

Chapter 4

Import and Export of Waste in Korea: Regulation and Actual Practice

Chung, Sungwoo¹

Abstract

This chapter reviews the legal framework and implementation of the current regulation on transboundary waste in Korea. Through this review, policy challenges and performance issues in the regulation of waste trade are elucidated and several implications are also identified. In addition, several site investigations regarding the waste trade have been carried out to comprehensively understand the regulation and actual practice of waste trade.

More importantly, maintaining uniformity between regulations to control transboundary waste and strengthening the pre-trade stage should be necessary for more effective management. Through the case of coal ash imported from Japan, it becomes clear that the potential effect of transboundary waste on the status of recycling in the importing country should be considered when it comes to waste trade.

Keywords:

Introduction

Countries differ in their policies on the transboundary movement of hazardous waste, recyclable resources, and secondhand goods depending on their respective domestic waste-related situations. In particular, Asian countries such as China, Indonesia, and Vietnam actively take legal actions to prohibit the import of hazardous recyclable waste for fear of contamination from improper treatment. As for secondhand goods, countries take a variety of policy positions, ranging from a complete ban of imports to selective acceptance with consideration given to various factors such as year of production.

At the same time, in countries such as Japan and Korea, domestic recycling industries are in decline as a result of recyclable waste being exported and the creation of

¹ Senior researcher (Embassy of the Republic of Korea, JAPAN)

environmentally sound recycling industries in importing countries, both of which can be seen as ongoing policy challenges for domestic industries. In addition, Korea still is similar to developing countries in terms of its lack of ability to regulate of imported waste, including secondhand goods.ⁱ One recent case is the improper recycling of coal ash imported from Japan, which had negative effects on the environment (refer to section 2.2).

In reaction to this problematic situation, Korea's policy response has been to continuously revise the Act on the Transboundary Movement of Waste and its Treatment (ATW), which has been the vehicle for domestic implementation of the United Nation's Basel Convention since 1992. In addition, the Import/Export Declaration System (IEDS), introduced in 2008, is a new tool to strengthen domestic waste management through the Act on Waste Management (AWM) (refer to section 3.3). The aforementioned policy measures by the Korean government form a dual system for the comprehensive management of transboundary waste, which nevertheless remains a challenge. Thus, careful review should be conducted on how effective these regulatory changes are in enhancing the domestic recycling situation, as well as recycling and reuse internationally. However, up to now, few studies have been conducted in this area.

In this chapter, the author reviews the legal framework and implementation of the current regulatory measures on waste trade in Korea. Through this review, policy challenges and performance issues in the regulation of waste trade in Korea are illuminated. Section 1 is a general introduction to the Korean regulatory system. Section 2 outlines the current tightening of regulation to provide a comprehensive understanding of the Korea government's attitude toward waste trade. Section 3 provides a detailed explanation of how the current regulatory system works, and reviews the actual processes of importing and exporting hazardous and recyclable waste. Section 4 discusses challenges and potential policy initiatives for improving Korea's regulatory system to achieve more sustainable waste management.

4.1 Korea's regulatory system on waste trade

4.1.1 Definition of waste

According to the AWM, which governs the proper treatment of domestic solid waste, waste is defined as "a material that is unnecessary for human life and business activities such as garbage, combustible ashes, sludge, waste oil, waste acid, waste alkali, carcass, etc."ⁱⁱ. In reality, the decision on whether a certain material legally constitutes waste is

ultimately left to the courts. However, in this chapter waste-related issues are discussed on the basis of the administrative interpretation of the Ministry of Environment (MOE), which is responsible for enforcement of the AWM. On the basis of the provisions above, it can be said that Korea's regulation places a high value on the viewpoint of the discharger in defining waste. Namely, what is produced as unnecessary goods by the discharger is preferentially treated as waste, irrespective of usefulness for a third party. For example, in cases where material is generated and discarded in the manufacturing process and can be provided to a third party for recycling, there are legal obligations required, such as declaring the material recyclable waste, because otherwise it is considered to be waste by default (Kim hong gyun [2007:257]). At the same time, if defective products (returned goods, etc.) are generated by the same facility where it is utilized as raw material, it is not regarded as a waste from a legal perspective. However, in cases where defective products are used as raw material by a third company, it should be handled as waste. (MOE [2004:7]).

