

**The Regional Technical Training Workshop on Environmentally Sound Collection,
Separation and Management of E-Wastes**

13 – 15 July 2010

Jakarta, Indonesia

Final Summary Report

1. The Regional Technical Training Workshop on Environmentally Sound Collection, Separation and Management of E-Wastes was held in Jakarta, Indonesia on July 13-15, 2010. The workshop was attended by 49 participants from the countries in Asia (Brunei Darussalaam, Cambodia, Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam, and Japan), Secretariat of the Basel Convention (SBC), United Nations Environment Programme-International Environmental Technology Centre (UNEP-IETC), the Basel Convention Regional Centre for South-East Asia (BCRC-SEA), the Basel Convention Regional Centre for Asia and the Pacific in China (BCRC China), the Basel Convention Regional Centre in Tehran, Iran (BCRC Iran), 4 resource persons from university, private companies and non-governmental organizations dealing with e-waste issues, and 21 observers from several ministries and local environmental management agencies in Indonesia, universities, private companies and non-governmental organizations.
2. In the Opening Session, three opening remarks were delivered by the distinguished speakers. First, Mr. Aboejoewono Aboeprajitno, Director of BCRC-SEA, welcomed the participants. He provided an overview of workshop participants and stressed the importance of e-waste issues in the region, as well environmentally sound management (ESM) of segregation, collection and separation as first steps in the e-waste treatment. He informed about the projects carried out by BCRC-SEA on e-wastes management, which were development of technical guidelines on e-waste inventory and 3R (reduce, reuse, recycle) of electrical and electronic equipment (EEE), and providing training on e-waste in Phnom Penh, Cambodia this year. He mentioned that the last E-Waste Training Workshop for Asia and the Pacific in 2009 in Hanoi, Vietnam, discussed several projects proposals on e-wastes management in the region and also led to the development of regional database on e-waste management and to the realization of organizing this workshop, which was planned to be the first in a series of training workshop on ESM of e-waste in the region, covering the ESM of repair, refurbishment, reconditioning, material recovery, recycling, storage and final disposal. Mr. Dadan Wardhana H.S., Programme Officer of SBC, highlighted that the workshop is part of BCRC-SEA's project on ESM of e-waste in Asia Pacific specifically in South-East Asia region and SBC'S Work Programme for 2009-2011, funded by the government of Japan and participated by countries in South East Asia as well as others in the East and South Asian regions. He informed on general progress of the programme

and said that based on SBC's observation, Asia Pacific was the most advanced region with regard to e-waste management activities in comparison with the other developing regions, such as Africa and South America. He stressed the need to move forward with more advanced training. The workshop was pre-assessed with some questionnaires by organiser which might guide the discussions in order to identify the common problems and try to formulate suitable options. He hoped that this workshop would also strengthen networking and cooperation between colleagues, countries and regions. Mr. Imam Hendargo Abu Ismoyo, Deputy Minister for Toxic and Hazardous Substances and Waste Management, Ministry of Environment of Republic of Indonesia, welcomed all participants to Indonesia and expressed honour in hosting the workshop. He emphasised on e-wastes issues which is a matter to be discussed by international and regional organizations as well as at national level, and difference of developed and developing in countries in dealing with e-wastes, especially the role of informal sector in developing countries. He acknowledged the challenges for decision makers to develop policy combining with exploitation of the economic benefits of e-waste and achievement of environmentally sound management of the respected waste, and officially opened the workshop. The speakers thanked the Secretariat of the Basel Convention and Ministry of Environment of Japan for supporting the workshop, the Ministry of Environment of Indonesia for hosting the workshop, and BCRC-SEA as the organizer.

3. The Session 1 was chaired by Ms. Qurie Purnamasari from Indonesia. During the Session 1, the representative of SBC presented on Basel Convention direction for policies and programmes on ESM of e-waste. He also summarised the current implementation status of the ESM of e-waste in Asia Pacific Programme which covered the pre-2009 activities and proposed and on-going activities/projects for the period of 2009 – 2011. Dr. Mushtaq Ahmed Memon from UNEP-IETC explained about the e-waste management capacity building activities conducted by UNEP-IETC.
4. Through the discussions, question to first speaker was raised on progress of ongoing work on technical guidelines on transboundary movement of e-wastes. SBC informed that it was still drafted and in very early form. A question to second speaker was raised on the opportunity to implement Extended Producer Responsibility (EPR) in ESM of e-wastes, and Cambodia raised concerned on the provision of ESM of e-waste project in Cambodia by UNEP-IETC, since there was no cooperation between the non-governmental organization (NGO) conducting the project and Pollution Control Department (PCD) of Cambodia. UNEP IETC informed that EPR was carried out in different forms in different countries, such as take-back and buy-back system, and it involved national level but must coordinate with the Basel Convention. Regarding the project in Cambodia, all project documents including scenario analyses, current legislation, implementation plan etc would be in public domain around September and could be sent to PCD Cambodia.

