

International E-waste Generation ³

Country	Total e-waste generated tonnes/year	Categories of Appliances counted in e-waste	Year	Source
Switzerland	66,042(*)	Office & Telecommunications Equipment, Consumer Entertainment Electronics, Large and Small Domestic Appliances, Refrigerators, Fractions	2003	(1)
Germany	1,100,000	Office & Telecommunications Equipment, Consumer Entertainment Electronics, Large and Small Domestic Appliances, Refrigerators, Fractions	*Estimated in 2005	(2)
United Kingdom	915,000	Office & Telecommunications Equipment, Consumer Entertainment Electronics, Large and Small Domestic Appliances, Refrigerators, Fractions	1998	(3)
USA	2,124,400	Video Products, Audio Products, Computers and Telecommunications Equipment	2000	(4)
Taiwan	14,036	Computers, Home electrical appliances (TVs, Washing Machines, Air conditioners, Refrigerators)	2003	(5)
Thailand	60,000	Refrigerator, Air Conditioners, Televisions, Washing Machines, Computers	2003	(6)
Denmark	118,000	Electronic and Electrical Appliances including Refrigerators		
Canada	67,000	Computer Equipment (computers, printers etc) & Consumer Electronics (TVs)	*Estimated in 2005	(7)

³ http://www.ewaste.ch/facts_and_figures/economics/quantities/

Notes: Caution! The table above only gives an overview of the quantities of e-waste generated in different countries. It is difficult to make direct country-to-country comparisons regarding the generation of e-waste as each country has different ways of classifying categories of appliances as e-waste and different methodologies of estimation.

(*) This is the quantity of e-waste generated in Switzerland that is physically weighed and accounted for. It is a much more accurate measure of e-waste quantities than for other countries for which only estimates exist.

Sources:

- (1) EMPA St.Gallen, Technical Control Body for SWICO and S.ENS (2004)
- (2) ZVEI - Deutscher Zentralverband Elektrotechnik und Elektroindustrie, i.e. German electrical and electronic manufacturers' association
- (3) UK Status Report on Waste from Electrical and Electronic Equipment Industry Council for Electronic Equipment Recycling (ICER), 2000
- (4) Municipal Solid Waste in the United States: 2000 Facts and Figures. US EPA Office of Solid Waste and Emergency Response. June 2002, Pages 150-160.
- (5) Resource Recycling Fund Management Committee, Environment Protection Administration, Taiwan, ROC. <http://cemnt.epa.gov.tw/eng/>
- (6) Govt moves to stem tide of 'e-waste' (<http://www.nationmultimedia.com/page.arcview.php3?clid=3&id=97108&date=2004-04-14&usrsess=1>)
- (7) Waste 21: Waste management plan 1998-2004, Denmark (<http://www.mst.dk/homepage/default.asp?Sub=http://www.mst.dk/udgiv/publications/2003/87-7972-740-9/html/>)
- (8) Fact Sheet Proposed End-of-Life Information Technology Equipment and Consumer Electronics (e-waste) Recycling Program, Saskatchewan Environment, Environmental Protection Branch, Canada

The *Basel Convention* on the Control of Transboundary Movements of Hazardous Wastes and their Disposal is the most comprehensive global environmental agreement on hazardous and other wastes. It has over 160 Parties and aims to protect human health and the environment against the adverse effects resulting from the generation, management, transboundary movements and disposal of hazardous and other wastes.

The *Basel Convention* regulates the transboundary movements of hazardous and other wastes and obliges its Parties to ensure that such wastes are managed and disposed of in an environmentally sound manner. The Convention covers toxic, poisonous, explosive, corrosive, flammable, ecotoxic and infectious wastes. Parties are also expected to minimize the quantities that are moved across borders, to treat and dispose of wastes as close as possible to their place of generation and to prevent or minimize the generation of wastes at source.

The *Basel Convention* has 14 Basel Convention Regional and Coordinating Centres in the following locations: Argentina, China, Egypt, El Salvador, Indonesia, Islamic Republic of Iran, Nigeria, Russian Federation, Senegal, Slovak Republic, South Pacific Regional Environment Programme (Samoa), South Africa, Trinidad and Tobago, Uruguay. They deliver training and technology transfer for the implementation of the Convention.

The *Basel Convention* came into force in 1992.



BASEL CONVENTION

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BASEL CONVENTION

Meeting the Challenge of E-Waste

The Basel Convention Partnership on the Environmentally Sound Management of Electrical and Electronic Wastes for the Asia-Pacific Region

The Secretariat of the Basel Convention has developed a partnership project on the environmentally sound management of electrical and electronic wastes (e-waste) for the Asia-Pacific region, in consultation with selected countries in the region and the Basel Convention Regional Centres in China, Indonesia and the South Pacific.

The effective implementation of the *Basel Convention* requires that hazardous e-waste is managed in an environmentally sound manner. A decision was 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 e-waste required urgent attention, especially in the Asia-Pacific region. E-waste is covered in Annex VIII (entries A1180, A1150 and A2010) and Annex IX (B1110) of the *Basel Convention*. E-waste is also a priority waste stream in the *Basel Convention Strategic Plan (2000-2010)*, in the Convention's approved Partnership Programme, and in the *Ministerial Statement on Partnerships for Meeting the Global Waste Challenge*, adopted at the seventh meeting of the Conference of the Parties to the Basel Convention.

