

**Asia-Pacific Regional Inception Workshop on the Environmentally  
Sound Management of Electronic and Electrical Wastes  
Tokyo, Japan, 21-22 and 24-25 November, 2005**

**SUMMARY REPORT**

**PREAMBLE**

The Asia-Pacific Inception Workshop on the Environmentally Sound Management of Electronic and Electrical Wastes was held in Tokyo on November 21-22 and 24-25, 2005, hosted by the Government of Japan in cooperation with Secretariat of the Basel Convention (SBC) and Japan's National Institute of Environmental Studies (NIES). There were 16 Parties, European Commission, 4 Basel Convention Regional Centres (BCRCs), 21 Industry Representatives, 3 NGOs, 21 Academia and Research Institutes, and SBC that participated in the Workshop. The Inception Workshop was co-chaired by Mr. Kazuyoshi Okazawa, Senior Adviser to the Minister - MOE Japan; and Mr. Adisak Thongkaimook, Deputy Director General, Pollution Control Department, Thailand. The Workshop's agenda consisted of the following: Introduction; Panel Presentation on Current Practices that included: Economics, Design for Environment, Life-cycle Analysis, Extended Producer Responsibility, Disposal of Residues, Transboundary Movement Issues, and Legal Issues; Discussion of Breakup Groups; Conclusions and Recommendations; and Official Launching of Country Projects/Regional Plan, and Closure of Workshop.

**OPENING SESSION**

Her Excellency Yuriko Koike, the Minister of Environment, Government of Japan opened the inception workshop by welcoming everyone to Tokyo, Japan and indicated that the government of Japan is pleased to host this Workshop on the environmentally sound management of electrical and electronic wastes. She shared information with participants on some of the initiatives in Japan one of which is to promote comprehensive and systematic implementation of waste reduction, and proper recycling aimed at the establishment of a sound material cycle society. To do that Japan has been globally promoting the 3Rs (Reduce, Reuse and Recycle), which the Prime Minister of Japan proposed and was agreed to during the G8 Sea Island Summit held in June of 2004. To promote 3R Initiative, Japan is focusing on 3 points: domestic realization of a zero-waste society and dissemination of their experience to the world, cooperation with developing countries for promoting a zero-waste society, and promotion of international cooperation for realizing a world-wide zero-waste society. She added that as part of the 3R efforts in Japan, home appliance manufacturers and relevant stakeholders have been obligated to recycle used TV sets, air conditioners, refrigerators and washing machines. With respect to growing e-waste problem in the Asia-Pacific region and to cope with those problems more effectively, cooperation amongst all stakeholders is necessary.

Mr. Takashi Kosugi, Member of Parliament from Japan in his opening remarks said that

in 1960 there was a significant increase in waste and this led to the first policy on incineration and landfill to counter hygiene problems, but this policy could not cope with the sheer quantity of waste. A fundamental solution was not realized and there was a mentality of not wanting the waste in one's own back yard. This led to difficulties in finding space for more landfill and over the last 10 years various laws have been enacted to reduce waste and promote recycling. In 2000 laws were passed to promote a recycling society and this policy was expanded into other fields of industry and society. While making considerable progress, focusing domestically on solving problems of dumping and E-waste, etc, we had not considered cross boundary E-waste. As the Chair he will continue to promote legislative efforts to solve this problem in the Asia-Pacific, hoping to also help economic growth and raising living standards. As E-waste moves across all national boundaries both national and international efforts are necessary to combat this problem and we can share our experiences, develop our resources and disseminate technologies. These are some of the goals we have and this conference provides a good opportunity to help people towards this end.

