The Basel Convention Programme on Environmentally Sound Management of E-waste

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Why e-waste is an issue?

Separation of PCs and other E-waste on the road

Photo: Terazono (2006)
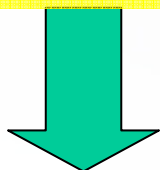
Usual scenery of print circuit board heating for removing IC-chips and Pb at Guiyu

Photo: Yoshida (2004)

Removing valuable parts and metals

Effluents after Cu recovery

Storage at river side

Crushing and Cu recovery

Open dumping of pulverized residues

(Source: Terazono, 2006)

Open dumping of E-waste recycling residues and residential waste along the river at Guiyu

Natural burning

Illegal export of used computer monitors (35.89 tons) from Japan to Thailand (Sep. - Dec. 2002)

Illegal export of used monitors (19, 15.6, 16.75 tons) from Thailand to China (Feb., Apr., May 2004 - present)

Illegal import of used boards of pinball game (46.2 tons) from Japan to Thailand (Jan. 2004 - 2005)

Illegal export of E-wastes (18.18 tons)
from Thailand Thailnad to Hong Kong (Dec. 2005 - present)

Examples of E-waste under the Basel Convention

- Annex I: Y45: Equipments with organohalogen compounds e.g. CFCs
- Annex VIII (hazardous wastes):
  A 1090: Ashes from incineration of insulated Cu wires

  A1010: metal wastes and waste consisting of alloys of specific metals e.g. Cd, Pb, Hg, etc.

  A1150: Metal ashes from printed circuit boards

  A1170: unsorted waste batteries

  A1180: waste electrical and electronic assemblies or scrap containing components such as accumulators and other batteries included on List A (A1170), mercury switches, glass from CRTs and other activated glass and PCB-capacitors, or contaminated with Annex I constituents (e.g. Cd, Hg, Pb, PCB)

  A 1190: Waste metal cables

  A2010: glass waste from CRTs and other activated glasses

Examples of E-waste under the Basel Convention

- Cathode ray tubes (CRTs)
- Printed circuit board assemblies
- EoL mobile phones
- Capacitors
- Mercury switches and relays
- Batteries, accumulators
- Electron beam generator and getter
- Liquid crystal displays (LCDs)
- Cartridges from photocopying machines
- Selenium drums (photocopier)
- Electrolytes, PCBs bearing capacitors
- Insulated copper cables and wires
- etc

Background of the Asia Pacific E-waste Project

- The AP Countries considered e-waste as a priority - Scoping Workshop on ESM of E-waste, Tianjin, China, Nov. 2002

- Obstacles identified to manage e-waste properly - Lack of trained personnel, legislations, infrastructure, public awareness, etc.

- The 4-year AP Programme is carried out through concrete and well-targeted national and regional efforts by SBC and other partners (Governments, IGOs, UNEP, NGOs and industry) based on needs

The Asia Pacific E-Waste Project

Launched: November 2005 in Tokyo

Participating countries:

Cambodia, China, India, Indonesia, Malaysia, Singapore, Sri Lanka, the Philippines,Thailand, and Vietnam

Basel Convention Regional Centres:

- *Beijing, Jakarta, SPREP*

Donors:

- *Japan, Canada and Netherlands*

The Asia Pacific E-Waste Project

Goal:

- *To enhance the capacity of Parties to manage e-waste in an ESM through public-private partnership, and preventing illegal traffic of hazardous e-waste*

Strategic Objectives:

- *Assessment of situation*: national inventories, information exchange, etc.

- *Prevention and minimization*: goals on waste reduction and minimization of quantities and quality

- *Management*: achieving ESM facilities

- *Information and training*: awareness, capacity building, exchange of best practices and technologies

The Asia Pacific E-Waste Project: Completed Activities

Country	Project	Level
Sri Lanka	Development of national implementation plan for e-waste management	National
Indian NGO	Facilitating partnerships for ESM of E-waste: Phase I (NGO Project)	National

The Asia Pacific E-Waste Project: Completed Activities

Country	Project	Level
Indonesia	**Preliminary Inventory of e-waste**	**National**
BCRC Beijing, China	Feasibility Analysis to Develop a Centre of Excellence of Information on the ESM of E-waste at BCRC Beijing	**Regional**
BCRC SEA	•**Development of technical guidelines on methodology on Inventory of E-waste** •**Development of technical guidelines on ESM Recycling, Reuse, Repair, Refurbishment and Disposal of E-waste**	Regional

The Asia Pacific E-Waste Project: Completed Activities

Country	Project	Level
BCRC SEA	Training workshop on ESM of e-waste	Regional
Cambodia	National inventory of e-waste	National
Malaysia	National inventory of e-waste	National
Thailand	National inventory of e-waste	National
Vietnam	National inventory of e-waste	National
Malaysia/Thailand/Singapore	Pilot project on collection of mobile phones (DOWA)	Subregional

