
Chapter 3

China: the World's Largest Recyclable Waste Importer

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INTRODUCTION

China, where continuous rapid economic growth has turned the country into “the world’s factory floor,” is also fast becoming the world’s largest base for resource recycling. In order to secure the resources needed to support high-level economic growth, China is tackling the issue of recyclable resource utilization with great enthusiasm. For example, China is already the world’s second largest producer of plastics after the US, and in 2003 produced upwards of 22.4 million tons of synthetic resins¹. However, even this enormous production capacity is far from meeting vigorous domestic demand, leaving China with no choice but to rely on imports. Cheaper than virgin raw materials and of higher quality than domestically-generated waste, imports of waste plastics are rising exponentially, with import volumes reaching 3,024 thou-

sand tons in 2003 and 4,096 thousand tons in 2004.

As this demonstrates, although China is actively utilizing recyclable wastes from overseas, it is also well on the way to becoming what can only be termed “the world’s dumping ground.” The term “recyclable waste” also incorporates “garbage,” which means that these resources are generating pollution damage and other environmental problems. This chapter explores prevailing conditions in the importation of recyclable wastes in China—the largest importer of recyclable waste in the world, analyzes the regulatory system for controlling imports in theory and in practice, and clarifies the major problems that China faces in connection with resource recycling.

SECTION 1: TRADE OF RECYCLABLE WASTES & PREVAILING TRENDS (IN CHINA)

1. Recyclable Waste Imports

Data from Chinese customs statistics for 2004 reveal that China imported 4.1 million tons of waste plastics, 12.3 million tons of used paper, 10.22 million tons of scrap iron, 3.95 million tons of copper scrap, and 1.2 million tons of aluminum scrap that year, accounting for more than 90 percent of imports from Asia (34.8%), Europe (15.2%), North America (34.2%), and neighboring countries² (8.3%).

Imports from the Asia region have been on a broadly increasing trajectory since 1996, with the largest volumes coming from Japan and Hong Kong, which account for more than 80

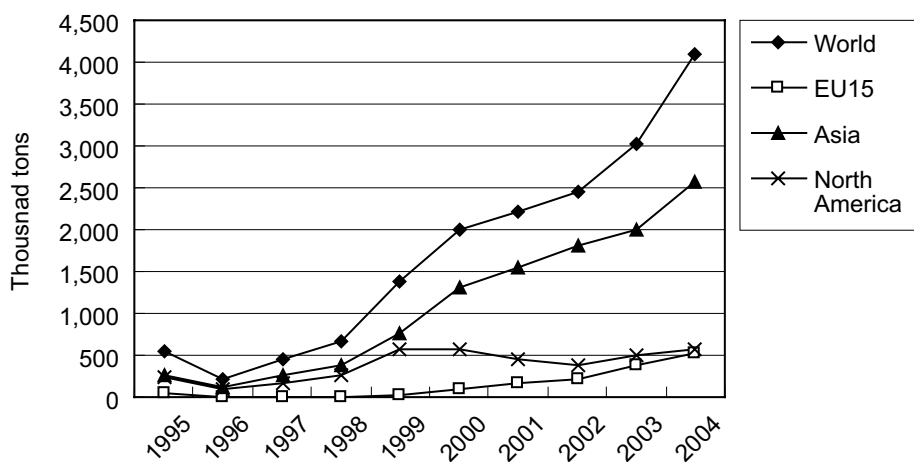
percent of all imports of Asian origin. Hong Kong is the through-port for exports from Asia, Europe and North America bound for mainland China (see the chapter on Hong Kong).

There has been a conspicuous increase in exports from Europe to China since 2000, with Germany, Belgium and the Netherlands being major exporters in all product categories. These three countries account for approximately 80 percent of waste plastics exports from Europe. Exports from France, Italy, the UK and Spain have also been on the rise in recent years. Meanwhile, the US exports far greater quantities of used paper to China than any other region, during the last few years (see Figure 3-1–5).

¹ Total of PE (LDPE, HDPE), PP, PS, PS, PVC, ABS, PET (including for textiles) taken from SINOPEC (China National Petrochemical Corporation) statistics.

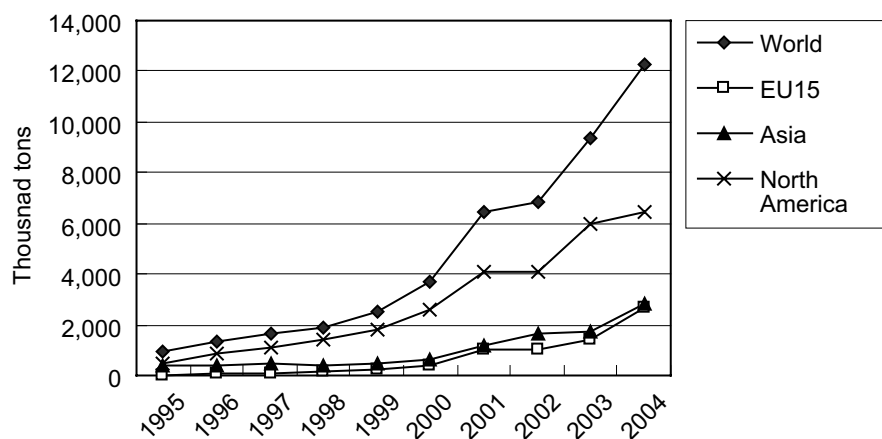
² ‘Neighboring countries’ refers to Russia, Kazakhstan, etc.

Figure 3-1: Chinese Waste Plastic Imports (1995–2003)



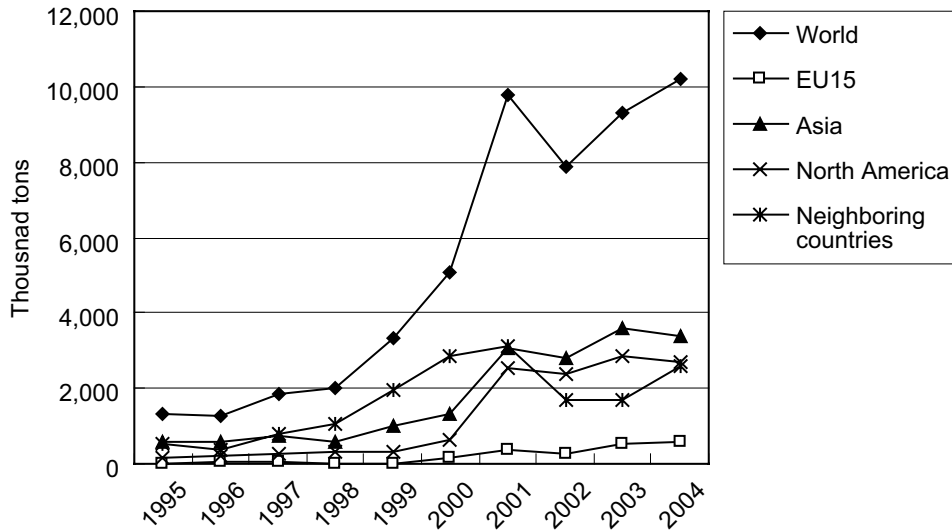
Note: Asia: Hong Kong, Taiwan, Japan, Korea, Singapore, Malaysia, Thailand, Indonesia, the Philippines, Macau, Mongolia, India
Europe: the 15 countries of the EU
North America: the United States and Canada
Source: Chinese customs statistics compiled by the author

Figure 3-2: Chinese Waste Paper Imports



Notes / Source are as for Figure 3-1.

