

THE CHALLENGES OF E-WASTE/WEEE MANAGEMENT IN INDONESIA



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UNEP-DTIE-IETC IN COLLABORATION WITH THE GLOBAL ENVIRONMENT CENTRE
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INTRODUCTION

- Electronic and electrical waste called as e-waste currently is rising an emerging global issue, to date it is not a common terms for many Indonesians.
- Under the national regulations, there is no specific definition for e-waste.
- Refer to the existing regulation on hazardous waste, e-waste might be understood as unusable and or unworkable or unwanted electronic or electric and electronic appliances due to become obsolete stuffs and need to be disposed, either in the forms of wholes or as parts.
- Capacity production by year 2005 in Indonesia: 63,8 millions TV, 29,1 millions AC, 8,5 millions regrigerator, 1,2 million PC
- The Ministry of Environment has concerned to raise this issue at the national level, including addresses its associated problems.

E-WASTE IDENTIFICATION

- National regulation has no identify of e-waste terminology.
- E-waste might be interpreted as any obsolete electronic and electrical goods or components or parts.
- It should be differentiated between non-hazardous and hazardous e-waste.
- E-waste that classified as hazardous e-waste if it contains of components or parts made from or containing hazardous substances (lead, mercury, cadmium and others).
- National Reguation, define hazardous waste as the residue from activities which contains hazardous materials and/or harmful to the environment and/or imperil the environment and the health as well as the survival of human beings and other living creatures.

E-WASTE IDENTIFICATION

- Electronic waste basically refers to post consumer electronic products that generated as obsolete electronic goods mainly resulted from households and offices.
- Guidelines to identify parts or components that categorized as hazardous might be obtained from BCRC SEA.
- To figure out how much e-waste generated in Indonesia, it might be essential to track back the capacity of the electronic manufacturers or the importation of electronic products.
- Group of manufacturers normally have a specific code for industrial identification such as ISIC number to identify group of industry based on their processes or activities and HS (harmonised system) number for commodities

REGULATION RELATED TO E-WASTE MANAGEMENT

REGULATION	CONSENT
Law Number 32 Year 2009	Environmental Protection and Management
Law Number 18 Year 2009	Solid Waste Management
Presidential Decree Number 61 Year 1993	Basel Convention Ratification
Government Regulation Number 18 Year 1999	Hazardous Waste Management
Decree of Ministerial Trade Number: 63/M-DAG/PER/12/2009	Importation of used product for reconditioning, remanufacturing or re-use (Importir Produsent)
Decree of Ministerial Trade Number: 39/M-DAG/PER/9/2009	Importation of Non Hazardous Waste (Scrap Waste)
Decree of Ministerial Trade and Industry Number 520 Year 2003	Prohibition of Hazardous Waste Import

NATIONAL POLICY

- Under the Annex VIII Basel Convention stated that e-waste is categorized as hazardous wastes, but if its e-waste do not content of the characteristic under the Annex III is not categorized as hazardous waste.
- Indonesia treats e-waste under hazardous waste regulation, considered that e-waste resulted from manufactured products and the content of heavy metals; Pb, Hg, Cd, and Cr
- The importation of waste is prohibited
- The importer of non-HZW should have approval from the Ministry of Industry, and obtained license from the Ministry of Trade.
- E-waste management shall meet the appropriate manner in order to avoid any uncontrollable intention to dump this waste to solid waste disposal site or anywhere else

TRANSBOUNDARY MOVEMENT OF E-WASTE

- No official data available for used electronic appliances and e-waste importation
- However, from the field inspections, it was recognized that importation of e-waste are existed by using other common term such as mix metals scrap or plastic waste for recycle in their documents.
- This case indicates that control cross border of waste is a difficult tasks and requires strong coordination among institutions.
- Modus of transboundary movement of e-waste is subjected to raw material, reconditioning/re-use, charity, and disposal.

Piles of imported e-waste, mainly telephone boxes, founds in one recycling facility. Document import stated the materials as metal scrap



Illegally import of contaminated hazardous waste (PCBs waste) from Electrical utilities (transformers). It stated in the import document as metal scrap with HS Number 3926.10.20.00).

