

Workshop 2010 of Asian Network for Prevention of Illegal  
Transboundary Movement of Hazardous waste

From 29 November to 02 December 2010

Allson Paradise Angkor Hotel, Siem Reap, Cambodia

*WASTE MANAGEMENT AND ACTIVITIES  
OF CAMBODIA IN THE APPLICATION OF  
BASEL CONVENTION*

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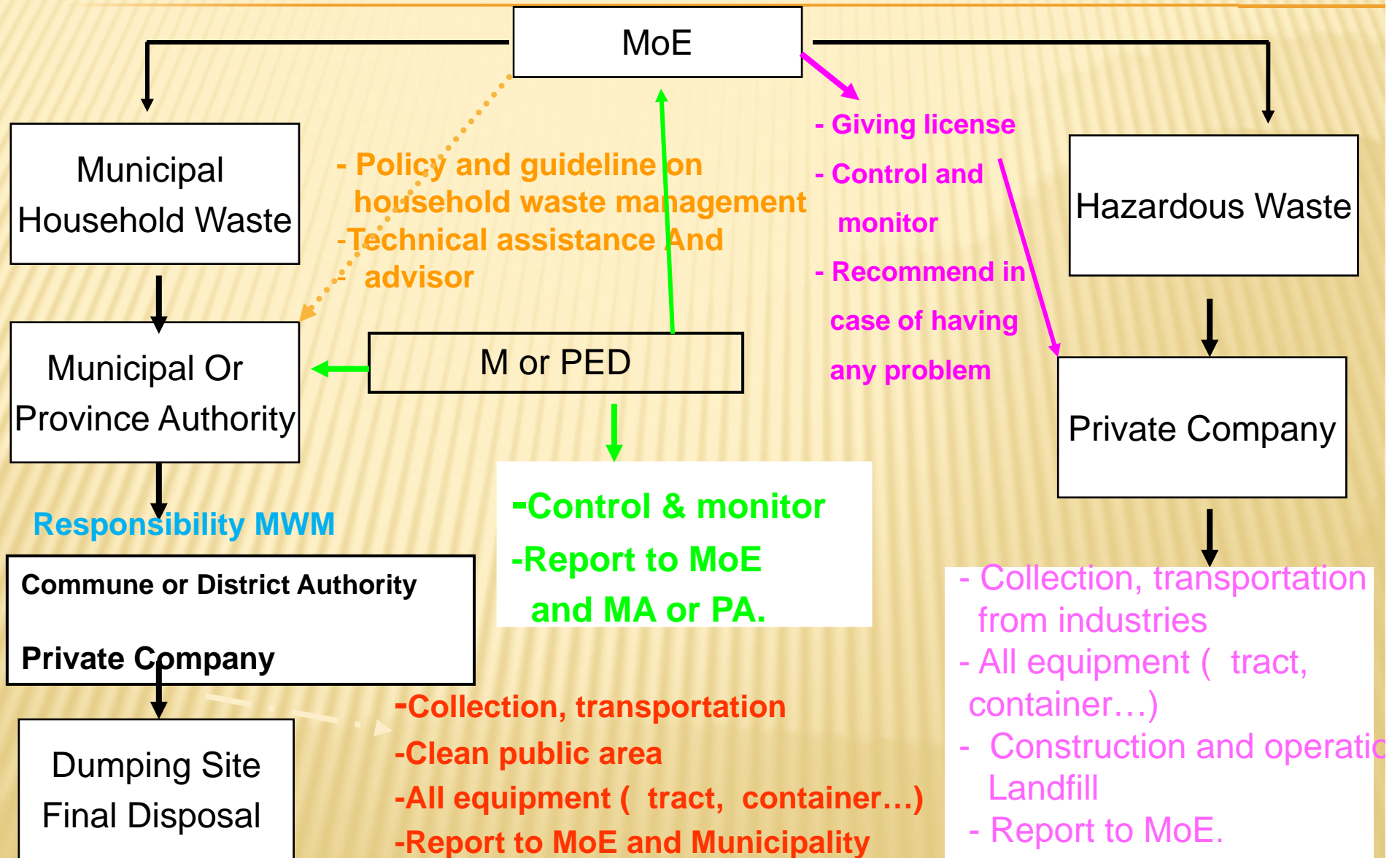
Department of Environmental Pollution Control, MoE,  
Cambodia.

# CONTENT

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1. Overview of Solid Waste Management System
2. Overview of the existing Regulation
3. Cambodia Participation in the application of Basel Convention
4. Challenges

