

**TRAINING WORKSHOP
ON “BUILDING CAPACITY TO DEAL
WITH ILLEGAL SHIPMENT OF E-WASTE
AND NEAR-END OF LIFE ELECTRICS”
10- 13 JULY 2012, HANOI, VIETNAM,
CAMBODIA PRESENTATION**

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1. GENERAL STATUS OF E-WASTE IN CAMBODIA

✘ Emerging trend in E-Waste Generation

- Due to improved living standards, globalization and international trade, and tourism, the consumption of electronic equipment has rapidly increased. This is leading to accumulation of E-waste.
- The Technical Report on National Inventory of UEEE in Cambodia indicated that numerous electric and electronic equipments (EEE) being used in Cambodia are second-hand items, imported from various country in the region.

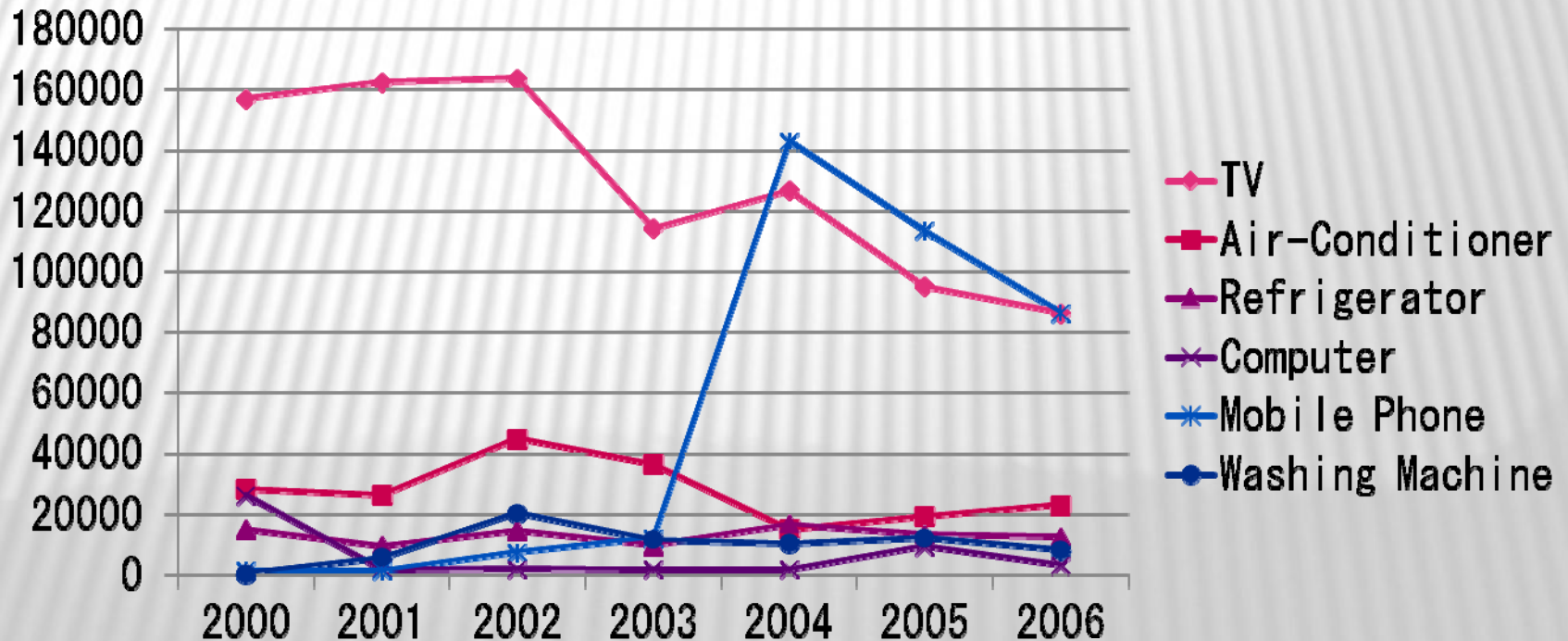
1. GENERAL STATUS OF E-WASTE IN CAMBODIA (CONT.)