Ms. Sachiko Kuwabara-Yamamoto, the Executive Secretary of the Secretariat of the Basel Convention thanked the Minister Yuriko Koike for taking the time, despite her busy schedule, to be present at this occasion. She also thanked the Ministry of Environment of Japan for hosting this workshop on the environmentally sound management of electrical and electronic waste, and for providing financial support to enable this workshop to take place. She reminded everyone of the decision taken at the sixth meeting of the Conference of the Parties to the Basel Convention in 2002, which recognized that the issue of the management of electrical and electronic waste required urgent attention, especially in Asia Pacific region. She added that the Secretariat, in consultation with selected countries in this region and the Basel Convention Regional Centers in China, Indonesia and the South Pacific, developed a proposal for a pilot project on the environmentally sound management of e-waste, that was presented at a side event in conjunction with the Ministerial Conference on 3R Initiative held in Tokyo in April of this year. She mentioned that such proposal is needed due to rapid industrialization of a number of developing countries in the Asia-Pacific region, which led them to be commodity-dependent and to the need to access large quantities of secondary raw materials. Therefore, high quantities of used end-of-life electronic wastes are being exported to developing countries in this region for the purpose of re-use, repair, refurbishment, recycling and recovery of non-ferrous and precious metals at facilities that not always operate in an environmentally sound manner. She stressed that efficient and effective implementation of the Basel Convention ensures that hazardous electronic and electrical wastes are to be managed in an environmentally sound manner; it provides the required transparency and traceability of e-wastes destined for recycling or recovery. She added that there is a need, therefore, to combine the development of international recycling resources systems with a mechanism that is capable of providing information about and monitoring such systems to ensure their accountability and soundness. This, however, cannot be achieved without intensified effort of the international community to help developing countries to strengthen their capacity to implement the Convention. Finally, she mentioned that this workshop should have 3 objectives: to refine project proposals that have been submitted for consideration, identify

elements for a sound regional programme, and to adopt practical conclusions and recommendations for a programme in the Asia –Pacific region on an environmentally sound management of e-waste. In conclusion, she indicated that the Secretariat would intensify its efforts in raising financial and other resources necessary for the implementation of the project.

## **SESSION I – INTRODUCTION**

A number of speakers provided an overview of the project on ESM of e-waste in the Asia Pacific region, and identified objectives for this workshop. Their presentations are attached to this summary report. Highlights of these presentations are as follows:

- Asia-Pacific countries consider e-waste as a priority waste stream, and management of end-of-life electrical and electronic equipment should continue to be given a high priority under the work programme of the Basel Convention.
- A 4-year programme will be carried out through concrete and well-defined national and regional project efforts. Objectives, short term and long term expectations, were identified, as well as 8 potential activities.
- It was mentioned that it is important to have industry, researchers, and other stakeholders involved.
- Facilities (repair, refurbishment and recycling) are not operating at the same level therefore; there is a need for level playing field. When dealing with e-waste there are a number of unscrupulous dealers who would undermine the work of reputable companies.
- For movements of hazardous e-waste, a notification system should be implemented expeditiously, and a common classification system for e-waste is needed.
- Basel Convention should not be seen as a barrier to build sustainable society, but one that embraces the 3R concept. The Convention was designed to put controls on transboundary movement in order to protect vulnerable countries against environmental and health damages. The Basel Convention is part of the solution for the sound management of e-waste; it provides for the necessary level playing field.
- It was mentioned that Japan is moving towards a sound material cycle society through 3Rs. Today, only 1/2 of the quantity of waste, generated in 1990, is going for disposal, as its recycling rate increased from 4% in 1989 to 17% in 2003.
- In Japan the recycling rate for PC has exceeded its target, after the recycling fee was introduced in the price of new PCs. This was done in 2003.
- Some mentioned that -e-wastes in the region are being shipped under the disguise of second hand commodities.
- There is a need for information sharing on what items are regulated in each country in the Asia-Pacific region.
- Facilitating adoption of environmentally sound technologies for recycling and refurbishment will not only protect the workers' health, but also will also reduce the environmental burdens.

- Awareness raising initiatives are important elements of any programme on environmentally sound management of e-waste, to ensure that all of the stakeholders are up to date on new initiatives.
- As part of this session, Basel Action Network showed their film on their latest findings entitled "The Digital Dump: Exporting Re-use and Abuse to Africa."

## **SESSION II & III - PANEL PRESENTATION ON CURRENT PRACTICES**

### **1. Economics, Design for Environment, Life-Cycle Analysis, Extended Producer Responsibility**

- A number of policy measures are to be implemented to discourage improper and promote proper recycling. Measures such as: subsidies, tax incentives/cost sharing systems, take-back schemes have been put in place in some countries. Furthermore, incentives to promote design of products with recycling in mind should be further promoted.
- When recycling electronics in developing Asian countries, the labor costs are low, regulations on pollution control is not fully enforced, and protection of the health of workers are limited, while demands for reusable parts and raw materials are very strong.
- More field work is needed to better identify the generation, imports and exports of e-waste.
- The issue of whether Extended Producer Responsibility (EPR) can be applied in developing Asian countries was raised. It was mentioned that unless there is some controls of informal sector the demand for goods produced by this informal sector may increase.
- The objective of EU Directive on Waste Electrical and Electronic Equipment (WEEE) is to: divert WEEE from landfills and incinerators to environmentally sound reuse, recycling and other recovery operations; harmonize national measures on the management of WEEE; and implement producer responsibility measures. It includes provisions that deal with product design, collection, financing, treatment, and recovery with targets, marking requirements, and the type of information to be provided.