# 1. OVERVIEW OF SOLID WASTE MANAGEMENT SYSTEM





# MUNICIPAL HAZARDOUS WASTE

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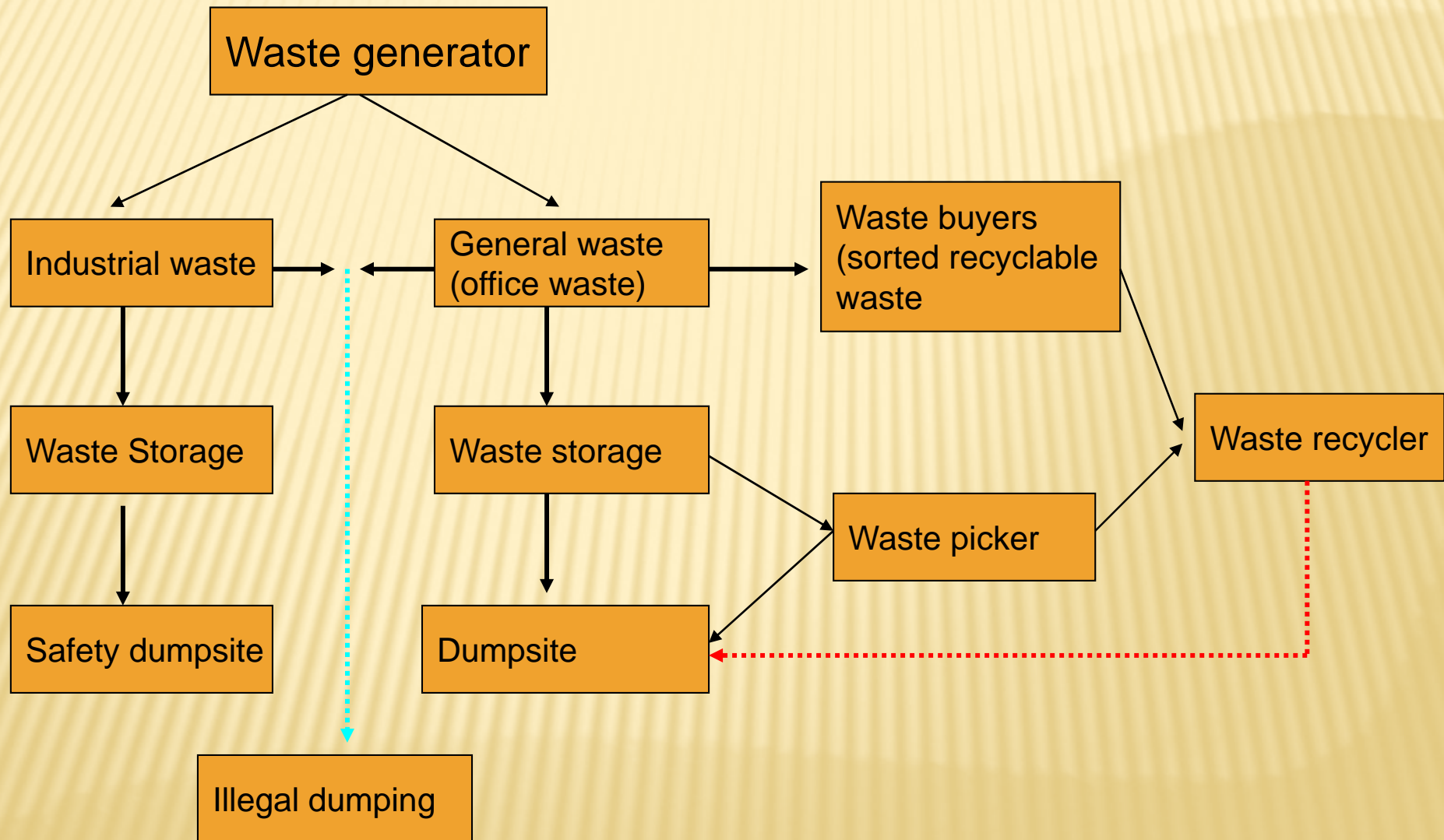
- ✘ Cambodia do not separated of hazardous waste from household.
- ✘ Do not specification of the service collection of hazardous waste.
- ✘ Some kinds of hazardous waste used system to back/ 3R like as: E-waste, Lead Acid Battery...etc.
- ✘ Some kinds of hazardous waste has be found at dump-site.
- ✘ Cambodia has not secure landfill for hazardous waste.

# COMPOSITION OF MUNICIPAL WASTE AT DUMP-SITE

Waste compositions		Percentage	Waste compositions		Percentage
01	Plastic	15.74	07	Organic	72.38
02	Fabrics	3.60	08	Metal	0.42
03	Paper	3.45	09	Medical	1.31
04	Glass	1.86	10	Gypsum	0.19
05	Poly-ethylene	0.68	11	Limestone	0.20
06	Dry-batteries	0.07	12	Tyres	0.10

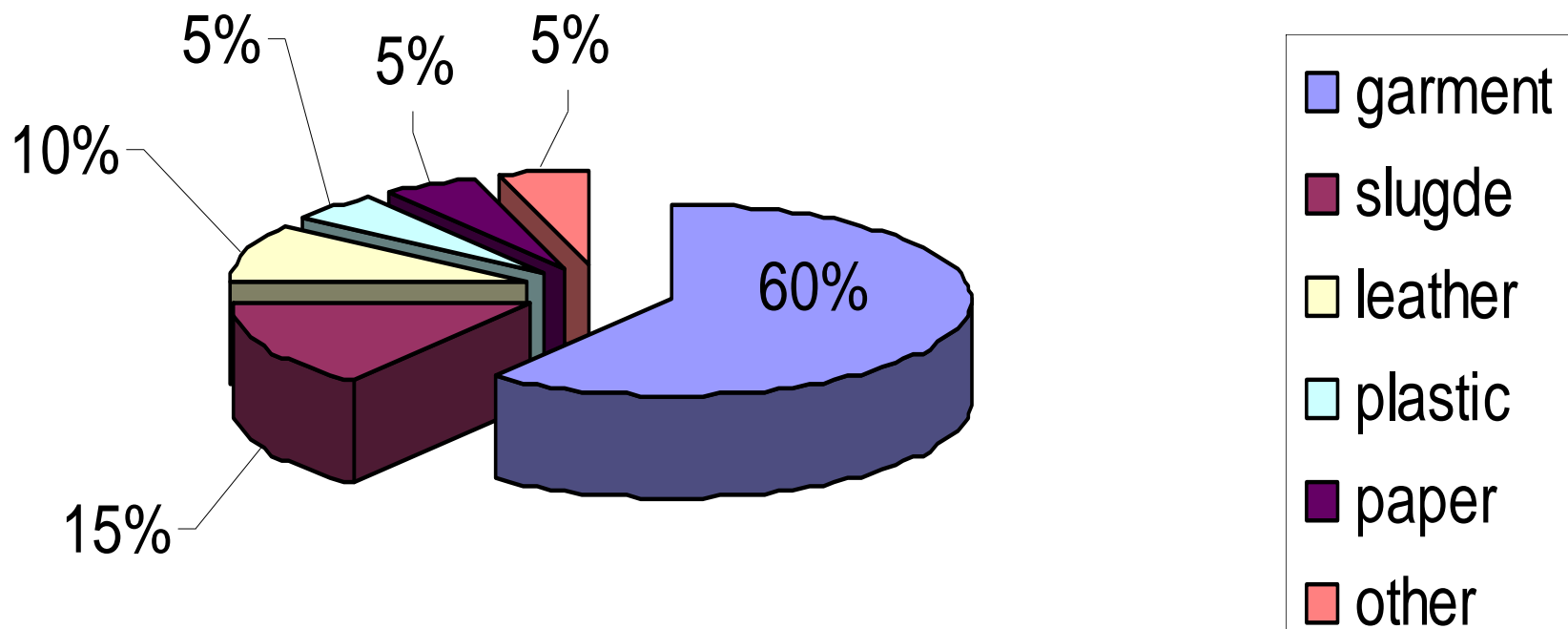
Sources: Report Workshop on “Establishing a policy on the Disposal of Dry Batteries in Cambodia “13-14 November 2006.

