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**Master's Thesis**

**The Anti-Ocean Dumping Regime  
in South Korea :  
Policy Diffusion and Implementation**

**February 2015**

**Graduate School of Public Administration  
Seoul National University  
Public Administration Major**

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**in South Korea :**  
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서 단 비

**The Anti-Ocean Dumping Regime  
in South Korea :  
Policy Diffusion and Implementation**

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## **ABSTRACT**

### **The Anti-Ocean Dumping Regime in South Korea: Policy Diffusion and Implementation**

This study examines the processes by which the international anti-ocean dumping regime has been adopted and implemented in South Korea. From a comparative political perspective, the process of adoption and internalization of the international anti-ocean dumping regime in Korea is quite unique. While the adoption of the regime itself did not experience much resistance, implementation has faced a severe opposition. The contents and implementation of the anti-ocean dumping policy has gradually evolved, yet it cannot be concluded that the policy took root completely.

Richard Matland's Ambiguity-Conflict model provides the basis for research framework. It presents policy ambiguity and conflict as two main variables that define the stage of implementation. Based on the Ambiguity-Conflict model, this study analyzes the anti-ocean dumping policy in South Korea and why the policy has gone through many changes in terms of policy goal ambiguity and conflicts among related actors exhibiting different characteristics in each time.

This study argues that (1) the high degree of goal ambiguity during the early period of policy implementation resulted from the way in which South Korea had adopted the anti-ocean dumping regime — that is, policy emulation; (2) the absence of coordination mechanism, especially among the central government agencies, has elevated the level of conflict; and (3) South Korea's anti-ocean dumping policy has thus undergone three

different stages ranging from experimental, symbolic to political implementations. This study concludes that the 'adoption' of an international regime does not necessarily guarantee the 'internalization' domestically. 'Policy learning' during the adoption stage and 'coordination' during the adaptation stage are both critical for drafting an effective policy implementation.

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**Keywords: Ocean Dumping, London Protocol, Policy Diffusion, Internalization, Coordination, Ambiguity-Conflict Model**

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# I . Introduction<sup>1)</sup>

## 1. Purpose of the study

Ocean dumping refers to disposal of waste or garbage produced on the land to the sea by ship or airplane. As the land disposal regulations became stricter, many countries started to rely on ocean dumping as a cost-saving, hassle-free alternative. Not until 1960s did people recognize that ocean dumping might have an adverse effect on the marine environment. With growing population and rapid economic expansion, however, the amount of waste soared, making ocean dumping one of the major causes of marine pollution. Especially in 1960s, the ocean dumping from the 1930s emerged as the cause of high concentration of arsenic in the Baltic Sea. With this event, people began to question the safety of ocean dumping and be aware of marine pollution. As a result of the reliance for global cooperation, the members of international community agreed on the London Convention (Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter)<sup>2)</sup> in 1972 and the London Protocol (Protocol to the London Convention on the Prevention of Marine Pollution by Dumping of Wastes

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1) An earlier version of this thesis was published in the journal entitled *Korean Policy Studies Review* in June 2014. This work was supported by the Asia Development Institute at Seoul National University.

2) The purpose of the London Convention is to prevent marine pollution by controlling any kind of ocean dumping in internal waters. Currently, 87 states including the United States, France, Germany, the United Kingdom, Russia and South Korea are Parties to the Convention. It is one of the first global multilateral agreements that controls the dumping issue. This Convention provides minimum criterion for international society, rather than complete ban on ocean dumping. It encourages each county to have its own stricter regulation, thus restrains dumping at sea (Koo, 2013: 89).

and Other Matter)<sup>3)</sup>, a modernized version of the London Convention in 1996 (Kim, et al., 2001; Hong, 2011).

South Korea supported the effort of international society for eradicating ocean dumping, joining the London Convention and its protocol in 1993 and 2009, respectively. The process of adoption and internalization of anti-ocean dumping regime, however, did not go smoothly. The reason is neither ocean dumping companies nor central and local governments were ready for the transition. For instance, a big food waste sludge issue attracted vast social and political attentions in August 2011 due to the 40-day strike of workers from ocean dumping industry. Fortunately and gradually, the anti-ocean dumping policy seemed to go on smoothly by satisfying every interested party. But in 2013, a hidden conflict between the food waste disposal company and the local government resulted in an uproar of food waste. Meanwhile, the sudden change of imposing a full ban on ocean dumping from the government by the end of 2013 had shed a light of uncertainty as the bill was supposed to be in effect from January 1, 2014. The end result led to a two-year suspension for the ban, adding another two years of dishonor, that put South Korea in the spotlight for being the only dumping country among OECD (Organization for Economic Cooperation and Development) members.

The process of transitioning from an international regime to domestic regime generally unfolds in two steps: (1) diffusion and adoption between countries and (2) adaptation and internalization in the country. The former can be seen as necessary condition and the latter as sufficient condition. It is meaningless to adopt an

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3) Parties to the London Convention adopted the London Protocol after having strengthen restrictions through several amendments. The protocol impose far stronger regulation on ocean dumping than the Convention. It took positive list system (or reverse system, contrary to 'black list' from the London Convention), which prohibits the whole dumping except very limited number of waste (Lee, et al., 2006b ; Hong, 2011).

international regime unless it is followed by internalization. In most cases, it requires a lengthy period of implementation and procedures for a country to adopt an international norm, which can be very intriguing topic for policy change study.

From a comparative political perspective, the process of adoption and internalization of the international anti-ocean dumping regime in Korea is quite unique. While the adoption of the regime itself did not experience much resistance, implementation has faced a severe opposition. The contents and implementation of the anti-ocean dumping policy has gradually evolved, yet it cannot be concluded that the policy took root completely.

Why is the anti-ocean dumping policy in South Korea still drifting even with long preparation period and consensus for the policy? Why did Korean government decide to hold the notorious status of 'dumping country' for additional two years when it supposed to strive for improving its honor? These are the fundamental questions the study aims to solve. To answer these questions, both the characteristic of adoption process of international regimes and its effectiveness on internalization process needs to be analyzed. But there has been little academic research on this issue. Most studies are dichotomous with either executing an extensive focus on international legal system or focusing on designing institutions for anti-ocean dumping policy. No research has ever been conducted with a core focus on policy change from the formation to implementation of policy. From this perspective, this paper analyzes the fundamental cause of obstacles affecting the implementation of anti-ocean dumping policy in South Korea by offering an integrated viewpoint of three different theories: policy diffusion theory, policy coordination & collaboration theory, and policy implementation theory.

This study set its basis for framework in 'policy implementation theory.' It uses Matland (1995)'s 'Ambiguity-Conflict model' for analysis. The reason for choosing

Matland's model is that it presents policy ambiguity and conflict as two main variables that define the stage of implementation. This study aims to examine the anti-ocean dumping policy in South Korea and why the policy has gone through many changes in terms of policy goal ambiguity and conflicts among related actors exhibiting different characteristics in each time. In this sense, Matland's model is considered to be able to provide solid criteria to define distinctive stages that the policy have undergone.

Also, this study exploits other theories such as policy diffusion theory and coordination/collaboration theory. The need for these theories can be found in the fact that the anti-ocean dumping policy in South Korea was not initiated in South Korea itself. It was developed in the international society and then spreaded through the world. From the viewpoint of this study, the diffusion mechanism during this process had a significant influence on the level of goal ambiguity and the implementation process. Furthermore, as for the level of conflict, this study focused on the poor coordination system, if any, as one of the main causes of the unstable and long-wandered policy implementation process.

The constitution of the study is as follows. In chapter one, general introduction on the purpose of the study is provided. In chapter two, it looks through the international anti-ocean dumping regime and literature reviews on this matter. The need for conceptual framework is pointed out to analyze the policy change process more systematically. In chapter three, a new model combining ambiguity-conflict model of Matland (1995) and policy diffusion theory and policy coordination & collaboration theory is offered as an integrated framework for analysis, setting up hypothesis for the study. Matland (1995) suggests four categories of policy implementation models, namely symbolic implementation, political implementation, experimental implementation, and administrative implementation, depending on the level of goal ambiguity and conflicts

among interested parties.<sup>4)</sup> Regarding the level of ambiguity, this paper (1) investigates the cause of inherent ambiguity in anti-ocean dumping policy by looking into the characteristic of internalization process of the London Convention and its protocol, and (2) decides the level of ambiguity based on the concreteness of policy. Chapter four presents the analysis result for the anti-ocean dumping policy in Korea. According to the preliminary result, the policy has been through three out of four models in the past five years, which are experimental implementation, symbolic implementation, and political implementation models. When Korea officially adopted the anti-ocean dumping regime in January 2009, the most powerful mechanism that shaped the adoption process was 'emulation,' adopting policy in an effort to catch up with other countries, lacking sincere needs and understanding for the policy. This contributed highly to the strong ambiguity in policy goal during the first period of internalization, from January 2009 to August 2011. The policy implementation during this period can be characterized as symbolic implementation model, with the levels of both goal ambiguity and conflicts very high. This resulted in 40-day strike of ocean dumping industry from August to November in 2011. During the second period of internalization (October 2011 to present), the degree of ambiguity has been diminished after undergoing trial and error. However, the conflicts among interested parties became severer as concrete duties and costs were imposed on specific actors. The policy implementation in this period matches with political implementation model, as predicted in the study. The suspension measure in December 2013 acts as an evidence. The implication and limitation of the study will be shown in chapter five.

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4) Each of the implementation model would be discussed in the later section.

## **II. Literature Review**

### **1. The evolution of international anti-ocean dumping regime**

#### **1.1. The London Convention of 1972**

Although the exact point is unknown from which ocean was used as a garbage dump, it has been used as so for hundreds of years. Many advanced countries especially had made full use of it to dispose of dramatically increased amount of waste since the early stage of the Industrial Revolution. It was resulted from the notion that the ocean is able to cope with wastewater almost limitlessly as well as the fact that it is located relatively far away from human residential area.

However, the high concentration of arsenic in the Baltic Sea was found to be the result of dumping containers filled with arsenic in 1930s. People's belief on the safety of ocean dumping started to be replaced due to this event, with pollution from ocean dumping becoming an international issue. Because of distinct nature of ocean that it is connected worldwide, collective effort for regulation was required. Accordingly in 1972 neighboring countries near the North Sea and the Baltic Sea agreed on the Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft, or 'Oslo Convention' for short. It is significant in that the convention was the first one that tried to regulate ocean dumping. The signatories were Norway, Denmark, Iceland, Portugal, Spain, France and Sweden. Other countries such as the United Kingdom, the Netherlands, Finland, Ireland, Belgium and Germany were included later. The London Convention was also designed for the same purpose in December in the same year (Kim, et al., 2001).

