

Chapter 10. Participating in Regional and International Initiatives

Many of the efforts in Asia to increase the efficiency of resource use will be strengthened through regional cooperation and integration. This is especially true to address problems associated with hazardous wastes and transboundary pollutants.

This chapter looks at two important elements of regional cooperation related to resource efficiency—information sharing and capacity building, and promoting the safe trade of secondary materials.

Regional Information Sharing and Capacity Building

Information sharing is critical at the regional and international levels. Information sharing can help harmonize policies and reduce the gap between countries in recycling-related institutional structure and recycling and management capacity. Sharing the experience of developed countries with proper recycling and waste management mechanisms can be useful for such capacity development to help improve systems for collection, transportation, treatment, storage, recovery, and disposal.

Information sharing in the region can be accelerated through

- information standardization on products regarding their recyclability and proper management;
- risk and proper management information on regulated and controlled substances and materials;
- national policies and frameworks for recycling and waste management;
- national regulations and standards;
- information on relevant institutions;
- incentive mechanisms, such as ecolabeling,

- taxation, or certification or certification and awards for good practices of reliable recyclers;
- statistics on traded amounts of secondary materials; and
- records of inappropriate incidents and relevant importers and dealers.²⁸¹

Information harmonization is likely to have some important benefits. First, sharing harmonized information on institutions and systems of domestic recycling would help producers find and use proper recycling facilities more easily. Harmonizing and sharing information on products and components would also help facilitate a better understanding of the recycling potential of products, as well as proper recycling methods and technologies. One useful source is the 3R Knowledge Hub (Box 10.1).

Box 10.1: The 3R Knowledge Hub

As part of regional efforts to promote the 3R Initiative, the 3R Knowledge Hub was jointly established by the United Nations Environment Programme and the Asian Institute of Technology in Bangkok, Thailand, in 2006, with support from the Asian Development Bank. The hub aims to collect, create, and disseminate knowledge relevant to the 3Rs, specifically in municipal, medical, and e-waste solid waste management.

The hub will also help develop broad guidelines and training programs and will encourage nations to develop national integrated policy frameworks and national action plans to promote resource efficiency. It will seek to promote to industry best practices that regulatory agencies endorse and, where possible, to work closely with trade and industry associations. Development of knowledge is under way with collaboration between several international and government partners.

Source: www.3rkh.net



²⁸¹ UNESCAP and IGES. 2006. Discussion Points for the Internationally-Harmonized EPR Systems. Asia 3R Conference. 30 October–1 November. Tokyo.

Box 10.2: The International Expanded Polystyrene Alliance

Expanded polystyrene (EPS) is widely used for packaging, construction, and insulations. In November 1992, an international agreement to promote EPS recycling was made between Austria, Germany, Japan, and US. This was very unique agreement to promote international cooperation among the packaging industries globally.

The agreement made three major commitments. First, it guaranteed the same level of access for imported EPS packaging as domestic EPS packaging to national recycling mechanisms. Second, the countries committed to promote national recycling mechanisms. Third, countries committed to establishing a worldwide network to exchange information on EPS recycling. The number of formal commitments to the agreement rapidly increased to more than 30 countries.

In 2000, three major EPS organizations—AFPR (North America), AMEPS (Asia Pacific) and EUMEPS (Europe)—established the International EPS Alliance (INEPSA) to exchange information about EPS environmental and solid waste management programs between packaging experts. In 2002, ASAPEX (South America) joined. Since then, more than 30 countries associations have signed INEPSA.

In addition, as of 2007, 14 countries in the Asia-Pacific region have joined AMEPS. They hold general meetings regularly and exchange information and build awareness on EPS recycling. In 2006, EPS recycling ratio among AMEPS member nations reached 67%. This is remarkably higher than that in the North America and European Union. According to AMEPS, recycling rates in North America in the 2000s were around 25% and those of the European Union were around 30–40%.

AFPR = Alliance of Foam Packaging Recyclers, AMEPS = Asian Manufacturers of Expanded Polystyrene, ASAPEX = Asociación Sur Americana Polistireno Expandido, EUMEPS = European Manufacturers of Expanded Polystyrene.

Source: Personal communication with the Japan Expanded Polystyrene Recycling Association (JEPSRA), 3 September 2007.

It could also help the region respond to integrated product policy initiatives in the EU. These include end-of-life vehicles regulations, RoHS (in electrical and electronic equipment), WEEE directives, and REACH regulation.

In response to these integrated product policy initiatives, manufacturers in Asia will confront increased responsibilities, such as safety evaluation of products, avoiding the use of hazardous substances in products, and registering used chemicals. Thus, it will become increasingly important to make information of the degree of hazard and recycling potential of the products available to relevant stakeholders along the product life cycle, such as suppliers of components, product manufactures, and waste management service providers. In some cases, international industry alliances, such as the International Expanded Polystyrene Alliance (Box 10.2), could be used to expand recycling markets through coordinated action.

Promoting Safe Trade of Secondary Materials

The expanding trade in secondary materials offers both opportunities and threats in terms of Asia's environment and its sustainable development

prospects. Depending on how it is conducted, trade can either complement waste minimization in the region or significantly increase environmental pollution and human health risks.

Secondary materials constitute one of the most important material flows worldwide.²⁸² One estimate suggests that the size of the global secondary materials markets in 2004 was 600 Mt, exceeding \$100 billion.²⁸³ Some materials are part of regional markets (compost, wood); national markets (glass); or international markets (paper, plastics, ferrous and nonferrous metals, and textiles). Secondhand goods, such as used buses or automobiles, construction equipment, home appliances, and computers are also internationally traded. Most of them are exported from developed countries to developing countries. Even ships are being exported to developing countries to be recycled (Box 10.3).