Figure 3-3: Chinese Iron and Steel Scrap Imports

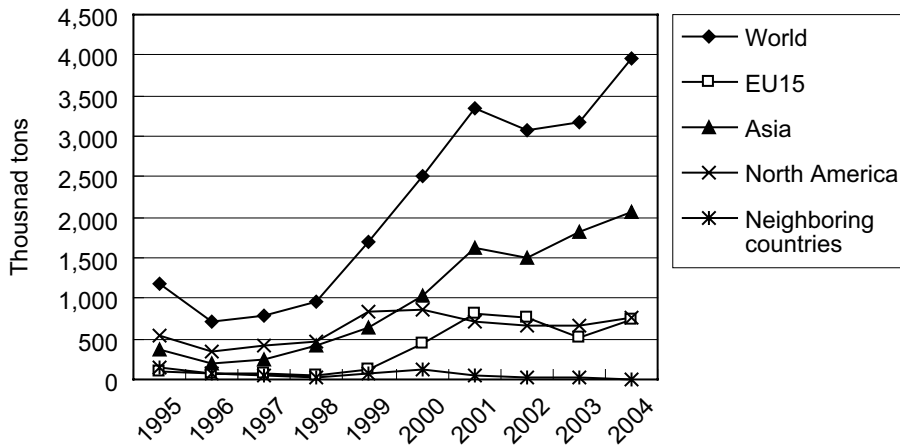


Notes: Asia, Europe, North America are as for Figure 3-1.

Neighboring countries: Russia, Kazakhstan, Kyrgyzstan

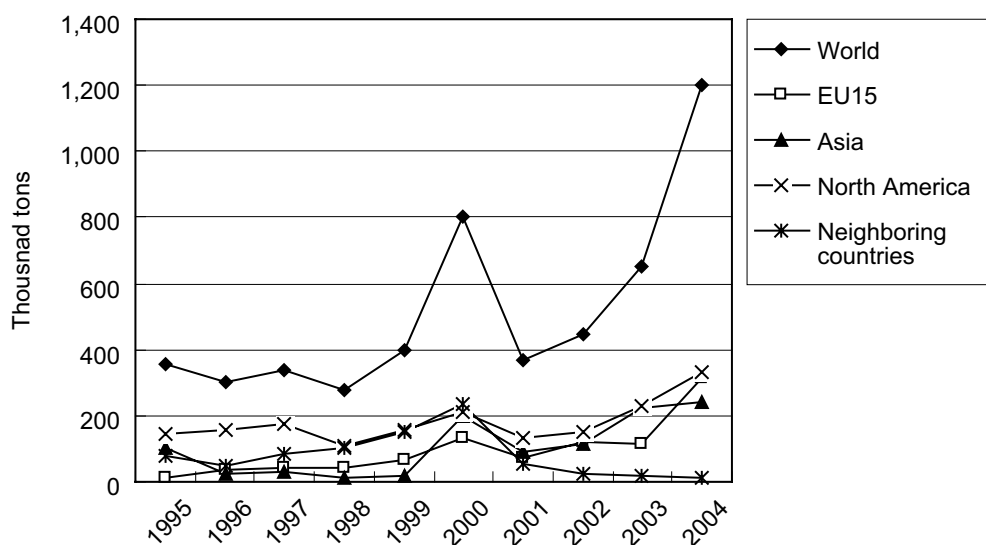
Source is as for Figure 3-1.

Figure 3-4: Chinese Copper Scrap Imports



Notes / Source are as for Figure 3-3.

Figure 3-5: Chinese Aluminum Scrap Imports



Notes / Source are as for Figure 3-3.

2. The Impact of Soaring Waste Plastics Prices

Soaring crude oil prices have been pushing the price of virgin plastics up since around June 2004, and this has also affected waste plastic prices, which have been climbing at an annual rate of around 1.5 to 2-fold. The price of virgin plastic, for example, which was selling for 8,000 Yuan (CNY) per ton, has spiraled and is now trading at 15,000 CNY per ton, while the price of waste plastics increased from 2,000 CNY/ton to 6,000 CNY/ton during the same period.

However, with supplies failing to keep pace with the demand for plastics from domestic production, some companies seeking to keep costs down have begun recognizing the relative cheapness of waste plastics, which is further increasing demand for this resource. According to interviews with recycling companies, the ban on Japanese exports of waste plastics that was imposed in May, 2004 and expanding uses for waste plastics contingent on recent innovations in technology are having an affect on rising import volumes³.

In Fujian Province and other regions, recycling plants that have become unprofitable due to the scarcity of waste plastic supplies have been adjusting production schedules, while others have stopped the operation⁴. Also, rapidly increasing imports and increasing prices are also serving to increase the risks involved in purchasing raw materials. Importers, for example, are at risk from sudden drops in raw material prices during transportation. Customs, for example, are at risk from underreport invoice price and falsified import certificates, and importing waste materials which does no meet the environmental standards⁵.

The ban on imports has made it impossible for Japanese companies to export waste plastics to China directly. So, some Japanese companies are now channeling their exports through Hong Kong in a battle to survive. By contrast, since it costs Chinese importers more to clear cargos shipped via Hong Kong, some recycling companies have set up domestic bases for collection and are strengthening domestic collection rates in view of the need to utilize waste plastics generated within the country.

³. Based on interviews held in October 2004 at the Fujian Province State Environmental Protection Administration (SEPA), newspaper articles, etc.

⁴. Based on interviews held in October 2004 at the Fujian Province State Environmental Protection Administration (SEPA)

⁵. XINHUA.JP, January 4, 2005 <http://www.12366.com.cn/news/63/68/20050104/88580.htm>

SECTION 2: IMPORTS OF RECYCLABLE WASTES & ENVIRONMENTAL POLLUTION

1. The Ship-back Problem

With the transboundary movement of recyclable wastes comes the problem of the irresponsible export and distribution of waste containing hazardous substances and trash that is difficult to recycle. The Chinese government has regulated foreign waste flows by promulgating the "Notice of Strict Regulations Governing Transboundary Movements of Hazardous Waste destined for China" in 1991, "Interim Regulation Concerning the Strict Control of Waste Imports from the European Commission" in 1994, "the

Law on the Prevention and Control of Environmental Pollution by Solid Waste" in 1995, and "Interim Provision on the Administration of Environmental Protection in the Importation of Waste Materials" in 1996. Meanwhile, between 1993 and 1995 China invoked the ship-back regulation on numerous consignments of imported waste, but while the regulations introduced in 1996 served to temporarily stem the flow of 'Yang Laji' (foreign garbage), 2000 saw the occurrence of numerous such incidences (see Table 3-1).