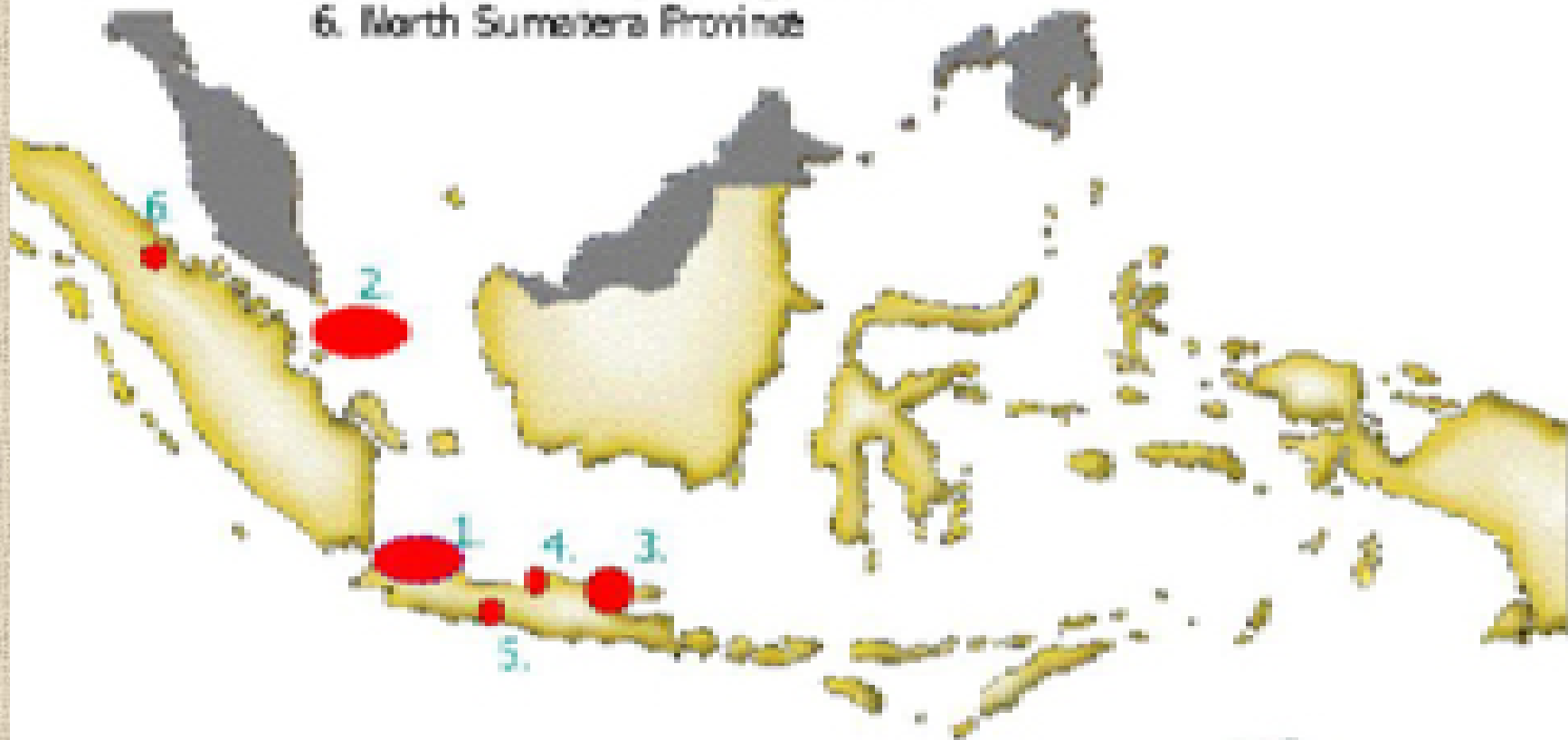


PRIMARY DATA COLLECTION

- Since there is no regulation in managing this waste in Indonesia, there is no available data concerning this waste.
- National Preliminary Study of E-waste Inventory has conducted in order to develop strategy and framework for the actual inventory.
- The purposes of study are focused on:
 - identification of refurbishment and recondition facilities, potential e-waste recycle facilities and influx of illegal used electronics goods,
 - identify the existing used electronic market and refurbishment premises in particular area,
 - identify kinds of waste collected and managed by those selected recycle facilities in East Java and Batam island,
 - Observation of obsolete products, electronic spare parts and components management in West Java, Jakarta, Batam island.
- In identifying potential illegal import of used electronic goods to Indonesia, the study was to find out the pattern of incoming used electronic goods in Batam and Wakatobi Islands.
- Refurbishment and recondition facilities were interpreted as shops or workshops that conduct electronics services and trading the used ones.