- Cambodia currently requires import of second hand/used EEE to enable uses by most poor people approximately 34.7% of the population (NSDP 2006-2010).
- Inventory Studies show that E-Waste generation potential range from 6792 metric tons in 2008 to 22,443 metric tons in 2019(CEA report 2008).
- The use of EEE in Cambodia is noticeably increased from year after year, especially, in Phnom Penh Municipality.

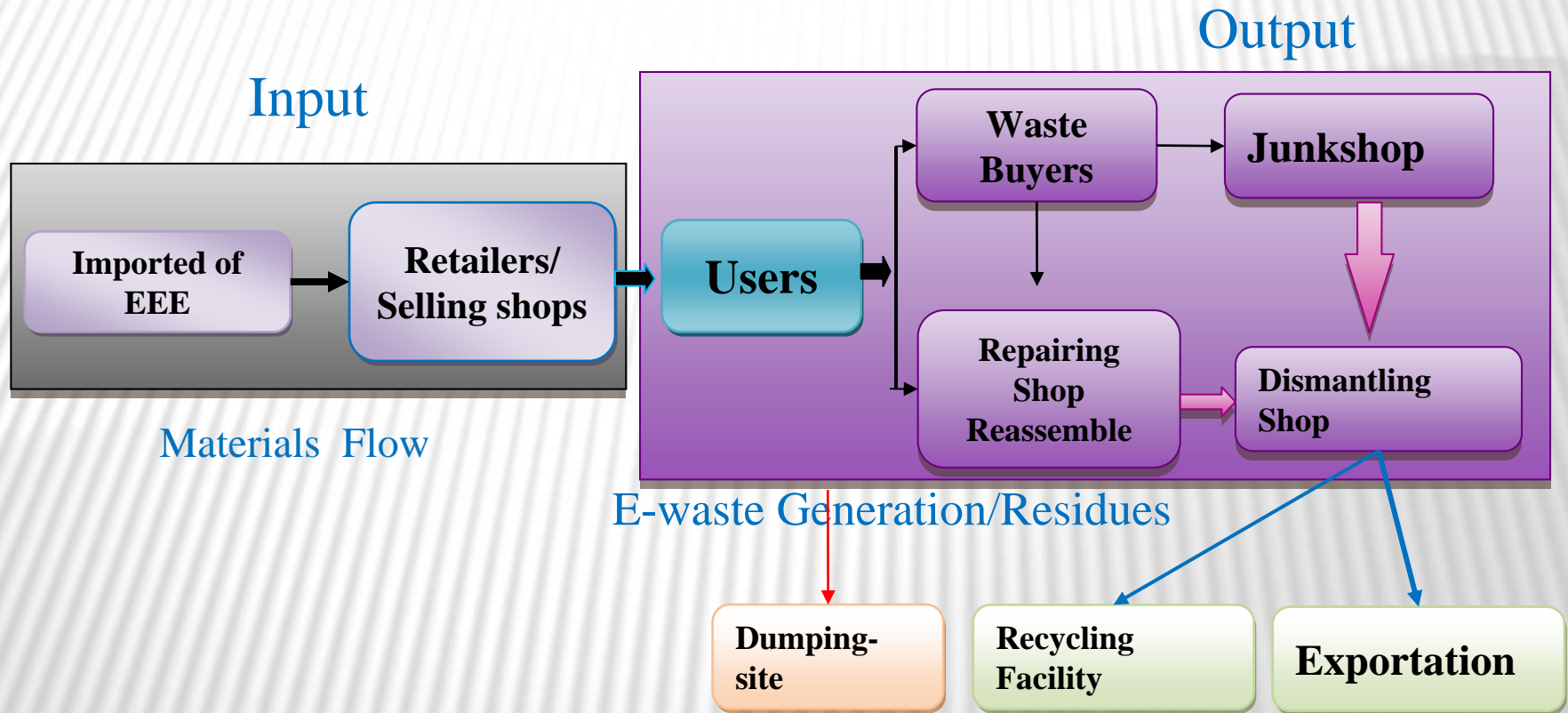
1. GENERAL STATUS OF E-WASTE IN CAMBODIA (CONT.)