Table 3-1: Illegal shipments to China (1993–2004)

Accrual date	Origin of export	Category of waste	Import goods (claimed)	Imports (tons)	Destination
1993.10.8	Korea	Chemical waste	Other fuel oil	1228	Nanjing
1994.3.3 1994.4	Germany	MSW	Plastic waste and scrap	3109 5700	Jiangsu
1994.5	Germany	MSW	Plastic waste and scrap	225 container	Wenzhou
1994.12.14	Unknown	Plastic waste	Plastic waste and scrap	400	Guangxi
1995.1	USA	PCB Transformer	Unknown	70 (units)	Unknown
1995.6.2	Germany	MSW	Plastic waste and scrap	678	Nanjing
1995.7.3	Japan	Agricultural plastic waste	Plastic waste and scrap	46	Shanghai
1995.7.4	Unknown	MSW	Plastic waste and scrap	148	Guangzhou
1995.7.4	Japan	Industrial waste (motors, transformers etc)	Metal scrap	1530	Ningbo
1995.7.7	USA	Industrial waste (ash slag)	Used wires	93.8	Ningbo
1995.7.27	USA	Waste phosphor	Plastic waste and scrap	184	Shanghai
1995.7.28	USA (through HK)	Industrial waste (Plastics, etc)	Plastic material	270	Haikou
1995.10.27	USA	Medical waste	Used paper	14 (containers)	Tianjin
1995.7–12	USA	MSW etc	Used paper	238	Shanghai
1995.7 –1996.5	Europe and USA	Plastic bags, canned drink, waste CDs, MSW, used clothes, sludge and stones, etc	Used paper etc	Unknown	Shanghai
1996.5 (1995.7)	USA ^a	Medical waste	Used paper	639	Beijing (Qingdao)
1996.5.16	USA (through Hong Kong)	Agricultural plastic waste, MSW	Used paper	193	Fuzhou
1996.7–9	Unknown	Waste plastics, cloth etc	Unknown	720	Shantou
1996.9–11	Unknown	Waste plastics, waste tire, mixed metal	Unknown	Unknown	Guangzhou

(continued)

Table 3-1: Illegal shipments to China (1993–2004) (continued)

Accrual date	Origin of export	Category of waste	Import goods (claimed)	Imports (tons)	Destination
1997.11.27	Unknown	Human hair	Unknown	15	Unknown
1997.12	Korea France	Unwashed plastic, mixed waste (used paper, wires, soil, etc)	Plastic waste and scrap	Unknown	Tianjin
1998.2	Japan	Waste home electronic appliances	Unknown	Unknown	Hainan
1998.4.15	Unknown	MSW (plastic waste)	Plastic waste and scrap	504	Guangxi
2000.5	USA	MSW	Used paper	15 (containers)	Huangpu
2000.11	Unknown	Dirty gloves	Gloves	47	Shenzhen
2001.3	Unknown	Medical waste	Used clothes	80,000 (pieces)	Shenzhen
2001.4	USA	Mixed waste	Waste cotton fibers	1000	Port of Zhang Jia (Jiangsu)
2001.7	Unknown	Copper metal sludge	Copper waste and scrap	504	Nanning
2001.1–12	HK and others	Used tire, home electronic appliances, personal computer, used cars	Unknown	2326; 8414; 339; 84 (units)	Guangzhou
2002.1	Taiwan, Japan etc	Dirty used clothes (suits, coats, etc.)	Unknown	30	Guangzhou
2002.1	Belgium	Seeds of crops, meat, tree etc	Used paper	23	Guangzhou
2002.1–5	Unknown	Used electronic machinery	Waste metals	128	Ningbo
2002.2	Japan	MSW	Steel waste and scrap	800	Haimen
2002.4 (2001.12)	Korea	Waste catalyst (containing Pd)	(No imports permit)	760	Port of Taicang (Jiangsu)
2002.9.11	USA	Used electronic products	Unknown	405.5	Hangzhou
2002.10.10	Unknown	Electronic waste (waste PC monitors, etc.)	Unknown	600 (units)	Nanning
2002.10	Unknown	Used engines (made in Japan)	Used electronic machinery	171 (units)	Tianjin
2002.12	HK	Used clothes	Unknown	230	Fujian
2002.12	Korea, Japan, Taiwan, HK	Used clothes	Unknown	279.2	Fujian
2002.12.24	Unknown	Used clothes	Unknown	100	Guangdong
2003.1	HK	Used clothes	Unknown	200	Guangzhou
2003.1.9	Unknown (through HK)	Used electronic machinery (PC monitors, TVs, speakers, etc.)	Unknown	400	Shenzhen
2003.4.28	Korea	Used electronic machinery (electric fans, telephones, toys), plastic bags and other MSW	Plastic waste and scrap	42	Qingdao
2003.6	USA	MSW	Used paper	375.5	Qingdao
2003.6	Germany	MSW	Used paper	175	Shanghai
2003.10.15	Japan	Unwashed plastic	PE sheet	75.23	Fujian
2003.10–12	Unknown	Waste PCs, TVs, printers, etc.	Unknown	40	Guangzhou

(continued)

Table 3-1: Illegal shipments to China (1993–2004) (continued)

Accrual date	Origin of export	Category of waste	Import goods (claimed)	Imports (tons)	Destination
2003.1–2004.02	Unknown ^b	Waste catalysts (containing molybdenum)	Unknown	3400	Nantong
2004.1.29	Japan, Korea (through HK)	Used clothes	Unknown	300	Fujian
2004.1–6	Israel, Korea, USA, Taiwan	Unwashed plastic	Plastic waste and scrap	51.2 200 92.35 15.49	Xiamen
2004.3.18	Korea	Scrapped PET bottles, etc.	Plastic waste and scrap	252.88	Fujian
2004.4	Japan ^c	MSW	Plastic waste and scrap	4000	Qingdao
2004.6.15	Unknown	Unwashed plastic	Plastic waste and scrap	9.36	Manzhouli
2004.6.16	USA	MSW, Medical waste	Used paper	967	Huangpu
2004.6.28	Netherlands	Waste PC parts etc	Plastic waste and scrap	11	Nanhai
2004.6	Japan	Unused medical waste	Plastic waste and scrap	3	Guangdong
2004.7.21	USA (through Tianjin)	MSW	Waste PET flake	Unknown	Inner Mongolia
2004.7	Unknown	Catalysts, magnesium slag	Unknown		Nanning
2004.8	Australia	MSW	Used paper	563.98	Shenzhen
2004.8.4	Germany	Unwashed PET bottles	Waste PET flakes	629	Ningbo
2004.9	Unknown	Used mobile phone	Unknown	12 (units)	Hebei
2004.11	Unknown	MSW, plastic waste and scrap etc	Used paper	250	Jiangmen (Guangdong)
2004.11	USA	PC board, power source etc	Mixed metal	267	Nanhai
2004.12	Unknown	Mixed waste	Used paper	Unknown	Shanghai
2004.12	Unknown	Used paper, plastic waste and scrap, pieces of cloth, food residue	Unknown	10 (bags)	Port of Zhoushan (Zhejiang)

a. Cases where a guilty verdict has been handed down.

b. The 'overseas container trash incidents' which resulted in a temporary ban on waste plastic imports in 1996.

c. The Tsingdao incident (trade embargo): 4,000 tons of a 6,000-ton shipment of waste plastics imported from Japan were found to be contaminated.

Source: Compiled by the author from various press releases

Broadly speaking, the flows of foreign garbage into China and the incidents resulting in the return of waste consignments occur in two patterns. Firstly, there are consignments that are imported without passing through customs (so-called smuggling) and some of the unidentified export items are believed to account for it. Customs officials and local governments have applied enforcement methods, shutting down illegal recycling bases and so forth, in a bid to

halt smuggling, but in Guangdong Province, for example, contraband traffic of waste electronic and electrical equipment (e-waste hereunder) remains rampant⁶. There are reports that unusable CRT (cathode-ray tube) televisions being exported to Hong Kong as secondhand goods, are being smuggled into China or exported to the mainland after being dismantled in Hong Kong⁷, and finding ways to control the quality of secondhand goods represents a problem.