The London Convention is considered to be very successful in that it contributed to reduce considerable amount of various kinds of waste. It has widened its coverage from the developed countries of Europe and North America to the underdeveloped countries of Asia, Africa, Latin America and the Pacific area. Furthermore, the efficient operation of consultative meeting not only provided an agora for mediation of opinions and settlement of disputes among the member countries, but also urged the implementation of the convention in each country. In addition, the effort made by some international non-governmental organizations (NGOs) including Greenpeace contributed to the success of the convention by exposing violations of member countries such as Russian dumping of nuclear waste. Still, the need for more powerful regulation was pointed out, as it only presented the minimum standard of permissible dumping condition. It did not have complete control over ocean dumping; like most of the other international conventions, it did not have its own supervisory institution, delegating supervisory task to local organization in each of the signatories. Especially, when it comes to the case of nuclear waste, the prohibition on dumping of nuclear waste was not defined in the convention itself. It was included in the form of a resolution, leaving the compliance to each country's autonomy; dumping of nuclear waste into the sea was not regulated effectively as a result.

Several amendments were followed to reinforce the regulation and make the convention more practical. This process was influenced by some local agreements and the United Nations Convention on the Law of the Sea (UNCLOS) in 1982. Yet, it could not reach a full achievement of regulations. There were still needs for more comprehensive form of regulation and it was the London Protocol in 1996 that was adopted as a result of this needs.



## **1.2. The London Protocol of 1996**

It was during the thirteenth working group meeting in 1990 that the need for new measure that could cope with limitations of the London Convention arose. The need for more 'fundamental' change was brought up during the meeting. The fourteenth working group meeting in 1991 approved it through a vote. In the following year, the fifteenth working group meeting agreed on hosting a meeting for revision and deciding its schedule. Finally, the London Protocol was adopted in 1996 at the special meeting held in IMO head office, after three years of amendment since 1993.

The London Protocol prohibits all dumping as a rule and incineration activities, imposing much more powerful restriction on ocean dumping. Despite its name, 'protocol,' it is closer to a whole new version in terms of system and level of regulation. It was adopted to aim for not only protect and preserve marine environment but also prevent and reduce pollution from all sources including dumping and incineration (Lee, et al., 2006a).

The approach the London Protocol takes for regulation is distinct from that of the London Convention. The London Convention permits ocean dumping as long as some conditions are met. It consists of 22 Articles and three Annexes. It takes "black/grey/white list" approach on the waste that is banned or restricted. Each list of waste is specified in the three Annexes respectively. In contrast, the London Protocol bans dumping of basically any kind of waste, except matters listed in Annex I ("the reverse list"). It prohibits virtually all kinds of dumping practices except very few cases, imposing way stronger restriction with 'Negative System' changed into 'Positive System.' It was a product of international society's consensus

on protecting marine environment and expression of its firm will at the same time (Supreme Prosecutor's Office of South Korea, 2002; International Maritime Organization; United Nations Environmental Program).

The relation between the London Convention and the Protocol can be summarized as follows.

<Table 1. A summary of the London Convention and the London Protocol>

Category	London Convention 1972	London Protocol 1996
<b>Regulation System</b>	permissive approach with banning on specific materials (amended in 1993 to permit only six specific materials by deliberation - added on Annex I (11))	prohibitionist approach with overall prohibition unless explicitly permitted (reverse list)
<b>General Principle</b>	Precautionary Approach, Polluters Pay Principle <sup>5)</sup>	Precautionary Approach, Polluters Pay Principle
<b>Scope of application</b>	exclusion of application on internal waters	regulations on dumping and incineration applicable on internal waters as well
<b>Objective</b>	regulating dumping at sea	control of all sources of marine pollution (including land-originated source) Ban on incineration at sea

Source: Koo (2013: 91)

### 1.3. Local treaties on marine environment

There are international laws and local treaties concerning preservation of the

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5) According to the explanation by International Maritime Organization, "the London Protocol stresses the 'precautionary approach,' which requires that 'appropriate preventative measures are taken when there is reason to believe that wastes or other matter introduced into the marine environment are likely to cause harm even when there is no conclusive evidence to prove a causal relation between inputs and their effects.' It also states that 'the polluter should, in principle, bear the cost of pollution' and emphasizes that Contracting Parties should ensure that the Protocol should not simply result in pollution being transferred from one part of the environment to another (International Maritime Organization)."

marine environment. First of all, major international conventions include '1958 Convention on the High Seas,' also known as Geneva Convention on the High Seas and '1972 Stockholm Declaration.'<sup>6)</sup>

Also, there exist many local treaties that regulate marine pollution in specific region, although they tend to have fewer contracting parties.<sup>7)</sup> These local treaties play an important role in controlling dumping of nuclear waste at seas in a wide range of regions from enclosed seas to open seas. It was possible by these treaties' adopting reinforced regulations in their terms. A country that is a member of the London Convention and local treaties at the same time is required to abide by regulations from both. This requirement can reap benefits in substantially strengthening the regulation on ocean dumping (Supreme Prosecutor's Office of South Korea, 2002).

Lastly, there is the United Nations Convention on the Law of the Sea (UNCLOS). The third United Nations Conference on the Law of the Sea (UNCLOS III), which took place between 1973 and 1982, agreed on this international convention. The Law of the Sea Convention aims to define duties of nations as well as rights of them on world's oceans. The principles it provides include establishing

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6) During the Geneva Convention in 1958, general rules for global cooperation on preventing pollution of the high seas by ocean dumping and by activities involved with nuclear materials. Several years later, in 1972, the 'United Nations Conference on the Human Environment' was held in an effort to understand the very nature of international environmental issues and to deal with the problem effectively. The Stockholm Declaration was adopted in this conference. Among the twenty six main principles of the Stockholm Declaration, Principle 7 and 21 define each country's duty on protecting the marine environment. An arrange committee established the 'Intergovernmental Working Group on Marine Pollution (IWGMP),' which asserted the need for international convention to effectively regulate ocean dumping issue. Accordingly the 'Intergovernmental Conference on the Dumping of Wastes at Sea' was formed and expedite drafting the treaty. The treaty was originally called 'London Dumping Convention,' yet changed to 'London Convention' during the fifteenth working group meeting in January 1992 to include all kinds of causes for marine pollution (Supreme Prosecutor's Office of South Korea, 2002).

7) Typical examples of the local treaties are followed: 1976 Barcelona Convention for protecting the marine ecosystem of the Mediterranean Sea, 1986 Noumea Convention for protecting marine environment in the South Pacific Ocean and its natural resources, Helsinki Convention for conservation of marine environment of the Baltic, and Oslo Convention for prevention of marine pollution from ocean dumping in the North Sea and Northeast Atlantic Ocean (Ibid.).

guidelines for setting territorial sea, protecting the environment, and the management of marine natural resources. It was adopted for the purpose of establishing new institution as well as codifying common law. It covers a wide range of general issues regarding the law of the sea and treats marine environment protection as an important part (Oceans & Law of the Sea, United Nations). The presence of diverse and interconnected conventions and treaties mentioned above appears to have had influenced countries to join and observe both the London Convention and the London Protocol.

## **2. Existing literature on anti-ocean dumping issue**

There are mainly three categories of researches on the London Protocol, or the diffusion and adoption of anti-ocean dumping regime in Korea.

Firstly, there are studies conducted based on the perspective of international law. Paik (1999) reviewed the process of development on international anti-ocean dumping regime by looking thoroughly into the London Convention and Protocol and other regional agreements. Lee (2008a) analyzed the structure of the London Convention and Protocol in comparison with other international marine environment agreements. Kim (2008) focused on the legal uncertainties generated when the dual structure of the United Nations Convention on the Law of the Sea (UNCLOS) and International Maritime Organization (IMO) Conventions collides and also when there are conflicts among flag states and coastal states. Meanwhile, there are attempts for integrating climate geo-engineering issues into international laws.<sup>8)</sup> Hong (2011)

presented the issues newly emerged with the development of science technology such as carbon capture · storage and ocean fertilization. In the article, it addressed the question whether these are in the coverage of dumping regulations of the London Protocol. Kim (2011) and Park (2011) also studied respectively the impacts of the international agreements including the London Convention and Protocol on the carbon capture · storage and ocean fertilization projects.

Secondly, there are case studies on other countries based on international comparative studies. Kim, et al. (2001) introduced international agreements on dumping at sea including the London Convention, then compared and analyzed cases of other countries such as from U.K., Mainland China and Japan. Moon and Hong (2010) presented an counterplan for the ‘United Nations regional groups’ system, which was adopted in the London Protocol. Lee, et al. (2006b) studied the amendment process of laws in Japan on adoption of the London Protocol. It tried to find an implication on its adoption in Korea through the case of Japan. Also, Choi, et al. (2012) analyzed Chinese declarations to the London Protocol at the time of its accession, which could influence Korea since two countries share part of the Yellow Sea which can lead to environmental dispute between two countries.

Finally, the last category involves the researches for adoptive preparation of the London Protocol. They are concerned about the domestic process on adoption of anti-ocean dumping regime. Noh (1993) reviewed into the legal system in Korea and international society at the time of effectuation of the London Protocol. It also reviewed the legal base of waste dumping system in South Korea and provided the expected policy direction for the anti-ocean dumping policy. Kim (2006) and Chae (2012) reviewed various laws on environmental issues including the Marine Pollution

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8) Studies in this category address the ocean dumping issue in terms of engineering.

Prevention Act. They organized the adoption status of international treaties on the prevention of marine pollution into domestic legal system. Several approaches on accepting un-adopted parts of international treaties into the Marine Pollution Prevention Act were proposed in their articles. Lee, et al. (2006a) looked into the current condition of ocean dumping in Korea and the measure being taken regarding the dumping. It suggested the direction for Korea Coast Guard in implementing the anti-ocean dumping policy in his article. Chung and Kim (2008) paid attention to the phenomenon that dumping at sea was preferred even though livestock manure can be converted into profitable source when disposed on land. It analyzed factors that attracted stock farms to prefer ocean dumping and offered legal solution for the phenomenon. Lee, et al. (2007) reviewed the current status and its problem of ocean dumping in Korea and proposed some ways for improvements.

### **3. Theories on policy implementation**

There are several prominent theories illustrating policy change process or interactions among policy actors such as 'Advocacy Coalition Framework,' 'Policy Windows Theory' and 'Power Politics Theory (Elites Theory).'

Firstly, 'Advocacy Coalition Framework' developed by Sabatier (1999) explains the process where different advocacy coalitions compete to one another to shape a government policy based on their own beliefs (Sabatier, 1999). Core principles of this theory include that actors who share same core beliefs about policies form coalitions and since they agree on the core beliefs they can coordinate effectively. Core beliefs are unlikely to change as long as there is no major external

events (Stachowiak, 2011: 6; 2013: 9). This theory seems considerably well fitted for describing the policy change of the anti-ocean dumping policy in South Korea. First, there are diverse interest groups that can be a match for advocacy coalition. Interest groups sometimes joined up with one another in case that they had similar opinion on an issue. Each group tried to solidify its position on shaping a policy direction, using mass media sometimes and demonstrations such as a strike some other time.

