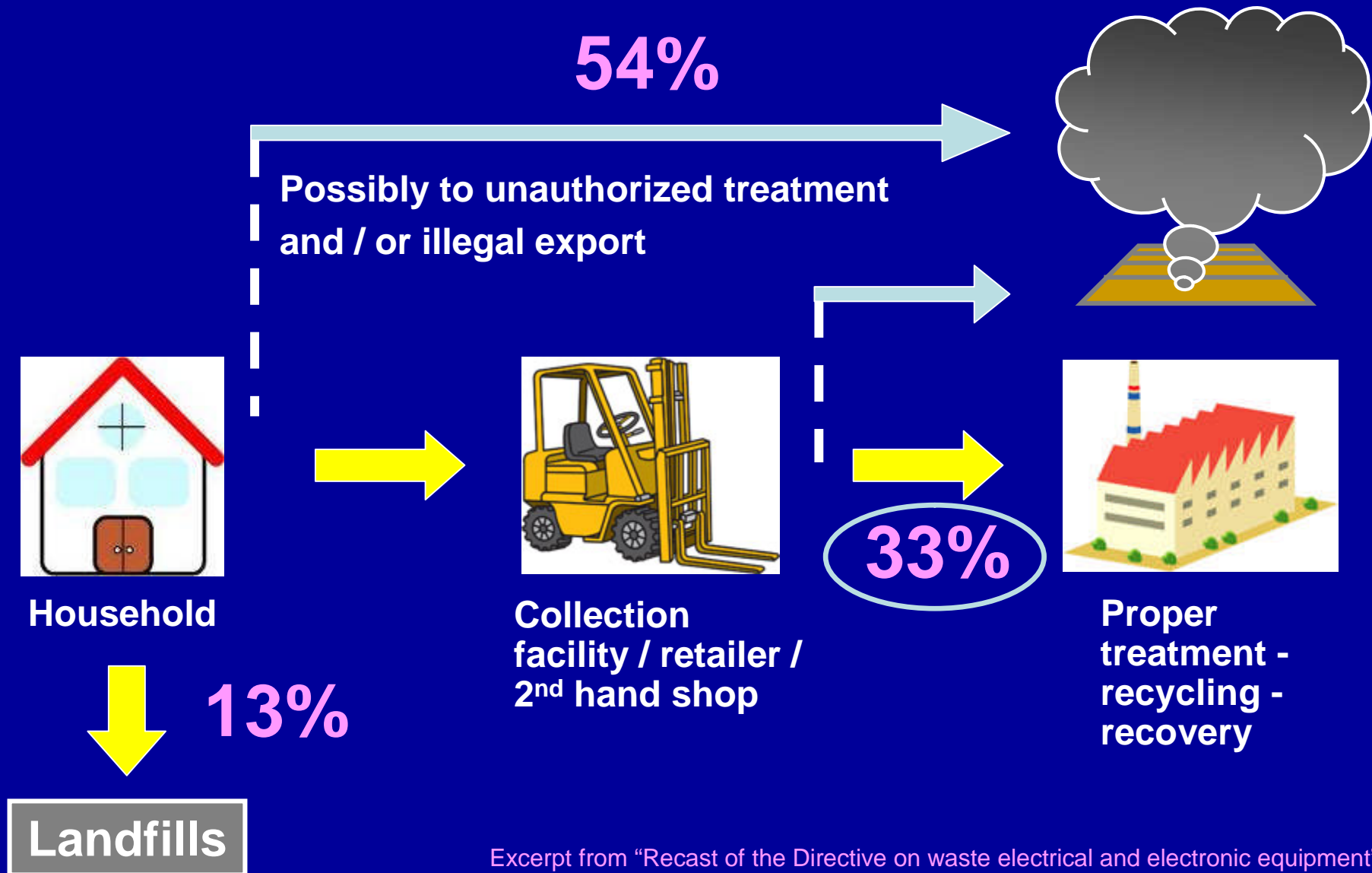


## <Invisible flow>



(Excerpt from material created by METI)

# Leakage of WEEE is a Problem in EU Today



Excerpt from "Recast of the Directive on waste electrical and electronic equipment"  
Thorsten Brunzema, European Commission – DG Environment, Jul 14, 2009

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# In View of the Actual Condition of Recycling

1. Collection is nuts and bolts of recycling.
2. Although there are legitimate waste streams in Japan and Europe, there are facts that a large portion of e-waste leaks from them.
3. Necessary requirement for collection from households.
  - Existence of mechanism which enables e-waste gather to legitimate waste stream
  - Convenience for disposer (consumer)
  - Utilization of existing infrastructure for collection (Achieving low-cost collection)

# Comparison Regarding Ensuring Collection from Households

	Collection Rate	Main Stakeholder Responsible for Collection from Households	Main Stakeholder Responsible for Collection from Households	
			Merit	Demerit
<b>Japan</b>	<b>51%</b>	<b>Retailer</b>	Convenient for Consumer	Retailer's burden is quite large
<b>EU</b>	<b>33%</b>	<b>Municipality</b>	Low-cost operation (making use of existing infrastructure)	WEEE stream after municipal collection sites is partially unclear
<b>Asia</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>?</b>

# Raising Issues for Discussion (Local Issue)

1. Neither individuals nor corporates will act proactively, if the recycling law is unpractical. Sustainability efforts should be backed by practical enforceable legislation drivers that serve as a catalyst and provide a level playing field. Such legislation must be based on policies that are tailored to individual country's needs, not "cut and paste" of legislation that may be in places elsewhere in the world. It never works in a country with immature infrastructure. It is required to study a tailor-made legislation along with the reality of collection and treatment in each country.
2. The best solution is to create optimized recycling system for collection and treatment in respective countries in Asia based on the local condition.

**Lastly,**

**“Recycling cannot be achieved only by the effort of manufacturers.**

**It never works without cooperation of stakeholders such as consumers, retailers and municipalities.”**

- Recycling needs appropriate roles to be allocated to respective stakeholders based on the concept that recycling is a societal system -

**“Shared Responsibility”  
is the key to success**

**Along with legislative movement in respective Asian countries, Panasonic as a manufacturer will support legislation in cooperation with related stakeholders.**



eco  
ideas

**Thank you**