In regard to transboundary waste, the ATW stipulates that waste is defined as a material that is listed in the Annex of the Basel Convention or that requires import and export regulation through a bilateral/multilateral or regional convention.ⁱⁱⁱ The specific waste list has been referred to in a few presidential decrees (refer to section 3.2). Namely, regulation of domestic waste and transboundary waste in the AWM and ATW are based on the differences in their definitions of waste.

The AWM classifies waste as municipal solid waste and industrial waste on the basis of where it was produced. Industrial waste includes waste that is notably hazardous for the human body, medical waste generated by medical institutions, and other types of dangerous material. In particular, waste designated as industrial waste is treated as hazardous waste, for which there are 11 categories according to presidential decree.^{iv}

4.1.2 Import and export regulatory system for waste trade

As mentioned above, Korea has enacted two main acts to regulate the import and export of waste: ATW and AWM. In accordance with ATW and AWM, an Import and Export Approval System (IEAS) and IEDS have been implemented, respectively.

The specific waste items regulated by ATW are announced by the MOE through public notice. The most recent revised MOE notice (No. 2007-188) lists 86 items as waste requiring import and export approval (WRIEA). In comparison to the Basel Convention and OECD rules, WRIEA includes 61 items from Annex I of the Basel Convention, 2 items from Annex II of the Basel Convention, and 23 items from the list of

green waste in OECD rule.

In September 2008, IEDS was introduced as an additional measure to protect against the illegal export of waste and secure the proper treatment of imported waste. Similar to ATW, 25 items are listed by MOE notice as waste requiring import and export declaration (WRIED) (refer to section 3.3). In other words, transboundary waste is primarily classified as the 86 items of WRIEA and the 25 items of WRIED. Accordingly, every type of waste that is imported and exported necessarily belongs to WRIEA or WRIED. If waste belongs to both groups, it is regulated by IEAS. Recyclable waste such as waste plastic, waste paper, scrap steel, secondhand goods, etc., essentially are not considered waste, and are instead viewed as products, which are not required to follow the procedures necessary for WRIEA and WRIED (MOE [2010:17]).

Korea's IEDS is a unique and challenging approach in that the system's coverage is quite inclusive. In Korea, all waste except WRIEA must be declared regardless of the price and hazardousness of the ingredients (Figure 1).

Furthermore, since January 2010, Korea Customs Service (KCS) has strengthened the enforcement of its regulations to effectively manage WRIEA and WRIED. KCS released public notice (No. 2009-115) to clarify the certification agency and documentation required for import and export. In addition, based on that notice, WRIED was added as items that must be checked in terms of trade.

Fig. 1 Regulation of waste trade and its target

		Price	
		Positive	Negative
Hazard	Hazardous	Regulated by AWM	Regulated by ATW (WRIEA)
	Non-hazardous		

Source: Compiled by the author

4.2 Background on increased regulation of waste trade: An introduction to the Import/Export Declaration System

4.2.1 Increasing trade volume of hazardous waste

The general trend in the trade of hazardous waste under the ATW in Korea is shown in

Table 1. During the late 1990s, the volume of exports of hazardous waste was greater than imports; however, since 1999 this has been reversed. In particular, it is noteworthy that the volume of hazardous waste imports has increased dramatically since 2005. Only in the last decade have 19 items with PCB been widely traded (11 items for export and 8 items for import) including waste transformers and waste batteries.

Specifically, the volume of exports from Korea reached its peak in 1998 and after that began to decline at a great rate. In 1998, 10,103 tons of waste accelerant was exported, which largely reflected the general trend in the volume of exports before and after 1998. In addition, of large amounts of PCB-containing waste transformers and waste PCB oil have recently become the main types of export waste, bound for the Netherlands and France.

In terms of import volume and value, waste batteries, waste cable, lead scrap, and sludge were the primary imports in the early 2000s and waste batteries, waste NiCad batteries, waste lead-acid batteries and printed circuit boards were the primary imports in the late 2000s. In particular, waste batteries containing lead have been continually imported, making up more than 90% of the total import volume. For example, in 2007, 122,000 ton of waste batteries were imported, which amounted to about 98% of the total import volume. The United States (waste battery) and Japan (lead-acid battery waste) are reported to be leading exporters of these materials. The remaining imported waste, excluding waste battery, include waste CRT glass tube televisions, the amount of which are expected to decline, considering that there is only one company manufacturing them and no more demand for CRT televisions in Korea (Min dal gi [2009:101]). The current increase in trade volume of waste (particularly imports) underscores that strengthening the regulation of the waste trade is a necessity in Korea.

