BCRC-SEA’s PROJECT:
DEVELOPMENT OF REGIONAL TECHNICAL GUIDELINES
FOR E-WASTE INVENTORY
AND ESM 5R OF E-WASTE

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Director of BCRC-SEA

BASEL CONVENTION REGIONAL CENTRE
for South-East Asia
TOPICS

- General Project Description
- Specific Project Part Description
  - E-Waste Inventory TGLDP
  - E-Waste 5R TGLDP
- Current Progress of the Project
- Important Issues for Consideration
GENERAL PROJECT DESCRIPTION

Initial Project Proposal and
The Approved Project
Introduction

- BCRC-SEA is currently conducting e-waste technical guidelines development project (E-Waste TGLDP), consisting of 2 parts:
  - Inventory of E-Waste;
  - ESM 5R of E-Waste.

- The Project is the approved 1 out of 4 components of a larger and integrated program/project proposed by BCRC-SEA through SBC in 2006
Background

- Due to the rapid industrialization of the countries in Southeast Asia, there is an increase in the production rate of the electrical and electronic equipment and also the obsolescence rate of these products, becoming e-waste. This e-waste are composed of hundreds of different materials, often in high value such as gold, platinum, silver, copper, et cetera, which recyclers can recover.

- However, if improperly managed throughout its life cycle, e-waste can cause environmental problems due to the content of potentially hazardous waste such as heavy metals, halogenated substances, PCBs, et cetera. Therefore, an environmentally sound management of e-waste is strictly required to protect the environment.
Background

This matter became the subject at the Conference of Parties to the Basel Convention 6. It was agreed that e-waste considered a priority waste stream and environmentally sound management should continue to be given a high priority under the work programme of the Basel Convention. It was also recognized that there is a lack of reliable data on the generation, collection, import and exports, and management schemes in general as well as implementation problems. Therefore, a 4-year programme will be carried out through concrete and well defined national and regional project efforts through multi-stakeholder partnership approach.
Background

- BCRC-SEA as one of the regional centres for training and technology transfer also serves as facilitator to provide assistance and support to Parties in its region. As it is, BCRC-SEA has proposed a project to assist the Parties in South East Asia to overcome these problems concerning e-waste management.

- It has been identified that it is important to target those types of equipment that have the greatest potential for impacting on human health and the environment, and at the same time have a greatest economic potential for refurbishment and recycling.
General Objective

To promote environmentally sound management of e-waste in South East Asia through:

- development of guidelines,
- technical assistance,
- training and coordination among Parties,
- multi stakeholder partnership.
Specific objectives

- To develop **guidelines for inventory and 3R & repair/refurbishment** to provide information and serve as guidance for implementation of inventory and 3R & repair/refurbishment of e-waste by Parties in the region

- To increase information/database that is useful for an improved understanding of the status of e-waste management in South East Asia

- To support pilot projects on assessments and repair/reuse/refurbishment schemes for priority types of e-waste (personal computers, TVs, refrigerators, and air conditioners).

- To implement training for trainers workshop on various components of ESM of e-waste and also organize a workshop on sound technology for improvement of e-waste management in South East Asia
Results

- Guidance documents on inventory and environmentally sound recycling/reuse/repair/refurbishment/disposal
- Database on sound technologies or processes for refurbishment, recycling and final disposal of e-waste is established and available for dissemination via the centre website
- Technical assistance for pilot collection in 4 countries and repair/refurbishment/recycling schemes in 3 countries in the region are provided
- Regional training for trainers on environmentally sound management and technology of e-waste are conducted
The Approved Project Description

- Development of Guideline Documents:
  - The Methodology on Inventory of Electrical and Electronic Waste
  - The 3R (Reduce, Reuse, Recycle) and Repair and Refurbishment of Electrical and Electronic Waste
The Approved Project Description

- **Responsibilities:**
  - BCRC-SEA is to carry out the activities and tasks to complete the project according to a work plan.
  - SBC is to provide financial support through the BC Technical Cooperation Trust Fund.