# FLOW CHART OF SOLID WASTE MANAGEMENT



# COMPOSITION OF INDUSTRIAL WASTE IN SAROM LANDFILL

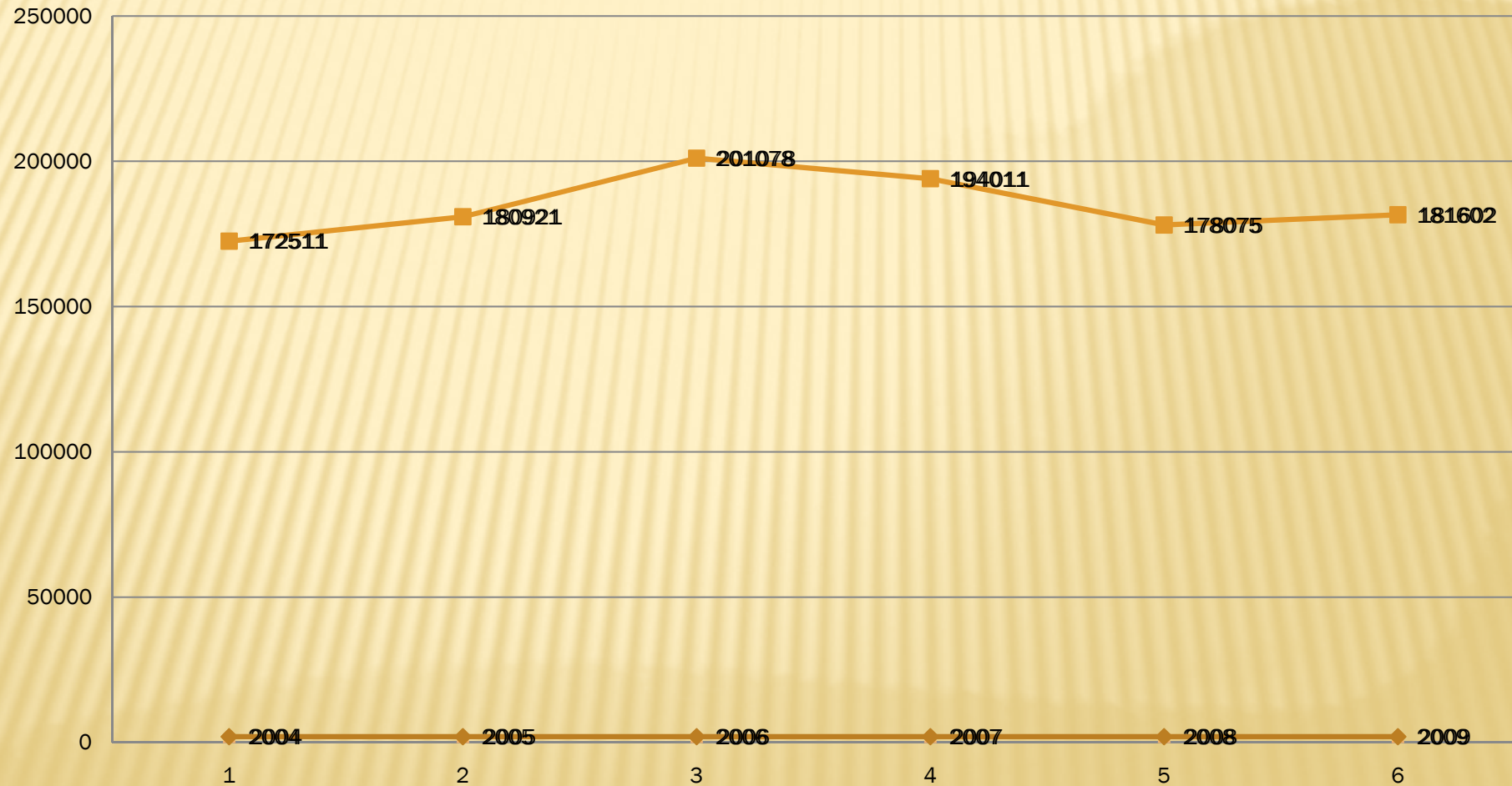
## Composition of industrial waste





# ANNUAL OF INDUSTRIAL WASTE COLLECTION

Volume of Industrail waste at Sarom Landfill





# SAROM TRADING INDUSTRIAL WASTE LANDFILL

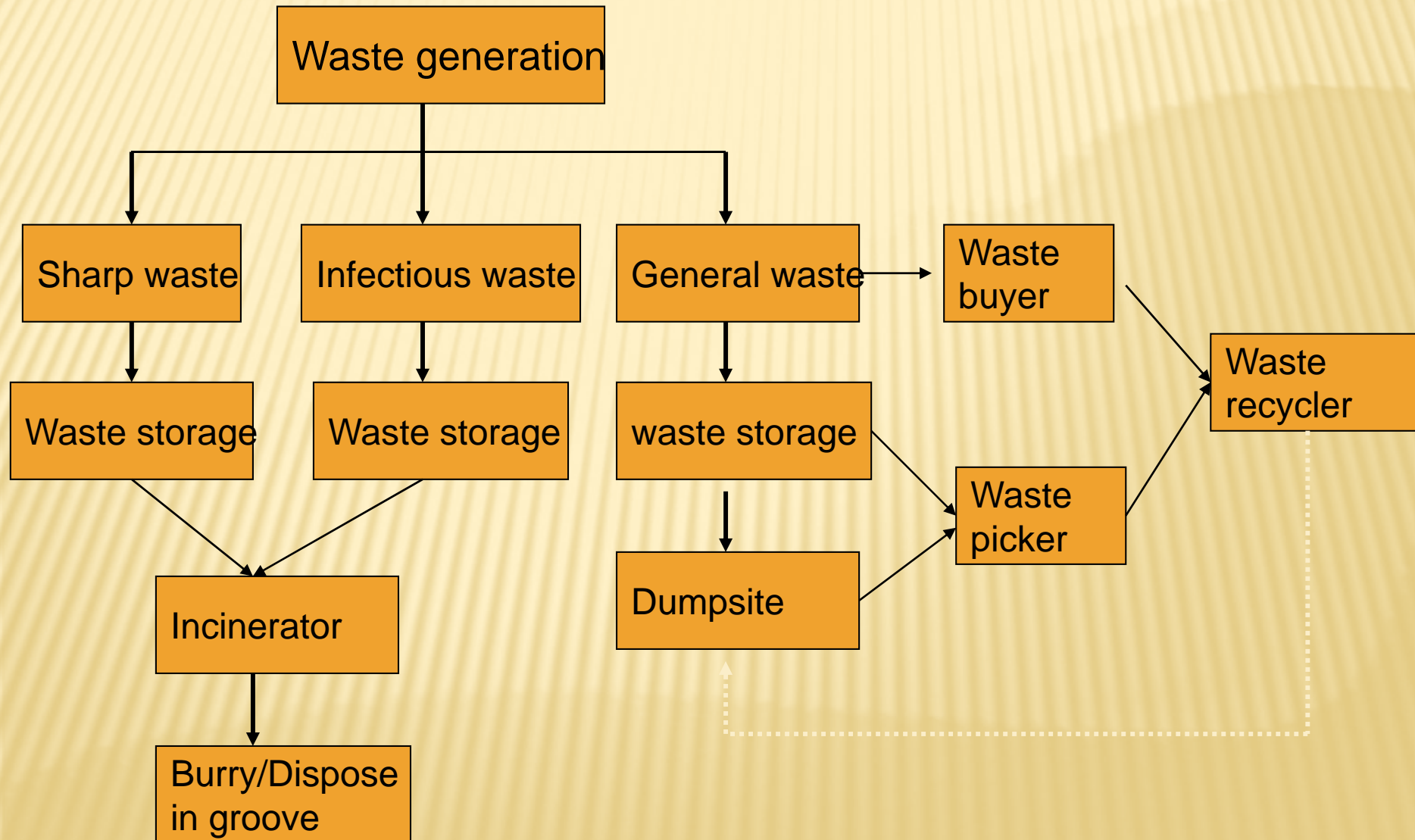


Landfill closed and soil covered



Landfill operating

# FLOW-CHART OF MEDICAL WASTE MANAGEMENT





# MEDICAL WASTE









## 2. OVERVIEW OF THE EXISTING REGULATION

**Environmental Law**

**Law on Environmental Protection and Natural Resource Management ( approved in Dec. 1996 )**

**Sub-Decree**

- 1- Solid Waste Management
- 2- Water Pollution Control
- 3- Air Pollution and Noise Disturbance
- 4- Environmental Impact Assessment Process

**Declaration  
Guideline**

**Prakas and other letters**

- 1- Joint Declaration MoE & Mol on on household waste management.
- 2- Guideline on Plastic Waste Management.
- 3- Guideline on Environmental Management

## RELEVANT CAMBODIAN LEGISLATION TO BASEL CONVENTION

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- Law on Environmental Protection and Natural Resources Management (1996)
  - ✓ Article 12 and Article 13 – focused on the preparation of mechanism to cope with toxic substances and hazardous substances in Cambodia.

## OVERVIEW HAZARDOUS WASTE DEFINITION

Based on Sub-decree No. 36 issue date 27 May 1999 on Solid waste management in article 3 point c were stipulated the definition of hazardous waste as:

“ Hazardous waste refers to radio activity substances, Explosive substances, toxic substances, inflammables substances, pathogenic substances, irritating substances, corrosive substances, oxidizing substances, or other chemicals substances which may cause to danger to human(health) and animal or danger plants, public property and the environment The hazardous waste may be generated from dwelling houses, industries, agricultural activities, business and service activities, mining, etc. The type of hazardous waste is listed in the Annex of this sub-decree.