Table1 . Imports and exports of hazardous waste in Korea

	Export		Import	
	Quantity (tons)	Number of transactions	Quantity (tons)	Number of transactions
1997	6,787	3	3,862	6
1998	10,448	4	1,784	6
1999	44	4	16264	11
2000	60	2	17380	16
2001	0	0	0	0
2002	32	2	20,453	12
2003	0	0	568	2
2004	0	0	0	0
2005	1,638	4	168,529	15
2006	3,050 (595)	3	295,618 (61,318)	38
2007	1,064 (402)	3	713,600 (124,259)	119
2008	1,301 (276)	N/A	1,338,140 (141,971)	N/A

Source: National report (1997-2006) of the Secretariat of the Basel Convention and the MOE (2008d), available online at [<http://www.basel.int/natreporting/index.html>]

(Note) (1) In the figure for 1997 and 1998, various types of waste are not included (steel scrap, iron scale, PET scrap, PTFE scrap EVA scrap etc) as they were not included in a regulation list until the 4th meeting of parties to the Basel Convention. (2) Figures in parentheses signify the real imported waste volume.

4.2.2 Conflicting regulations for domestic and imported waste: The case of coal ash imports from Japan

In Korea, coal ash generated from thermal power plants is usually sold at a positive price to cement manufacturing companies, which utilize it as raw material for producing cement. During the economic crisis of the late 1990s, the construction industry fell into a

recession, which subsequently caused an oversupply of cement. To cope with this problem, the cement industry demanded that the MOE deregulate kiln fuel in order to legalize the use of industrial waste. In response to the cement industry's request, the MOE approved the comprehensive usage of industrial waste such as coal ash in the kiln with the goal of promoting recycling activities. As usage of industrial waste in kilns increased, the recycling rate of industrial waste also increased accordingly. As a result, the rate of recycling industrial waste rose from 62.9% in 1997 to 83.1% in 2005 (MOE [2008a: 534-536]).

However, despite the growing importance of the recycling of industrial waste in kilns, no installation standards for kilns as waste recycling and treatment facilities were provided in the AWM. The MOE then put forth a policy on the usage of industrial waste as a supplementary material in kilns. This policy stated that when using industrial waste generated in one's own workplace installation approval and recycling declaration are required; if generated by an outside entity, only the Recycling Declaration is necessary. This measure led to a situation where the cement manufacturers had the option to report their own kilns as recycling facilities in order to widely utilize industrial waste in kiln. In addition, the MOE policy was the main cause that appropriate monitoring of the type and volume of waste disposed in kiln was not efficiently undertaken. Furthermore, in terms of exhaust gas, only dust, SO₂ and NO₂ were regulated; however, hazardous materials such as heavy metals were not included in the regulation. As a result of these insufficient and irrelevant regulations, kilns have caused ill health effects on nearby residents (Choi [2007]; Korea Chemical Research and Development Institute [2007]).

Under this regulatory regime, the import volume of coal ash from Japan to Korea has drastically increased since the year of 2003.^v This provoked increasing concerns about the hazards of coal ash, which were eventually discussed in Korea's National Assembly. Reflecting the discussion in the National Assembly, IEDS was introduced in 2008 for the purpose of strengthening the management of imported hazardous waste. Consequently, imports of coal ash from Japan were a meaningful factor in strengthening the regulation of waste trade.

According to the ATW, steel slag and coal ash generated in thermal power plants are not considered WRIEA. However, fly ash, which contains hazardous materials greater than the standards of the Basel Convention, should be regulated as WRIEA. Meanwhile, according to the OECD rules, fly ash can be tradable between member countries without restrictions. In reality, coal ash, which includes many toxic substances, was traded between Korea and Japan as a commodity.^{vi} When coal ash contains toxic

substance in excess of the standards for designated waste as indicated by dissolution testing, it is treated as WRIEA. If not, it is regulated as WRIED. Judgment on whether coal ash is WRIEA or WRIED is possible because the IEDS requires the importer or exporter to submit the results of analysis on the waste composition.

However, determining the hazardousness of coal ash is carried out by borrowing the standards for designated waste, which is not accepted as a general standard applicable to other type of waste. Therefore, the same type of problems raised by coal ash may be raised by other waste.

Next, the influence import of coal ash from Japan on landfill sites is considered, in addition to environmental hazards. Before the full-scale import of coal ash from Japan, most fly ash was recycled in kilns and bottom ash containing highly toxic substances was disposed of in landfill sites. However, as more than 500,000 tons of coal ash were imported from Japan, even fly ash generated in Korea was no longer recycled in kilns (Refer to the Table 3). This change shows that the import of coal ash from Japan was substantial factor in depleting landfill sites, as well as making the recycling of coal ash in Korea more problematic.