²⁸² Secondary materials are defined as materials or goods that have been manufactured and used at least once and are to be used again. The term is often used interchangeably with recyclable resources and materials and sometimes includes secondhand goods. However, it should be noted that, in reality, the definition and distinction of secondary materials, recyclable resources and materials, and secondhand goods, as well as waste, is a very complex policy-relevant issue itself.

²⁸³ Lacoste, Elisabeth, and Philippe Chalmin. 2006. *From Waste to Resource: An Abstract of "2006 World Waste Survey."* Cyclope. Commissioned by Veolia Environmental Services. Paris.

Box 10.3: Shipbreaking in Developing Countries

Formerly, shipbreaking was concentrated in developed countries, but now it mainly operates in developing countries due largely to their low labor costs and, in some cases, less stringent environmental and safety standards. According to Greenpeace, Bangladesh, People’s Republic of China, India, Pakistan, and Turkey account for 90% global shipbreaking.

Shipbreaking is a form of recycling, mainly to recover iron scraps. About 95% of ship components are iron. However, because hazardous substances, including polychlorinated biphenyls (PCBs) and asbestos, have been used in vessels, shipbreaking for material recovery causes very heavy pollution in these countries. In the process of recovering iron and copper scrap and other materials from ships, hazardous substances often move into the environment and can create serious health problems for workers and their communities. However, for workers who often come from the poorest regions/districts of low-income countries, it is a source of jobs and resources. Therefore, there is a heated debate about the benefits and risks currently presented by the ship dismantling industry.

Detailed information is given in the Basel Convention’s website, on Ship Dismantling: <http://www.basel.int/ships/index.html>

Source: Greenpeace Shipbreaking Site. Available: <http://www.greenpeaceweb.org/shipbreak/whatis.asp>

Expanding trade of secondary materials can be attributed to a number of factors, including (i) the increased recovery of recyclable waste commodities in developed countries in line with the development of associated legislation; (ii) the shift of various production bases from developed countries to Asian countries, especially the PRC; (iii) the inability of developed countries to consume domestically all the recyclable resources they generate; and (iv) the increasing demand for resources in Asian countries that cannot be met by domestically-generated volumes of recyclable waste.²⁸⁴

Secondary Material Trade Flows

A recent study by the Japanese National Institute for Environmental Studies looked at the material flows of ferrous materials in Asia and discovered

²⁸⁴ Kojima, Michikazu. 2005. Current Trade Flows in Recyclable Resources within Asia & Related Issues. *IDE Spot Survey No.29*. Chiba: Institute of Developing Economics. May.

Figure 10.1: International Trade of Iron Ore, Steel, and Scrap Iron in Asia (1983)

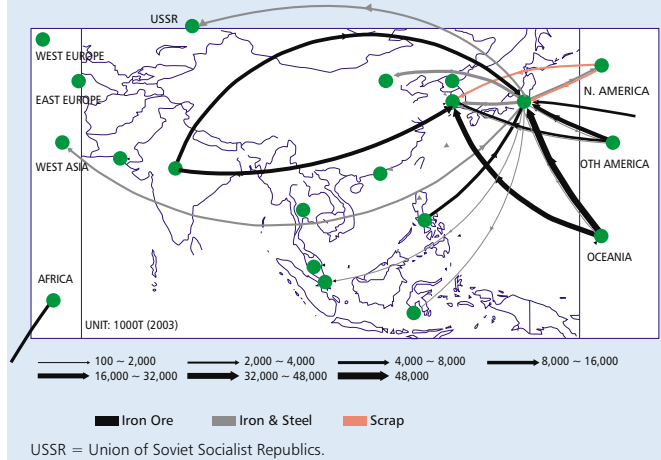
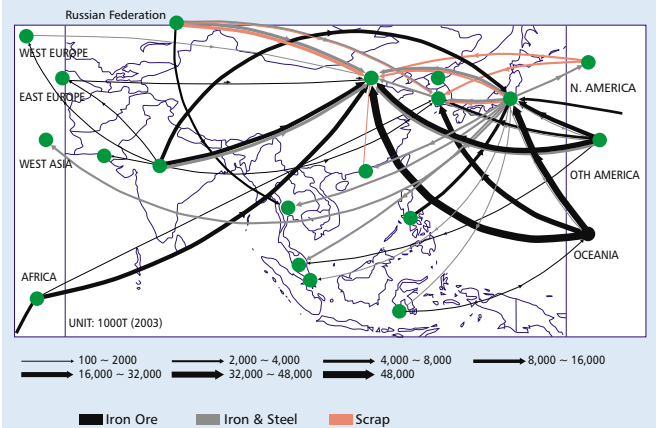


Figure 10.2: International Trade of Iron Ore, Steel, and Scrap Iron in Asia (2003)



Source: Moriguchi, Yuichi, and Seiji Hashimoto. 2006. *Material Flow Databook –Third Edition. World Resource Flows around Japan*. Center for Global Environmental Research of NIES. Available: www-cger.nies.go.jp/publication/D040/cd/Flow/pdf/Asia/2003/iron-03.ctl.pdf

a complicated global trade system centered on PRC, India, Japan, and Republic of Korea.²⁸⁵ The study revealed that demand for recyclable wastes shipped from developed countries to developing countries (Figures 10.1 and 10.2) has increased sharply. Exports from EU, Japan, and US have been