The Asia Pacific E-Waste Project:

Country	Project	Level
Cambodia	Development of awareness raising kits and conducting training courses	National
PRC SPREP	**Pilot inventory of E-waste in 5 Pacific Countries**	**Subregional - ongoing**
BCRC China	Research on criteria between new/used EEE and hazardous/non-hazardous EEE	Regional – on going

E-waste Management Status

Environmentally unsound management

- Lack of legal framework; or
- In preparation/only pilot programmes
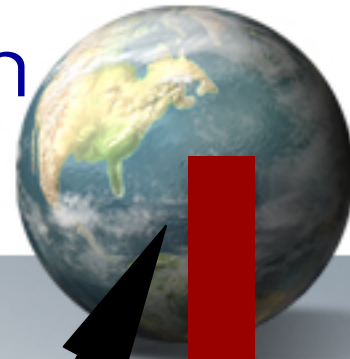
Not Waste, Resource →Informal sector

- Good collection of reusable e-waste
- Good reuse of obsolete e-product
- Good repair, refurbishment network

"Non-reusable/recyclable" "No Interesting"

- Disposed with other wastes
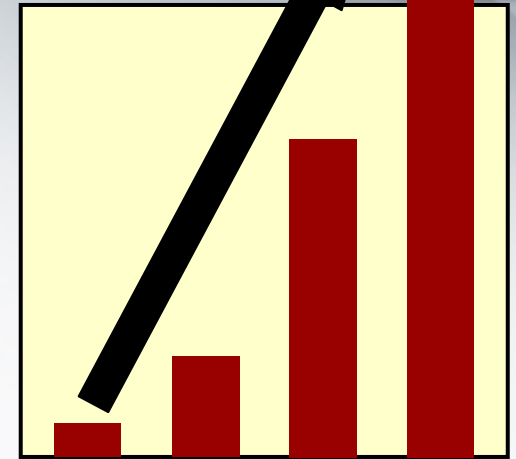- Open burning, open dumping, illegal dumping

Status in Asia and the Pacific Region

E-waste Inventory

Explosively increasing tendency

- Urbanization of life style, high demand of e-products
- Importation of used e-product, illegal E-waste transboundary movement…

Problem

- No or limited statistical data
- Large secondhand market
- Lack of data management mechanism

The Asia Pacific E-Waste Project:
Future Activities

- Pilot collection, segregation, and take-back schemes

- Development & pilot testing of methods for evaluation/characterization

- Establishment of information exchange and monitoring of impacts on human health and the environment

- Training of customs and enforcement officers to control the import/export of used EEE

- Estimated cost: USD 2.44 mill.

E-Waste Activities in Other Regions

- Electronic Wastes in Africa project
- Electronic Wastes in the South American Region
- Development of technical guidelines on e-waste
- Formulation of criteria or testing standards for e-waste;
- Pilot scheme on certification for e-waste in Asia Pacific

The Nairobi Declaration on ESM of E-Waste

- Theme of COP8 in Nairobi (27 Nov-1 Dec 2006) was "Creating innovative solutions through the BC for the ESM of electronic waste"
- The Nairobi Declaration on ESM of E-waste and Decision VIII/2 were adopted (see Annex VI of COP8 report at http://www.basel.int/meetings/cop/cop8/docs/16eREISSUED.doc)
- COP9 in Bali (June 2008) adopted a workplan for 2009-2011 which a continuation of work already ongoing in BC and new activities

Mobile Phone Partnership Initiative (MPPI)

Adopted: COP6 in 2002

Participants: Countries, industries and NGOs

Achievements: 5 technical guidelines developed (see http://www.basel.int/industry/mppi/documents.html)

Pending issues:

- Pilot projects on mobile phone recycling and awareness-raising

- Finalization and adoption of technical guidelines on the transboundary movements of mobile phones (provisionally adopted by COP9)

Partnership for Action on Computing Equipment (PACE)

Adopted: COP9 in Bali

Participants: Countries, industries and NGOs,

Basel Convention Regional Centres (China, Egypt, Nigeria)

Scope: PCs, displays, printers and associated peripherals

Agreed activities:

- #To develop tools (such as guidelines) and activities on ESM refurbishment and repair, including criteria for testing, certification and labelling

- #To develop tools (such as guidelines) and activities on environmentally sound recycling and material recovery, including facility certification

- #To develop and promote pilot schemes for ESM of used and end-of-life computing equipment towards the attainment of the Millennium Development Goals

- #To develop awareness-raising and training programme activities

FURTHER INFORMATION

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