As shown in the above case, attention should be paid to the impact of transboundary waste on domestic recycling and landfill sites, as well as the increasing environmental impact caused by improper recycling. In the Basel Convention, transboundary movements of hazardous waste for landfill sites are explicitly banned. This ban shows that in certain situations, decreasing landfill sites in an importing country from the promotion of waste trade to increase recycling (even in non-hazardous materials) may be undesirable.

Table 2. Volume of coal ash imports from Japan and fly ash incineration in Korea
(Unit: 1,000 ton)

	2002	2003	2004	2005	2006	2007
Import volume of coal ash from Japan	6	109	231	396	636	643
Incineration volume of fly ash in Korea	635	445	1,117	1,639	1,196	960

Source: MOE [2008d]

4.3 Current Korean regulatory system for waste trade

4.3.1 Determination of regulating authority: IEAS or IEDS?

As shown in the first section, the import and export of hazardous waste in Korea has been regulated by the ATW. To import and export hazardous waste under the ATW, the following conditions are required. First, hazardous waste may only be exported when Korea does not have proper technology to treat it in an environmentally sound way. Second, hazardous waste may only be imported if the importing county utilizes the material for recycling. In addition, prior notice to the importing country and an agreement for exporting hazardous waste are required. At the same time, import of hazardous waste is allowed only when Korea possesses proper technology and facility to treat the imported hazardous waste and the imported waste must be utilized as material for recycling. Similar to the export of hazardous waste, prior notice by the exporting country and an agreement request are needed.

Fig.2. Flow chart of import and export waste regulation

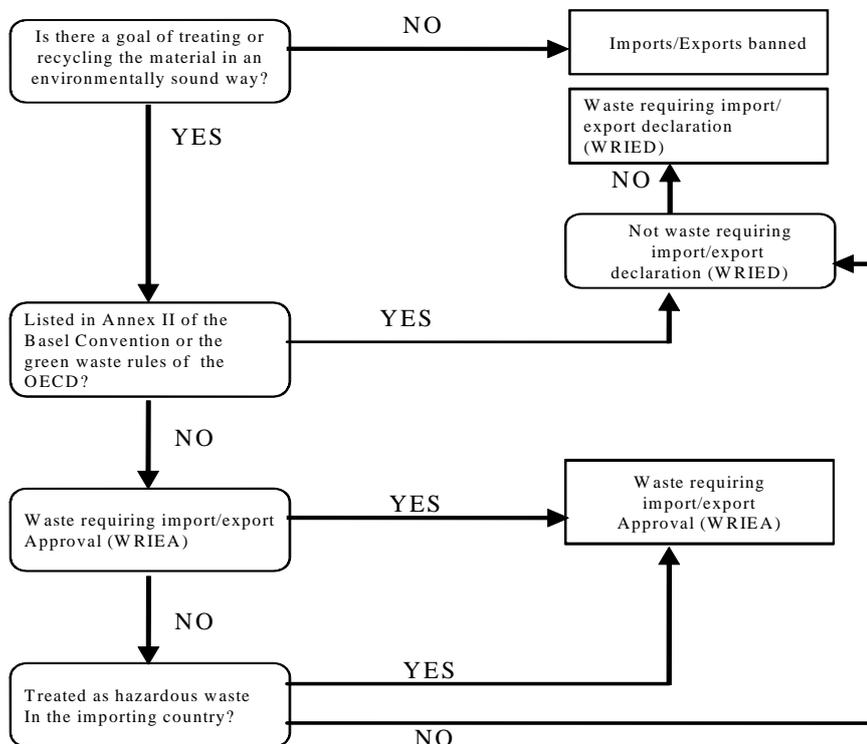


Figure 2 provides a flow chart showing how to determine whether or not the ATW is applicable. According to Figure 2, the purpose of the waste export, whether the exported waste is listed in the Basel Convention and OECD rules, and the handling situation in the importing country all play a significant role in determining which regulation should be applied. In cases where the decision is not straightforward, the exporter or importer may seek a judgment from the head of the Local Environmental Authorities (LEA) based on documents on the generation process of waste and its ingredients. However, these are discretionary matters. In the case of exports, the head of the LEA in the region where the workplace is located makes a decision about which law should be applied. For imports, the head of LEA who is responsible for the area where the recycling or treatment facility is located is the final decision maker. Furthermore, when waste is transferred through Korea, the LEAs with jurisdiction over the transit area can come to a joint agreement. In the case where both WRIEA and WRIED are included for import or export, they are regulated by IEAS.