DISTRIBUTION OF ELECTRONIC INDUSTRIES IN INDOENSIA

1. Banten, DKI Jaya and West Java Provinces
2. Batam of Kepulauan Riau Province
3. East Java Province
4. Kudus of Middle Java Province
5. Special Territory of Yogyakarta
6. North Sumatera Province



PRIMARY DATA COLLECTION

Results of study:

- Small islands is market targeted for illegally e-waste import into territory.
- Identification of Individual shops provide used electronic goods and refurbishment. In respect to ability extending of the end of life electronic products, some workshops have played important role in reduction penetration of e-waste.
- Most of e-waste recycle industry have recycling facility to produce metal scrap.
- As a special bonded area, Batam has privilege to import almost everything. For this reason, brand new goods might be imported cheaply and even lower for the used ones. Most goods supplied to Batam were imported from Singapore or Malaysia

PRIMARY DATA COLLECTION

- Used electronic goods in Batam Island mostly are still valued including hazardous e-waste (PC Board, residue and scrap metal).
- Most industries in the industrial area have followed several activities; collecting, separating, reconditioning, recycling, packing and reselling (national market and export).

RECYCLE FACILITIES IN BATAM ISLAND

NO	COMPANY	ACTIVITIES	E-WASTE
1	PT. Sentral Agung Himalaya	Collecting metal waste from domestic sources, segregation, packing, export or domestic sale, no physical treatment	Rejected small parts of electronic components
2	PT. Interco Bisnis Langgeng	Collecting metal waste from domestic sources, segregation, packing, export or domestic sale, no physical treatment, producer poly bag and garbage bag made from used plastic and new plastic	Plastic, e-waste: used PCBs, rejected PCBs, computer monitor, electrical and electronical parts
3	PT. Indo Batam Ekatama	Collecting metal waste from domestic and imported, segregation, packing, export or domestic sale, no physical treatment	Scrap: Al, Cu, brass, tin solder, plastic. e-waste: Used PCBs

RECYCLE FACILITIES IN EAST JAVA

NO	COMPANY	ACTIVITIES	E-WASTE
1	PT. Wajar Logam Jaya	importer mix scrap metal, TV and monitor, dismantling CPU and printer; recondition monitor, produce scrap metal or aluminum, brass ingots, grinded casings, export	e-waste: CPU, printer, TVs, monitor
2	PT. Sun Doly	Importer mix scrap metal, TV and monitor, dismantling CPU and printer; recondition monitor, produce scrap metal or aluminum, brass ingots, grinded casing, export	e-waste: CPU, printer, TVs, monitor
3	PT. Kingson Metal Industry	Metal smelter using imported material in form scrap of vehicles	e-waste: not found
4	PT. Metalindo Jaya Abadi	Recondition of CPU, fax machine, and printer from domestic originated for local market	e-waste: CPUs, computer's , printer
5	PT. Fremont Nusa Metal	Non ferrous smelter using local mix scrap metal, metal apparatus reconditioned	e-waste: not found
6	PT. Hanjaya Perkasa Metal Indonesia	Non ferrous smelter using imported mix scrap metal, recondition metal apparatus, imported PCBs powder	e-waste: used PCBs, PCBs sacrap, PCBs Powder

CHALLENGES OF E-WASTE MANAGEMENT IN INDONESIA

- The absence of such regulation would give difficulties in collecting data on e-waste from households which considered as the largest consumers of electronic products.
- There is no obligation for producers to manage, “take back” their obsolete products indicates that there is no liable part responsible for generation of e-waste including its management.
- The Ministry of Environment has formulating regulation or policy on electronic waste treatment and disposal.
- Further study on e-waste inventory should be focused on :
 1. Data collecting from Specific Sources
 2. Data collecting from Recycle Facilities
 3. Data collecting of Post Consumer Electronic Products