## RELEVANT CAMBODIA LEGISLATION TO BASEL CONVENTION (CONT.)

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- Sub-Decree on Solid Waste Management (1999)

- ✓ Article 20: “*The exportation of the hazardous waste from the Kingdom of Cambodia to abroad could be conducted if there are an agreement from the Ministry of Environment, export license from the Ministry of Trade, and permit from the import country .*

*The exportation of the hazardous waste shall be consistent with the provisions and principles of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal in 1989 which come into force on May 05, 1992”.*



## RELEVANT CAMBODIA LEGISLATION TO BASEL CONVENTION (CONT.)

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- ✓ Article 21: “*The importation of hazardous waste from abroad into the Kingdom of Cambodia is strictly prohibited.*”
- ✓ Other relevant Article in Chapter 3 and Chapter 4
- ✓ Hazardous waste criteria highlighted in the Annex of the Sub-Decree

## RELEVANT CAMBODIA LEGISLATION TO BASEL CONVENTION (CONT.)

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- Article 8 of the Sub-Decree on Water Pollution Control, stipulated that *“The disposal of solid waste or any garbage or hazardous substances into public water areas or into public drainage system shall be strictly prohibited. The storage or disposal of solid waste or any garbage and hazardous substances that lead to the pollution of water of the public water areas shall be strictly prohibited.”*

## RELEVANT CAMBODIA LEGISLATION TO BASEL CONVENTION (CONT.)

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- 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).



# RELEVANT CAMBODIA LEGISLATION TO BASEL CONVENTION (CONT.)

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- ➔ 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.



### 3. CAMBODIA PARTICIPATION IN THE APPLICATION OF BASEL CONVENTION(CONT.)

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- Cambodia signed as a party of the BC on 02 March 2001 which that Department of Environmental Pollution Control, MoE is the competent authority and focal point.
- Set-up working group/steering committee for applicants of Basel Convention like as:
  - MoE
  - MoI
  - MoEF(General Department of custom and Excise)
  - MoC(CAMCONTROL” Cambodia import Export Inspection fraud Repression Directorate General”

### 3. CAMBODIA PARTICIPATION IN THE APPLICATION OF BASEL CONVENTION(CONT.)

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- 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)
- 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)



### 3. CAMBODIA PARTICIPATION IN THE APPLICATION OF BASEL CONVENTION(CONT.)

- Relevant activities have done by Cambodia under the BC's Framework include as follows:
  1. Environmentally Sound Management of Used Lead Acid Batteries(ULAB) with both financial and technical support from the Secretariat to the Basel Convention.
    - 👉 Technical report and National action plan





# BATTERY WASTE IMPORT OF LEAD, ACID AND BATTERIES

Item Year	Lead(t)	Acid(l)	Battery(t)
2000	10,930	139,276	5,289,627
2001	110	1,999,770	4,663,883
2002	2,000	1,808,067	3,122,493
2003	10,109	965,280	4,126,590
<b>Total</b>	<b>23,148</b>	<b>4,912,393</b>	<b>17,202,593</b>
<b>Estimated number batteries available for recycling</b>			
1999	2000	2001	2002
7,559	7,733	9,202	7,143

### 3. CAMBODIA PARTICIPATION IN THE APPLICATION OF BASEL CONVENTION(CONT.)

2. 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).

👉 Repot on Inventory outcome of Electronic and Electric Waste in the Kingdom





The table of disposal of Used Electrical and Electronic Equipment by estimated.

Year	Used Electrical and Electronic Equipment (UEEE) (sets)				
	TV	Air-conditioner	Refrigerator	Computer	hand phone
2004	157,096	28,408	15,172	26,342	
2005	162,557	26,450	9,460	1,863	7,356
2006	163,663	44,920	14,645	1,990	12,222
2007	111,538	36,698	9,895	1,852	142,990
2008	126,773	15,070	16,606	1,514	113,605
2009	95,269	19,331	13,464	9,381	86,348
2010	86,438	23,114	12,513	3,115	
<b>Total</b>	<b>903,334</b>	<b>193,391</b>	<b>91,935</b>	<b>46,057</b>	<b>362,611</b>

Source: Draft Report on Inventory outcome of Electronic and Electric Waste in the Kingdom of Cambodia (Cambodia Environmental Association Report 2007)