4.3.2 Implementation of the import and export approval system (IEAS)

Only a 'Waste Dealer' (waste disposer, waste recycler and waste treatment facility installer) is qualified to collect, transfer, store, and treat waste. However, businesses peripheral to the trade of waste can be performed by those who are not waste dealers. For a waste dealer to export hazardous waste, the permission of the LEA and agreement of the importing country are required. The decision to allow the export of hazardous waste is made by LEA on the basis of the export application and related documents^{vii}.

For imports, even those who are not waste dealers are able to import without any restrictions if they obtain permission from the LEA. However, the treatment of imported hazardous waste in Korea is done by waste dealers to ensure proper recycling and treatment. When hazardous waste is imported by a waste dealer, permission from the LEA and treatment according to the AWM are required.

To obtain permission to import hazardous waste, an import request from the exporting country is required. For exporters of hazardous waste who do not acquire permission, a 30 million won fine is imposed. Importers must follow the method proscribed by the ATW by consigning waste to the intermediate treatment contractor. The intermediate treatment contractor is not able to re-export the imported hazardous waste as it has not been properly treated.

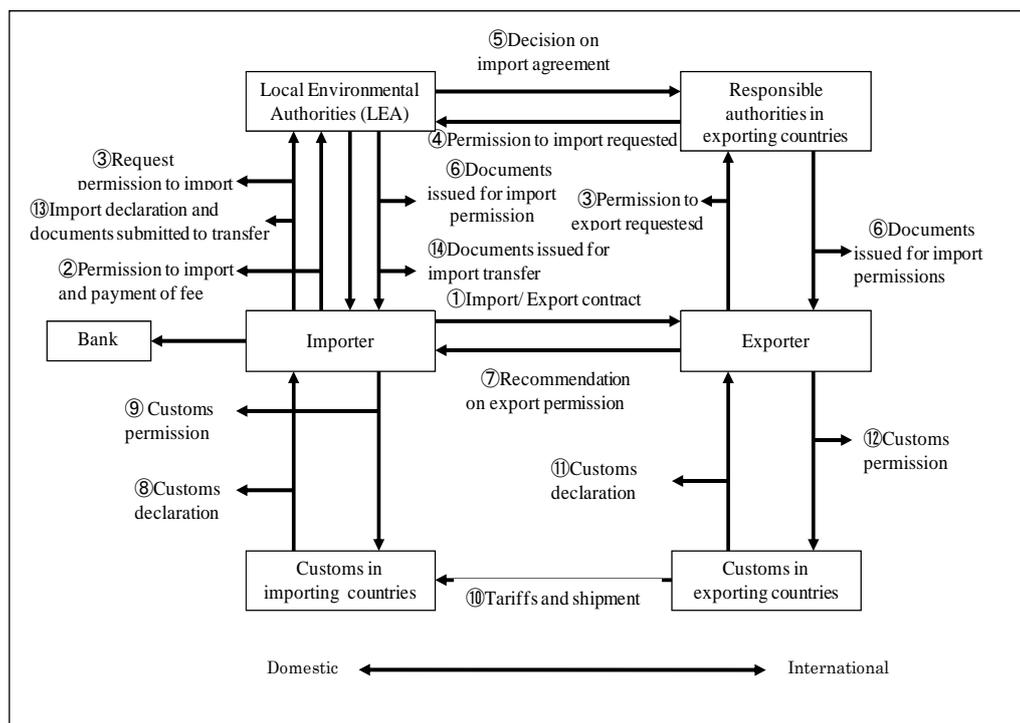
Figure 3 provides a flow chart on the actual process of trade of hazardous

waste between importing country and exporting country. The number at each stage represents the steps for the waste to be traded. Documents on treatment results should be sent to the responsible authorities in the exporting country and the exporter within 10 days after treatment. In addition, the copy of the documents must be sent to the LEA.