²⁸⁵ Moriguchi, Yuichi, and Seiji Hashimoto. 2006. *Material Flow Databook (Third Edition), World Resource Flows around Japan*. Tsukuba: Center for Global Environmental Research, National Institute for Environmental Studies. Available: <http://www-cger.nies.go.jp/publication/D040/cd/Flow/pdf/Asia/2003/iron-03.ctl.pdf>

Table 10.1: Gross and Net Exports of Recyclable Wastes by Major Asian Nations, 2005
(Difference between gross exports and gross imports)

Waste	PRC		India		Indonesia		Japan		Republic of Korea		Malaysia		Philippines		Thailand	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net
Plastics	45	(4,912)	11	(85)	29	24	1,058	1,055	235	210	112	37	80	72	130	129
Paper	0.1	(17,032)	3	(1,653)	16	(1,942)	3,710	3,633	46	(1,304)	0.8	(165)	1	(286)	15	(931)
Iron	2	(10,134)	5	(4,903)	70	(1,132)	7,576	7,893	207	(6,607)	227	3,224	972	958	173	(1,510)
Copper	8	(4,813)	4	(146)	32	18	424	321	161	(45)	75	(161)	15	11	283	278
Aluminum	1	(1,989)	0.8	(216)	15	(8)	96	(13)	11	(287)	14	no data	13	13	21	(10)
Lead	.0	0	0.1	(32)	0.0	0	9	9	0	(2)	0.4	0	0.8	1	0.2	0

PRC = People's Republic of China.

Source: Kojima, Michikazu. 2005. Current Trade Flows in Recyclable Resources within Asia & Related Issues. *IDE Spot Survey* No.29. Chiba, Japan: Institute of Developing Economics.

growing.²⁸⁶ The region is also observing increasing trade in secondary materials among developing countries. For instance, various secondary materials from Kathmandu, Nepal, are collected, sorted, and exported to India. Likewise, surplus materials from Kolkata, India, are exported to Bangladesh.²⁸⁷

Table 10.1 shows some specific trends:

- Japan, with the exclusion of scrap aluminum, is a net exporter of secondary materials.
- The Republic of Korea is a net importer, with the exclusion of scrap plastics.
- India is a net importer of all kinds of secondary materials.
- All the countries of Southeast Asia are net importers of waste paper (due to increasingly short supplies of raw materials used for paper manufacture, associated with dwindling forest resources).
- The PRC is one of the biggest net importers of all kinds of secondary materials.

The PRC's imports of recyclable materials deserve special mention. These are growing especially rapidly,

²⁸⁶ Ibid.

²⁸⁷ UNEP. International Environmental Technology Centre. 2002, March. *International Source Book on Environmentally Sound Technologies (ESTs) for Municipal Solid Waste Management (MSWM)*. Available: http://www.unep.or.jp/ietc/ESTdir/Pub/MSW/RO/asia/topic_a.asp

fueled by high demand for resources due to rapid economic growth (Figure 10.3). For instance, imports of scrap copper far exceed imports of crude copper and copper ore (Figure 10.4).

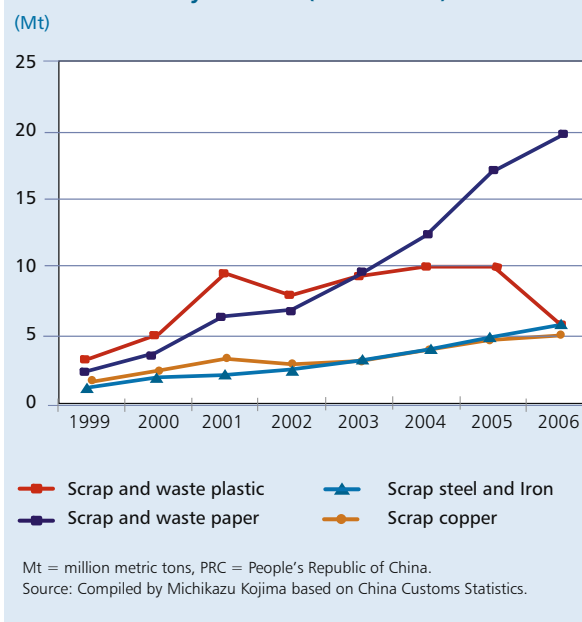
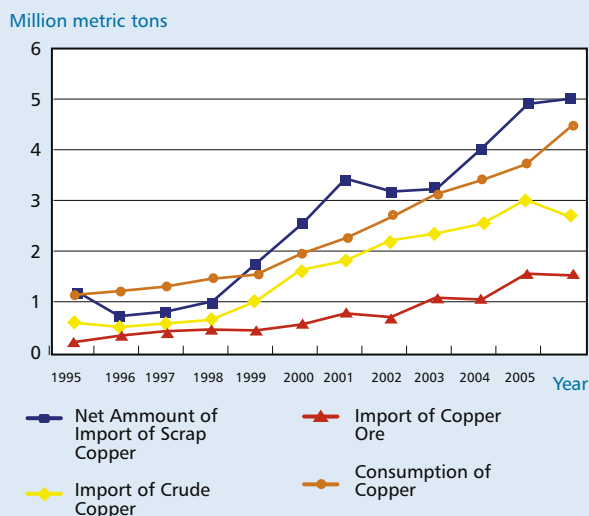
Figure 10.3: Import of Recyclable Resources by the PRC (1999–2006)

Figure 10.4: The PRC's Increasing Demand for Copper



Mt = million metric tons, PRC = People's Republic of China.