⁶ See Greenpeace (2004).

⁷ From "Japanese Trash Crossing to the Mainland: Chinese Style Recycling Alchemy," broadcast in July 2004 by NHK

Secondly, there are cases of prohibited imports being falsely labeled as 'waste plastics' or 'used paper,' and consignments contaminated with household rubbish. The gaps between the import items listed in Table 3-1 and actual imports can be accounted for here. In recent years, many consignments of waste plastics have been shipped back (to Japan) for failing to conform to Chinese standards on cleaning and crushing, but problems arise because differences between Chinese and Japanese standards mean that, in so far as exporters are not in violation of Japanese law they will not be subject to strict punishment in Japan even if their exports are shipped back by China.

The biggest problem with back shipments lies in identifying who is responsible and where to return the shipments. With contraband traffic, in many instances, the country of export is unknown or the goods are labeled as having emanated from Hong Kong, which makes it difficult to ship the goods back to the country of origin (the generator of the waste). If the goods are defined as hazardous waste by the Basel Law of exporting country then, in principle, the exporter (the generator of the waste) and, ultimately, the government of the exporting country has responsibility for return shipment. However, when the exporting country is not a Party of Basel Convention or the goods in question are not defined as hazardous by the Law (e.g. cases that violate Chinese standards), the locus of responsibility (i.e. between exporter (country of export) and importer (country of import)) has not been clarified

2. The Ban on Imports of Waste Plastic from Japan

At the end of March 2004, China uncovered a 4,000-ton consignment of waste plastics exported by Japan into Tsingdao that was in violation of Chinese laws and regulatory standards, and on May 8, the Chinese government, which took a grave view of the matter, declared a (temporary) block on all imports of waste plastics

from Japan (General Administration for Quality Supervision, Inspection and Quarantine Notice No. 47).

Chinese media reports on the incident stated that a small amount of high-grade waste plastics had been used to cover the bulk of contaminated plastic materials when the cargo was shipped from Japan in an attempt to smuggle this toxic waste into China. It was the biggest incident involving imported waste since that of April 1996 involving a US shipment of mixed waste that had been falsely labeled as used paper.

This was the first time China had banned imports of recyclable wastes from one specific country and was seen as an extremely tough punitive action against Japan. As prerequisites to the resumption of imports of waste plastics, China's General Administration for Quality Supervision, Inspection and Quarantine (AQSIQ hereunder) submitted that Japan should (1) ship all cargos of problem waste back to Japan, (2) that Japanese exporters should compensate (buy back) the buyers of waste plastics that had already been sold, and (3) take steps to prevent the recurrence of such incidents⁸. The ban on imports of Japanese waste plastics was still in place as of March 2005. The following constitute two factors underlying the protracted nature of China's trade embargo on this resource.

The first stems from illegal trades of waste plastics in China. This incident came to light in consequence of a report by Central China Television (CCTV)⁹. The "Jiaodian fangtan (News in Focus)" broadcast of April 23, 2004, showed farmers in Tsingdao using rudimentary equipment to clean and process the toxic waste plastics, and materials printed in Japanese were contained within such waste. If the waste plastics shown were those involved in the Tsingdao trade embargo incident, then it may mean that the imported waste plastics were resold, illegally, to the farmers, who do not have waste treatment licenses¹⁰.

⁸ "Zhongguo Huagong Daily," August 18, 2004

⁹ From "Industrial Parks or Garbage Dumps," CCTV News in Focus, broadcast on April 23, 2004 <http://www.cctv.com/news/china/20040423/102350.shtml> (January 2005)

¹⁰ Companies that hold export licenses are prohibited from transferring or reselling imported wastes to unlicensed companies, and in the event that they are found to have done so, their license to import and entitlement to use waste treatment facilities will be rescinded. (Additional Regulations to the Interim Provisions on the Environmental Protection Management on Import of Wastes, Clause 11)

The second involves the amount of time being taken by China to resolve this incident. AQSIQ investigations and litigation are still ongoing, and until a verdict is handed down it will be difficult for Japan to ship back the cargoes and for buyers to be compensated, and the embargo remains in place¹¹.

In 2003, Japan exported 680 thousand tons of waste plastics, almost double the volume recorded three years earlier. Approximately 300 companies export waste plastics to China and their gross turnover is said to be in the region of 30 billion yen annually¹²; the trade embargo is believed to be inflicting considerable economic loss, even bankruptcy in the worst-case-scenario, particularly on small and medium-sized enterprises (SME).

3. Guiyu: the Reality of Recycling Situation in China

The waste recycling industry is flourishing, particularly in the coastal provinces of Guangdong, Jiangsu and Zhejiang, where it is making a considerable contribution to the local economies, particularly in terms of employment and tax revenues. However, because, in rural agricultural and fishing communities, the recycling is being undertaken by municipal SMEs or even smaller private businesses or as cottage industries by individual farmers, inappropriate disposal of e-waste is resulting in the spread of environmental pollution.

A 2002 report issued by the Basel Action Network (BAN) and the Silicon Valley Toxics Coalition (SVTC) entitled "Exporting Harm: The High-Tech Trashing of Asia" reports on the recycling industry in China, stating that residues from the treatment of e-waste exported by the world's industrial nations are being illegally dumped, and that contaminated water is being released without treatment.

Guiyu, an area¹³ in Chaoyang, Shantou, has a population of around 132 thousand. At one time, this was a predominantly agricultural community, but from sometime in the mid-90s when it had become difficult to raise crops, the area grew into a base for recycling e-waste collected from inland areas (major cities) and abroad. Reports state that approximately 30 to 40 thousand migrant workers are treating somewhere in the region of 1 million tons of e-waste annually¹⁴, and while there are no accurate statistics, it has been reported that, in reality, upwards of 100 thousand people are employed in the recycling of e-waste¹⁵. Since the Chinese government imposed a ban on imports of used household appliances in 2000, the majority of e-waste that is coming in from Japan, North America and the EU is being smuggled in¹⁶. There are concerns about air, water and soil pollution and about the damage to human health, since the waste is being recycled using primitive methods that include simple manual sorting and dismantling work, open burning of plastic-coated wires, burning of soldered circuit boards, and strong-acid waste treatment.

China has yet to develop any regulatory standards for the treatment of printed circuit boards and other e-waste. One outcome of this is that unrecovered and untreated CFC gases are being released into the atmosphere. The nation has insufficient facilities for sorting and treating hazardous wastes, and even in large cities where some infrastructure has been developed, the waste treatment costs are high and the facilities are thus not easily accessible to domestic businesses. In consequence, most wastes that are difficult to process are being buried in landfills together with household waste, irrespective of their toxicity. Moreover, there are reports on what can only be termed improper recycling, stating that in regions such as Fuzhou and Jiangxi, the country's medical waste is being processed into plastic food bags and shoe soles, for example¹⁷.

¹¹ China's General Administration of Customs website <http://www.china-customs.com/customs/data/1521.htm> (January 2005)

¹² China Youth Daily, May 31, 2004 <http://comm.icxo.com/htmlnews/2004/05/31/228961.htm> (January 2005)

¹³ A district represents one of the terminal administrative boundary units and is smaller than a city.

¹⁴ Nanfang Weekends, June 3, 2004 <http://news.sina.com.cn/c/2004-06-03/11283382537.shtml> (January 2005)

¹⁵ Sun Yat-Sen University Department of Anthropology and Greenpeace (2003).