### **2. Collection Systems and Product Take-back**

- Collection of used and end-of-life electrical and electronic equipment can be effectively carried out by retailers, when they deliver new appliances to consumers after purchase.
- Take-back obligations can be imposed by local authorities for retailers who sell new appliances.
- Recycling oriented society should be promoted which would include efforts to reduce the amount of e-waste that ultimately goes to landfills.
- Fuji Xerox mentioned that through their integrated recycling system in Asia – Pacific region it has achieved 99.97% recycling rate in Japan. Furthermore, one of their management principles is not to realize any environmental damage in the importing country, while the management of their used and

end-of-life products is improved. Their view is that international resource recycling system should be established.

- The goal of Swiss Ordinance on WEEE includes the following: provision that no e-waste is found in the municipal solid waste, separate disposal of problematic material, and recovery of secondary raw materials. Consumers must return used or end-of-life equipment to a retailer that sells that type of equipment (regardless of the brand) or to an e-waste collection center. Retailers and traders must take back, free of charge, these type of equipment, the type they normally sell even if no new equipment is purchased. In Switzerland municipalities are not obligated to collect e-waste. Industry and commerce established a voluntary financing system and funds are raised through a “Prepaid Recycling Fee (PRF). This PRF s incorporated into the price of new equipment.
- The Mobile Phone Partnership Initiative was launched in 2002 with the goal to: promote sustainable partnership on environmentally sound management of used and end-of-life mobile phones; promote changes in public behavior; promote state of the art repair, refurbishment and recycling; implement extended producer responsibility; and raise awareness and provide training on ESM. As of today, 3 guidelines (refurbishment, recycling, and design considerations) have been finalized. The overall Guidance Document is been prepared for consideration by COP 8 meeting in 2006. Pilot projects on collection and treatment schemes are being developed so that they could start in 2006 in selected developing countries and countries with economies in transition.

### **3. Disposal of Residues**

- Residues from printed circuit boards, containing base metals and precious metals, when processing low grade, can go to smelting operations, rather than sending them to landfills.
- An integrated mining and smelting operations can deal with problematic residues which can be difficult to dispose, as they may contain toxic substances.

### **4. Transboundary Movement Issues**

- The definition of second-hand electronic products and e-wastes is not clear
- International trade in second-hand products is not controlled in many countries, and therefore such trade, which in many cases includes e-waste, may increase the supply of e-waste for improper recycling, or direct such wastes to landfills or dumpsites.
- Joint training programmes for customs and environmental officers should be developed, including development of inspection manuals needed for enforcement activities.
- Research on environmental and health impacts of mismanagement of e-waste should be conducted.

- Prior informed consent scheme can be used to ensure proper management of transboundary movement of e-waste.
- Australia has developed and released this year the criteria to determine when used electronic equipment will be classified as hazardous waste or not. It also requires testing of used equipment prior to any export. Companies are expected to implement the criteria by incorporating their testing and documentation procedures into the management system, which would be periodically audited.
- Due to high economic value, used home appliances are handed over to exporters who do not always follow the transboundary movement rules, as these are shipped as mixed scrap.
- Asian countries are gradually implementing various recycling schemes and therefore cooperative understanding and management should be promoted between exporting and importing countries.
- Transit countries are seeing an increasing flow of used electronics from developed countries, which are being shipped in the name of second-hand goods, such as: used appliances, or metal scrap or plastic wastes.
- In those ports where there is heavy cargo traffic it is difficult to distinguish wastes from second-hand goods, as many may have filed misleading declarations. Enforcement agencies should be launching joint enforcement operations with custom agencies on illegal import of hazardous e-waste, and take actions against those that do not follow established regulations.