Secondly, 'Policy Window' theory by Kingdon (1995) offers systematic understanding on the agenda-setting procedure. Kingdon viewed the procedure as a combination of 'problem stream,' 'political stream' and 'policy stream.' Problem stream means the process where policy participants perceive the problem. The likelihood that an issue will receive attention varies depending on the tools used by policy-makers and the way of perceiving the issue. Next, political stream means changes in public opinion, regime, or pressure from interest groups. In this stream, inducing agreement via compromise becomes important. Lastly, policy streams means the refinement process of alternative policies by expert group. There can be lots of alternatives but only a few are accepted due to various constraints. Thus, each actor strives to promote one that best matched with its interest (Kingdon, 1995; Kim and Lee, 2011; Stachowiak, 2013). This model well presents the agenda-setting process with the reason for attention on some policies while others do not receive it. Yet, it is valid only when it explains the design stage of the anti-ocean dumping policy in South Korea since it does not provide standard for analyze policy conflict that comes in the implementation period.

Lastly, there is 'Power Politics Theory,' whose basis is on sociology, proposes that the power to influence policies is concentrated in the hands of a few

(Stachowiak, 2011; 2013). It is also known as 'Elites Theory' and it assumes that decision-making in policy takes top-down form in a hierarchical order from elites in the top to public in the bottom, with both the political power and resources concentrated exclusively in elites group. It is quite natural in this kind of structure that the belief and value of elites group, rather than the general public opinion, are reflected in the policy. In fact, the anti-ocean dumping policy in South Korea was shaped in the active interaction among relevant actors who are mainly government officials from different departments. Power Politics Theory has an implication on this study in that the actors can be regarded as elites. However, this approach cannot be fully applied to analyzing the whole process of policy change. The main reason is that the policy was initially provoked with general public awareness on protecting marine environment; it cannot be considered as a product of a top-down approach. Moreover, the characteristics shown in the interaction among governmental officials are not equivalent to elites' power exertion on policy making.

#### **4. Limitations of current studies**

The above researches have various perspectives on a variety of topics regarding to the London Convention and Protocol. Among them, the largest portion is dedicated to international legal approach, whose research focuses are the impact and limit of the London Convention and Protocol in terms of international law. In the meantime, a few researches were done with the diffusion of international anti-ocean dumping regime. However, they are limited in that they only paid attention to the preparation procedures for domestic adoption, merely introducing



cases for policy changes in other countries. None of them covered the actual result of the adoption. Very few attempts have been made so far to focus on the diffusion mechanism and conflicts arisen in the process of domestic adoption of the protocol.

Furthermore, all these aforementioned theories partly provide proper approaches to explain change of the anti-ocean dumping policy. However, no single study is completely matches to the distinctive feature of the anti-ocean dumping policy in South Korea. As for the Advocacy Coalition model, it shows considerable appropriateness to the policy, yet this study selected Matland (1995)'s Ambiguity-Conflict model as a framework for analysis. The reason for this lies in that it seems reasonable and distinctive at the same time to focus on the policy itself, rather than actors surrounding the policy, and check out the changes in the level of goal ambiguity and conflict. Since there has been very few studies examining a policy change in terms of ambiguity and conflict, the selection of Matland's model in this study is expected to yield quite a unique implications.

In this regard, this study examines the reason for evident social conflicts such as strikes in the process of anti-ocean dumping policy implementation despite of a long time for preparation and internalization. The following chapter presents the framework for the analysis combining Ambiguity-Conflict model on policy implementation (Matland, 1995) with policy diffusion theory and coordination theory. Through the framework, it will categorize policy change types according to the seriousness level of ambiguity and conflicts. The international regime of anti-ocean dumping was accepted in South Korea through two steps: accession to the London Convention in 1993 and the Protocol in 2009. The fundamental reason for the delay in anti-ocean dumping policy can be found in the strong ambiguity of policy goal. Moreover, the multiple structures of conflicts consisting of the central

government-local government-relevant industries in private sector contributed to the characteristics of policy change. Further details are followed in the next chapter.

### III. Research Design

#### 1. Framework for analysis

##### 1.1. Matland's Ambiguity-Conflict model

Matland (1995) presented four types of policy implementation with two independent variables, namely 'ambiguity' and 'conflict': low policy ambiguity and low policy conflict for *administrative implementation*, high ambiguity and low conflict for *experimental implementation*, low ambiguity and high conflict for *political implementation*, and lastly, high ambiguity and high conflict for *symbolic implementation*. The four cells in the matrix are below.

Table 2 Matland's Ambiguity-Conflict model

		Level of Conflict	
		Low	High
Level of Ambiguity	Low	administrative implementation model	political implementation model
	High	experimental implementation model	symbolic implementation model

Source: Matland (1995)

*Administrative implementation* is a state where a goal is clearly defined and means to accomplish the goal is well known. Therefore, outcome is determined

depending on resource procurement. The combination of low ambiguity and conflict level provides an ideal condition for a rational decision-making process. Implementation is processed in a hierarchical manner with each underlying link receiving rational orders from the level above. The information needed for accomplish tasks in each level is given and flows from the top down. Actors in each level have clear understanding on their missions and responsibilities. This is possible mainly because the actors in this model are stable over time, thus being able to develop standard operating procedures. This whole process can be compared to a machine that is operated in highly systematical order, as Matland (1995) presented. For administrative implementation, where levels of conflict are low, normative compliance mechanisms are generally sufficient.<sup>9)</sup> These characteristics of administrative implementation fit into the traditional top-down approaches.<sup>10)</sup>

*Experimental implementation* is a state with high policy ambiguity and low policy conflict. In this type of implementation, preferences of actors toward policy goals and means are vague and the requirements of technology are sometimes uncertain. As a result, contextual conditions play an important role of determining the process. This implementation model is analogous to a “garbage can” policy process in that both have high degree of uncertainty and randomness in policy process. Outcomes depend heavily on the resources and actors present in the micro

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9) Matland exploited Etzioni (1961)’s concept of eliciting compliance to explain different policy implementation process in each model. there are three types of mechanisms for gaining compliance from an actor: normative, coercive, and remunerative. In normative mechanism, compliance is obtained through common goal among related actors or the legitimacy. In contrast, coercive mechanism usually imposes restrictions to those who do not comply. The last type of gaining compliance is a remunerative mechanism, which mobilizes incentives. It provides incentives to actors in return for desired action of the actor (adapted from Matland, 1995: 161).

10) “When a policy is characterized by a high degree of consensus and the means for reaching the policy goal are known, the implementation process becomes dominated by technocratic questions of compliance and follow-up (Ibid., 162).”

implementing environment due to strong policy ambiguity. These are likely to vary strongly from site to site; therefore broad variations in outcomes will occur. Matland (1995) explained the cause of this variation with differences in “the pressures on the actors, the perceptions of what the policy is, the available resources, and possible programmatic activities.” Since the conflict does not exist or is not strong, if any, the participation of one actor can play a significant role in shaping a policy. Furthermore, the low level of conflict can also provide an opportunity for the government or policy makers to experiment and learn about the new policy.

In *political implementation*, the level of policy ambiguity is low yet the level of conflict is high. That is, actors have clearly defined goals but dissension occurs because these goals are incompatible. These actors strive to accomplish their own purpose. As a result, implementation outcomes are decided by this power game, which is a highly political process as implied in the name of this model.

While it is comparatively easy for the *administrative implementation* model to attain policy compliance from actors, it is almost impossible to apply the same mechanism in the *political implementation* model. The implementation process involves two stages: (1) procure compliance from actors who are critical due to their influence on social, economic or political meaning and (2) prevent the process from being hampered by opponents of the policy. It is essential for a policy to succeed by reaching an agreement and cooperation among the related actors. However, in some cases, some actors might not want to cooperate. In this circumstance, an actor or a coalition of actors sometimes exerts influential power to

force their will on other participants, which can be presented as coercive mechanism. In other circumstances, when no actor including the government has sufficient power to interfere, then it will be a possible alternative to start bargaining in order to reach an agreement, which is equivalent to remunerative mechanism.

Lastly, *symbolic implementation* is a state where there are severe conflicts despite of high degree of ambiguity in both policy goals and means. It is general that ambiguous policy goal diminish conflict since clearly defined policy goal, rather than vague one, is more likely invoke resistance from opponents. In this sense, it may seem implausible that a policy is highly ambiguous and conflictual at the same time, which is the very characteristic that is the key point of *symbolic implementation*. Matland (1995) explains that this phenomenon does occur in the real world because “policies that invoke highly salient symbols often produce high levels of conflict even when the policy is vague (Matland, 1995: 168).” That is, although the policy goal itself is not clear, conflict among actors can be severe if the policy carries salient symbolic meaning that is critical to some actors.

Along with *political implementation*, power matters in policy outcome. Yet, more roles for expert group are required since the ambiguity of the policy goal itself is higher than political implementation. This process can particularly be severe in that each actor presents different interpretations from the ambiguous policy goal and compete to shape the direction for policy implementation in favor of itself. In the process, the actors tend to interact with one another and sometimes form coalition strength. Distinct aspect about it is that the local level context becomes

significant. In a clearly ordered system with definite policy goal, it is the central authority that is most important in implementing the policy. However, in a situation with ambiguous policy goal lacking clear order, local level conditions such as coalition strength of actors who controls the available resources determine the policy direction (Matland, 1995; Yang, 2012).

This model provides systematic classification on implementation types with two significant factors in policy implementation: the level of ambiguity in policy goal and the level of conflict among interest groups. However, it fails to offer us a suitable framework of analysis in the study since it does not include detailed explanation on the concepts and cause of ambiguity, and specific factors that cause the degree of conflicts. Thus, the aim of this study is to set up more concrete framework, with policy diffusion theory explaining the ambiguity of policy goal and collaboration externalities accounting for the degree of conflict.

It is theoretically possible that the two independent variables, namely the level of ambiguity and conflict, may have multicollinearity. Matland (1995) also indicates that “goal conflict and ambiguity often are negatively correlated.” Yet, in this study on anti-ocean dumping policy in Korea, the level of conflict changed independently while strong goal ambiguity decreased by lapse of time.

## **1.2. Goal ambiguity and policy diffusion mechanism**

Policy goal refers to a desirable state achieved by the policy (Chung, et al., 2006: 34). The ambiguity of policy goal can be divided into four categories:

mission comprehension ambiguity, directive ambiguity, evaluative ambiguity, and priority ambiguity. When the concept of ambiguity is defined as the degree of existence of competitive interpretations, mission comprehension ambiguity involves with the understanding and explanation for the focal point of mission. The more one misinterprets the reason for his goal, the greater the ambiguity will be result in. Likewise, directive ambiguity and evaluative ambiguity are about the possibility of alternative interpretations on detailed guideline for actions and methods for evaluation, respectively. Lastly, priority ambiguity is related to the confusion among actors caused by existence of different goals at the same time. The level of goal ambiguity can be high although each goal has a clear objective and direction, since they are sometimes incompatible and priority of the goals is not set (Chun, 2004; Chun and Rainey, 2005).