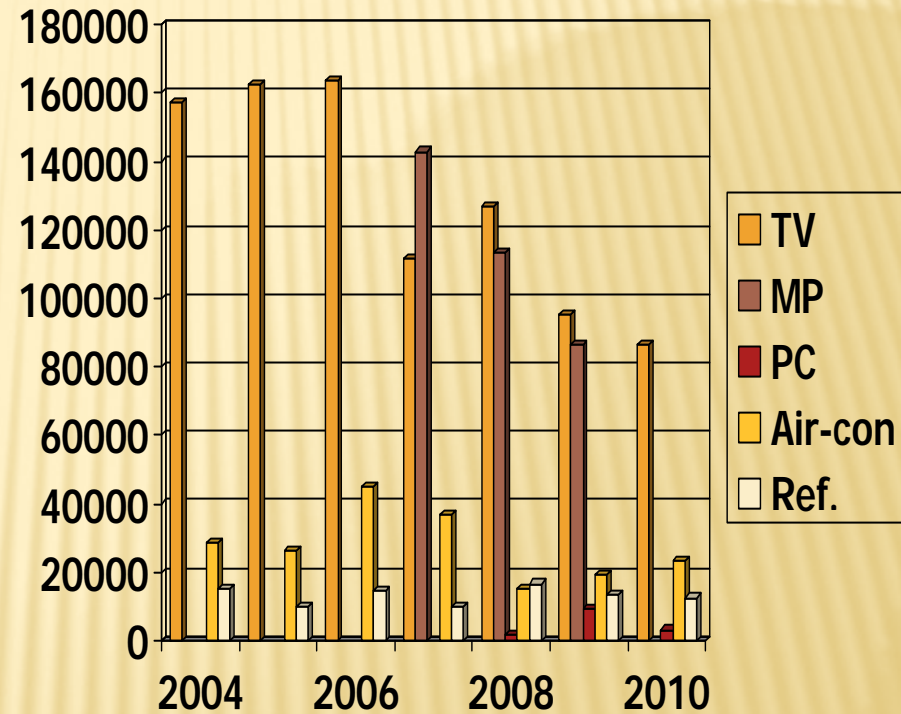
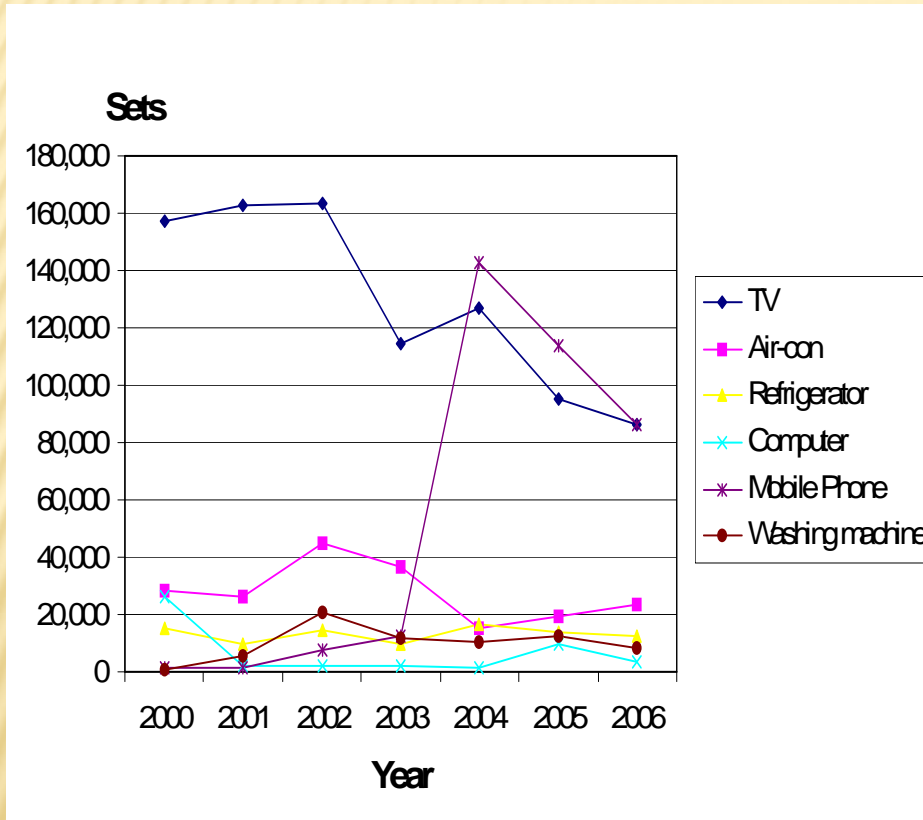
### 3. CAMBODIAN PARTICIPATION IN THE APPLICATION OF BASEL CONVENTION(CONT.)

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3. 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 Cambodia.

# OUT COME OF REPORT



Imported EEE between 2000-2006

Estimated residues, 2004-2010  
(set)

### 3. CAMBODIAN PARTICIPATION IN THE APPLICATION OF BASEL CONVENTION(CONT.)

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#### 4. a) Training Programme on E-waste for key stakeholders