- According to outcomes of the survey in 2006-2007 of local NGO, namely, Cambodia Environmental Association (CEA), we have found brand-new items are being used more higher than second-hand types.

Statistics of imported EEE, 2000-2006



1. GENERAL STATUS OF E-WASTE IN CAMBODIA (CONT.)



Flow Chart of Electronic & Electric Equipment/Used Electronic & Electric Equipment

1. GENERAL STATUS OF E-WASTE IN CAMBODIA (CONT.)

✘ E-Waste impact on public health and Environment of Cambodia

- In Cambodia, the management practice of EE wastes (EEW) at various sources has not yet complying with the environmentally sound manner.
- Occupational health is another case: less attention from concerned institutions, and repairers do their jobs with either less or unaware of it, occurring during the operation.

GENERAL STATUS OF E-WASTE IN CAMBODIA (CONT.)

❖ Environmental impacts

- Obnoxious smell and noise disturbance
- Particulate matters
- Residues discharged
- Exposure to surface/ground water contamination and pollution
- Ecosystem impacts
- Atmospheric pollution
- Climate change, etc.

GENERAL STATUS OF E-WASTE IN CAMBODIA (CONT.)

❖ Public health Impact

- Acid emission/evaporation
- Releasing other chemical/toxic substances, chemical compounds
- Electric shocking
- Negative aspects (smelling, noise pollution, particles release, smoke and toxic substance).
- Protection equipment : workers ignore to wear the protective equipments (safe facilities)

2. CAMBODIA LEGAL FRAMEWORKS ON E-WASTE ENTERING

- ❖ Cambodia does not have a specific law or regulation aiming at managing UEEE/EEW.
- ❖ The Law on Environmental Protection and Natural Resources Management (1996) aims to manage various kinds of hazardous substances/wastes (solid, liquid, and gas) in order to prevent and get rid of public health impacts and environmental quality protection.

2. CAMBODIA LEGAL FRAMEWORKS ON E-WASTE ENTERING

- ❖ **Sub-decree on Solid Waste Management (1999)**
- ❖ **Sub-decree on Water Pollution Control (1999)**
- ❖ **Sub-decree on Air Pollution Control and Noise Disturbance (2000)**
- ❖ **Sub-decree on Ozone Depleting Substances (2005)**

CAMBODIA LEGAL FRAMEWORKS ON E-WASTE ENTERING

- ❖ Sub-Decree on Business Facilitation by Risk Management (2006) is another important legal instrument of Cambodia, aiming at:
 - ✓ improving the imported/exported processes of goods and other facilities in complying with the national laws/regulations and international agreements/protocols;
 - ✓ effective management and monitor;
 - ✓ providing low cost in service comparing to other adjacent countries;
 - ✓ authorizing functions/duties of line institutions at check-points;
 - ✓ facilitating a rapid and easier way to importers/exporters.

CAMBODIA LEGAL FRAMEWORKS ON E-WASTE ENTERING

- ❖ General Dept. of Customs and excise of Cambodia (GDCE).
- ✓ GDCE is one authority belong to the Ministry of Economy and Finance, are responsible for all kinds of movement of goods on trans boundary and control the suppression the activities of smuggling goods.
- ✓ Customs is a leading agency for inter-authorities at the border gate such as cam control, immigration police, photosynthesis agencies, etc.
- ✓ GDCE established sub-decree number 209 on the implementation of the list of prohibited and restricted goods (12/03/2007).
- ✓ Totally listed 1537 of tariff lines of Cambodia customs tariff. That list included of used commodities such as PCs, shoes, bags, batteries, etc.

Ex. All kind of used and brand new of cold equipment consuming ozone depleting substance must be apply to MOE for licensing imported.