¹⁶ E-waste believed to have been smuggled in from developed nations, including Japan, the US and the EU was found (based on the field survey undertaken by the authors at the end of November 2004).

¹⁷ The People's Daily, April 6, 2004, "Fuzhou: The Horrifying Reality of the Black Market in Medical Waste"

The People's Daily, April 20, 2004, "A Waste Recovery Station on a Pedestrian Road in Jiujiang, Jiangxi: Waste Medical Equipment Hitting Markets"

SECTION 3: CHINA'S IMPORTED WASTE¹⁸ MANAGEMENT SYSTEM

1. Legislature on Waste Imports

China has two basic laws regarding waste transports: the “Law of the People’s Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste” (the Solid Waste Law hereunder), and the “Interim Provi-

sion on the Administration of Environmental Protection in the Importation of Waste Materials” both of which were enacted in 1996. It also has an import licensing system, requires pre-shipment inspections and has issued guidelines (in the form of an ultimatum) on the importing of wastes (see Table 3-2).

Table 3-2: Changes in the Regulations on Imported Wastes (1989–2004)

March	1989	Basel Convention established
March	1991	“Notice of tough restrictions on transboundary movements of foreign hazardous wastes bound for China”: State Environmental Protection Administration, General Administration of Customs
Sept.		Standing Committee of the National People’s Congress ratifies the Basel Convention
Nov.	1994	“Interim regulations concerning the strict control of waste imports from the European Community (EC)” State Environmental Protection Administration (total ban on imports of yellow and red wastes)
Oct.	1995	“Law of the People’s Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste” established (enacted on April 1, 1996)
Nov.		“Urgent Circular on the Strict Control on Transference of Foreign Waste to China” (the General Office of the State Council)
Mar.	1996	“Interim Provision on the Administration of Environmental Protection in the Importation of Waste Materials” (State Environmental Protection Administration, General Administration of Customs, Ministry of Foreign Trade and Economic Cooperation, State Ministry of Commerce, General Administration of Import and Export Commodity Inspection)
July		“Supplementary Interim Provision on the Administration of Environmental Protection in the Importation of Waste Materials” (as above)
July		“Supreme People’s Court explanation regarding minor problems in applying the law to criminal hearings on illegal imports of wastes”
Sept.		“Management rules for pre-shipment inspections of imported wastes” (General Administration of Import and Export Commodity Inspection) established
Oct.		Category 5 and Category 10 (waste plastics) added in a “Supplementary notice relating to those wastes used in raw materials and restricted in import” (State Environmental Protection Administration, Ministry of Foreign Trade and Economic Cooperation, General Administration of Customs, State Ministry of Commerce, General Administration of Import and Export Commodity Inspection)
Feb.	1997	“Urgent notification by the State Council of a tough ban on imports of waste metals and plastics that have been radioactively contaminated” (State Council)
Nov.	1999	“Methods of Managing Pre-shipment Inspection Agency Licenses for the Importation of Wastes” (General Administration for Quality Supervision, Inspection and Quarantine)
Feb.	2000	“Notice of even tougher controls on the importation of waste” (State Environmental Protection Administration)
Jan.	2000	“Notice of problems relating to the importation of Category 7 wastes” (Ministry of Foreign Trade and Economic Cooperation, General Administration of Customs, State Environmental Protection Administration) bans imports of used household appliances, etc. from February 1, 2000 onwards
Jan.	2001	“Notice of adjustment of problems relating to the importation of waste and environmental protection administration” (State Environmental Protection Administration, General Administration of Customs, State Administration for Quality Supervision, Inspection and Quarantine, Release [20002] No. 7) automatic import licenses

(continued)

¹⁸ China refers to recyclable wastes as “importable wastes” and “waste materials.”

May	2001	"Notice of problems relating to the management of "mixed metal waste" imports" (Ministry of Foreign Trade and Economic Cooperation)
Nov.	2001	"Notice of adjustments to the screening and accreditation procedures for authorized Category 7 waste treatment companies" (State Environmental Protection Administration, Release [2001] No. 186)
Dec.	2001	"Measures on the Administration of Automatic Import Licenses for Goods" (Ministry of Foreign Trade and Economic Cooperation, 2001, No.20) enforceable from January 1, 2002
Mar.	2002	"Notice relating to the importation of wastes and environmental protection issues" (SEPA [2002] No. 7) Imports of 11 types of waste, including waste plastics, scrap vehicles, scrap ships, etc., covered by import quotas are, in principle, permitted. Imports of used paper, iron and steel scrap, copper scrap, aluminum scrap (excluding used mixed metal electrical equipment, electric wires / cables, motors) permitted via the administration of an automatic registration system.
July	2002	Ban on imports of components (State Environmental Protection Administration, Ministry of Foreign Trade and Economic Cooperation, General Administration of Customs) enforceable from August 15, 2002 onwards
Dec.	2002	Bill of amendments to Criminal Law passed by the National People's Council Stipulating that contraband traffic in imported wastes (solid, liquid, gaseous) is a punishable offence Regulations on the administration of quality inspections, supervision and quarantine for importation of secondhand electrical equipment (State Administration for Quality Supervision, Inspection and Quarantine Ordinance No. 37) enforceable from May 1, 2003. Strengthening of inspections of secondhand electrical equipment; mandating of pre-shipment inspections for certain products.
Apr.	2003	Notice of Administration of Environmental Management of Waste Materials Restricted in Importation (SEPA [2003] No. 69)
July		Notice of Problems in the Administration of Licenses for Waste Materials Restricted in Importation (SEPA [2003] No. 61)
July		Notice of Standards for the Rigid Enforcement of Environmental Protection from Imported Waste Plastics (SEPA [2003] No. 66)
July		Notice relating to the further strengthening of quarantine controls on imported waste materials (AQSIQ [2003] No. 217)
Aug.		Notice relating to the strengthening of the environmental management of used electronic and electrical equipment (SEPA [2003] No. 143)
Aug.		Regulations relating to quality supervision, inspection and quarantine procedures for imported secondhand electrical equipment (State Administration for Quality Supervision, Inspection and Quarantine Ordinance No. 53), enforceable from October 10, 2003 onwards
Dec.		Notice relating to the temporary registration of foreign suppliers of waste materials (State Administration of Quality Supervision, Inspection and Quarantine [2003] Ordinance No. 115), enforceable from January 1, 2004 onwards Announcement concerning problems relating to the importation of secondhand electrical products (2003, No. 124)
May	2004	(State Administration of Quality Supervision, Inspection and Quarantine Notice No. 47) Temporary ban on Japanese exports of waste plastics to China Detailed regulations on the registration of overseas suppliers of imported waste (State Administration of Quality Supervision, Inspection and Quarantine Notice No. 48 [2004]) enforced
Oct.		Notice concerning problems relating to the licensing of companies designated to undertake the treatment of mixed metals, used electrical wires / cables and motors imported in 2005 (SEPA [2004] No. 344) List of processing trade bans / products (Ministry of Commerce, General Administration of Customs, State Environmental Protection Administration Announcement [2004] No. 55) enforceable from November 1, 2004 onwards
Nov.		Notice concerning problems relating to the administrative strengthening of checks on import-restricted wastes (SEPA [2004] No. 100)

Source: Compiled by the author from the State Environmental Protection Administration website and various materials.