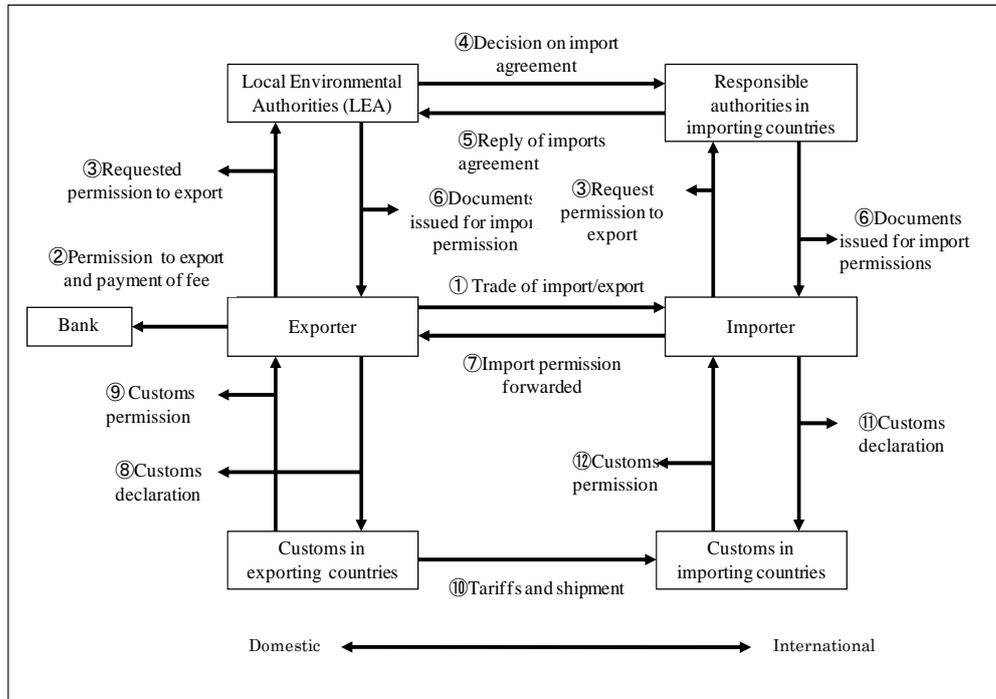
If provisions on the transfer, storage, treatment, and recycling of imported waste are not set in the ATW, either the AWM or the Act on Recycling of Resources (ARR) are applied. According to the AWM, imported waste must clear the standards and treatment methods that are required for industrial waste. A fine of 0.5 million won is imposed in the event that the waste is not imported even after obtaining export permission, the contents of the export are not reported, or documents with the treatment results are not sent to the responsible authority and exporter.

Fig.3. Flow chart of import and export of hazardous waste in Korea

a) Import of hazardous waste



b) Export of hazardous waste



4.3.3 Implementation of import and export declaration system

As mentioned in the first section, as waste imports have rapidly increased since the late 2000s, concerns about environmental pollution have gradually intensified as a result of inappropriate waste handling. The Korean government introduced the IEDS for 25 types of waste to prevent the export of illegal waste and promote the proper treatment of imported waste.

In particular, waste electrical and electronic equipment (WEEE) is regulated as WRIED, even though regulation on the definition is insufficient (refer to Table 3). Other material, with the exception of WEEE, such as secondhand goods and WRIED are regulated through IEAS. The IEDS is not able to directly control the flow of WEEE trade. However, the implementation of IEDS is important, considering it will greatly affect the reuse internationally of secondhand EEE moving forward.

Table 3. List of waste requiring import and export declaration (WRIED) in Korea

IEDS	List of AWM			
	Household waste	Industrial waste	Construction waste	Designated waste
1. Waste synthetic polymer	Waste plastic	Waste synthetic polymer	Waste synthetic resins	Waste synthetic polymer
2. Sludge		Sludge		Sludge
3. Mineral ash		Mineral ash		Mineral ash
4. Dust		Dust		Dust
5. Waste refractories and ceramic fragments	Metal hyaline	Glass ceramics		Waste refractories and ceramic fragments
6. Incineration ash(bottom ash/ fly ash)		Incineration ash		Incineration ash
7. Residue of stabilization and solidification				Residue of stabilization and solidification
8. Waste catalysts		Waste catalysts		Waste catalysts
9. Waste adsorbent and waste absorbents		Waste adsorbent and waste absorbents		Waste adsorbent and waste absorbents
10. Waste paint and lacquer				Waste paint and lacquer
11. Waste oil				Waste oil
12. Waste lime plaster		Waste lime plaster		
13. Combustion residues	Waste coal briquette	Combustion ash		
14. Waste stone			Residential constructionwaste	
15. Waste tires	Rubber leather			
16. Waste cooking oil		Waste cooking oil		
17. Animal and plant residues	Food waste	Animal and plant residues		