THE TYPE OF HAZARDOUS WASTE IS LISTED IN THE ANNEX OF SUB-DECREE ON SOLID WASTE MANAGEMENT:

1. Fibrous and clothing wastes from textile and garment industry
2. Paper waste from paper-mill industry
3. Sludge waste from factory wastewater treatment and product manufacturing processes
4. Combustion residues from coal-fired power plants
5. Plastics waste from production or use of plasticizers
6. **PCB waste from use of PCB contained in discarded air conditioners, TVs and microwaves**
7. Rubber waste from production or use of resins and latex
8. Oil waste from oil refinery, use of lubrication oils, washing oils
9. **Acid waste**
10. **Alkali waste**
11. **Metal waste and their compounds: Zinc (Zn), Selenium (Se), Tin(Sn), Vanadium (V), Copper(Cu), Arsenic (As), Barium (Ba), Cobalt (Co), Nickel (Ni), Antimony (Sb), Beryllium(Be), Tellurium (Te), Lead (Pb), Titanium (Ti), Uranium (U), and Silver (Ag)**
12. Soot and dust waste from incineration facilities, treating exhaust gas
13. **Wastes from used or discarded electricity lamp**
14. **Wastes from production or use of battery**
15. Wastes from production and use of paints, lacquers and pigments

- 16 Wastes from production and use of inks and dyes
- 17 Explosive wastes

- 18 Infectious diseases wastes
- 19 Agriculture drugs wastes
- 20 Ash wastes from incinerators
- 21 **Wastes from expired products**
- 22 Wastes from production and use of film
- 23 Waste from treatment of polluted soil
- 24 Waste from production of drugs and medicines, and expired drugs
- 25 Inorganic fluorine wastes
- 26 Cyanide wastes
- 27 Asbestos wastes
- 28 Phenols wastes
- 29 Ethers wastes
- 30 Wastes from production and use of solvents
- 31 Wastes from production and use of dioxin and furan
- 32 Radioactive wastes
- 33 Wastes produced as a result of treating above item 1-32

2. CAMBODIA LEGAL FRAMEWORKS ON E-WASTE ENTERING

Relevant Regulations

- ❖ Joint-Declaration the Ministry of Interior and the Ministry of Environment on “Solid Wastes and Litter Management in Cambodia
- ❖ Environmental Guideline on Solid Waste Management in Cambodia (2006)
- ❖ National 3R Strategy on Wastes Management (2008)
- ❖ Custom and Excise General Dept. Announcement on the Ban of importation of old computers and spare-parts for occupation purpose, except, for self consumption and/or charity in minor amount (12/03/02).

2. CAMBODIA LEGAL FRAMEWORKS ON E-WASTE ENTERING

International Conventions

Cambodia is a signatory to numbers of international treaties related to E-Wastes Management: Stockholm, Basel convention and Ozone Depletion ...etc

3. INSTITUTIONAL MECHANISMS TO DEAL WITH ILLEGAL MOVEMENT OF E-WASTE

Usually Ministry of Commerce is one institution that responsible on import- export goods quality inspection and for all of importers should be registered at ministry of Commerce.

Ministry of Economic and Financial (General Department of custom and Excise), is a inspector institution on transboundary movement of trade, evaluation for customs tariff and banned cross-border goods smuggling activities.

On 02 March 2001, the Royal Government of Cambodia signed as a party of the BC, which that Department of Environmental Pollution Control, MoE is the competent authority and focal point, therefore Ministry of Environment set-up a working group/steering committee for applicants of Basel Convention such as below :

3. INSTITUTIONAL MECHANISMS TO DEAL WITH ILLEGAL MOVEMENT OF E-WASTE

- MoE (Ministry of Environment)
- MoI (Ministry of Interior)
- MoEF (General Department of custom and Excise)
- MoC (CAMCONTROL” Cambodia import Export Inspection fraud Repression Directorate General”)
- MoP (Ministry of Planning)
- MoH (Ministry of Health)
- MAFF (Ministry of Agriculture Forestry and fishery)
- MoFA (Ministry of Foreign affair and International Cooperation)
- MoWT (Ministry of Public Work and Transportation)

3. INSTITUTIONAL MECHANISMS TO DEAL WITH ILLEGAL MOVEMENT OF E-WASTE

- MIME (Ministry of Industry Mines and Energy)
- MoW (Ministry of Women Affair)
- MoLVT (Ministry of Labor and Vocational Training)
- MPP (Municipality of Phnom Penh)
- RUPP (Royal University of Phnom Penh)

4. CAMBODIA PARTICIPATION IN THE APPLICATION OF BASEL CONVENTION

Relevant activities have done by Cambodia under the BC's Framework include as follows:

2004-2005, Project on Environmentally Sound Management of Used Lead Acid Batteries(ULAB) with both financial and technical support from the BCs.