The Solid Waste Law is the basic law relating to the management of solid waste inside China and also sets forth regulations governing the importation of wastes. The law prohibits imports of (foreign) solid waste for dumping, storage or disposal (Article 24), imports of wastes that cannot be reused as raw materials, imposes restrictions on imports of reusable wastes (Article 25), and prohibits flows of hazardous wastes through China (Article 58).

Under the Solid Waste Law, customs officials and the State Environmental Protection Administration (SEPA) are entitled to reprimand and/or punish (1) unlicensed imports, (2) imports of solid waste labeled as recyclable waste, (3) imports of wastes for final disposal, and other illegal actions. Customs officials can order the offending country to ship back cargoes and impose fines. Unlicensed imports of waste materials or imports of unusable materials incur fines of between 100,000 to 1 million CNY, while criminal responsibility will be pursued in incidences of unlawful import (Article 66). SEPA is entitled to mandate the restitution of pollution to its original state (Article 68) and to take other steps, including rescinding import licenses. AQSIQ is free to revoke the import licenses of exporters that have had cargoes shipped back because their imports of wastes exceeded environmental quality standards at port inspections or the imported waste exceeds allowable limits of environmental standards twice within any 12-month period.

At the end of December 2004, a draft amendment to the Solid Waste Law was passed at the tenth session of the Standing Committee of the National People's Congress (NPC); this amendment will go into force on April 1, 2005¹⁹. This amendment introduces the Polluter Pays Principle (new law; Article 5), and adds punitive provision on the import of waste, stating that, in cases where the importer cannot be identified, the shipper shall be responsible for shipping back or disposing of the solid waste cargo (new law; Article 78). It further clarifies the definition of importable wastes, stating that import-

able waste materials are required to meet SEPA environmental quality standards and to pass AQSIQ inspections (new law; Article 25); any importer objecting to their cargo being classified as solid waste has the option of filing an administrative response with the General Administration of Customs or of bringing an administrative suit in front of the Supreme People's Court (new law; Article 26).

2. Regulatory Standards for Importable Waste Materials

In order to import waste materials the importer has to pass through SEPA inspection and be granted a license for importation. The inspections involve checks on environmental protection facilities infrastructure: has concrete been laid over the floor of the disassembly workshop? Does the storage warehouse have a roof to protect the contents from rain water? etc.

Importable wastes are limited to those listed in the "List of Wastes Used as Raw Materials and Restricted in Import," and the importation of non-listed items, such as waste tires, that are not included in this list is, in principle, prohibited (see Table 3-3).

Importable wastes are required to meet National Environmental Protection Control Standards for Imported Scrap Materials and to pass AQSIQ inspections (i.e. pre-shipment inspections). Environmental protection and management standards corresponding to the various waste material categories have been set for importable wastes; that for waste plastics, for example, in principle requires plastics to have been crushed, to be colorless and odorless, and to have been washed to remove any obvious contaminants. Further, the mix rate of agricultural and chemical waste and their containers, liquid wastes, kitchen and toilet garbage, sealed containers and used plastics (uncrushed), should not exceed 0.01% of total waste plastic volume, while the mix rate of impurities, including wood chips, waste metal, mud and sand, should not exceed 0.1% of total volume.

¹⁹China Net, December 30, 2004, "China moves to enact a new Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste <http://www.china.org.cn/japanese/150141.htm> (January 2005)

Table 3-3: List of Restricted Import Waste Materials

Category	Customs Code	Denomination	Classification in the OECD List
Category 1		Animal waste and manure	Green
	0506.9010	Bone waste	
Category 2		Refinery (metallurgy) scrap	Amber
	2619.0000	Slag, dross, scalings & other waste from manufacturing iron/steel Suspended waste (including vanadium) Oxidized rubber and other wastes	
Category 3		Waste and scrap of wood and its byproducts	Green
	4401.3000	Sawdust, highly glutinous wood waste and wood chips, trunk sections, logs, branches, limbs and any other sections of a similar shape	
	4501.9000	Cork waste (crushed, granulated or powdered)	
Category 4		Recovered (waste and scrap) paper and paperboard	Green
	4707.1000	Recovered (waste and scrap) unbleached vellum, craft-board, paperboard, cardboard	
	4707.2000	Other recovered (waste and scrap) un-dyed paper and paperboard, mainly unbleached chemical pulp	
	4707.3000	Recovered (waste and scrap) paper and paperboard mainly manufactured from mechanical pulp (newspapers, magazines and other similar printed matter)	
	4707.9000	Other recovered (waste and scrap) paper and paperboard, including unsorted spinning waste	
Category 5		Textile wastes	Green
	5202.1000	Cotton waste and scrap (including waste cotton thread)	
	5202.9900	Other cotton waste and scrap	
	5505.1000	Synthetic fiber waste and scrap	
	5505.2000	Artificial fiber waste and scrap	
Category 6		Waste and scrap of metals and their byproduct	Green
	7204.1000	Waste and scrap of cast iron	
	7204.2100	Waste and scrap of stainless steel	
	7204.2900	Waste and scrap of other alloy steel	
	7204.3000	Waste and scrap of tin-plated iron or steel	
	7204.4100	Other waste and scrap: Turnings, shavings, chips, milling waste, sawdust, filings, trimmings and stampings, whether or not in bundles	
	7204.4900	Other ferrous waste and scrap (including used rail track)	
	7204.5000	Remelting scrap ingots (including used factory equipment, etc.)	
	7404.0000	Copper waste and scrap	
	7503.0000	Nickel waste and scrap	
	7602.0000	Aluminum waste and scrap	
	7902.0000	Lead waste and scrap	
	8002.0000	Tin waste and scrap	
	8103.1000	Tantalum waste and scrap	
Category 7		All mixed metal scrap, used electrical equipment and electrical products	Not listed
	7404.0000	Used wires and cables (copper)	
	7602.0000	Metal scrap and used electrical equipment (aluminum)	
Category 8		Used transportation equipment	Green
	8908.0000	Vessels and floating structures for scrapping	
Category 9		Special imported waste	Not listed OECD

(continued)

Table 3-3: List of Restricted Import Waste Materials (continued)

Category	Customs Code	Denomination	Classification in the OECD List
Category 10¹		Waste plastics	Green
	3915.1000	Waste and scrap ethylene polymers and factory loss	
	3915.2000	Waste and vinyl styrene polymers and factory loss	
	3915.3000	Waste and scrap vinyl chloride polymers and factory loss	
	3915.9000	Other plastics (including PET flakes)	

Note 1: The list of wastes contained in the 1996 Regulations incorporated categories 1–9; category 10 “Waste Plastics” was added in October of that year in an “Supplementary notice relating to those wastes used in raw materials and restricted in import” issued by the State Environmental Protection Administration and related organizations.

Source: Compiled by the author from the annex to the “Interim Provision on the Administration of Environmental Protection in the Importation of Waste Materials”.

3. AQSIQ Registration as overseas suppliers (Legislation)

In some instances, waste materials such as metals and plastic that are unwanted in Japan are exported to China for recycling. However, some imported cargoes have been found to fall short of Chinese national regulatory standards and have been left abandoned in local customs warehouses without being shipped back to exporting country. China is seeking to prevent such unprincipled exporters from exporting to China, but the crackdown is proving difficult to affect because these exporters change the names of their companies and then re-export.

In December 2003, the Chinese government promulgated the Temporary Registration Measure for Overseas Companies Exporting Recyclable Wastes to Mainland China (AQSIQ Announcement No. 115). Temporary registration was designed to screen overseas supply enterprises, and weed out those that had had cargoes shipped back in the past, small-scale exporters and so forth; the export records for the preceding 3-year period, environmental certification, such as ISO14000, acquisition status, and the scale/ownership of facilities of companies applying for registration were identified as being subject to screening.