Policy ambiguity can lead to misunderstanding of the legislation and could ultimately result in policy failure (Cohen, et al., 2005). Anti-ocean dumping policy in South Korea started with a prolonged period of high degree of goal ambiguity. The solution for long-standing ambiguity lies in the process in which anti-ocean dumping regime was adopted in South Korea. Particularly in case for domestic internalization of international regime, the goal ambiguity was directly influenced by diffusion and adoption mechanisms.

Simmons et al. (2006) and Marsh and Sharman (2009) presented four types of mechanisms of policy diffusion depending on the spontaneity of states; namely, coercion, emulation, competition and learning mechanisms (Lee, 2008b; Bae, 2010).<sup>11)</sup>

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11) Extant explanations on policy diffusion mechanisms can be summarized and generalized by four



The first mechanism is ‘coercion.’ Powerful countries can explicitly or implicitly influence the probability that weaker nations adopt the preferred policy by manipulating the opportunities and constraints encountered by target countries, either directly or through the international and nongovernmental organizations they influence. The goal of policy in a country is very likely to be ambiguous when coercion occurred, since the country adopts a regime with little self-motivation.

Second mechanism is ‘emulation.’ It is generally impossible for policy makers to determine what defines the best policy. Furthermore, policy itself changes constantly. Thus, policy is accepted not necessarily in rational ways. Advanced countries may serve as exemplars, and experts become advocates for certain policies, or even based on the psychological proximity among nations. Some policies are adopted even when the policy-makers are aware of their inefficiency to convey a connotation towards the domestic or international society. In other words, countries often perfunctorily adopt a policy despite of its goal ambiguity due to the reputation cost and peer pressure from the international society. In this case, the

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types of mechanisms presented in this study with researches by Simmons et al. (2006) and Marsh and Sharman (2009). For example, Weyland (2005) focused on distinctive features of policy diffusion process in regard to temporal and spatial dimensions; the diffusion of a policy draws S-shaped line when it comes to cumulative frequency of policy adoption over time. Moreover, it displays a typical geographic pattern where models spread first in the region in which they originate and only later reach other areas. It shows that the regional proximity plays an important role in diffusion. Weyland (2005) proposes ‘causal mechanisms driving diffusion’ consisting of external pressure, symbolic or normative imitation, rational learning, and cognitive heuristics, respectively. These classifications almost overlap with those presented in this study; coercion, emulation, competition and learning mechanisms. The external pressure exerted by powerful international organization or a country is the key element that explains the principle for ‘coercion.’ In similar way, symbolic or normative imitation corresponds to ‘emulation’ and ‘competition.’ Finally, rational learning and cognitive heuristics can be compared to ‘learning’ in this study. The difference between emulation and competition may lie in the difference between ‘quest for legitimacy’ and ‘pursuit of interests’ (Weyland, 2005: 265-271).

level of ambiguity is lower than that of coercion mechanism, yet higher than those of competition and learning mechanisms.

‘Competition’ is the third mechanism, which is a more decentralized mechanism than coercion or emulation. Policies are spread in the process of international competition. In other words, countries accept a certain norm or regime because it yields advantage under competitive situation, that otherwise would not be accepted. It is natural to expect that the ambiguity level would be relatively lower than those of coercion and emulation mechanisms.

Lastly, there is ‘learning’ mechanism. Policies change through learning when new evidences emerge. Decision-makers in one country learn by other countries’ cases as well as from its own experience. Learning mechanism has the strongest spontaneity among the four mechanisms and well-defined policy goals are likely to be presented through this mechanism (Simmons et al., 2006; Lee, 2008b; Marsh and Sharman, 2009; Bae, 2010).

The most eminent mechanism that influenced the adoption of anti-ocean dumping in Korea was emulation. The core idea of the London Convention and Protocol is to ban any kind of dumping at sea, which started from the deep consensus of international society. At first, South Korea did not sympathize with this concern from the international society. As time goes by, South Korea was pressured by the international society for the marine environment, as there has been a steady increase of states participating in the London Protocol.<sup>12)</sup> In addition, IMO has held annual meeting to check the observance of the regulation and advertised

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12) The London Protocol started with one states (Denmark) in 1997. It gained average of three states each year joining in and had 37 Parties in 2009 when South Korea participated in. Currently, there are 43 Parties in 2014.

to urge more states to join in. All of these functioned both as a pressure and a motive for policy emulation. Thus, the ambivalence from the South Korean government is reflected on its stance; it was aware of the paradoxical conflicts when its government advocated green development while still engaging in ocean dumping that could cause environmental disputes with neighboring countries.<sup>13)</sup> As a result, the anti-ocean dumping policy was implemented with strong ambiguity although it gradually dissipated.

The diffusion mechanism of emulation led to the two specific characteristics of goal ambiguity: mission comprehension ambiguity and priority ambiguity. At the beginning of the adoption, there was very little, if any, understanding on the needs of regulation on dumping at sea. After having some time for understanding the mission for anti-ocean dumping regime, mission comprehension ambiguity was relieved. Yet, there was still another source of strong goal ambiguity, the priority. In fact, the Ministry of Maritime Affairs and Fisheries (Ministry of Land, Transport and Maritime Affairs, from February 2008 to March 2013) has long experienced confusion regarding setting the priority. It needs to advertise the aftermath of dumping issues in order to implement the regulations effectively. At the same time, however, it has to promote fishery industry, which can be negatively influenced by dumping and marine pollution issues. These two

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13) The South Korean government did advocate environmental-friendly development during the period when the adoption of the London Protocol was discussed. the slogan for the government of the former president Myeong-bak Lee was 'Green and Sustainable Development.' During his terms, Lee made almost all government departments to design policies that are related to promoting environmental-friendly development, although the actual accomplishments it achieved are not clear and remains skeptical. The 'green' motto disappeared with current president, Geun-hye Park.

incompatible policy directions engendered confusion and led the policy to be highly ambiguous.<sup>14)</sup> Detailed are covered later in the paper.

### **1.3. Policy conflict and coordination externalities**

Policy conflict refers to a situation where different ideas or interests collide in the process of policy operation. Conflict plays an important role as an independent variable in Matland's model, yet it does not cover the concept of conflict in detail. Although various causes can exist on policy conflict, one specific aspect needs to be examined as the main cause of conflict for more thorough analysis.<sup>15)</sup> This study of ocean dumping regards the problem of coordination as the fundamental source that led the policy to extreme conflict. Coordination externalities<sup>16)</sup> can particularly account for the conflicts in the anti-ocean dumping

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14) The dilemma that the Ministry of Maritime Affairs and Fisheries had faced was resulted from two irreconcilable policy goals. Traditionally the number one priority for the department was to protect and promote the fisheries business. For this goal, it had emphasized the clean and clear seas of South Korea and their healthy marine ecology. However, as the ocean dumping issue received great interest, it also had to stress the seriousness of maritime pollution, which was the opposite to what it had been emphasizing. Confusion aroused in this situation kept the department perplexed in setting the priority, thus making the policy goal highly vague.

15) Various factors have been counted as causes for policy conflict. Among them are inability of acceptance, inability of comparison and uncertainty (Simon and March, 1958), Asymmetry in power and power struggle also result in policy conflict (Hall, 1991). Meanwhile, the cause for conflict can be divided into macroscopic aspect and microscopic aspect. Factors in macroscopic aspect includes competition involving incompatible goals and limited resources. On the other hand, discrepancy in role expectation, attitudes, recognition on problem and miscommunications can be seen as factors in microscopic aspect (Litterer, 1966; Schmidt and Kochan, 1972; Stewart, 2006; Kang and Kim, 2013).

16) Choosing the sides of the road on which to drive, for instance, requires coordination. If all the members of a society reach an agreement and adhere to it, the safety and efficiency of traffic can be achieved. Coordination is the factor that makes different ideas come together and communicate, and thus, in this case it affects the whole society positively. As this case elucidates, coordination externalities arise when there are more than one equilibrium and it is success or failure of coordination that can move actors to higher-output or lower-output equilibrium.

policy, where multi-layer interests and preferences exist among the central government & local government, and private business. The coordination externalities refer to the effects of presence or absence of coordination among different actors that affect them in a positive or negative way. Quite naturally, the coordination mechanism for different actors, along with a diverse policy goal and cognition of current condition is required. It is expected that the level of conflict would be low with the presence of policy coordination mechanism that can put various interests together in the process of policy formation and implementation. This is because the mechanism can operate as an independent organization that reconciles disputes among interest parties that cannot easily reach an agreement by themselves. In other words, conflicts among different actors can be relieved through communication and compromise with a hybrid coordinator (Ju and Hong, 2001). According to Rodrik (2008), the 'coordination and collaboration council' consists of representatives of every field of interested parties and performs as a bridge of information exchange and social learning.<sup>17)</sup>

The adoption and implementation process of anti-ocean dumping was continuous conflicts among interest groups. Parties involved in conflicts are mainly divided into two divisions: 'government sector' that deals with the implementation of the anti-ocean dumping policy and 'private sector' that generates profits with ocean dumping. In fact, the most aggressive opposition groups were ocean dumping companies and pork industry that had used dumping to dispose muck. Food waste disposal companies that reacted against the increased amount of food waste and its

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17) By referring the coordination and collaboration council, Rodrik (2008) suggests the establishing of a device that can act as a coordinator. It can be either a formal institution or a mechanism.

disposal cost also belongs to private sector. However, it is noted that the fundamental reason for the conflicts lies in miscommunications and absence of coordination between main actors: the central and local governments, and again, Ministry of Environment and Ministry of Land, Transport and Maritime Affairs (currently 'Ministry of Maritime Affairs and Fisheries') from the central government. Followed is a table that shows various actors related to anti-ocean dumping policy.

Table 3. Key actors in the anti-ocean dumping policy process

Sector	Organization		Role
Government	Central	Ministry of Land, Transport and Maritime Affairs (Currently, Ministry of Maritime Affairs and Fisheries)	<ul style="list-style-type: none"> <li>• Preparing countermeasures 1</li> <li>• Advocating the interest of its client industry</li> </ul>
		Ministry of Environment	<ul style="list-style-type: none"> <li>• Preparing countermeasures 2</li> <li>• Advocating the interest of its client industry</li> </ul>
		Ministry of Food, Agriculture, Forestry and Fisheries (Currently, Ministry of Agriculture, Food and Rural Affairs)	<ul style="list-style-type: none"> <li>• Preparing countermeasures 3</li> <li>• Advocating the interest of its client industry</li> </ul>
		Ministry of Knowledge Economy (Currently, Ministry of Trade, Industry and Energy)	<ul style="list-style-type: none"> <li>• Preparing countermeasures 4</li> <li>• Advocating the interest of its client industry</li> </ul>
	Local	Local government	<ul style="list-style-type: none"> <li>• Implementing policy from central government</li> </ul>
Private	Ocean dumping industry, Pork industry, Food waste disposal industry		<ul style="list-style-type: none"> <li>• Opposing to the policy</li> </ul>

There was an absence of communication and coordination among departments in the central government during the early period of adoption. This led to confusion and conflicts between the central and local governments later in implementation stage. Eventually, these intergovernmental conflicts caused strikes by the private sector. Strikes are the most extreme way of protest, and thus, the fact that there were strikes can be interpreted as an indicator that the conflict reached its peak. The anti-ocean dumping policy in South Korea experienced two major strikes in 2011 and 2013 respectively. During these strike periods are classified as the periods with highest degree of conflicts among actors.

