

## Chapter 1

### Issues Relating to the International Trade of Secondhand Goods, Recyclable Waste and Hazardous Waste

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#### Abstract

As economic integration in the world has been deepened, international trade of secondhand goods, recyclable waste and hazardous waste have increased. Historically, major concern on the international trade of them has been shifted. This paper reviews the shift of the concern on international trade of secondhand goods, recyclable waste and hazardous waste has been shifted. Currently, the major issues relating to the international trade of hazardous waste and recyclable waste are preventing illegal and illicit transboundary movement of hazardous waste and promoting the utilization of recyclable waste internationally. Appropriate trade regulations should be adopted and enforced.

**Keywords:** International Trade, Secondhand Goods, Recyclable Waste, Hazardous Waste

#### Introduction

Economic integration has progressed considerably in Asia, and most Asian countries have seen an increase in trade dependency, which is calculated as the total value of exports and imports divided by GDP. With deepening economic integration, the international trade of recyclable waste and hazardous waste has also increased, consequently generating environmental problems such as unsound disposal practices and pollution from recycling processes.

To prevent these problems, various trade regulations have been enacted. In particular, the Basel Convention regulates the transboundary movement of hazardous waste, which is defined in the annex of the convention. Additionally, some countries also maintain their own list of hazardous waste types, and have introduced regulations on the import of recyclable waste and secondhand goods. Such regulations include

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standards governing recyclable waste import and pre-shipment inspections, and import bans on secondhand goods.

This paper reviews the issues relating to the international trade of secondhand goods, recyclable waste, and hazardous waste.

## **1.1 A Historical Overview of the International Trade of Recyclable Waste and Hazardous Waste**

Recyclable waste is not a commodity new to international trade. The international trade of recyclable waste is recorded in Japanese trade statistics from the 19th and early 20th centuries: for example, 68 tons and 3,482 tons of copper scrap were exported in 1868 and 1871, respectively, and in 1917, 11 thousand tons of waste cotton were exported, with a value of 3.17 million yen. This price of cotton waste was more than double that of rice. Cotton waste was used to make products for wiping up oil. At that time, recyclable waste and scraps were internationally traded in the same manner as other goods.

In the 1980s, a number of incidents occurred where hazardous waste was exported from developed countries to developing countries, and the environment and human health were harmed in the importing country as a consequence. For example, hazardous waste was exported from Italy to Koko, Nigeria, where the hazardous chemicals contaminated the surrounding environment.

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (hereinafter, the Basel Convention) was drafted to prevent improper transboundary movement of hazardous waste that can harm the environment and human health in importing countries. The convention entered into effect in 1992. Prior notice and consent are required before shipment of hazardous waste. In the late 1980s and early 1990s, the number of hazardous waste treatment and disposal facilities was limited. In the third conference of parties, an amendment was adopted that banned developed countries (annex VII countries: EU countries, OECD countries, and Liechtenstein) from exporting hazardous waste to developing countries. The decade after the Basel Convention went into effect was the time to make trade regulations stricter.

Around 2005, this trend started to change. A substantial amount of recyclable waste was shipped from the European Union, Japan, and United States to China, India, and other countries for recycling. Recycling facilities with environmentally sound

management were established in middle- and high-income countries such as Singapore, Malaysia, Thailand, and other non-annex countries. G8 adopted the 3R initiative at the Sea Island Summit in 2004, which includes the topic of reducing barriers to the international trade of recyclable waste and recycled goods as described in the following.

Reduce barriers to the international flow of goods and materials for recycling and remanufacturing, recycled and remanufactured products, and cleaner, more efficient technologies, consistent with existing environmental and trade obligations and frameworks;...

Some countries started to ease import restrictions of recyclable waste. China, which had prohibited the import of unwashed and uncrushed waste polyethylene terephthalate (PET) bottles, began to allow import of such bottles under certain conditions. Indonesia had prohibited the import of plastic waste because tens of shipping containers holding plastics waste had been left in Indonesian ports; however, in 2008 Indonesia began to allow the import of plastic waste after the plastic recycling industry had expanded.

An important factor in this trend is economic integration with fragmentation of the production process. With deepening economic integration in Asia, various products, parts, and materials are now made in various countries and internationally traded. The international trade of recyclable waste is not an exception to this trend. Recycling industries for specific waste types are not located in every country, and thus trade is necessary. For example, Singapore does not have recycling facilities for lead acid batteries or paper mills that utilize waste paper. Accordingly, these materials are exported to other countries.

## **1.2 Trade Measures on Recyclable Waste, Hazardous Waste, and Secondhand Goods**

The international trade of recyclable waste and secondhand goods may conserve resources and be economically beneficial. However, in connection with the international trade of those goods, some problems have emerged. One problem is that inadequate recycling processes generate pollution. A typical case was the recycling of lead in Taiwan in the late 1980s. Waste lead acid batteries were imported to Taiwan from the United States, Japan, and other countries, and the resulting lead pollution harmed

children living near the recycling facilities, who exhibited lower intelligence levels upon entering kindergarten.

Another problem is that sometimes imported waste is disposed of without any treatment at the destination. Secondhand goods can also create problems. For instance, if secondhand vehicles do not meet emissions standards, increased air pollution will result. Furthermore, the duration of use for imported secondhand goods may be shorter than that for new goods; thus, the use of secondhand imported electronics may increase the volume of electronic waste in the importing country.

To prevent these types of problems, many countries restrict the international trade of such goods. Examples of trade measures implemented by Asian countries are presented in Table 1.