Table 3-4: Number of Registered Overseas Suppliers in Each Country
(Unit: Companies)

Country	1 st	2 nd	Total
United States	335	261	596
Hong Kong	448	56	504
Japan	316	129	445
South Korea	147	71	218
Taiwan	95	57	152
Canada	70	58	128
Germany	64	42	106
Kazakhstan	55	46	101
United Kingdom	48	35	83
Netherlands	40	27	67
Australia	31	31	62
France	40	16	56
Russia	27	27	54

Source: AQSIQ

The initial plans called for a ban on imports of waste materials by exporters that had not applied for temporary registration with AQSIQ to go into effect from July 1, 2004. However, the application period for temporary registration was extended beyond the initial plans and there were massive delays in the announcement of screening results, which pushed the start date back by six months to January 1, 2005. By November 2004, approximately 4,000 international companies had filed applications, and registration certificates had been granted to around 2,000 exporters. Some 750 Japanese exporters filed applications, of which 316 were certified in the first list of registered "overseas suppliers" (AQSIQ Announcement No. 159). Aside from these 316 companies, there are about 160 companies specializing in the export of waste plastics that meet the required criteria, but certification has been demurred in light of the continuing ban on Japanese exports of waste plastics. Some of the 316 companies certified are exporters of waste plastics, but have stated that the scope of their business services covers waste metals or other waste materials as opposed to plastics. The registrations of an additional 1,010 companies were certified in the second list of registered "overseas suppliers" at the end of December (AQSIQ Announcement No. 202). 129 Japanese companies were certified (see Table 3-4).

4. Cases of Company-Oriented International Recycling

The concept of establishing global recycling centers is making headway among some of Japan's office appliance manufacturers. Ricoh, for example, has moved its materials recycling operations for used products to China because rising personnel costs have made it difficult for the company to continue recycling in Japan, and is currently investigating large-scale develop-

ment of both upstream (manufacture) and downstream (reuse, recycle) operation to China. Ricoh expects that not only will securing a low-cost Chinese workforce enable it to meet its high material recycling rate targets, but that reusing recyclable wastes, such as plastics, will also assist the company in its bid to bring manufacturing costs down.

Nonetheless, there are obstacles to these corporate efforts to build international recycling systems.

One such is the difficulty in exporting key used products to China. Canon, for example, has had shipments of used toner cartridges shipped from Japan stopped by Dalian customs officials. The company has accordingly developed and is operating a fully-automated recycling plant in Japan. Another difficulty stems from the regulatory trends of recent years.

The Chinese Ministry of Commerce issued a notice stating that a ban on e-waste for the processing trade would go into effect as of November 1, 2004 (Announcement No. 55). One of the aims of this notice is to prevent the environmental pollution caused by the e-waste processing trade in imported waste materials in areas like Taizhou and Guiyu where such trade is conducted (however, it does not include processing trade undertaken in export processing zones or bonded zones). This notice added pachinko machines and other devices to the list of tradable goods that are banned for the processing trade. On the other hand, there has been some easing of the restrictions, with waste treatment trade in air-conditioners, personal computers, monitors and other used electronic goods that were previously included in the list of banned import items now being permissible in export processing zones and bonded zones.

SECTION 4: INITIATIVES TARGETING PROPER RECYCLING

China is currently in the process of shifting from a national stance aimed at securing large volumes of resources to support economic growth to one that advocates promoting the development of its recycling industry, but has been forced into a contradictory position in that it is required to impose restrictions on imports of wastes that are ultimately regarded as gar-

bage in order to protect its environment. One example of an initiative for recycling that balances both the security of resources environmental protection is the development of Renewable Resources Processing Parks (e.g. the Tianjin Ziya and Ningbo Zhenhai Renewable Resources Processing Park). Of course, environmental pollution is not only generated during

the recycling of imported waste. Domestic waste is being collected in areas such as Guiyu and Taizhou. To guard against becoming a society of mass production, mass consumption and mass waste on an unprecedented scale, there are calls for China to develop various recycling laws. Law on promoting the development of a circular economy has already been planned, and there are plans to develop individual recycling laws under this basic law.

1. Renewable Resources Processing Parks

Importers of mixed metals, waste motors, waste electronic and electrical goods, and waste electric wires and cables—item 7 in the list of importable wastes issued by the government of China, are known as “Category 7 Companies.” Imports reached 3.53 million tons in 2002, and as of 2004, there were 480 Category 7 Companies in China, 418 of which are located in coastal areas.

The recycling of category 7 wastes has a massive impact on the environment and in consequence, a number of recycling complexes are being built, predominantly in coastal areas, in a bid to concentrate recycling activities in specific areas and afford for environmental protection at the same time. Four recycling resources processing parks are already operating in Tianjin, Taicang in Jiangsu Province, Ningbo in Zhejiang Province, and Zhangzhou in Fujian Province, and there are plans to open another facilities in Taizhou, Zhejiang Province. The licenses of Category 7 Companies are reviewed annually and, in principle, (1) no increase in the total number of Category 7 Companies is permitted, (2) no new entrants are permitted, and (3) no increase in import volumes is permitted²⁰. The principles of openness, fairness and impartiality stand for import license screening, and SEPA’s registration management center of waste importation has been publishing screening results on its website since September 1, 2003.

However, under recent regulation, as of 2005, Category 7 Companies located in provinces and cities in coastal areas will not be permitted to transfer (import) waste materials from the ports

of other provinces or cities, while those located in provinces and cities in inland areas will not be permitted to transfer (import) waste materials from the ports of Guangdong and Jiangsu²¹. The impetus for this regulatory tightening is believed to derive from the need to limit the environmental pollution being caused by the recycling of imported waste in Guangdong and Jiangsu Province. The considered opinion is that, unable to overlook imports exceeding permissible volumes, transshipments and rampant import license forgery, the government has elected to tighten the regulations at the waste import license application stage.

2. Present Situation of Planning for Major Recycling Laws

China has yet to establish laws akin to Japan’s Containers and Packaging Recycling Law and Home Appliances recycling Law. In consequence, while many foreign electronics manufacturers, such as Hewlett Packard (HP), Nokia and Motorola have begun collecting used products; the majority of companies have yet to tackle the waste recycling issue head on.

However, the existing Solid Waste Law contains provision on the integrated use and harmless disposal of solid wastes, and the Cleaner Production Promotion Law that was enacted on January 1, 2003, is attempting to shift the emphasis from end-of-pipe regulations to measures to reduce resource use and waste in factories.

The waste product collection industry has prospered since China began pursuing a policy of reform and liberalization, and the waste collection and used product industries, which mainly employ migrant workers from rural communities, are currently flourishing in urban areas. In order to develop and promote the recycling industry, the government began offering tax breaks to industry operators in 1994. Businesses eligible for these preferential taxes are listed in the “Resources Comprehensive Utilization Catalogue,” and companies collecting and recycling waste/used household appliances and e-waste are included in Articles 30 and 31 of the Register.

²⁰ Refer to State Environmental Protection Administration Notices No. 344 and No. 735 of 2004.

²¹ Notice on problems relating to the licenses of designated treatment facilities users on imports of mixed metals, waste electric wires / cables and waste motors in 2005 (State Environmental Protection Administration Notice No. 344 of 2004).