## **2. Propositions**

From the discussion above, four propositions are drawn. When the levels of goal ambiguity and policy conflict are both high, the policy implementation will go through symbolic implementation model. When the level of goal ambiguity is high while policy conflict is low, the policy will be implemented in experimental implementation model. With low goal ambiguity and high degree of policy conflict, the policy implementation will show the characteristics of political implementation model. Lastly, when both the goal ambiguity and policy conflict are low, policy implementation will resemble administrative implementation. These four propositions can be summarized as follows.

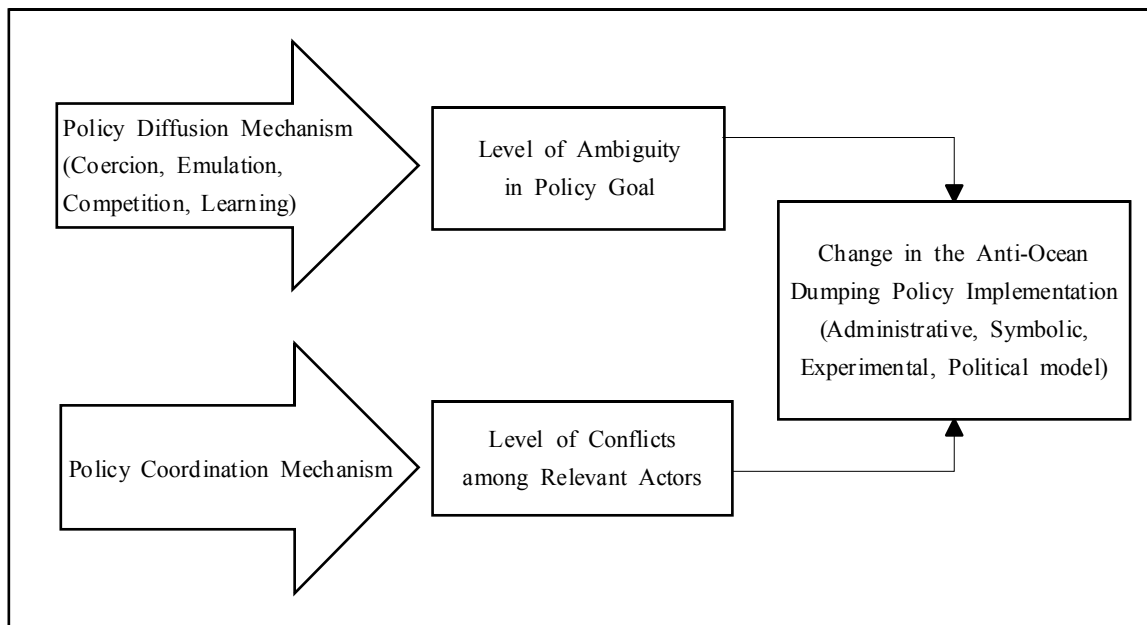
P<sub>1</sub> : High ambiguity and high conflict → Symbolic implementation

P<sub>2</sub> : High ambiguity and low conflict → Experimental implementation

P<sub>3</sub> : Low ambiguity and high conflict → Political implementation

P<sub>4</sub> : Low ambiguity and low conflict → Administrative implementation

Table 4. A conceptual framework



### 3. Methodology

This study used a qualitative research design, borrowing tools from case study such as archive research analysis and open-ended interviews. Case study methodology was determined to be the most appropriate way to analyze the



anti-ocean dumping policy in South Korea, since it focuses on the hidden stories that has shaped the formation and implementation of the policy. The case study method can be very useful for examining contemporary events, such as the implementation of a piece of legislation. Through such sources of evidence as direct observation, systematic interviewing, and document review, it can provide a “holistic investigation of some space- and time-rooted phenomenon” (Lofland and Lofland, 1995: 21). Since this study does not aim to control any actors, there is no need for experimental or quasi-experimental methods to be exploited (Yin, 1994; Cohen, et al., 2005).

#### (1) Archive research

Literatures and relevant documents were reviewed to looking at the footsteps of the anti-ocean dumping policy in South Korea. First of all, researches done by other researchers who had focused on relevant issues such as the London Convention and its protocol, international regime and cooperation for protecting the marine environment provided both detailed information and fundamental insight to this study.

Relevant documents include press release and the National Assembly records from related departments such as the Ministry of Maritime Affairs and Fisheries, the Ministry of Land, Infrastructure, and Transport, and the Ministry of Environment. Since this study tries to review governmental policy and its implementation process, contents of press release have significance for capturing

subtle changes in each government department's stance on the anti-ocean dumping policy. Another merit of the press release is that it shows clear source of origin, even the names of officials who were in charge of the policy and press release material. In this sense, these data facilitated the examining the policy change process.

## (2) Newspaper contents analysis

The news articles from different papers in South Korea will help to understand the process of policy implementation, with different perspectives from diverse interested parties presented. The main focus for the newspaper content analysis is to observe the social reactions caused by the anti-ocean dumping policy. This study took a look at newspaper articles from not only major companies such as Chosun Ilbo, Joong-ang Ilbo and Dong-A Daily News, the three largest newspapers in South Korea, but also other various publishers. This is because it is sometime the small and medium sized newspaper companies that carry unpopular news that draws little attention from the public.

The problem inherent to using newspaper contents is that sometimes these contents are biased. To solve this problem and maintain objectivity of research, this study compared multiple articles on the same topic. The contents were used for analysis only after they are ascertained to be consistent with each other.

## (3) Interviews

The hidden facts in the process of the formation and legislation of policy idea can only be obtained by interview with the people who were actually engaged in the policy adoption and implementation. Therefore, interviews with the representatives of each party are required for accurate analysis of the anti-ocean dumping policy.

This study interviewed four people who are experts in their respective fields; former minister Do-yeop Kwon from the Ministry of Land, Transport and Maritime Affairs, government official Jae-heon Jeong from Korea Coast Guard, Dr. Gi-hoon Hong and Dr. Chang-soo Chung from Korea Institute of Ocean Science & Technology. The Ministry of Land, Transport and Maritime Affairs was in charge of ocean dumping issue and the anti-ocean dumping policy from February 2008 to March 2013. The Korea Coast Guard is the institution that has inspected the ocean dumping companies' compliance with rules. The two people from these two main organizations in charge witnessed vividly the grueling process of anti-ocean dumping policy. Also other two people, Dr. Hong and Dr. Chung who are senior researchers in Korea Institute of Ocean Science & Technology could supplement the general information on how the anti-ocean dumping policy in South Korea has been developed, with position of other related government departments and interest groups together.

When direct interview was impossible or unnecessary, the position of the party was represented by its interview with newspaper reporters or announcement written in its official website.

## **IV. Result of Analysis**

From the discussion above, the implementation process of the anti-ocean dumping policy in South Korea can be divided into three stages.

### **1. Adoption period (prior to 2009. 1): experimental implementation**

The first stage refers to the period prior to January 2009. January 2009 was the time when South Korea joined the London Protocol. South Korea started to be involved in the international exertion to prohibit ocean dumping by joining the London Convention in December 1993. One of the main reasons of joining was largely due to the Russian radioactive waste dumping in the Far Eastern waters.<sup>18)</sup> Ironically, however, South Korea officially began ocean dumping in 1988, which was five years before the participation in the London Convention. Dumping was justified in the name of unburdening disposal of waste on land and protecting river and coastal area. Initially, most of the dumped waste was muck but other materials increased throughout the course. For example, in 1993, sewage water sludge started to be dumped into the ocean. Dumping of livestock wastewater and food waste sewage ensued in 1997 and 2004, respectively. With these increased waste, the total amount of ocean dumping multiplied every year during the 1990's. As a result, the

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18) Russia admitted officially that it had been dumping high and middle level radioactive waste in the oceans such as the East Sea, the Sea of Okhotsk, and the Kamchatka Sea. It was ascertained by Russian report on radioactive waste dumping published in March 1993. International society including the U.S., European countries and Far East Asian countries (Korea and Japan, etc.) strongly protested with Russian violation of international law and required it to cease further dumping practice. Still, Russian navy resumed the dumping of nuclear material on October 17, 1993. This led to total ban on dumping of radioactive waste, which had been a controversy for the past ten years, in the sixteenth working group meeting by revising Annex of the London Convention (Koo, 96-97).

amount of ocean dumping reached 9.93 million tons, which was almost tenfold increase compared to the amount in 1990 (Lee, et al., 2006a). The London Convention did not impose any obligation to its parties. Rather, it was a device to stop dispersion of hazardous materials such as radioactive waste by controlling dumping at sea. Therefore, there was no need for the South Korean government to try to reduce or regulate ocean dumping at all cost. However, as time passed, the government faced with pressures from in and outside of country on the protection for marine environment. Only then did it started to consider joining in the London Protocol and this was the turning point of establishing anti-ocean dumping policy in South Korea.

The anti-ocean policy during this period showed high degree of policy goal ambiguity and low degree of conflict. According to the model of Matland (1995), it is expected to present characteristics of experimental implementation. The result of analysis showed (1) policy setting in the absence of certain alternatives and (2) mutations as a result of different contextual conditions, which are characteristics of experimental implementation.

### **1.1. High degree of goal ambiguity**

As for the goal ambiguity, this period especially featured 'mission comprehension ambiguity' among the four aspects of goal ambiguity. It signifies that the government, which was supposed to implement the anti-ocean policy with precise understanding, did not fully understand the essence and appropriateness of the policy. Since the absence of mission comprehension is a reflection on the officials failing to grasp the goal of the policy, mission comprehension ambiguity is usually

accompanied with directive and evaluative ambiguities as well. The officials engaged in the anti-ocean dumping policy did not have a clear perception on the implementation of the policy, not to mention the overall understanding of the situation.