☞ Technical report and National action plan

2005-2006, Project survey of the import and the environmentally sound management of electronic waste. Project has been supported between the Asia- Pacific Regional Centre for HWM Training and technology Transfer(BCRC- China).

☞ Reput on Inventory outcome of Electronic and Electric Waste in Cambodia



4. CAMBODIA PARTICIPATION IN THE APPLICATION OF BASEL CONVENTION

2006-2007, Project on Environmentally sound management of electrical and electronic waste(personal PC, TVs, refrigerators, air-conditioners, Mobile phones and washing machine): Project has been supported MoE of Japan and Implemented by EX corporation company in Japan that contracted with Cambodia Environment Agency.

👉 Technical Report on National Inventory of Used EEE in



4. CAMBODIA PARTICIPATION IN THE APPLICATION OF BASEL CONVENTION

2008-2009, Conducted National Training workshop for ESM of E-waste, organized by MoE, Cambodia and Supported BC,

a) Training Program on E-waste for key stakeholders

- Government Officials
- Workers/Scavengers

b) Demonstration of ESM of E-waste

- Collection Scheme at Recyclable waste
- Collection Site

2009-2010, Project on WEEE /E-waste in Phnom Penh supported by UNEP-DTIE-IETC has provided

- Stakeholders Workshop on e-waste management.
- Training manual of e-waste inventory/management for 3days to national and local government officials and academic sector.

OVERVIEW AT USED EEE REPAIRING/SELLING SHOPS



5. EXISTING RECYCLING INFRASTRUCTURES FOR E-WASTE IN CAMBODIA

At the moment, Cambodia is not any regulation frameworks specific deal on E-Waste management and extended producer responsibility (EPR) policy yet.

E-Waste management mechanism in Cambodia, depend to value trade of e-waste

Usually, there are three major components of E-waste management systems in Cambodia.

1. E-waste collection, sorting and transportation system
2. E-waste treatment system (dismantling)
3. E-waste disposal system.

5. EXISTING RECYCLING INFRASTRUCTURES FOR E-WASTE IN CAMBODIA

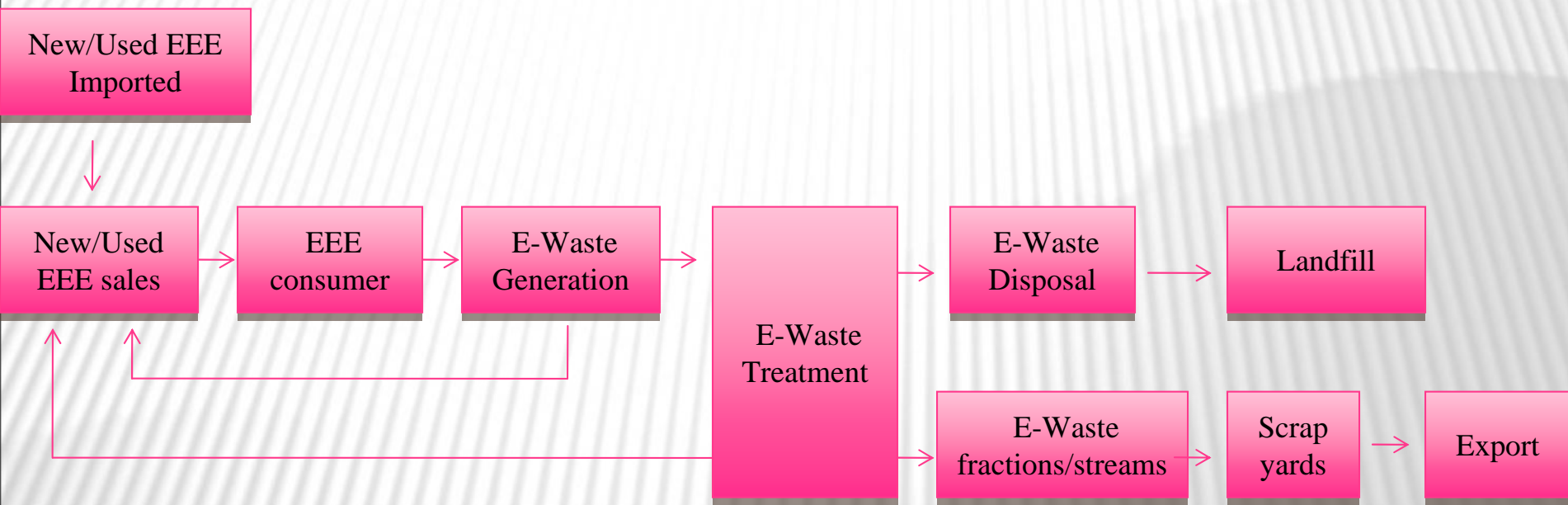
1. E-Waste collection, sorting and transportation system