At present, a draft of Law on promoting the development of a circular economy has been planned and there are plans to draft bylaws on (1) the comprehensive use of resources, (2) e-waste, (3) used tires, and (4) food containers and packaging waste. Meanwhile, WEEE (Waste Electrical and Electronic Equipment) and RoHS (Restriction of the use of certain Hazardous Substances) legislation, which corresponds to Japan's Law for the Recycling of Special Kinds of Home Appliances, and a bylaw on the environmental management of electronic waste that will set applicable technical standards for the disposal of e-waste, are being developed. Once these laws enter into force, it is anticipated that China will turn its eyes to the establishment of a vehicle recycling law.

3. New market entrants vs. Guiyu

There are said to be 5 million discarded TV sets, 5 million washing machines, 4 million refrigerators, 5 million PCs and 70 million mobile phones (estimates) in China²². In many instances used products and secondhand goods are transported to underdeveloped western areas of the country where they are reused. However, in reality, because there are not necessarily sufficient appropriate recycling facilities to handle such goods once they have been discarded and such items are being disposed of with ordinary household waste, toxic and hazardous substances are causing pollution damage. Added to which, end-of-life household appliances are in distribution, and voices have been raised in connection with the issue of safety, in that such items present danger in use.

In the context of such circumstances, scientific research into the recycling and reuse of waste household appliances (The 863 National High-Tech Research and Development Project) was officially commenced in July 2003. In December of that year, the National Development and Reform Commission designated Hangzhou in Zhejiang Province and Tsingdao in Shandong Province as model cities for the construction of

a national collection system for the management of waste household appliances and electronic products. In Tsingdao, collaborative research is being undertaken by the Haier Group and Tsinghua University, and an interest-free government loan to the Haier Group is supporting the development of home appliance recycling technology.

Two companies have recently joined the project: the Beijing Huaxing Group and the Tianjin Datong Mining Group, and there are plans to expand the regions covered by the project at a later date. Companies recycling waste/second-hand electronic equipment have begun springing up in other areas throughout the country. These new entrants are not only concerned with post-consumer products, but also e-waste, including production loss, and it is expected that this will give rise to new business opportunities (see Table 3-5).

On September 25, 2004, Nanjing Jinze Metals (a limited company) began operating China's first e-waste recycling center. However, in reality, this center is open but not doing business due to a lack of any e-waste to process²³. In fact, the operating company has been implementing a mobile phone recovery program for Motorola and has set up 230 collection boxes in 151 cities nationwide; however, it has not collected any mobile phones, only rechargers and waste batteries. The center is capable of treating 3,000 tons of waste per year, but since only a few tons of waste products have been collected to date, this does not represent a major trend in the recycling industry.

Ironically, even with stricter government regulation in place, domestic and foreign e-waste continues to be collected in Guiyu, China's informal and even illegal waste treatment center for recyclable wastes. This suggests that there is a need to develop some form of system to facilitate the passage of e-waste through appropriate waste treatment and recycling routes.

²² Jianxin Yang, "E-waste issues and measures in China" (published in the NIES E-waste workshop *December 14-15, 2004*)

²³ NNA News, December 15, 2004 edition

Table 3-5: New Entrants to the e-waste Recycling Industry

Company	Date of foundation	Area (thousand m ²)	Investment	Employees	Capacity (annual)
GuanDong Lüyou	1985	200	0.15billion CNY (First stage)	2000	Circuit board 18,000 t Imported waste
Nanjing Huanwu	2002.9	30	1 million CNY	20	e-waste 50,000 t (factory loss and residues)
Nanjing Jinze ^a	1992	65	10 million CNY	300	Imported waste 120,000t (plastic 50,000t; copper 5,000t) e-waste 3,000–4,000t Currently producing approx. 1–2 t
Weicheng (Wuxi)	2003.3	200Mu ^b	35 million USD	500	e-waste 30,000 t (will increase to 60,000 t in the second stage) Mainly precious metal recovery (waste and residues from foreign manufacturers)
Xin Jinqiao Huanwu	2003	N.A.	N.A.	110	10,000 t/month. e-waste: 10 t/month Off-grade products (Hewlett-Packard, Toshiba, Kodak), fluorescent lamps (Ricoh)
Dowa (Suzhou)	2003.12	N.A.	6 million USD	N.A.	Precious metal recovery (waste and residues from Japanese companies in Suzhou)
Renxin (Shanghai)	2004	15	2 million USD	N.A.	Large electronic appliances 500 thousand Unit (TV sets, PCs etc.)
Wuhan Tianzhenqing	2004	N.A.	0.5 billion CNY (First stage) 0.2 billion CNY for Second stage)	N.A.	N.A.
Hangzhou Dadi ^c	1998	N.A.	N.A.	100	Used electronic appliances 800 thousand Unit

a. Established the first Chinese electronic waste treatment plant

b. 1 Mu=15ha

c. The 863 National High-Tech Research and Development Program

Source: Chinese press releases and interviews

CONCLUSION

High-level economic growth continues apace and China requires huge volumes of resources to support this economic activity. Added to which, China's low personnel costs are making it possible to recycle the low-grade recyclable wastes that cannot be processed in the industrial nations of the world. Resource demand and cheap labor have acted as triggers for a huge wave of recyclable waste imports from overseas.

Meanwhile, because China has yet to develop appropriate technological standards for recycling, and specifically, environmental measures,

the recycling of e-waste in areas such as Guiyu is leading to environmental pollution.

A spate of incidents involving "foreign garbage" has led to newspaper reports stating that the developed nations of the world are exporting their garbage to China due to the high costs of treating it at home, which means that the blame for these incidents is being laid with the exporters of the waste. In defense, import restrictions on all recyclable wastes have been tightened. In fact, Chinese government fears that the processing trade is becoming a hotbed for the recycling of contraband and illegal waste are strong-

rooted, and regulations passed in 2004 have banned processing trade in some used electronic and electrical products.

The Chinese government has already taken various steps in an attempt to prevent environmental pollution, including the import license system, a ban on imports of waste household appliances, export standards, and pre-shipment inspection requirements. However, ship-backs and smuggling remain rampant in spite of these measures, and as mentioned earlier, the recycling of smuggled waste continues to generate pollution in Guiyu. These problems have been attributed to (1) inadequate enforcement of the inspection system and related regulation, and (2) the absence of a shared understanding of recyclable wastes among the competent authorities in exporting and importing nations (the scope of permissible imports, etc.). By continuing to tighten the regulations controlling imports of recyclable wastes without giving due consideration to the above factors, the government has created barriers to proper recycling. Japanese companies, for example, face obstacles in their efforts to recycle used products.

Having become the factory floor of the world, it

is in one sense inevitable that waste products and recyclable wastes are being returned to China. Even as it imposes regulations, China continues to need large quantities of high quality recyclable wastes, hence the establishment of recycling resources processing parks in coastal areas and its efforts to ensure both quality and quantity.

In order for both developed countries, the exporters, and China, the importer, to benefit, instead of playing up its victim status as “the world’s dumping ground,” China would do better to identify the environmental problems occurring as a result of international trade in resource recycling between China, which has become the industrial production/export base of the world, and developed countries, which are the exporters of recyclable waste, and to undertake closer checks on the real benefits and losses that result from such trade.

Cooperation between China and the exporter nations in the development of consistent standards for recyclable wastes, information sharing and stronger border controls, will enable international trade in recyclable wastes that is of greater benefit to both parties.

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