- **Project deliverables from BCRC-SEA to UNEP/SBC**
  - First Progress Report: 31 October 2006
  - Final Report: 30 December 2006

- **Total cost of the project: US$ 26,100 only**
Overall BCRC-SEA’s E-Waste TGLD Project Timeline

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<thead>
<tr>
<th>Task Name</th>
<th>Duration</th>
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<tr>
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<tr>
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2 Consultants have been assigned to undertake the Project

- **E-Waste Inventory TGLDP**
  - Undertaker: AmbikA Consultants, Jakarta
  - Contract Value: US$ 10,000
  - Contract & Start Date: 13.09.2006

- **E-Waste 5R TGLDP**
  - Undertaker: SHW Laboratory, ITB, Bandung
  - Contract Value: US$ 12,500
  - Contract & Start Date: 1.09.2006
SPECIFIC PROJECT PART DESCRIPTION

E-Waste Inventory
Technical Guidelines Development
Specific Objectives

- to develop methodological guidelines for inventory of e-waste within the Southeast Asia Region
- to provide information to the Parties in the Region in designing and implementing a national e-waste inventory program.
Scope of E-Waste Types

- E-waste types to be assessed is the primary e-waste, that is the e-waste generated from (discarded by) first users in its originally manufactured or intended form.
- 2 main groups of e-waste types under the Project:
  - Electronics
    - Personal Computer Central Processing Units (CPUs)
    - Cathode Ray Tubes (CRT) Television Sets & PC Monitors
    - Cellular Phones
  - Electrical Home Appliances
    - Home Air Conditioners
    - Dry Power Batteries
    - Fluorescent Lamps
E-Waste Inventory TGLD Methodology

Diagram:
- Final TGL Document
- Reviews
- Draft TGL Document
- Progress Report
- Detailed Planning
- E-WASTE INVENTORY TGLDP
- TGL Pre-Development Works
- Inception Report
- Contract Agreement
- Direction
- TOR Interpretation
- Work Plan & Timeline
- Report Content & Structure
- Project Team & Assignment
- References
- Literature Review
- Field Observations
- e-Waste Flow Mapping
E-Waste Inventory TGLDP Timeline

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SPECIFIC PROJECT PART DESCRIPTION

E-Waste 5R
Technical Guidelines Development
Specific Objectives

- to provide guideline for Reduce, Reuse, Recycle (3R) & Repair/Refurbishment of e-waste to all stakeholders particularly Parties to the Basel Convention in the region / Southeast Asia countries served by BCRC-SEA
- the guideline will assist Parties/Southeast Asia countries in management of e-waste in an environmentally sound manner.
Initially, the Guidelines will be focused on all types of e-waste. However, the possibility of focusing on any particular electronic wastes depends on the problems faced by ASEAN countries and current technologies availability.

The Project will include the ones that mostly can be found in electronic waste flow such as:

- PCs,
- TV-set,
- mobile phone,
- refrigerator,
- washing machine,
- air conditioner, and
- lamps.
E-Waste 5R TGLD Methodology
# E-Waste 5R TGLDP Timeline

## Table 1 Schedule of activity

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- **Continuous activity**
- **Intermittent activity**

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**RAKÉAN SUND SAMBABA**

**24**
CURRENT PROGRESS
Current Progress

- By the time of this presentation, both consultants have performed:
  - Inception Report submission;
  - Literature Review;
  - Field Survey;
  - Progress Report submission.
Current Progress
Visual Record - Field Survey

Photo: DanWHS, 2006
Current Progress
Visual Record - Field Survey

Photo: DanWHS, 2006
IMPORTANT ISSUES FOR CONSIDERATION
Some Issues for Consideration

- E-waste stream generation inventory is relatively more complex/difficult to perform accurately comparing to the common industrial haz waste streams
  - Broad range of lifetime of e-products
  - Longer chain of ownerships and uncertain fate
  - Involvement of repair or refurbishment
  - Economic value of e-waste components
  - Scarcity or lack of records or reliable information
  - No single estimation method appropriate for all cases
Some Issues for Consideration

- E-waste management problems within the SEA region may be country specific:
  - level of economic development;
  - legal basis for e-waste management;
  - intersectoral coordination;
  - law enforcement;
  - monitoring and evaluation.

- Some common and more specific approaches to the ESM of E-Waste in the Region may be required.
Some Issues for Consideration

- E-waste importation may not be properly controlled nor noticed by a BC national focal point and not in accordance to BC
  - false declaration of importers;
  - lack of intersectoral coordination;
  - Lack of international cooperation.

- Neglecting EHS aspect in e-waste 5R in developing countries in SEA is apparently due to:
  - Lack of awareness;
  - Desperate needs for job (economic factor);
  - Lack of regulatory control and enforcement.
Some Issues for Consideration

- There must be more important issues to be raised; discussed; and (more importantly) resolved; or planned to be resolved in this forum.

- Thank you.
BASEL CONVENTION REGIONAL CENTRE for South-East Asia

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