Continue

IEDS	List of AWM			
	Household waste	Industrial waste	Construction waste	Designated waste
18. Waste Electrical and electronic equipment				
19. Chaff and bran	Food waste	Animal and plant residues		
20. Waste wood	Waste wood	Waste wood	Waste wood	
21. Waste sand	Waste sand		Waste sand for construction	
22. Waste foundry sand			Waste foundry sand	Waste foundry sand and sandblast
23. Waste fiber	Combustible fiber	Waste synthetic fabric	Waste fiber	
24. Waste metal	Metal hyaline	Waste metal	Waste metal	
25. Waste glass	Metal hyaline	Glass ceramics	Waste glass	

Source: MOE [2008b]

Exporters of WRIED must provide the following three documents to the LEA: A copy of the order, including export price based on the FOB (Freight on Board); the transfer plan for the export waste; and the results of analysis of the export waste issued by an authorized testing laboratory. If changes in this documentation are necessary, the documents must be resubmitted to confirm the changing matter. If there is a change in the volume of export waste (more than 30% volume increase for designated waste and more than 50% volume increase for other type of waste), this change must also be reported.

In addition, importers of WRIED must report the location of the treatment facility to the LEA in the following three documents: A copy of the order, including import price based on the Cost, Insurance, and Freight (CIF); the transfer and treatment plans for the imported waste, and results of the analysis of the imported waste. WRIED is prohibited from being re-exported as it is without proper treatment in Korea. Imported WRIED are transferred, stored, and treated in accordance with the standards and treatment methods for industrial waste. The process of acceptance and take-over of the waste is maintained by the Manifest System, which is also known as the Albaro system.

In order to increase the effectiveness of IEDS, penalties and fines may result from

violations of the required procedures. A person who placed imported WRIED in a landfill and exports WRIED without treatment may be sentenced to at least 3 years in prison or a fine up to 20 million won. In addition, at least 2 years in prison or a fine up to 10 million won may be imposed on a person who pollutes the environment in the course of transferring and storing WRIED.

From late 2008 to December 2009, an average of one export transaction and 3.5 import transactions per month have been reported (Refer to Table 4). Waste electrical and electronic equipment and waste synthetic polymer are primarily exported to china. As for imports, coal ash from Japan and waste vehicle catalyst from the United States and Colombia are typical imported items.

Table 4. Number of import/export transactions in the import and export declaration system (IEDS)

Category	2008 (August-December)		2009 (January-November)	
	Export	Import	Export	Import
Number of import/export)	5	7	10	45

Source: LEA of Han River [2009]

4.4 Policy challenges for more effective implementation of waste trade regulation

4.4.1 Strengthening the pre-trade stage

Despite the existence of a flow chart suggested by MOE for determining which regulation should be applied to waste trade, there are still considerable amounts of WRIEA that are imported or exported without going through the necessary procedures. From January 2004 through October 2006, various WRIEA such as waste oil (55 million liters), waste organic solvents (20 thousand liters), and waste catalyst (1,320 tons) have been exported without prior notice and consent from importing countries, which are on regulation required in regulations in the ATW (Article of Hangyere newspaper "A large hole in the import and export management of hazardous wastes", Nov. 28, 2006). In Korea, provisions on the pre-trade stage are not sufficient to prevent illicit trade. Determination of which regulation should be applied primarily rests with importers and exporters. If they consider imported or exported waste not to require approval as WRIEA, the importers and exporters proceed to trade it as common goods and in this case the

procedure for WRIEA is not necessary.

To prevent the export of WRIEA disguised as secondhand goods, measures strengthening the determination stages, such as the "prior consultation"^{viii} stage in Japan, would be an effective means. The reporting requirements for frequently traded waste with a high potential for pollution need to be reviewed and emphasized because it is inefficient to require reporting for all WRIEA. In addition, to increase the effectiveness of the regulation of import and export waste, strengthening regulation in the customs stage is also required. The Korea Customs Service (KCS) set forth a revised public notice (No. 2009-115) to tighten regulation for the import and export waste. However, the tightened regulations only apply to making changes in the lists of waste and the addition of waste requiring regulation. These steps do not include the cooperation with the HS code to enhance the effectiveness of regulation (Kim yongwon [2008:156-157]). In fact, customs civil servants manage waste by matching the inventory list and number on the declaration form in detail, which is neither an efficient nor an effective method for regulation. Clear standards for evaluating the hazardousness of WRIEA and data from the dissolution test are not specified, which leads to the problem of regulatory uncertainty.