5. The Session 2 was chaired by Mr. Rangsan Pinthong from Thailand. Dr. Sukandar from Bandung Institute of Technology (ITB) delivered a presentation on environmentally sound e-waste collection and separation. The presentation was based on the Technical Guidelines on the Reduce, Reuse, Recycle (3R) of End-of-Life Electronic Products, prepared in cooperation with SBC and BCRC-SEA in 2007. He also informed about study case of e-waste flow in Indonesia. Mr. Dadan Wardhana H.S from SBC followed with presentation on occupational safety and health (OSH) and environmental aspects of e-waste management operations, particularly the collection and separation/dismantling operations. The presented topics covered occupational hazards, OSH management, OSH protection and personal protective equipment (PPE), environmental management and other important considerations.
6. Following the presentations, there were suggestion on possibility of BCRCs to conduct pilot testing to see the guidelines could be implemented and updated, incentive program should be developed and concern on the health of workers related to e-waste activities. Questions were also raised on how to encourage people and how the regulator could follow the guidelines.
7. During Session 3 on the Working Groups, the participants are divided into country groups. Since most countries did not respond to the questionnaires or did not refer to the questionnaires to guide the preparation of their presentation, each country discussed the issues as covered in the questionnaire on national collection and separation of e-wastes.
8. The session 4 on the countries' and BCRC's presentations were divided into 3 intervals chaired by Vietnam, Cambodia and Philippines. Each country presented its result of the previous working group. Following country presentations, each BCRC (BCRC-SEA, BCRC China and BCRC Iran) delivered presentation on activities/projects particularly on collection and separation of e-wastes.
9. During discussions, participants raised questions on registration system for informal sector, landfill facilities, collection system, and licensing for transporters and facilities. Questions and discussions were also raised on challenges on e-waste management, information on Extended Producer Responsibility (EPR), future plan, implementation and statistics of the mobile phone battery take back program (recycle box program), green collection project, clarification for the Private-Public Partnership, profit of recycling company in Japan, Gross Domestic Products (GDP) and cost for solid waste and e-waste treatment.
10. Mr. Josse Salvador Terrenal Passe, Jr from Philippines chaired the Session 5 on other elements for ESM of collection and separation of e-wastes. The first presentation was made by Dr. Shunichi Honda from Ministry of Environment of Japan on Japan's experience on ESM of e-waste which includes the Home Appliances Recycling Law, statistical data, review of the law and information on personal computers and other used EEE and e-wastes. The Indonesian Lead Information Centre represented by Mr. Ahmad Safrudin made presentation on experience in awareness raising and practises in collection and separation of e-waste in Indonesia. He

informed on the problems of e-waste dumping, improper collection and recycling by informal sector, efforts on public education as well as points, method and principles of separate discharge. Mr. Junya Kikuhara from EX Corporation introduced economic overview on informal e-waste recycling and technically advanced recycling and also provided recommendations from economic aspects. The presentation is followed by Ms. Chandra Paramita from Tess-AMM with presentation on Tess-AMM and its activities on e-waste collection and separation.

11. Questions following the presentations include term of an e-waste study, suggestion to include health aspects and cost in the study, and amount of e-waste shipped from a company in Indonesia to Singapore for recycling. There was also concern on health cost in the e-waste process, and suggestion that health aspects should also be considered not just economical point of view.
12. During Session 6 on the Working Groups, the country participants are divided into 2 groups based on the similarities of national situation and problems as concluded from the countries presentations. Group 1 consisted of countries with a formal e-waste collection scheme in place while Group 2 consisted of countries without any formal e-waste collection scheme in place. Group 1 discussed on the identification of main features of existing e-waste collection and separation scheme, performance indicator, target and current achievements, weakness and strengths as well as risks and opportunities for improvement. Group 2 discussed on the identification of main factors behind the need for a proper e-waste collection and separation scheme, suitable options, performance indicator, and targets as well as planned for more concrete way forward. It is expected that the result of the discussions would help both group of countries in planning/developing a project on the establishment or improvement of an environmentally sound collection and separation/dismantling of e-waste.
13. On the third day, the participants visited the e-waste treatment facilities operated by PT. Mukti Mandiri Lestari, a waste management company in Cikarang, Bekasi, West-Java Province.