The cause for strong goal ambiguity in this period can be attributed to two aspects. First, it was because of the fact that the adoption process of international anti-ocean dumping regime in South Korea was heavily influenced by emulation mechanism. It is more likely for the policy to have concrete vision and road map when it is adopted through learning and competition mechanism, because these mechanisms are generally equipped with perception on practical needs for the policy. When it comes to the case of South Korea, however, the anti-ocean policy was adopted due to the ‘peer pressure’ and ‘reputation cost’ from international society, without deliberation on the policy.<sup>19)</sup>

Second, different departments were involved in complicated relationship regarding to the design and implementation of anti-ocean dumping policy. As for the London Convention, there was discrepancy between signing and implementing the convention: while Ministry of Foreign Affairs and Ministry of Environment played an active role in the conclusion of treaty in 1993, actual task for implementation was assigned for the Ministry of Maritime Affairs and Fisheries, which was initiated in 1996. Almost all maritime issues were taken over from Ministry of Environment

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19) The Ministry of Land, Transport and Maritime Affairs enunciated, “South Korea, as a participant of the London Convention and the United Nations Law of the Sea, can enhance its national prestige by joining the London Protocol. Also, the government can get higher ground over the conflicts on marine pollution with neighboring countries such as Japan and China.” in its press release about joining of the London Protocol on January 24, 2009. This notion shows the concern of government regarding reputation cost and peer pressure from international society played a main role, rather than environmental awareness. The press release is currently presented in the Ministry of Land, Infrastructure and Transport due to the reorganization of government departments in 2013(Ministry of Land, Transport and Maritime Affairs Policy Q&A, retrieved on June 2, 2014 from [http://www.mltm.go.kr/USR/policyTarget/m\\_24066/dtl.jsp?idx=402](http://www.mltm.go.kr/USR/policyTarget/m_24066/dtl.jsp?idx=402)).

to Ministry of Maritime Affairs and Fisheries, along with the handling of ocean dumping. However, there was a lack of understanding the policy thoroughly, since the ministry did not take part in the process from the beginning. Also, it lacked environmental perspective in itself in that the ministry was initiated mainly as fisheries agency and port administration. Thus, the ocean dumping issue did not draw much attention in the Ministry of Maritime Affairs and Fisheries, although it was the authority in charge.<sup>20)</sup> Gravity of the dumping problem was not addressed until the effectuation of the London Protocol in 2006. The London Protocol, which came into effect on March 24 in the same year, had much stronger binding power than the London Convention. Media and environmental organizations stressed on the seriousness of maritime pollution and advocate the need for an in-depth, thorough regulation. In fact, South Korea did not have any obligation to reduce or regulate ocean dumping; it was not even a member of the protocol. In addition, to abandon ocean dumping meant huge financial burden for the South Korean government, since it had to treat waste on land otherwise could be easily disposed by simply dumping at sea. As media dealt with the dumping issue more frequently and negative public sentiment aroused; however, the government had to consider ways to deal with dumping issues.<sup>21)</sup>

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20) The support for the anti-ocean dumping policy from leadership level in the Ministry of Maritime Affairs and Fisheries seemed to have been meager, although it had taken ocean dumping task since 1996. Not until 2005 did the task receive attention when the Minister Geo-don Oh dealt with dumping issue under the patronage of the president Moo-hyun Rho who had been also the Minister of same department (Interview conducted on February 11, 2014, with Dr. Gi-hoon Hong from Korea Institute of Ocean Science & Technology).

21) For example, KBS aired a documentary named "17 years of ocean dumping, the ocean is now warning," which was about serious status of maritime pollution on November 6, 2005. People were shocked to see severely damaged maritime ecosystem including red snow crabs in deep sea having animal fur on their body. This made many people in South Korea realize the seriousness of dumping problem (Interview conducted on April 5, 2013, with Jae-heon Jeong from Korea Coast Guard).

The government reported reduction program in the Cabinet meeting, starting with amendment on Enforcement Regulations of Marine Pollution Prevention Act. In 2007, the departments involved including the Ministry of Environment and the Ministry of Maritime Affairs and Fisheries began to set countermeasures against ocean dumping waste. South Korean government prepared as such for stricter regulations on dumping issues until it joined the London Protocol in January 2009. Yet, the series of policies devised during this period had strong goal ambiguity. It was because there was no concrete understanding on why and how to implement such a policy, other than general concept of ‘protecting the maritime environment’ or ‘prohibiting ocean dumping’ at that time. The evidence for strong ambiguity can be found in the fact that the consolidation of relevant laws was processed very slowly, as referred later.

## **1.2. Low degree of conflict**

No obvious symptom of conflict between interest groups was observed in this period; there was no room for advocating ocean dumping when the public opinion was inclined for protecting “severely polluted” maritime environment. The cause of the low-degree conflict can also be attributed to the uncertainty on who will be the cost payer. Generally, the more specific goal of a policy is, the higher level of conflict becomes. Since a concrete goal tend to present clear distinction between cost and benefit, it provokes resistance of possible cost payer groups to the policy. In the adoption stage of the anti-ocean dumping policy, the distinction of cost payer and benefit receiver was vague and the regulation itself had not been carried out. As a result, there was little opposition on the policy.



Thus, the level of conflict in this period was low and the government did not rush to refine the relevant ordinances; it did not feel any need for promptness with policy of little conflict. In fact, it took a long time for the anti-ocean dumping policy to have solid legal system. For international regime to be adopted and domestically implemented, relevant ordinance needs to be equipped. However, in the case of Marine Environment Management Act that was effectuated from April 11, 2007, the act provided mere rules of dumping at sea, rather than prohibit it with possible alternatives in accordance with the London Protocol. Later, a bill addressing the need for relevant ordinance and design of countermeasures passed in December 2010. It was not until June 2012 that actual countermeasures were reflected in the bill.

### **1.3. Experimental implementation**

According to the model presented by Matland (1995), the implementation with high level of goal ambiguity and low level of conflict goes for experimental model. The experimental implementation model is where the preference of participants and the requirements of technology are unclear. In this type of implementation, contextual conditions become the most influential factor for the implementation process. Since the policy outcomes depend on environmental situations, a wide range of variation in outcomes is likely to be presented. A policy is sometimes designed simply because it is supported widely without possible implementation tools or technologies. In this case, the policy itself functions as the catalyst for developing new technology (Matland, 1995). The implementation of the

anti-ocean dumping policy actually showed some of the characteristics of experimental implementation model.

As South Korea joined the ranks of advanced countries and the members of to the London Protocol has been growing, the Korean government started to consider joining the London Protocol. However, it was a negative action against pressures from in and out of country and the government was hardly prepare for the protocol. There was little, if any, enlightened recognition on the seriousness of the problem or needs for regulation among governmental officials and facilities for treatment of waste after banning on ocean dumping were not secured. Moreover, there was little consistency in policy at this period. For example, the government permitted temporarily dumping by-product waste of aluminum hydroxide until the end of 2015, while it is banned in the London Protocol. It was due to great importance of disposal cost of the by-product waste in terms of industrial competitiveness.<sup>22)</sup> Eventually, South Korea joined the London Protocol, submitting request for temporal dumping of the by-product waste of aluminum hydroxide. Dumping of sewage water sludge was another case. It was on the acceptable waste list on the condition that there is no other option for treatment. Yet, Marine Environment Management Act (Marine Pollution Prevention Act at that time) only emphasized permission of dumping of sewage water sludge, not referring to the condition of permission (Hong, 2014). This inconsistency was the outcome of perfunctory regulations, rather than sincere approach for internalization of the international anti-ocean dumping regime.<sup>23)</sup>

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22) Aluminum hydroxide was a major Japanese-import substitute. The Ministry of Commerce, Industry and Energy insisted on reservation measure in order to compete with Japanese counterparts. Accordingly, the ban on by-product waste of aluminium hydroxide was deferred until 2016, with gradual decrease yearly. Dumping of the by-product waste was supposed to be banned in 2016 in Japan as well.

23) The South Korean government had implemented policies encouraging ocean dumping from 1997 to 2005. It prohibited landfill of sewage water sludge in 1997 and food waste in 2005. Meanwhile, it gave incentives to those stock farms that exploit ocean dumping to dispose of wastewater by amending relevant laws in 2002 (Chosun Ilbo, August 3, 2009).

As described above, it took a lengthy period of time for the anti-ocean dumping policy in South Korea to have methodical legal system. High degree of goal ambiguity and low degree of conflict were the fundamental cause of this phenomenon. Policy programs made during this period hardly provided alternative solution for the prohibition of dumping. Rather, it simply prescribed list of waste item that can be and cannot be dumped in the sea. For this reason, the programs can be barely considered successful. However, as Matland (1995) pointed out, the South Korean government made full use of the low conflict in solving the strong ambiguity of policy goal. That is, this period functioned as place for policy experiment. Henceforward the policy had more concrete form and it can be compelling evidence for the fact that this period was a testing ground.

## **2. First period of internalization (2009. 1 - 2011. 10): symbolic implementation**

The second stage occurred when South Korea participated in the London Protocol from January 2009 to October 2011. The highlight include the ending point of the strike orchestrated by ocean dumping companies. The anti-ocean dumping policy in this period still had high degree of goal ambiguity and the level of conflict was also elevated, culminating in a strike. According to the framework of the analysis, this period is expected to present characteristics of symbolic experimentation. Some of important characteristics of symbolic experimentation were actually shown in this period: (1) there were multiple interpretations regarding policy

means due to vague policy goal and (2) there was interaction between the central government and private sector interest groups, both being limited in terms of power.

## **2.1. High degree of goal ambiguity**

The anti-ocean dumping policy in South Korea had strong goal ambiguity even after the adoption of London Protocol. Consequently, confusion arose in the implementation process. The government continued to permit dumping at the sea due to the fact that the countermeasures for the treatment of waste that used to be dumped were not fully prepared. It initiated preparatory period and planned to decrease the amount of dumping waste gradually. It was included in the amended Enforcement Regulations of Marine Environment Management Act and processed for pre-announcement for legislation in August 2011, two years and eight months after joining the London Protocol.

In general case, there was room for treatment of waste because there were other possible options such as landfill and incineration. In this case, dumping at sea is banned at first and then the use of landfill and incineration is regulated for reduction gradually. In the case of South Korea, however, both dumping at sea and disposal on land were prohibited by the Ministry of Land, Transport, and Maritime Affairs and the Ministry of Environment, respectively. It was difficult to make ideal alternatives for prohibition of dumping due to the incompatible regulations between two different ministries.<sup>24)</sup>

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24) Interview conducted on February 11, 2014 with Dr. Chang-soo Chung from Korea Institute of Ocean Science & Technology

Meanwhile, the problematic aspect of goal ambiguity in this period was different from what it used to be in the previous period. The most eminent aspect of ambiguity before was mission comprehension ambiguity that came from lack of understanding of the international anti-ocean dumping regime. Fortunately, as time went by, there seemed to be an enhancement of learning process occurred among the officials. In the first period of internalization, however, the priority among different policy goals became the pressing issue.

The priority ambiguity existed both in and among departments. First of all, regarding the priority ambiguity among departments, four different ministries had been confronted: Ministry of Environment, Ministry of Knowledge Economy (Ministry of Trade, Industry and Energy, currently), Ministry of Food, Agriculture, Forestry and Fisheries (Ministry of Agriculture, Food and Rural Affairs, currently) and Ministry of Land, Transport and Maritime Affairs (Ministry of Maritime Affairs and Fisheries, currently). The Ministry of Environment was in charge of maritime pollution before 1996, the year when the Ministry of Maritime Affairs and Fisheries was established. After the creation of the Ministry of Maritime Affairs and Fisheries, the identity of the Ministry of Environment was focused on land, thus making the department lenient with the dumping issue. The Ministry of Knowledge Economy and the Ministry of Food, Agriculture, Forestry and Fisheries espoused ocean dumping so that the industrial waste and muck could be disposed at a low cost. Only the Ministry of Maritime Affairs and Fisheries were at the side which supported the ban on dumping. Yet, there was opposition even in the Ministry of Land, Transport and Maritime Affairs itself.<sup>25)</sup> The reason for this opposition was a

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25) One of the main relevant departments, the Ministry of Land, Transport and Maritime Affairs (currently the Ministry of Maritime Affairs and Fisheries) at that time had two incompatible objectives. On one hand, it wanted to protect the marine environment by effectively restrict dumping at sea. On the other hand, however, there was another important objective that was in

reorganization of government departments in 2008. After the abolition and integration of the Ministry of Maritime Affairs and Fisheries into the Ministry of Land, Transport and Maritime Affairs, the ocean-related task was not able to become priority.<sup>26)</sup> The high degree of priority ambiguity as aforementioned caused a slowdown in the organization of the legal system.