Hazardous waste is regulated by the Basel Convention entered into effect in May 1992. The convention was established in response to the dumping of hazardous waste generated in the United States and Europe in developing countries in the 1980s.

This treaty provides for three major trade measures. The fundamental regulatory measure is prior notice and consent. The exporter and/or importer should provide the governments of the importing and exporting countries with notice of the intended trade involving hazardous materials and obtain the necessary permits. The Convention also prohibits hazardous waste's export from and import to non-parties. At the Second Conference of Parties in 1994, a ban was adopted on the export of hazardous waste from developed countries to developing countries for disposal.

As listed in the annex of the Convention, the regulated hazardous waste types are defined according to several aspects. The first aspect is the "waste stream" such as "clinical waste from medical care in hospitals, medical centers and clinics," "waste from the production and preparation of pharmaceutical products," and "waste from the production, formulation and use of organic solvents." The second aspect is "waste having as constituents" such as "metal carbonyls," "arsenic; arsenic compounds," and "cadmium; cadmium compounds." The third aspect is hazardous characteristics such as whether the material is "explosive," "flammable," "oxidizing," "toxic," or "ecotoxic." Regulated hazardous waste types are also listed in Annex VIII of the convention. However, testing methods and minimum concentration levels are not defined in the convention, and are left for each country to define.

Some countries also prohibit the import of specific recyclable waste types that are not listed in the Basel Convention. For example, Indonesia prohibits the import of waste plastics, because waste plastics were imported and abandoned in several Thai

ports in the early 1990s. Also, Thailand banned the import of waste tires in 2003, after no one used imported waste tires that were abandoned in port areas.

**Table 1 Trade Measures Governing Hazardous Waste, Recyclable Waste, and**

Trade Measure	Content	Example
Pre-shipment inspection	Importing country request exporter to undergo pre-shipment inspection before shipment. Inspector checks the quality of waste	The Chinese government mandates pre-shipment inspection of secondhand goods and recyclable waste such as used paper, waste plastics, and steel scraps. Foreign exporters of used paper to Indonesia must undergo pre-shipment inspection, to prevent the import of banned printed materials that are viewed as religiously problematic.
Tariff on secondhand goods according to year of production	Special tariff or tax on older secondhand equipment	Mongolia imposes a special tax on imported secondhand automobiles, depending on the age of automobile.
Registration of importer	Importer must register. If importer violates the law, the license will not be renewed.	China introduced a registration system for importers of recyclable waste. Singapore also has a registration system for importers of recycled tires.
Registration of exporter	Exporter in foreign country must register. If exporter violates the law, the license will not be renewed.	China introduced a registration system for exporters of recyclable waste to foreign countries in January 2005.
International manifests	Manifest system where the importer must send back the manifest to the exporting country.	Taiwan set up an Internet-based manifest system, in which recyclers in foreign countries must provide documentation when they receive recyclable waste and when they treat the material.

Continue

Trade Measure	Content	Example
Inspection of treatment facilities in foreign countries	Inspection of treatment facilities in foreign countries	Taiwan sends specialists to treatment facilities in foreign countries that import and treat hazardous waste from Taiwan. The inspectors also conduct interviews of local and central government officials in the importing country.

Source: Compiled from various sources.

The import of older secondhand goods is also banned by some countries. Older secondhand vehicles are more likely to emit pollutants more than new ones. Secondhand goods also have a shorter duration of use, and thus become waste sooner, as compared with new goods. While some countries have completely banned the import of secondhand goods, others allow imports of secondhand goods that were manufactured within a certain number of years.

China has established standards for imported recyclable waste. In regard to waste PET bottles, crushed and washed PET flakes can be imported, whereas baled waste PET bottles had been prohibited until recently. The justification of this regulation is the possibility of contamination by residues inside in the bottles. In order to check whether recyclable waste to be imported satisfies the standard, pre-shipment inspection is also required. Exporters of recyclable waste to China are required to undergo pre-shipment inspection in the exporting country. The Indonesian government also requires exporters of used paper to undergo pre-shipment inspection in order to prevent the import of religiously problematic documents such as pornography.

Tariffs can be used to control the quality of imported recyclable waste and secondhand goods. For example, Mongolia imposes a special tax on imported secondhand automobiles, with higher taxes being levied on older automobiles.

Registration systems for importers and exporters have also been established, and importers must have facilities that meet certain criteria. China introduced not only a registration system for importers, but also for exporters that intends to export recyclable waste to China. If an exporter does not have a suitable environmental management system, or violates the regulations, the permit is not renewed.

Taiwan introduced the system to ensure proper treatment of exported hazardous waste. Manifest system or consignment note system covers not only the domestic

transaction but also international transaction. Importers of hazardous waste sent from Taiwan should put the information in the internet based manifest system, when they receive and treat the materials. Taiwan also sent the inspection team to foreign countries.

### **1.3 Current Issues Relating to the International Trade of Hazardous Waste and Recyclable Waste**

Currently, the major issues relating to the international trade of hazardous waste and recyclable waste are preventing illegal and illicit transboundary movement of hazardous waste and promoting the utilization of recyclable waste internationally. Trade regulations are needed to prevent such illegal trade. However, overly tight trade regulations often hinder legitimate international trade where waste is destined for recycling facilities with environmentally sound technology.

Therefore, the challenge that we face is how to devise appropriate trade measures, although countries with few or no facilities for the treatment of recyclable waste and hazardous waste may be reluctant to ease trade regulations. In moving forward, it is important to review the existing regulations and the background of illegal and illicit transboundary movement of hazardous waste.

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