- In the municipal system, dustbins are utilized for E-waste disposal while waste pickers use hand carts for transportation of E-Waste. Further, vehicles from municipal solid waste transportation company pick E-waste residues from the bins for disposal at waste dump site.
- Dismantler's in the informal sector use vehicles to transport E-waste from the point of generation to the junkshop or for the place of dismantling.

5. EXISTING RECYCLING INFRASTRUCTURES FOR E-WASTE IN CAMBODIA

- Most wastes of used EEE occurring from repairing and dismantling process were sold to waste collectors or scavengers, because they still have some value, albeit small.
- Remaining residues (unvalued residues) were disposed mixing with domestic wastes, and finally, collected by waste collection company and disposed at municipal waste dumpsites.

5. EXISTING RECYCLING INFRASTRUCTURES FOR E-WASTE IN CAMBODIA



E-Waste trade value chain in Cambodia



Municipal Dustbins Usage for E-waste collection and transportation



Existing Informal Sector E-waste collection and transportation

5. EXISTING RECYCLING INFRASTRUCTURES FOR E-WASTE IN CAMBODIA

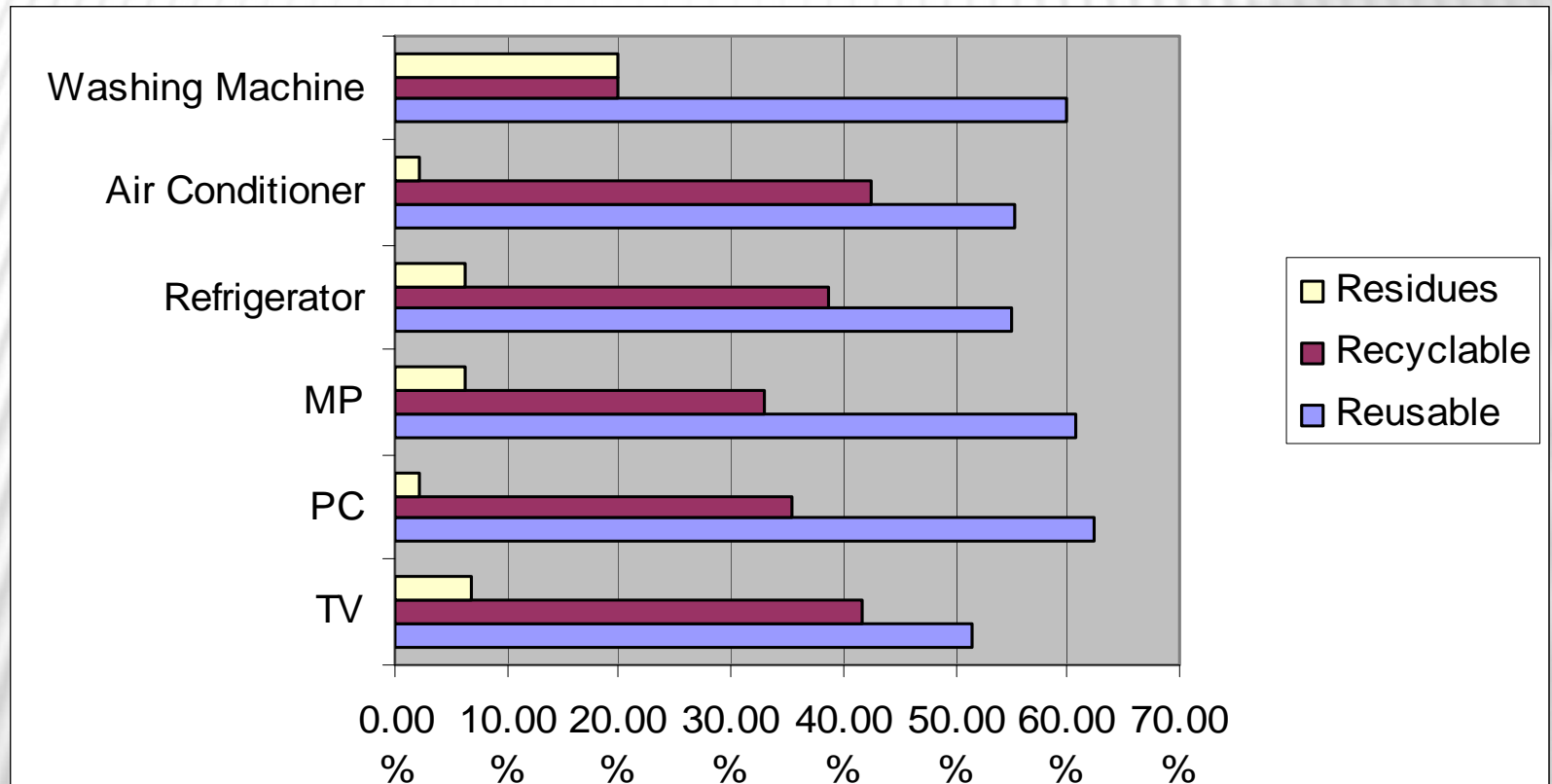
2. E-Waste treatment and disposal system

E-waste generation requires adequate treatment and disposal in an environmentally sound manner.

- The recyclable parts of computers, mobile phones, AC, TV, refrigerators and washing machine are sold to waste pickers and dismantlers while the other parts that cannot be repaired are disposed in dustbins as domestic wastes.
- The waste pickers generally sell their collected E-waste residues both from dustbins as well as from formal/organized sector to scrap yard owners for export.