## **2.2. High degree of conflict**

In this period, the level of conflict was elevated, culminating in the strike of ocean dumping companies. The fundamental reason for a strong conflict in this period can be found in the absence of coordination among different interest groups. As mentioned before, there existed different policy goals with priority issues. However, a mechanism that could lead various actors to cooperation was absent. Moreover, frequent change of personnel in each government department made it even more difficult to cooperate.<sup>27)</sup>

Meanwhile, there was conflict between the government and the private sector as well as among government departments. The association of ocean dumping companies, one of the interest groups that would bear the blunt of the anti-ocean dumping policy, had expressed itself against the policy. For example, the president

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collide with the former one: promoting fisheries. The more it tried to address the seriousness of ocean dumping and regulate the problem, the more it damaged the image of clean ocean, negatively influencing the domestic fishing industry. Confusion arose out of this dilemma, making the level of ambiguity high. Although the mission comprehension ambiguity reduced as time passes, it took very long for the policy to have systematic legal structure due to the priority ambiguity. This is evident considering that the policy went into the procedure of 'pre-announcement of legislation' in August 2011, when almost three years have passed from the joining in the Protocol and six years from the Cabinet meeting in June 2006.

26) Interview conducted on February 11, 2014 with Dr. Chang-soo Chung from Korea Institute of Ocean Science & Technology

27) During this period (January 2009 to October 2011), there were six and fourteen times of changes on personnel in the Ministry of Land, Transport and Maritime Affairs and the Ministry of Environment, respectively.

of the association evinced its position in an interview with a press in August 2009, opposing the irresponsible legislation of a total ban on ocean dumping with no countermeasure.<sup>28)</sup> Despite efforts of this kind, however, no special measure was taken and the pre-announcement of legislation went on in August by the Ministry of Land, Transport and Maritime Affairs in 2011. It was nearly impossible for the government whose departments did not achieve amicable communication to design sufficient countermeasures for private sector interest groups.

The whole situation made the ocean dumping companies feel threatened. It elevated the level of conflict to the climax, resulting in a strike of the companies that lasted about 40 days, from August 29 to October 7 in 2011. On the one hand, during this period, large amounts of food waste untreated due to the strike became a social issue, with the stench from rotten food on the streets. On the other hand, the anti-ocean dumping policy was lost since the communication and cooperation among each government department and private sector was impossible. As a result of this, strike, one of the most radical forms of social conflict, occurred.

### **2.3. Symbolic implementation**

According to the framework of this study, the first period of internalization is classified as symbolic implementation model. The anti-ocean dumping policy in

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28) The president said, "The government had actually induced ocean dumping since 1997 in order to prevent pollution on land and make a full use of its small territory. All of a sudden, however, it announced reduction in ocean dumping for protecting marine environment without any prior notice. Thus, the association of ocean dumping companies is opposed to the unprepared government policy, not to the idea of protecting marine environment itself. [...] The reduction policy must be implemented after enough waste treatment facilities are secured. [...] Therefore, the immediate issue is not prohibition on dumping itself, but the development of such treatment system." during an interview with a media (Chosun Ilbo, August 3, 2009).

South Korea was becoming more specific but still had strong goal ambiguity. As for the level of conflict, it reached its peak as seen in the strike in 2011.

First of all, regarding the ambiguity level of the policy goal, various interpretations existed because concrete policy goal was not set up. The different and incompatible perspectives of each department in the government are the evidence. The Ministry of Knowledge Economy and the Ministry of Food, Agriculture, Forestry and Fisheries supported the interest of business and the pork industry in favor of the competitiveness of industry. The Ministry of Environment put emphasis on solving the pollution issue on land. The situation was no different in the Ministry of Land, Transport and Maritime Affairs as well: tasks on the anti-ocean dumping policy that was suddenly added to the department could not get a priority. In addition, the ocean dumping companies insisted on more measures for compensation. All these different interests and perspectives intertwined with one another in the absence of coordination mechanism, thus elevating the level of conflict.

The level of conflict can be high even with an ambiguous policy that has a symbolic meaning, provided it is critical to an interest group. When it comes to the anti-ocean dumping policy, the goal of protecting marine environment could mean a lot to the interested parties even in a vague form. Unlike the early stages of the adoption period, the policy goal carried a more symbolic meaning, yet the fear of the private sector also increased due to the uncertainty of the policy means. The fact that the relevant government departments tried to accomplish their own purposes, rather than discuss solid countermeasures, even though they all agreed on the principle of protecting marine environment, indicates that conflict can arise even with only the symbolic meaning of the policy goal.



Neither a top-down nor a bottom-up approach fit into the symbolic implementation model. It lacks clear policy guidelines to be considered as top-down approach and it is too political in terms of interaction among interested parties to be categorized as bottom-up (Matland, 1995: 170). In the first period of internalization, the central government tried to design a policy for distribution of available resources and provide incentives. However, as conflicts inside government departments and between government and private sector arose, each actor attempted to skew the implementation for their own benefits by mobilizing its resources. One of the characteristics of a symbolic implementation, the phenomenon where power relations among individual actors becomes more important than the authority of a central government, was shown in this period.

### **3. Second period of internalization (2011. 10 - present): Political Implementation**

The second period of internalization ranges from October 2011, the ending point of ocean dumping companies' strike, to present as of June 2014. The policy goal in this period became considerably concrete with a low degree of goal ambiguity. However, the level of conflict remained constantly high, as seen in the uproar over food waste in January and the suspension measure at the end of 2013. This period can be categorized into political implementation according to the framework of analysis. The interested parties still had different and incompatible concerns over one policy goal. Policy compliance was gained through a remunerative

mechanism rather than a normative one because each actor had conflicting interests. Also, the policy outcome was largely determined in the local level, not in the central.

### **3.1. Low degree of goal ambiguity**

The anti-ocean dumping policy in South Korea started to establish a solid legal system with the reduction of the ambiguity level. Other relevant departments as well as the Ministry of Land, Transport and Maritime Affairs (Ministry of Maritime Affairs and Fisheries, after March 2013), the department in charge of dumping issue, clearly understood the need for the anti-ocean dumping policy by this period.<sup>29)</sup> Regarding the priority ambiguity, as the understanding of policy was enhanced, the priority was set and settled in the Ministry of Land, Transport and Maritime Affairs. To illustrate, the department set the standard amount of permission on dumping for 2012 to 2.5 million square meters in December 2011. Also, it completed the plan for total ban of ocean dumping in July 2012 (Ministry of Maritime Affairs and Fisheries Real-name System).

Moreover, the legislation process that had taken many years to develop started to take shape in this period. Notably, parts of the Marine Environment Management Act were revised in June 2012, followed by the pre-announcement of

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29) According to Do-yeop Kwon, the former minister of the Ministry of Land, Transport and Maritime Affairs, he had a strong will for banning ocean dumping during his term of office (May 2011 to March 2013). In an interview for this study, he made it clear that he had a deep understanding of the need for regulating ocean dumping. He perceived that it was for national prestige of South Korea as well as prevention of maritime pollution, protecting fishery resources and public health. He also told that all the relevant departments including the Ministry of Land, Transport and Maritime Affairs and the Ministry of Environment agreed on the need for the anti-ocean dumping policy and securement of waste treatment facility on land (Interview conducted on February 12, 2014 with Do-yeop Kwon from the Ministry of Land, Transport and Maritime Affairs).

legislation of its revised Enforcement Decree and Regulations in August. The pre-announcement of legislation indicates that the policy has a considerable degree of concreteness so that it can function as an independent law and guideline. The act that had been revised founded the provision on supporting measures for the ocean dumping industry.<sup>30)</sup> Meanwhile, it also reinforced regulations on the conditions for dumping at sea, as the first step preparing towards a total ban.<sup>31)</sup> Also, the Ministry of Land, Transport and Maritime Affairs prohibited the dumping of muck and its sludge from 2013 and industrial wastewater and its sludge from 2014 by revising the Enforcement Regulations of Marine Environment Management Act, proceeding with the pre-announcement of the legislation process of each. In October 2013, the Ministry of Maritime Affairs and Fisheries that was established again announced that it would partly amend the act so that the ocean dumping companies could co-register waste carriers to cut their operational cost.

### **3.2. High degree of conflict**

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30) Article 70-2 (Measurement for Supporting Waste Marine Discharging Business) (1) The Minister of the Ministry of Land, Transport and Maritime Affairs can establish proper measurements such as arranging alternative business and closure subsidy in the case of closing down business because of Presidential Decree. <Amended on March 23, 2013>; (2) Necessary matters regarding the measurements in (1) shall be determined by the Ordinance of the Ministry of Land, Transport and Maritime Affairs. <Amended on March 23, 2013> (Korea Ministry of Government Legislation, retrieved June 4, 2014 from <http://www.law.go.kr/main.html>)

31) Article 72 (Obligation of Marine Environment Manager) (1) A marine environment manager shall prepare a disposal result record regarding ocean dumping of waste, [...] and submit it to the Minister or Commissioner of the Korea Coast Guard, and prepare a disposal book and keep it in the vessel or facility. <Amended on March 23, 2013> [...] (3) A waste marine discharger shall store and manage wastes, which are the substance of ocean dumping, as determined by the Ordinance of the Ministry of Land, Transport and Maritime Affairs, and prepare a waste transfer and acceptance deed, as determined by the Ordinance of the Ministry of Land, Transport and Maritime Affairs, and submit it to the Minister. <Amended on March 23, 2013> (Korea Ministry of Government Legislation, retrieved June 4, 2014 from <http://www.law.go.kr/main.html>)

The level of conflict remained constantly high, while the ambiguity of the policy goal was relieved considerably. After the strike of ocean dumping companies, the anti-ocean policy seemed to reconcile those angry demands from interested parties and run well in its implementation. The ocean dumping of sewage water sludge and muck was prohibited from January 1st, 2012, as planned before. The government pre-announced the legislation on August 29th about implementing the plan for a total ban from September 4th. Subsequently, the dumping of food waste sewage and muck sludge was banned from January 1st, 2013. A total ban on ocean dumping was supposed to be achieved officially in 2014, by prohibiting industrial wastewater and its sludge as well. There was no distinctive sign of resistance and it appeared as if there had been no conflict at all.