## **5. Legal Issues**

- Many countries in the region lack regulations to control hazardous wastes, including e-waste, which are characterized as hazardous. However, all of them have ratified the Basel Convention and some have also ratified the Ban amendment. For some scheduled wastes, these are exported to developed countries in Europe and North America, as there are no environmentally sound facilities to dispose of these wastes in the region.
- In order to promote reasonable reuse, a form of traceability is necessary such as the regulation and management control not only by the importing country, but also by the exporting country.
- Direct reuse may include repair or refurbishment, shipments to such facilities is not controlled by many countries. As part of any regulatory scheme, countries need to know where the used electrical and electronic equipment is going, and if it will be managed in an environmentally sound manner.

## **SESSION IV, V & VI - BREAKOUT GROUPS**

- Three breakup groups were established to discuss the following:
  - Draft project proposals on the management of e-waste for countries participating in the project.

- Regional plan of action, in particular improvement of data acquisition, gathering and dissemination of information, and possible projects to be undertaken at the regional level,
- The reports/presentations of breakup groups are attached.

## **SESSION VII - RECOMMENDATIONS AND PROGRAMME OF ACTION**

### *PROGRAMME OF ACTION*

A programme of action was discussed by the participants who endorsed the following actions:

#### Goal

The goal of this programme of action is to enhance the capacity of Parties to manage electrical and electronic wastes in an environmentally sound way through the building up of public-private partnerships, and by preventing illegal traffic of hazardous e-waste.

#### Strategic objectives

A number of strategic objectives have been identified as important to achieve the above goal and to create the required level-playing field for the environmentally sound management of electrical and electronic wastes. These are:

- Assessment of the situation through the conduct of national inventories, the establishment of mechanisms for information exchange at the national and regional level and monitoring of the impacts on human health and the environment of activities concerning or related to the management of electrical and electronic wastes.
- Prevention and minimization. Establishment of goals, both intermediate and long-term, to reduce the quantity of electrical and electronic wastes ending up in landfills. Introduction of cleaner production approach to minimize, and where feasible, to eliminate hazardous substances in Electrical and electronic Equipment (EEE) and consequently their wastes. Development of economic and regulatory incentives to stimulate best practices.
- Management. Achieving ESM through promotion of best practices and use of sound recycling technologies adapted to the national specificities. Development of appropriate methods for evaluation, testing, characterization and classification of electrical and electronic wastes. Development of environmental management systems, Extended Producer Responsibility (EPR), standards and guidelines or principles for environmentally sound management or certification scheme.

- Information and training. Establishment of a regional information collection and dissemination clearing house or network accessible to all concerned stakeholders (e.g. Governments, IGOs, industry, NGOs, municipalities, research institutions). Increase of awareness at all levels and public participation on e-wastes issues. Development of training curricula for trainers. Promotion of the transfer, within the region, of expertise, know-how on best practices and technologies.

## *RECOMMENDATIONS*

The participants to the regional workshop were convinced that there is a need to work together to achieve the environmentally sound management of electrical and electronic wastes. They recognized that national and regional actions are required to meet the goal of the programme.

### A) Actions at a national level (national plan of actions)

1. Awareness Raising Activities.
2. Carry out detailed inventories.
3. Initiate pilot schemes on collection and segregation of e-wastes, including take-back schemes.
4. Initiate pilot repair, refurbishment and recycling schemes.
5. The customs and enforcement officers to be trained, as necessary, to control or verify export or import of electrical and electronic wastes and work on the identification of electronic wastes in the Harmonized System of the WCO.
6. Evaluation of various projects for their effectiveness and their sustainability

### B) Actions at a regional level (regional plan of actions)

1. The Basel Convention Regional Centers in Asia and the Pacific could be tasked to coordinate the implementation of the programme of action and adequate support should be provided to these centers to conduct this task in an effective and efficient manner.
2. Emphasis should be placed on the development of a regional focus to address the issue of illegal traffic in electrical and electronic wastes, in particular through exchange of information and strengthening information and enforcement networks on a regional basis to prevent illegal traffic.
3. Harmonization of national regulatory procedures to improve the control of those electrical and electronic wastes characterized as hazardous wastes.
4. The regional programme of action should be carried out in the spirit of public/private partnerships, emphasizing the importance to initiate the implementation of the national projects as soon as feasible.
5. Consider harmonization of information sharing activities at the regional level, to include the following:



- Establishment of database on existing recycling and refurbishment companies in the region, and circulate this information to countries in the region.
  - Establishment of a directory of recycling companies, including identification of technologies involved, and types of materials that are recycled by these companies.
  - Identify markets for recyclable materials – could be part of the directory of recycling companies work.
  - BCRCs should facilitate in identifying the appropriate experts in the region or globally to assist in various e-waste activities at the national level.
  - Establishment of information system (Network) that would include information scheme for transboundary movement of e-waste, that was initiated by Japan, to be supplemented by other inventory/data/information collected by countries in the region.
  - BCRC-China will be working in cooperation with other BCRCs in the region and other institutions on the development of e-waste information management system.
6. Development of environmental management systems, standards, guidelines or principles and best practices for environmentally sound management or certification scheme for evaluation and/or testing of used electrical and electronic equipment and certification of those involved in transboundary movement of e-wastes.
  7. Identify common concern, with an objective to minimize any duplication and share know-how and experiences. Tasks and projects could be divided amongst the countries in the regions. Some could develop selected guidelines on environmentally sound management of e-waste, while others could initiate pilot projects or enhance laboratory capabilities, etc.
  8. Develop regional capacity building initiative: BCRCs to facilitate in the *training the trainers program* of various components of ESM of e-waste, and establish linkages with cleaner production mechanisms.
  9. Design of the Electrical and Electronic Equipment (EEE) – should further move towards environmentally friendly material in the production of EEE.
  10. BCRCs in the regions should provide guidance to countries of the region and consider developing a generic methodology for the inventory work, taking into account Basel Convention's guidelines.
  11. Generic awareness raising and communication tools could be developed and adjusted to the needs of countries in the region.
  12. Consideration should be given, or feasibility study carried out, on the establishment of a regional environmentally sound recycling scheme.
  13. BCRC in SPREP to develop a regional proposal for other Pacific Island countries. The Papua New Guinea proposal could be used as a template.
  14. Regional workshop on ESM of e-waste including, but not limited to best practices and sound technologies.
  15. International conference on environmentally sound management of e-waste.

### **SESSION VIII - CLOSURE OF THE WORKSHOP**

During the ceremonies to officially close the Workshop, the representative from Ministry of Foreign Affairs, Japan announced that the Government of Japan is ready to provide

USD 300,000 towards launching of national and regional projects on e-waste in the Asia-Pacific Region. He mentioned that as these projects are being implemented it is important to seek appropriate collection, segregation, repair and recycling schemes for used electrical and electronic equipment. Also, he stressed the importance of national training workshops on environmentally sound management of e-waste. He added that this project provides a great opportunity for MOE Japan, SBC, and NIES to work together on the environmentally sound management of e-waste, while promoting sound material cycle society.

Ms. Sachiko Kuwabara-Yamamoto, the Executive Secretary of the Secretariat of the Basel Convention thanked the Government of Japan for hosting this Inception Workshop and indicated that after 3 days of deliberations she is pleased with accomplishments which includes: providing suggestions to countries to improve their project proposals; developing concrete suggestions for a regional plan on the environmentally sound management of e-waste, taking into account regional needs; and concrete conclusions and recommendations for follow-up actions. She added that a step by step approach is needed as a follow up plan by all countries in the region and their partners. For its part, the Secretariat of the Basel Convention will intensify its effort to raise funds for the implementation of projects at the national and regional level so that some tangible progress can be shown at the eighth meeting of the Conference of the parties. She said that, subject to availability of resources, the International Conference and Trade Exhibition on environmentally sound management of e-waste could be held in 2007. She concluded by declaring the launching of the Basel Convention Partnership on the Environmentally Sound Management of Electrical and Electronic Wastes for Asia Pacific Region.

His Excellency Mr. Wataru Takeshita, the Parliamentary Secretary of the Ministry of the Environment, Japan, indicated that he is also pleased with the Workshop's accomplishments and declared launching of this project, where legal, technological, economic aspects of e-waste management must be addressed. He stressed that academia, research institutes and industry must be involved in future initiatives on environmentally sound management of e-waste. He stated that implementation of waste reduction and proper recycling aimed at the establishment of a sound material cycle society, as well as 3Rs (Reduce, Reuse and Recycle), should be promoted. Finally, he said that there is a rapid improvement in standard of living in the region which resulted in a rapid increase in movements of used and end-of-life electrical and electronic equipment.

December 7, 2005