- The transition of E-waste trade value chain from formal to semiformal and informal sector in PPM

E-WASTE CONCERNED 3R PRINCIPLE

Percentage E-Waste Fractions generated during repairing/ refurbishment & Dismantling



Source: CEA report on e-waste management in Phnom Penh 2009

Example :TV

Repairing and 3R



EXAMPLE :TV JUNKSHOP FOR DISMEMTLING



SAFETY OF THE REPAIRING AND DISMANTLING SHOP ACTIVITIES



6. KEY CHALLENGE FOR CAMBODIA

1. Institutional Capacity and Capacity Law Enforcement Officials is limited
2. People are working directly with EEE mostly have low education
3. Less on Public Awareness of EEE Effects on Health and the environment
4. Data collection on WEEE/ E-waste is costly, time consuming, requires technical capacity and support
5. WEEE/E-waste is available in almost all the waste streams (residential, commercial, industrial, construction & demolition, etc.). This requires strong coordination among various departments at national and local government level, responsible for management of various waste streams

6. KEY CHALLENGE FOR CAMBODIA

6. WWEE/E-waste contains hazardous substances; thus, it could also be treated as hazardous waste
7. Producers of electronics goods and consumers of these goods could be at a distance, sometimes in different countries; thus, it becomes difficult to implement various regulations
8. Higher rate of material recovery from WEEE/E-waste motivates informal sector to collect materials without using proper gear and technology and there is a hypothesis that WEEE/E-waste Management would affect their income.

THANK YOU FOR
YOUR ATTENTION