Some Statistics on E-waste ¹

- 1 E-waste grows at a rate of 3-5% per annum, three times more rapidly than the general waste stream.
- 1 More than 500 million computers will become obsolete in the USA alone between 1997 and 2007
- 1 130 million cellular phones will be discarded in USA in 2005 (BAN, 2004)
- 1 610 million cellular phones will be discarded in Japan by 2010 (Uryu et al. 2003)
- 1 An EU citizen discards 25 kg of e-waste per year (SECO & EMPA 2003)
- 1 20 to 50 million tonnes of e-waste are generated per year worldwide

¹ UNEP/DEWA/GRID-Europe, Jan. 2005. E-waste, the hidden side of IT equipment's manufacturing and use. Early Warning on Emerging Environmental Threats.



UNEP



UNEP

The Basel Convention Partnership on the Environmentally Sound Management of Electrical and Electronic Wastes for the Asia-Pacific Region

Large quantities of e-waste are being exported to developing countries for the purpose of re-use, repair, refurbishment, recycling and recovery of non-ferrous and precious metals at facilities that do not always operate in an environmentally sound manner. This is of special concern to countries in the Asia-Pacific region. E-waste contains problematic substances such as lead, cadmium, beryllium, mercury or brominated flame retardants for example, which can harm human health and the environment if they are not refurbished, recycled, or disposed of in an environmentally sound manner.



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The Basel Convention promotes the environmentally sound management of hazardous wastes through a three-pronged approach of minimizing the generation of wastes, treating wastes as near as possible to where they were gener-

ated, and minimizing international movements of hazardous wastes.

The Secretariat of the Basel Convention has developed a partnership project on the environmentally sound management of electrical and electronic wastes for the Asia-Pacific region, in consultation with selected countries in the region and the Basel Convention Regional Centres in China, Indonesia and the South Pacific.

The goal of the partnership project is to enhance the capacity of countries in the region to manage e-waste in an environmentally sound manner through public-private partnerships, and to prevent the illegal traffic of hazardous e-waste. It is based on actions to be taken at the national and regional level with the support of the Basel Convention Regional Centres in the region.

The partnership project was officially launched on 25 November 2005 in Tokyo, Japan, on the occasion of the Asia-Pacific Regional Inception Workshop on the Environmentally Sound Management of Electronic and Electrical Wastes, hosted by the

Government of Japan, in collaboration with the Secretariat of the Basel Convention and Japan's National Institute for Environmental Studies.

Strategic Objectives:

- **Assessing of the situation** through the conduct of national inventories, the establishment of mechanisms for information exchange and impact monitoring,
- **Preventing illegal traffic and minimizing e-waste generation** by establishing quantitative goals, cleaner production measures, extended producer responsibility (EPR), and economic and regulatory incentives.
- **Achieving the environmentally sound management of e-waste**

Plan of Action:

At the national level, the following activities will be carried out:

1. Awareness raising activities on the environmentally sound management of e-waste.
2. Inventories of hazardous e-waste.
3. Pilot schemes on collection and segregation of e-waste, including take-back schemes.
4. Pilot repair, refurbishment and recycling schemes.
5. Training of customs and enfor-

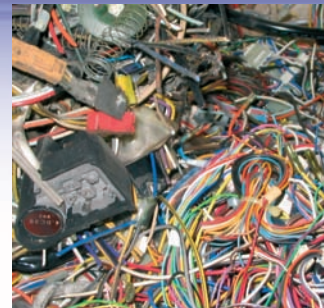


Photo SBC

by promoting the use of recycling technologies and developing methods for evaluation, testing, characterizing and classifying e-waste.

- **Raising awareness and training** through the establishment of an information clearing house accessible to all concerned stakeholders.

cement officers to control exports/imports of e-waste and to identify e-waste in the Harmonized System of the World Customs Organization.

At the regional level, the following activities will be carried out:

1. Coordination of implementation of activities through the Basel Convention Regional Centres in the Asia-Pacific region.
2. Exchange and strengthening of

information on regional enforcement networks.

3. Harmonization of national regulatory procedures to improve the control of e-waste characterized as hazardous waste.
4. Harmonization of information sharing activities to include the following²:

- Development of a directory on existing recycling and refurbishment companies in the region and circulation of this information to countries in the region.
- Identification of markets for recyclable materials.
- Identification of experts with the support of BCRCs to assist with e-waste management activities at the national level.
- Establishment of information systems including an information scheme for transboundary movements of e-waste, with inventory/data/information collected by countries in the region.

5. Development of environmental management systems, standards, guidelines or principles and best practices for the environmentally

sound management of e-waste.

6. Development of certification scheme for evaluation and/or testing of used electrical and electronic equipment and certification of those involved in transboundary movements of e-waste.
7. Initiation of pilot projects for enhancement of laboratory capabilities.
8. Development of regional capacity building initiative.
9. Development of environmentally sound material in the design of Electrical and Electronic Equipment (EEE).
10. Development of awareness raising and communication tools tailored to the needs of the countries in the region.
11. Feasibility study on the establishment of a regional environmentally sound recycling scheme.
12. Regional workshops on environmentally sound management of e-waste, best practices and sound technologies a.o.
13. International conference on environmentally sound management of e-waste.

² 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 and awareness raising tools.

Participating Countries and Budget

The following countries have supported and indicated interest in participating in the project activities: Cambodia, China, India, Indonesia, Malaysia, Papua New Guinea, The Philippines, Singapore, Sri Lanka, Thailand and Vietnam. In addition, the South Pacific Regional Environment Programme has prepared a regional proposal for Pacific Island countries. As of February 2006, Japan and Canada have pledged financial support for the implementation of the project and efforts are being made to secure further funding for activities estimated to cost USD 9.33 Million over a 5-year period.