Compiled by the Institute of Global Environmental Strategies based on the following sources:

- Osame, A. 2003. Reflection of China's Non-Ferrous Industry in 2002, Influence of SARS and Future Perspective of Copper Supply and Demand. *Kinzoku Shigen Jouhou (Metal Resource Report)* 33(4). Japan Oil, Gas and Metals National Corporation (JOGMEC).
- Osame, A. 2005. Reflection of China's Non-Ferrous Industry in 2003. *Kinzoku Shigen Jouhou (Metal Resource Report)* 34(5). JOGMEC. Available: http://www.jogmec.go.jp/mric_web/kogyojoho/2005-01/MRv34n5-02.pdf
- Sawada, K. 2006. *Trend of Copper Consumption in China and Copper Industry in Mongolia and Kazakhstan*. JOGMEC. Available: http://www.jogmec.go.jp/mric_web/koenkai/060622/breifing_060622_1.pdf
- World Trade Atlas Database.

Notes: Import of Scrap Copper is based on H.S.Code 7404; Import of Crude Copper is based on H.S.Code 7402; Consumption of Copper is based on Sawada (2006) and Osame (2003, 2005).

Opportunities and Threats of the Trade

In principle, with strict and proper implementation of appropriate safeguards, along with measures to properly treat and dispose of waste domestically, the trade of secondary materials offers many benefits. For importing countries, secondary materials can be used as cheap sources of materials for production, thus lessening consumption of primary virgin material and avoiding environmental pollution associated with extraction, transportation, and refining of primary resources. Trade of secondary materials can also help narrow the demand-supply gap of secondary materials that currently exist in many domestic markets and open up international recycling markets.

In addition, for countries that lack their own facilities for proper disposal of hard-to-manage

wastes, shipping waste to other countries may be the most viable solution. This is the case for the Pacific Islands, which are struggling to manage metal scrap from old vehicles, as described in Box 2.2 on page 22.

Despite these positive aspects, the transboundary movement of secondary materials often results in transferring pollution and waste to low-income countries, where environmental and safety standards are typically low and labor is cheap. Through this transboundary movement, developing countries are forced to bear the burden of final waste disposal for developed countries, which are not fully internalizing the total costs of recycling and disposal of products.

Particularly troubling is the fact that hazardous materials are part of this transboundary movement. Tons of hazardous waste vanish every year into illicit dumps in the region. This waste includes unrecoverable wastes, such as toxic incinerator ash, industrial sludge, contaminated medical equipment, and persistent organic pollutants.

It also includes hazardous waste contained in secondhand goods—older finished consumer products that are partly recyclable—including electrical and electronic equipment and used vehicles. While secondhand goods offer less expensive options for producers and consumers, the useful life of secondhand goods is usually shorter than for newly manufactured goods and they usually are less energy efficient and much more polluting. For instance, a study shows that 700 tons of ozone depleting substances in car air-conditioners was moved to Asian countries from Japan as a result of used car export from Japan.²⁸⁸ Some countries restrict the import of secondhand goods, not only to limit pollution but also to protect domestic manufacturers.

One of the biggest environmental concerns in the region is the importation of discarded electronics, or e-waste, which has been called the “dirty little secret of the high tech revolution.” Much of the e-waste collected for recycling in developed countries is not recycled domestically, but is instead placed on container ships, many bound for developing countries in Asia. Asian countries accept tens of millions of pieces of discarded electronics equipment

²⁸⁸ Minato, K., A. Funazaki, and S. Kajima. 2004. Estimation in Export of Secondhand Cars and Amount of Environmental Burden. In *Conference Proceedings of the 8th Energy System and Economics Conference*. Japan Society for Energy and Resources. 23–25.

Box 10.4: E-Waste Recycling and Disposal in Developing Asian Countries

The e-waste recycling and disposal operations found in developing countries are extremely polluting and likely to be very damaging to human health. The entire recycling system operates as a trade value chain. Recycling is characterized by a hierarchy of physical dismantlers and metal extractors. The chain starts from the formal sector, where obsolete electronic items are traded from the organized market and passed from one level of dismantler to another level, depending on the item and value of its content, and finally leading to metal extraction.

In many parts of Asia, dismantling and recycling of electronic wastes is frequently carried out in small workshops and industrial units. In these places, “recycling” is a misleading characterization of many disparate practices—de-manufacturing, dismantling, shredding, and burning—that is mostly unregulated and often creates additional hazards. Some of the hazardous recycling processes include extraction of metals, such as copper and gold, using acid treatment and primitive metallurgical processes, while physical processes include recovery of glass by breaking cathode ray tubes. The crude metal extraction process leads to uncontrolled effluent discharges in urban and rural drainage systems, while glass recovery leads to lead and other emissions in the air.

Although valuable materials and components are recycled, much of the less valuable material is simply dumped by the roadside or in landfills or burned in open air. As reported in the report *Exporting Harm: The High-Tech Trashing of Asia*, which documents the harmful effects of the e-waste trade on Asian communities in the People’s Republic of China (PRC), India, and Pakistan:

“A tremendous amount of imported e-waste material and process residues are not recycled but simply dumped in open fields, along riverbanks, ponds, wetlands, in rivers, and in irrigation ditches. These materials include leaded CRT glass, burned or acid-reduced circuit boards, mixed, dirty plastics including mylar and videotape, toner cartridges, and considerable material apparently too difficult to separate. Also dumped are residues from recycling operations including ashes from numerous open burning operations, and spent acid baths and sludges.”