- Government Officials
- Workers/Scavengers

#### b) Demonstration of ESM of E-waste

- Collection Scheme at Recyclable waste
- Collection Site



## CAMBODIAN PARTICIPATION IN THE APPLICATION OF BASEL CONVENTION(CONT.)

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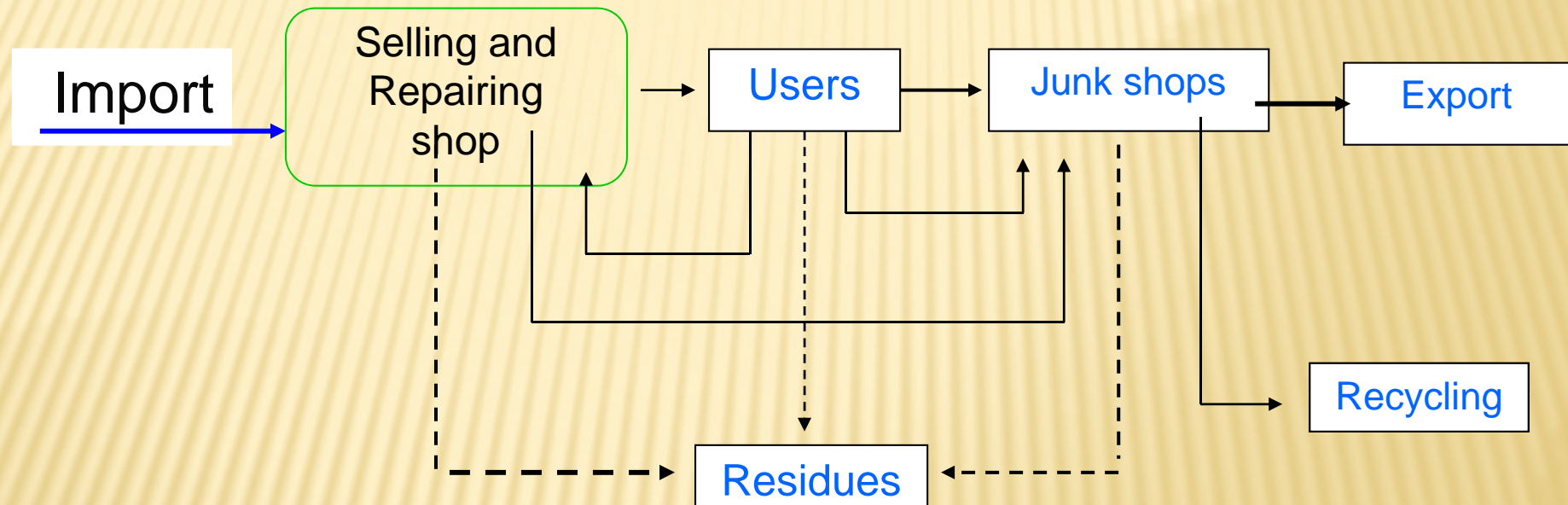
5. National Training workshop for ESM of E-waste organized by MoE, Cambodia and Supported SBC, which started from April-May-June 2008 and workshop location at Phnom Penh, Preash Sihanoukville city, Kampong Cham province, Siem Reap Province and Battambang province.
6. Training Course for the ESM of E-wastes in Phnom Penh on 31 March- 01 April 2010 Organized by MoE, Cambodia and Supported by SBC.

# CAMBODIAN PARTICIPATION IN THE APPLICATION OF BASEL CONVENTION(CONT.)

7. 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.