4.4.2 Harmony between ATW and AWM

Designated waste in AWM must also be considered to ensure the proper treatment of WRIEA. Currently, hazardous waste in Korea is managed using the categories of WRIEA and designated waste; however, there is no clear relation between these two classifications. As in the table 3, WEEE and Chaff/ bran should be treated as industrial waste under the IEDS. However, AWM has not specified them as waste to be managed. As a result, this inconsistency in regulations often results in the illegal export of designated waste and improper treatment of WRIEA.

Specifically, only 53 waste items out of 86 WRIEA are managed as designated waste in the AWM. The rest of the 33 items are classified as general industrial waste, not designated waste. However, a portion of those 53 items must be included as WRIEA because they could cause pollution if treated improperly. One possible concrete measure that would be desirable is to gradually expand the coverage of designated waste, taking into account the situation of relevant companies and the level of hazardousness to classify waste into three groups: red waste to be verified internationally (1st stage), green waste for which technical guidelines are prepared (2nd stage), and the other waste (3rd stage) (Lee SH et al [2008:299]). More importantly, finding a way to secure to secure

consistency between regulations to control domestic waste and transboundary waste becomes an imminent policy challenge

Concluding remarks

In this chapter, the regulations of waste trade in Korea and policy challenges for more effective implementation are discussed. Korea has established a two-tiered system to effectively manage the import and export of hazardous waste: the act implementing the Basel Convention and the AWM. In particular, transboundary waste, excluding hazardous waste, is controlled by IEDS under the AWM. Namely, all transboundary waste is regulated under current law except secondhand goods in Korea.

However, there are still gaps between regulation and actual practice. Uniformity in the regulation of hazardous waste is not yet ensured for the handling of hazardous waste classified in the ATW and AWM, and the management methods for WRIED. Effective management of imports of hazardous waste at the customs stage is required because the HS code does not cover 86 items of WRIEA. Additionally, there is a lack of regulation for WRIEA, which is not included as designated waste.

In addition, the fact that determining the applicable regulation for waste rests primarily with importers and exporters is also a policy challenge for the regulation of trade in hazardous waste and secondhand goods. Strengthening the pre-trade stage is necessary for more effective regulation and the legal definition of secondhand goods with consideration to proper treatment of transboundary waste should be clarified.

Finally, as in the case of coal ash imported from Japan, more discussion is needed about what kind of policy response would be most effective in dealing with the shortage of landfill sites caused by transboundary movement of waste not covered by WRIEA. This landfill issue touches on some different concerns in addition to the environmental pollution caused by imported and exported waste, which must be addressed. When seeking a solution to the above situation, the potential effect of waste trade on the status of recycling in the importing country becomes one of the most important factors.

This paper is based on the author's opinion and is not representative of the views of the affiliated organization.

ⁱ At present, Korea does not have any legal provisions dealing with or defining secondhand goods. However, under the legal definition of ‘recycling’, recycling is considered to be an activity for waste. Therefore, “waste” in waste regulation in Korea is comprehensively defined to include even secondhand goods.

ⁱⁱ ATM article 2, paragraph 1.

ⁱⁱⁱ ATW article 2, paragraph 1.

^{iv} Designated waste is comprised of waste generated in the specific facilities (4 types), corrosive waste (2 types), waste containing hazardous substance (8 types), waste solvents (2types), waste paint/lacquer (3 types), waste oil, waste asbestos(3 types), waste containing PCB (2 types) waste toxic chemicals, medical waste, and others.

^v It is more profitable for Korean cement manufacturing companies to treat the imported coal ash from Japan because about 50,000 won per ton is paid as the disposal cost, which is higher cost than paid by Korean power plant for cement companies.

^{vi} In 2007, the prosecuting authorities investigated the waste imported by S company. This investigation showed that imported coal ash includes 2.1 mg/kg of carcinogenic material, which is higher than that of designated waste. However, the prosecution did not have the authority under the existing regulations to impose any punishment on that company.

^{vii} An original or copy of the export contract, including provisions on treatment methods and export prices in FOB, the domestic transfer contract, and the test certificate of export waste must be submitted.

^{viii} However, the system of "prior consultation" in Japan only uses documents filed in relation to import and export transactions for decision making. This system does not prove that importers and exporters comply with the relevant laws in terms of trade (Tsuruta and Yoshida [2009:61]).

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