The most infamous destination for e-waste is Guiyu in Guangdong, PRC, a city that is almost entirely devoted to receiving e-waste shipped from the United States, Europe, and Japan. In communities throughout Guiyu, poor people, many of them children, can be seen in concrete-block sheds sifting through computers and printers and breaking them into scrap with their bare hands. As rivers and soils in these communities often absorb high amounts of carcinogens and other toxins, people suffer high incidences of birth defects, infant mortality, tuberculosis, and blood diseases, as well as particularly severe respiratory problems.



Source: Kojima Michikazu, JETRO.

Source: Basel Action Network and Silicon Valley Toxics Coalition. 2002. *Exporting Harm: The High-Tech Trashing of Asia*. February.

every year. A number of Asian countries are considered to be common destinations for e-waste, including PRC, India, Malaysia, Philippines, Singapore, Sri Lanka, Thailand, and Viet Nam. In these countries, labor is cheap and occupational and environmental protection is generally weak. These countries are also ill-equipped to deal with mountains of discarded electronics and the toxic substances—lead, mercury, cadmium—that they contain (Box 10.4).

Controlling this transboundary movement of hazardous waste is not easy. It is believed that significant amounts of hazardous waste are smuggled without prior notification and consent, and it is relatively easy to dump hazardous waste illegally. Lack of proper disposal and recycling capacity, legal

frameworks, and enforcement capacity in developing countries contributes to this problem.

Furthermore, there is an absence of education on the harmful effects of handling toxic materials. In the developed world, toxic materials are labeled and accompanied with safety procedures, but people in poor communities usually handle these materials with their bare hands and without respiratory protection. Most poor communities who handle toxic materials do not realize the threats they are facing, do not know what protective measures to take, and do not have the means to advocate for themselves. Compounding the problem, the medical community has also not been trained to recognize symptoms and deal with the effects.

Box 10.5: Basel Convention: Article 4**General Obligations**

1. (a) Parties exercising their right to prohibit the import of hazardous wastes or other wastes for disposal shall inform the other Parties of their decision pursuant to Article 13.
- (b) Parties shall prohibit or shall not permit the export of hazardous wastes and other wastes to the Parties which have prohibited the import of such wastes, when notified pursuant to subparagraph (a) above.
- (c) Parties shall prohibit or shall not permit the export of hazardous wastes and other wastes if the State of import does not consent in writing to the specific import, in the case where that State of import has not prohibited the import of such wastes.

Basel Ban Amendment inserted in new Article 4A:

1. Each Party listed in Annex VII shall prohibit all transboundary movements of hazardous wastes which are destined for operations according to Annex IV A, to States not listed in Annex VII.
2. Each Party listed in Annex VII shall phase out by 31 December 1997, and prohibit as of that date, all transboundary movements of hazardous wastes under Article 1(1)(a) of the Convention which are destined for operations according to Annex IV B to States not listed in Annex VII. Such transboundary movement shall not be prohibited unless the wastes in question are characterised as hazardous under the Convention. ...”

The status of the amendment ratifications can be found on the Basel Secretariat’s web page. <http://www.basel.int/ratify/ban-alpha.htm>

The international community is increasingly acknowledging this problem and is endeavoring to fight it. Efforts to control the movement of hazardous waste are centered around the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, which was adopted in 1989 and entered into force on 5 May 1992. The convention calls for all countries of the world to become self-sufficient in waste management and to minimize all transboundary movements of hazardous wastes. The convention also requires exporters of hazardous wastes to give prior notification to the government of the importer country and to obtain their approval.

After the initial adoption of the convention, some least developed countries and environmental organizations argued that it did not go far enough and pushed for a total ban on the shipment of all hazardous waste to non-OECD countries. After long and intensive debates at the 1995 Basel conference, a decision was made to adopt the Basel Ban Amendment to the Basel Convention. The amendment, which is yet to come into force, prohibits the export of hazardous waste from a list of developed (mostly OECD) countries to developing countries. The Basel Ban Amendment applies to export for any reason (Box 10.5).

As of late-2005, 63 nations had ratified the Basel Ban Amendment (62 are required for it to enter into force), but it not yet in force due largely to opposition by a number of countries. The EU fully implemented the Basel Ban in its Waste Shipment Regulation, making it legally binding in all EU member states.

Although the establishment of the Basel Convention represented the start of international efforts to control transboundary movements of hazardous wastes, illegal traffic is still being observed. Like most other multilateral environmental agreements, the Basel Convention is stifled by inadequate implementing legislation, underdeveloped legal systems, and a lack of enforcement among its members. However, even where legislation exists, illegal shipments still occur. For instance, a newspaper reported that exporters of e-waste to the PRC can avoid detection by routing container ships through Hong Kong, China; Philippines; and Taipei, China, and then transshipping them to smaller ports in mainland PRC, where customs officials are willing to look the other way in exchange for a share of the spoils.²⁸⁹

²⁸⁹ Goodman, Peter. 2003. China Serves As Dump Site For Computers: Unsafe Recycling Practice Grows Despite Import Ban. Washington Post Foreign Service. 24 February. Available: <http://www.washingtonpost.com/ac2/wp-dyn/A56653-2003Feb24?language=printer>

A number of recent illegal trafficking incidents have come to light in Asia. For instance, in April 2004, a shipment from Japan to Tsingdao, PRC, was found on inspection by a PRC officer to contain large quantities of contaminated plastics, covered by a small amount of clean and crushed plastic to disguise the shipment. This incident caused the PRC Government to impose a temporary ban on waste plastic imports from Japan. An incident of unauthorized exporting of industrial waste from Taipei, China to Malaysia was also revealed in 2004.²⁹⁰

In one infamous incident, the now-defunct Japanese company Nisso was caught by the Philippine police trying to dump 2,100 tons of infectious medical waste in the Philippines in December 1999. The shipment of used needles, syringes, diapers, and other discarded hospital products was disguised as recyclable scrap paper. In response, the Government of Japan spent a large sum to transfer the waste back to Japan for proper treatment.²⁹¹ Following the incident, Japan also strengthened its manifest system for tracking shipments and implemented the “revision of waste management law” to clarify polluters’ responsibilities.