DRAFT MINISTERIAL DECREE ON E-WASTE

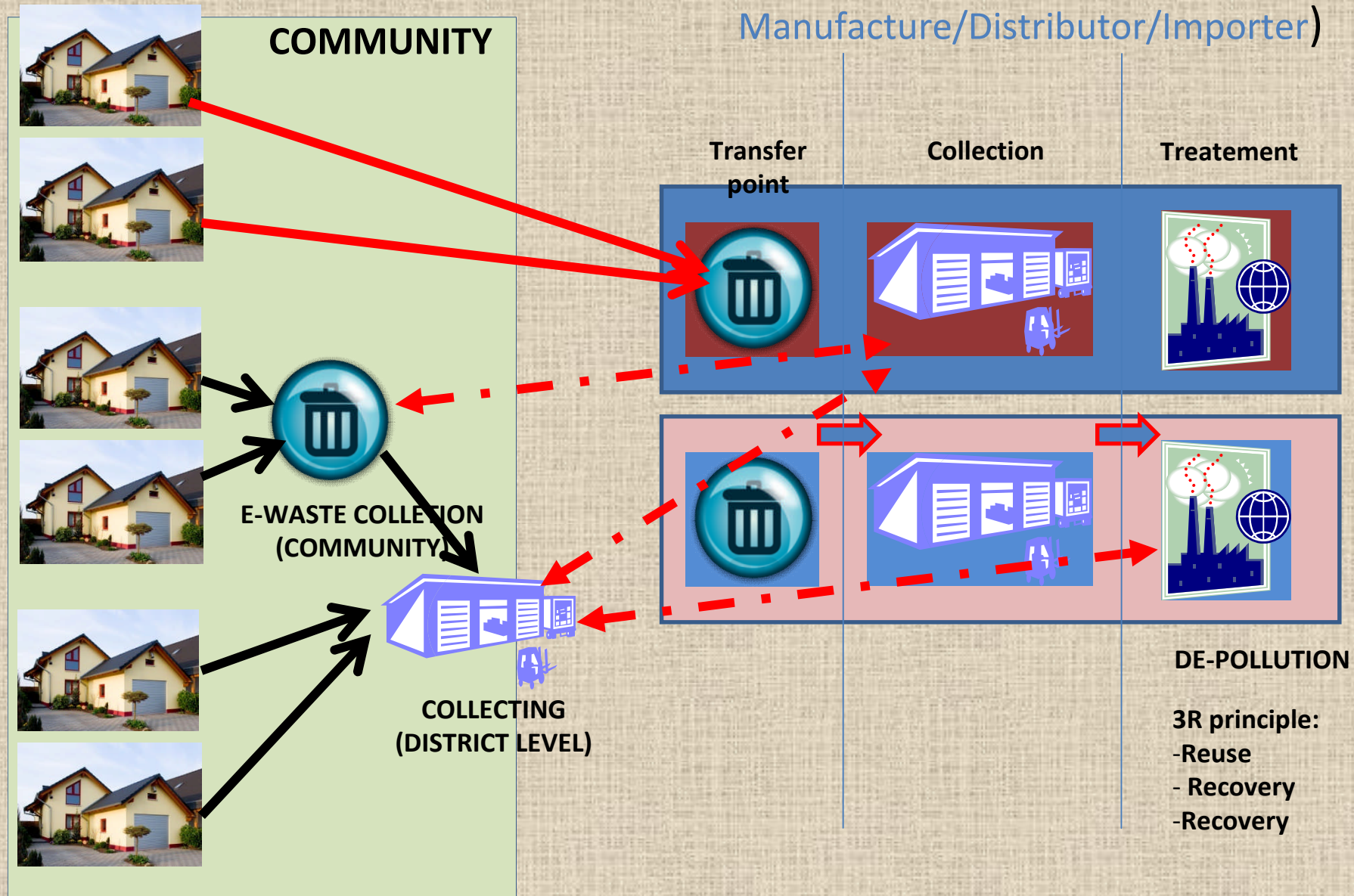
Draft of e-waste regulation focused on:

- Distinguished between e-waste and second-hand equipment
- Management approach through:
 1. EPR (*Extended Producer Responsibility*)
 2. Government participating at all levels (national. Provinces and districts)
 3. Economic instrument (insentive and disinsentive)
 4. 3 R program (reuse, recycle and recovery)
- Current status of e-waste management:
 1. Permit system for 3R activities
 2. Voluntarily take back the used equipment (handphone, photo copy machine)

E-WASTE COLLECTING SYSTEM SCENARIO

PRODUSENT:

Manufacture/Distributor/Importer)



Open storage of imported monitors in a reconditioning facility in East Java



Electronic parts and components found in a recycle facility in Batam



A small informal seaport in Batam Island was used for trans-shipment of used goods



THE NEED OF FURTHER ASSESSMENT ON MANAGING NATIONAL E-WASTE

- Regulation on e-waste
- Institutional mechanism (product take back)
- Deep inventory on e-waste
- Technical Aspect
- Law Enforcement and Inspection
- Financial mechanism
- Consumers Protection
- Environmental and Economic Aspect

THANK YOU