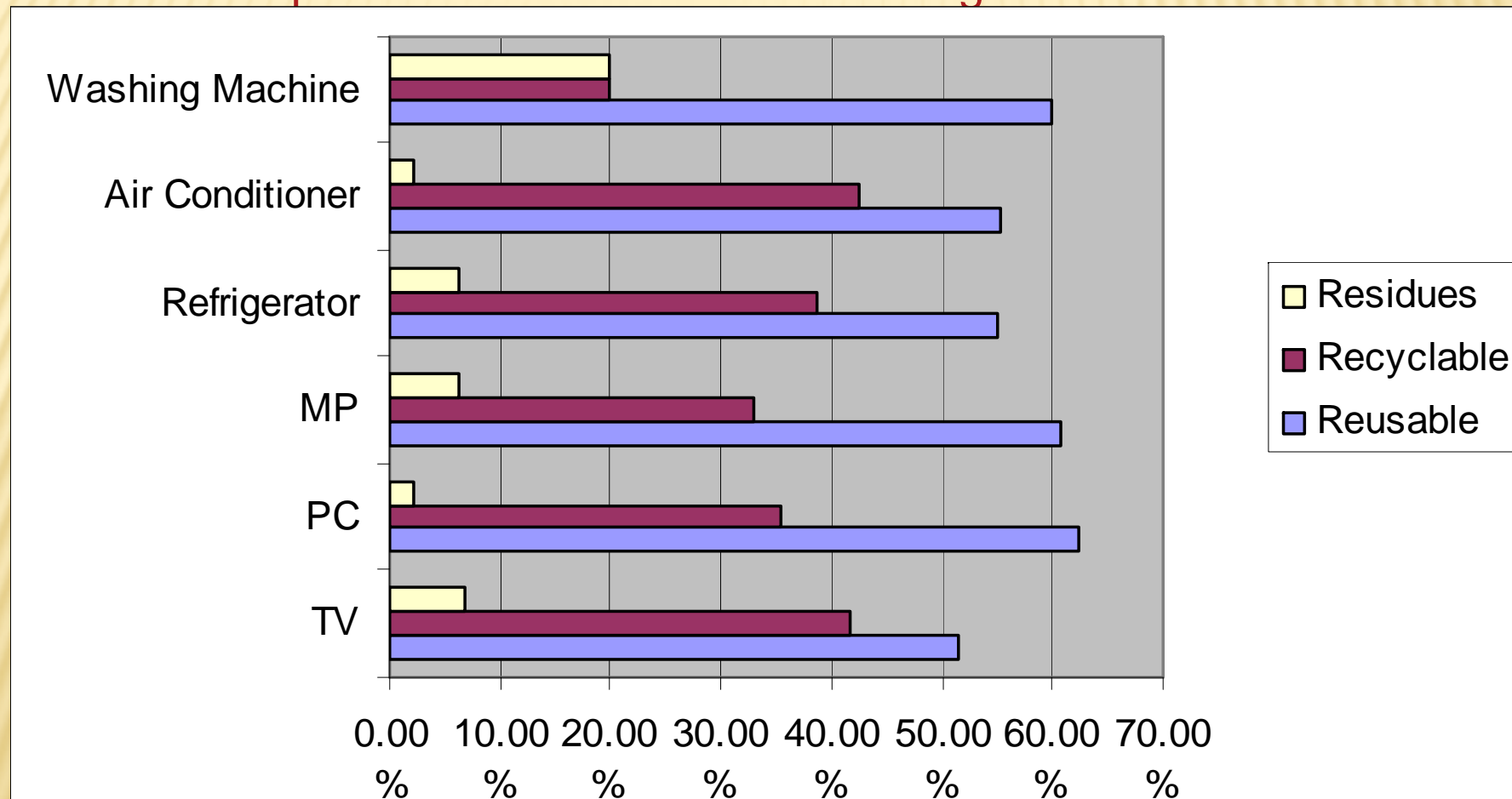
# OVERVIEW OF EEE FLOW





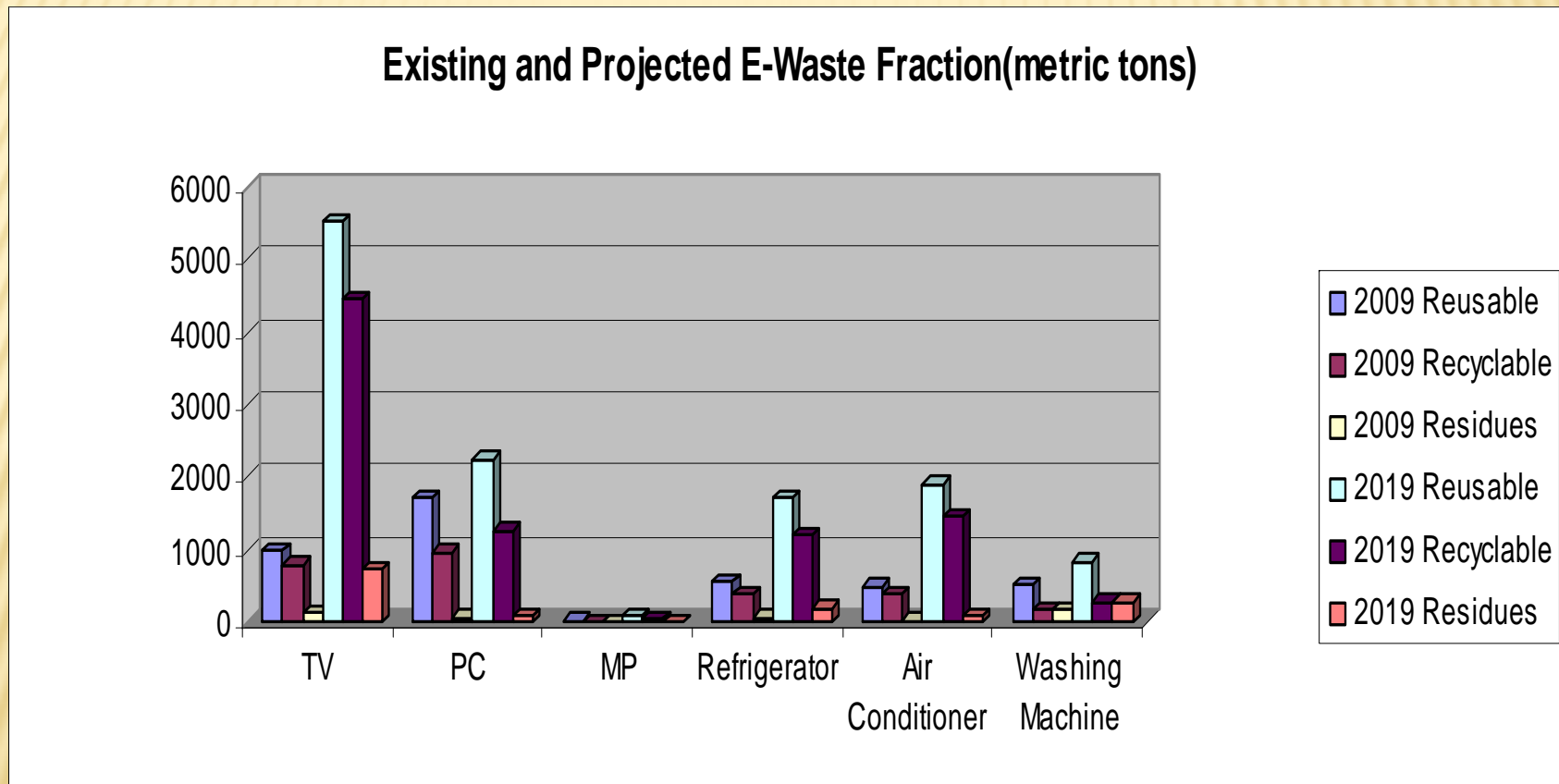
# E-WASTE CONCERNED 3R PRINCIPLE

Percentage E-Waste Fractions generated during  
repaire/refurshment & Dismantling



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

# EXISTING AND PROJECT E-WASTE FRACTION (METRIC TONS) (REPORT ON E-WASTE MANAGEMENT IN PHNOM PENH 2009)



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

## CAMBODIAN PARTICIPATION IN THE APPLICATION OF BASEL CONVENTION(CONT.)

8. On Going project supported by Government of Japan.
  - Training on ESM of E-waste to stakeholder involve.
  - Televised debate on E-Waste
  - Demonstration programme on E-Waste at Recyclable work collection sites.





# TRAINING COURSE TO GOV. OFFICIALS AND STUDENTS





# TRAINING COURSE TO GROUP OF SCAVENGERS





# BEFORE PROJECT IMPLEMENT





# DURING PROJECT IMPLEMENTATION





# SCREEN DISMANTLING



## 4. CHALLENGES

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- ✘ Lack of technical and financial support for :
- Case study/survey to make data sheet/ information related to home compliance such as fluorescent lamp, up-date ULAB.
- Hazardous waste from chemicals waste/ waste containing toxic substances(Industrial, Consumers product, Agriculture sector...)
- Lack of the facility for treatment, recycling and disposal of Hazardous waste.



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*THANK YOU VERY MUCH  
FOR YOUR KIND ATTENTION*