In addition to blatantly illegal shipments, another issue is that a certain portion of trade in goods that are classified as secondhand goods are actually near end-of-life products. In many cases, only certain parts are extracted from the goods, and the rest is discarded, often through illegal dumping. This is particularly true in the case of used electrical equipment, such as mobile phones and computers. Because the Basel Convention does not regulate international trade of secondhand goods, prior notification and consent procedures are not required for these goods. In fact, there is no internationally standardized definition of secondhand goods, although ISO has discussed a new international standard guiding the cross-border trade of secondhand products.²⁹² It is also currently difficult

to trace movement of secondary materials to ensure that they are treated at proper recycling facilities.

This is not a simple issue, because there is a market-based driving force for refurbishing or extracting resources from near end-of-life products. For instance, although PCs contain hazardous substances, there is a clear economic incentive for refurbishing used PCs and disassembling obsolete PCs, monitors, and circuit boards and then recovering nonferrous metals, such as gold and copper. Many local people engaged in small-scale informal recycling consider this a vital employment opportunity. In the national capital region of Delhi, India, the yearly sales turnover of e-waste recycling during 2002–2003 was \$5 million, with 941,274 yearly person hours spent on recycling and 10–20% profit margin.²⁹³

One recent development that is causing some concern in the region is Japan’s efforts to negotiate bilateral agreements as a way to liberalize and promote trade that environmentalists and civil groups claim will circumvent the Basel Convention. The Basel Action Network, an organization that opposes trade in toxic wastes, products, and technologies, recently issued a Basel Non-Compliance Notification Report on the issue. The report charges that Japan is openly in noncompliance with the Basel Convention through the development of contradictory bilateral agreements.²⁹⁴

The Japan-Philippine Environmental Partnership Agreement (Box 10.6) is the latest of a series of recent bilateral agreements that Japan is negotiating throughout the Pacific Rim countries. In the first quarter of 2007, Japan also finished negotiations with Thailand on the Japan-Thailand Economic Partnership Agreement. In both cases, a letter was exchanged between the countries stipulating that the trade pact will not overrule the Basel Convention. Japan is now in negotiations with Indonesia and India for their respective agreements. Civil society groups in both India and Indonesia are taking

²⁹⁰ Kojima, Michikazu. 2005. Current Trade Flows in Recyclable Resources within Asia & Related Issues. *IDE Spot Survey* No. 29. Chiba: Institute of Developing Economics. May.

²⁹¹ Schmidt, Charles W. 2004, Feb. Environmental Crimes: Profiting at the Earth’s Expense. *Environmental Health Perspectives* 112(2). Available: <http://www.ehponline.org/members/2004/112-2/focus.html>

²⁹² Resolutions of 25th meeting of Committee on Consumer Policy of the International Organization for Standardization,

2003. Bangkok, 10–11 September. Available: http://www.jisc.go.jp/policy/pdf/25th_meeting_10-11_September_2003.pdf

²⁹³ Jain, Amit. 2006. Perspective of Electronic Waste Management in South Asia: Current Status, Issues and Application of 3Rs. Paper for Promoting Reduce, Reuse and Recycle in South Asia; Synthesis Report of 3R South Asia Expert Workshop. ADB, IGES, and UNEP. Kathmandu, Nepal 30 August–1 September.

²⁹⁴ Basel Action Network. 2007, 12 Mar. *Basel Non-Compliance Notification Report*. Available: http://www.ban.org/Library/Japan_JPEPA_BNN2007_1.Final.pdf

Box 10.6: The Japan-Philippines Economic Partnership Agreement

In September 2006, Japan and the Philippines signed a bilateral trade agreement known as the Japan-Philippine Economic Partnership Agreement (JPEPA). In the JPEPA agreement, a legally binding instrument, trade covers articles “which can no longer perform their original purpose...nor are capable of being restored or repaired and which are fit only for disposal or for the recovery of parts or raw materials.”

Environmentalists are fearful that reducing tariffs to zero will offer a blanket invitation to make the Philippines the dumping ground for Japanese waste, especially hazardous and toxic waste. They also stress that the JPEPA provisions violate and contradict both Philippine laws, such as the Toxic Substance and Hazardous and Nuclear Waste Act of 1990 and the Clean Air Act of 1999, the latter because JPEPA includes toxic incinerator ash (The CAA bans incineration partly because of the problems surrounding disposing of incinerator ash).

Proponents of the Agreement downplay these concerns. The Philippines' Department of Environment and Natural Resources claims that JPEPA will not violate Philippine laws because toxic and hazardous waste are banned. A letter from the Minister for Foreign Affairs of Japan to the Secretary of Foreign Affairs in the Philippines contained the following statement:

“I am pleased to confirm the statement and commitment of Prime Minister Shinzo Abe that Japan would not be exporting toxic wastes to the Philippines, as defined and prohibited under the laws of Japan and the Philippines, in accordance with the Basel Convention, and the understanding that provisions related to this topic in the Japan-Philippines Economic Partnership Agreement (JPEPA) do not prevent the adoption or enforcement of such measures under existing and future national laws, rules and regulations of the Philippines and Japan.”

Due to the 2007 midterm elections, the Philippine Senate has not acted on the JPEPA ratification. Environmentalists and nationalist trade advocates are now scrambling to convince the Philippine Senate, the country's treaty ratifying body, to reject JPEPA when it is transmitted to Congress.

Sources: Pabico, Alecks. 2006. *JPEPA to encourage trade in hazardous and toxic waste*. Philippine Center for Investigative Journalism. 25 October. Available: <http://www.pcij.org/blog/?p=1264>; <http://www.mofa.go.jp/region/asia-paci/philippine/epa0609/letter.pdf>

steps to get information from their respective governments.

Policies to Promote Safe Trade of Secondary Materials

In response to these emerging concerns, multilateral and regional efforts must be accelerated to seek coordination and balance between domestic recycling systems and transboundary networks in a way that eliminates associated environment and health risks while realizing the potential benefits of improving resource efficiency in the region as a whole. To accomplish this, a common and clear policy and vision must be developed that is consistent with current international agreements, such as the Basel Convention. The prevention of environmental pollution and health risks must be emphasized as a major precondition to international reuse and recycling. Both exporting and importing countries must strive jointly to prevent the creation of environmental pollution from transboundary movements of secondary materials.

It must be emphasized that exporting countries and exporters must take responsibility in such efforts,

especially considering the insufficient capacity of many importing countries in tracking these materials and in treatment technologies. Along with governments, manufacturers and consumers must participate in solving this problem, such as participating in product stewardship programs, life-cycle management, and changing consumption patterns. The problem will never truly be solved unless goods are redesigned and reformulated to facilitate proper dismantling and component separation and to avoid the use of hazardous chemical components at source. Manufacturers must develop and design products that are easy to repair, upgrade and recycle, have longer life spans, and will not expose workers and the environment to hazardous chemicals. Otherwise, they will continue to generate polluting residues and emissions at end-of-life, whether in developed-country landfills or developing-country waste recovery industries.

The problem is complex and a comprehensive solution requires a variety of remedies. Some of the actions that developing countries should consider are discussed below as part of a regional effort to address the problem. In addition to these measures,

it is also important that individual countries improve the management of their waste domestically, as described in the section on page 57.

Passing and Enforcing Tougher Laws

Policy makers must strengthen the roles of national and local regulators in eliminating the negative impacts of such trade. Where effective legislation exists, illegal trade can be curbed (but not entirely stopped) if countries are willing to target flagrant violators, increase the use of sanctions and other penalties, encourage compliance through positive incentives, and mandate the use of identifying documents to flag shipments governed by the Basel Convention. Parties to the Basel Convention are also encouraged to participate in the Basel Convention Partnership activities such as on Mobile Phone Partnership Initiative that was adopted in 2002 (<http://www.basel.int/industry/mppi.html>).

Fortunately, a number of countries are starting to take a tougher line as the social fallout from this harmful trade is becoming more apparent. The PRC has ratified the complete Basel package and in February 2006, adopted guidelines similar to the RoHS in the European Union for phasing out of toxic substances, including mercury, lead, and cadmium, from electronic goods.²⁹⁵

Through tougher regulations, some other countries in the region have been able to slow imports of lead scrap, which falls within the scope of the Basel Convention. For instance, in Indonesia and Taipei, China, lower lead imports are clearly a consequence of the introduction of regulations on imports of lead scrap such as waste car batteries. India also tightened its restrictions on lead waste imports in 2000 and import volumes fell, but they have been creeping up again during the past few years.²⁹⁶

Tracking Shipments of Secondary Materials

Besides passing tougher regulations, countries need to improve their domestic ability to gather data on and inventory transboundary movements of secondary materials. This includes defining

national measures and tools for effective shipment tracking and compliance monitoring for hazardous chemicals. Definitive documentation systems, such as manifests that identify shipments, can help ensure compliance. To help facilitate this, imports and exports of hazardous e-waste should be subject to prior-informed-consent procedure as required under the Basel Convention. In addition, it is extremely important to build the capacity and strengthen the governance of customs agents and other officials.

Some countries in the region have passed laws to allow preshipment inspections, a measure that falls outside the framework of the Basel Convention. Such inspections aim to prevent entry of unrecoverable waste shipped as recyclable waste. For instance, Indonesia requires preshipment inspections of waste paper and scrap metal, used capital goods, and secondhand buses. Imports of recyclable waste (e.g., waste plastics, scrap metal, and waste paper) bound for the PRC are also subject to preshipment inspection. The PRC also introduced an exporter registration system in January 2005, because preshipment inspections alone were failing to stem the flow of illegal traffic.²⁹⁷

For proper application of trade measures, exporting countries must cooperate in monitoring efforts. Also, to reduce negative impact and to maximize net benefit, countries should apply stricter domestic environmental standards in addition to a combination of trade measures to control trade of end-of-life products.

In all national efforts, international networks are potentially useful in linking regulatory agencies, law enforcement officials, prosecutors, NGOs, and other stakeholders. These networks can help coordinate law enforcement efforts and strategies, gather information, create acceptable environmental standards, raise awareness about enforcement issues, and assist in developing and implementing legislation more effectively.

An independent international body needs to coordinate these efforts. Toward this objective, UNEP set up the “Green Customs” program, launched in June 2003. This program aims to improve coordinated intelligence gathering and training of customs agents who are saddled with monitoring

²⁹⁵ Boyd, Alan. 2003. IT Revolution’s Dirty Secret: E-Waste Exports. *Asia Times Online*. 8 August. Available: http://www.atimes.com/atimes/Asian_Economy/EH08Dk01.html

²⁹⁶ Kojima, Michikazu. 2005. Current Trade Flows in Recyclable Resources within Asia & Related Issues. *IDE Spot Survey* No. 29. Chiba: Institute of Developing Economics. May.

²⁹⁷ Kojima, Michikazu. 2005. Current Trade Flows in Recyclable Resources within Asia & Related Issues. *IDE Spot Survey* No. 29. Chiba: Institute of Developing Economics. May.

**Table 10.2: Ratification Status of Basel Convention by ADB
Regional Member Countries**

Country	Basel Convention	Ban Amendment
Armenia	1999 (a)	
Australia	1992 (a)	
Azerbaijan	2001 (a)	
Bangladesh	1993 (a)	
Bhutan	2002 (a)	
Brunei Darussalam	2002 (a)	2002 (A)
Cambodia	2001 (a)	
China, People's Republic of	1991 (r)	2001 (r)
Cook Islands	2004 (a)	2004 (r)
India	1992	
Indonesia	1993 (a)	2005 (r)
Japan	1993 (a)	
Kazakhstan	2003 (a)	
Kiribati	2000 (a)	
Korea, Republic of	1994 (a)	
Kyrgyz Republic	1996 (a)	
Malaysia	1993 (a)	2001 (r)
Maldives	1992 (a)	
Marshall Islands	2003 (a)	
Micronesia, Federated States of	1995 (a)	
Mongolia	1997 (a)	
Nauru	2001 (a)	
Nepal	1996 (a)	
New Zealand	1994 (r)	
Pakistan	1994 (a)	
Papua New Guinea	1995 (a)	
Philippines	1993 (r)	
Samoa	2002 (a)	
Singapore	1996 (a)	
Sri Lanka	1992 (a)	1999 (r)
Thailand	1997 (r)	
Turkmenistan	1996 (a)	
Uzbekistan	1996 (a)	
Viet Nam	1995 (a)	

(a) = Accession, (A) = Acceptance, (r) = Ratification.

Source: Basel Convention Secretariat. Available: <http://www.basel.int>

shipments falling under multilateral environmental agreements and distinguishing them from the overwhelming volume of international cargo.

In this connection also, the Asian Network for Prevention of Illegal Transboundary Movement of Hazardous Wastes was formally established in 2005. This network aims to develop an information exchange system among the competent authorities in East and Southeast Asian countries (Box 10.7).

Controlling Shipments of Outdated Secondary Goods

Countries should also consider passing import regulations for secondhand goods based on the year of manufacture. These are designed to prevent imports of secondhand goods that are liable to

Box 10.7: The Asian Network for Prevention of Illegal Transboundary Movement of Hazardous Wastes

A network among officials from Asian countries in charge of the Basel Convention has been formed to exchange information and capacity building based on a proposal from the Japanese Government. The activities of the network are to

- develop an Internet-based information system that facilitates exchange and dissemination of information on illegal transboundary movements of hazardous wastes among parties in East/Southeast Asia;
- identify, collect, and disseminate through the network, useful information on the control of transboundary movements of hazardous and other wastes in East and Southeast Asia;
- facilitate day-to-day communication among environmental authorities of the countries in East and Southeast Asia; and
- assist, primarily by providing information collected through the network, in designing, preparing, and organizing workshops, seminars, and other training events for capacity building in environmental authorities of the countries in North, East, and Southeast Asia.

Three workshops have been held to share the experiences on controlling illegal shipment of hazardous waste and to identify the further activity of the network. It is expected that this kind of effort will strengthen the capacity of competent authorities and the inspection of suspicious shipments.

Source: The Asian Network for Prevention of Illegal Transboundary Movement of Hazardous Waste. Available: http://www.env.go.jp/en/recycle/asian_net/preface.html



Source: AFP.

become waste a short time after import. Second hand goods, such as electrical and electronic equipment, should undergo testing before being shipped, such as is carried out in Australia.

A number of countries restrict and regulate the import of secondhand goods to protect the environment and their own industries. For instance, in 2003, Thailand imposed a ban on imports of used computers and household appliances more than 3 years old and on copy machines more than 5 years old; India prohibits imports of secondhand equipment more than 10 years old. Some countries also impose restrictions on imports of used refrigerators if they contain ozone-damaging coolants.²⁹⁸

It should be noted that there is a little statistical information on the flow of secondhand goods internationally. The Harmonized Commodity Description and Coding System (HS) code is considered as a possible way to capture the international transaction of secondhand goods. The HS code is an international method of classifying products for trading purposes. This classification is used by customs officials around the world to determine the duties, taxes, and regulations that apply to each product. However, the HS code is currently applied to only a few secondhand goods, such as used cars and clothes. The code does not currently apply to electric appliances, automobile parts, and construction machinery, which account for a large portion of the trade secondhand goods.²⁹⁹

²⁹⁸ Kojima, Michikazu. 2005. Current Trade Flows in Recyclable Resources within Asia & Related Issues. *IDE Spot Survey* No. 29. Chiba: Institute of Developing Economics. May.

²⁹⁹ Kojima et al. 2007. *The Real Recycling Situation in Asian Region and Management of International Transboundary Material Recycling / 3R Policies*. Ministry of Environment, Japan.