However, at the beginning of 2013, the truth was revealed that the strong conflict still existed, with the uproar over food waste on streets in Seoul due to another strike. In January 2013, food waste disposal companies went on a strike, insisting on the increase of the food waste disposal commission. They argued that a commission raise was essential since the amount of waste increased dramatically due to the prohibition on ocean dumping and the current commission was fixed at an underestimated price (Chosun Ilbo, January 21, 2013).

At first, it seemed that this conflict resulted from the avarice of private sector businesses. However, in the process of solving the problem, it became known that the appropriate measures had not been taken even though the Ministry of Environment predicted the strike several years ago. The Ministry of Environment expected the conflict and published a guideline for commission raises. Yet, the local governments, including that of Seoul, did not abide by the guideline, which became the target of public criticism. The Seoul Metropolitan Government insisted that there

was no obligation to follow the guideline and that it could not implement the measures prescribed in the guideline because of the cost (Yonhap News Agency, January 22, 2013). This situation reaffirms the significance of the coordination externalities. Soon, the Seoul Metropolitan Government and the food waste disposal companies negotiated and the conflict was resolved with a commission increment. However, this event reminded of how conflict can arise when there is absence of coordination.

Meanwhile, the conflicting goals of each government department were not resolved. The ambiguity in the mission comprehension was relieved with every actor involved agreeing on the need for a ban on ocean dumping. Still, there existed discrepancy in setting the priority among different goals of each department.<sup>32)</sup> No department wanted to give up its goal and interest. The Ministry of Land, Transport and Maritime Affairs (Ministry of Maritime Affairs and Fisheries, after March 2013) persisted on the total ban on dumping at sea, which was supposed to be effective from January 2014. However, an incomplete facility for treatment of the waste instead of ocean dumping put a constraint on the plan. Businesses and existing facilities that were to bear the obligation to treat waste on land severely opposed to the application of a total ban. It led to the opposition of the Ministry of Knowledge Economy (Ministry of Trade, Industry and Energy, after March 2013) and the Ministry of Environment, which represent the interests of businesses and the waste disposal industry. The Ministry of Maritime Affairs and Fisheries had to revise its

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32) According to Do-yeop Kwon, the former Minister of the Ministry of Land, Transport and Maritime Affairs, there were continuous meetings held by directors of relevant departments. The cooperation among departments were essential in that the disposal of waste on land and in sea were in close relation with each other. Prime Minister's Office was the one that played an important role in coordination of different departments. However, he pointed out the absence of more institutionalized coordination system as weakness (Interview conducted on February 12, 2014 with Do-yeop Kwon from the Ministry of Land, Transport and Maritime Affairs).

plans over these limitations. Finally, as a product of political process where incompatible goals conflicted, the suspension of total ban measure was decided in December 2013. The total ban that was planned in 2014 was postponed to two years later, in 2016.<sup>33)</sup> In exchange for the concession, the Ministry of Maritime Affairs and Fisheries imposed enhanced regulations for the next two years.

Some press criticized the suspension measure, describing it as a ‘retreat’ (Seoul Newspaper, January 2, 2014). However, this is not a valid description; rather, it is more appropriate to consider it to be a compromise in the clash of diverse interests. Cooperation among different government departments was essential in implementing the anti-ocean dumping policy successfully. Yet, this very part of achieving cooperation was so difficult that the suspension measure was adopted through a compromise. With this measure, the Ministry of Trade, Industry and Energy and the Ministry of Environment secured more time to prepare for industrial competitiveness and treatment of waste on land, respectively. As for the Ministry of Maritime Affairs and Fisheries, it could revise its plan considering existing limitations and still persist on its original goal, protecting maritime environment, at the same time. All this process is highly political in nature, matching well with Matland (1995)’s political implementation model.

### **3.3. Political implementation**

According to the framework for analysis in the study, this period is classified as political implementation with low ambiguity of policy goal and high

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33) Pre-announcement of Enforcement Regulations of Marine Environment Management Act on October 7, 2013 amended on December 30, 2013.

degree of conflict. After much meandering throughout several years, the international regime for the regulation on dumping at sea has been internalized in Korean society. Other interested parties as well as government officials shared sympathy for the duty of protecting marine environment. Also, the priority was set for the anti-ocean dumping policy, risking the anticipated damages in fisheries. The confusion from both the mission comprehension ambiguity and the priority ambiguity was settled. However, the level of conflict remained continuously high, as evidenced by the strike and the suspension measure.

The characteristics of political implementation model are followed: policy outcome is decided in terms of power relation and bargaining is sometimes used when no actor has the power strong enough to influence other actors to reach an agreement. Moreover, the original policy goal is often modified to negotiated agreement on action because the local level actors have considerable degree of independency. In the anti-ocean dumping policy in South Korea, the strike by the food waste disposal companies was resolved through the negotiation of a raise on commission, which can be seen as a remunerative compliance, or bargaining. Meanwhile, the original policy goal represented by the guideline of the Ministry of Environment was not implemented properly at the local level. These series of events show considerable consistency with the prediction from Matland's model.

#### **4. Current status of ocean dumping in South Korea**

The South Korean government currently operates three seas designated as dumping area; two in the Yellow Sea and one in the East Sea. Dumping of waste at sea is banned as for now, 2014, except some wastewater and wastewater sludge. Complete ban on ocean dumping will be imposed from 2016, ending the long-standing practice of dumping at sea.

Meanwhile, the amount of dumped wastes steadily decreased. It reached its peak in 2005 with 9.93 million cubic meters of dumping and was reduced to 8.81 million in 2006, 6.58 million in 2008, 4.48 million in 2010, 2.29 million in 2012 and 1.16 million in last year, 2013. The Ministry of Maritime Affairs and Fisheries announced that it expected the amount of this year would be only 6 to 7 percent of what it was in 2005, with this trend.

Moreover, the Ministry of Maritime Affairs and Fisheries has been investigating the water quality of the designated dumping areas and influence of harmful substance. It signed a contract with Korea Institute of Ocean Science & Technology (KIOST) for detailed examination on soundness of marine ecosystem and safety of marine product. Another measure it takes to protect marine environment is to manage the three designated areas systematically. It established rest period for the designated areas susceptible for pollution. All of these efforts are aimed for the restoration of damaged seas in dumping areas into the ones vibrant with life and energy through effective and systematic management. It plans to end the current ban on capturing red snow crab from 2016 from which the ocean dumping is completely prohibited by restoration of polluted seas (Ministry of Maritime Affairs and Fisheries Press release).



Table 5. Ocean Dumping in South Korea (1991 to 2013)

Year	liquid					organic sludge				inorg- anic sludge	natural origin waste	mineral waste	fish waste	dredg- ing mate- rial	sum
	hu- man waste	muck	waste water	waste acid & waste alkali	food was- te sew- age	human waste sludge	muck sludge	waste water sludge	sewa- ge water sludge						
1991	0	0	1,105	0	0	0	0	179	0	0	0	0	2	0	1286
1992	499	0	1,148	87	0	0	0	241	0	0	0	0	15	0	1990
1993	929	0	921	125	0	0	0	450	10	10	10	0	20	0	2475
1994	1,124	0	1,040	213	0	0	0	692	129	76	76	0	17	0	3367
1995	1,256	0	1,203	298	0	0	0	1,169	143	87	87	0	13	0	4256
1996	1,562	0	1,500	257	0	0	0	1,374	231	72	72	0	17	1	5085
1997	1,778	52	1,586	249	0	0	0	1,419	266	199	199	0	24	38	5772
1998	1,780	297	1,637	206	0	8	0	1,356	484	182	184	0	13	11	6147
1999	1,746	605	1,311	157	0	24	0	1,607	658	242	5	11	8	70	6374
2000	1,666	765	1,257	107	0	30	0	1,837	920	224	5	119	8	166	6938
2001	1,554	1,126	1,417	67	0	11	0	1,848	1,145	218	6	0	6	273	7398
2002	1,538	1,626	1,520	0	0	12	0	1,794	1,268	336	28	0	5	348	8127
2003	1,593	2,006	1,660	0	0	18	8	1,666	1,364	294	45	0	5	215	8659
2004	1,582	2,346	1,258	0	698	23	10	1,650	1,547	273	31	4	12	315	9434
2005	807	2,745	777	0	1,498	26	19	1,441	1,629	209	18	97	28	635	9294
2006	364	2,607	563	0	1,656	43	15	1,352	1,640	129	14	47	9	372	8439
2007	377	2,020	356	0	1,710	35	10	1,124	1,609	0	14	34	11	153	7300
2008	328	1,461	356	0	1,484	24	11	1,014	1,457	0	14	23	3	409	6175
2009	128	1,172	232	0	1,203	24	12	836	1,161	0	1	9	8	647	4786
2010	15	1,039	308	0	1,100	30	16	867	1,093	0	1	0	9	151	4478
2011	5	794	361	0	1,071	23	11	812	887	0	3	0	4	136	3971
2012	0	0	266	0	1,192	22	0	802	0	0	4	0	2	696	2288
2013	0	0	253	0	0	0	0	900	0	0	4	0	3	6743	1160

Source: Ocean Dumping Management Center<sup>34)</sup>

\*The figure in sum does not include dredging material.

34) Ocean Dumping Management Center, retrieved June 2, 2014, from [http://www.oceandumping.re.kr/web/web/?p\\_name=chart](http://www.oceandumping.re.kr/web/web/?p_name=chart)

## **V. Conclusion**

### **1. Summary of the findings**

This study so far examined the adoption and internalization process of the anti-ocean dumping policy in South Korea. The implementation of the international anti-ocean dumping regime represented by the London Protocol remains in progress as of 2014. During the process, two major strikes in 2011 and 2013. In addition, the total ban on ocean dumping that was supposed to be in effect starting from 2014 was, at the end of 2013, suddenly postponed to 2016. This study postulated that the ‘adoption’ of an international regime does not necessarily guarantee the ‘internalization’ domestically.

In the case of South Korea, it was very distinctive that the properties taken from the adoption process affected that of the internalization process. First of all, the most eminent power that shaped the adoption of the regime was the emulation mechanism. It inevitably encompassed policy ambiguity since the regime was chosen due to the reputation cost and peer pressure from the international society, lacking the true needs and the understanding of the issue. Meanwhile, the strong ambiguity in the policy goal and guideline made it difficult for various relevant interest groups and officials to see their role clearly. For the policy to succeed, coordination of different actors was indispensable with the multi-layered relationship of the central government, the local governments, and the business groups in the private sector. However, no organization that can handle such tasks existed. For this reason, the conflict among actors was aggravated over time. Even though there is generally a

relationship of inverse proportion between the level of conflict and the policy ambiguity, the strong ambiguity affected the level of conflict in direct proportions.

## **2. Policy implications**

This study has several limitations. First of all, regarding the analytical framework, it focused on a single model, the ambiguity-conflict matrix of Matland (1995). The reason for choosing the model was that the changes in the level of policy goal ambiguity and policy conflict in the anti-ocean dumping policy were considered to be very distinctive. There are several prominent theories illustrating policy change process or interactions among policy actors such as ‘Advocacy Coalition Framework,’ ‘Policy Windows Theory’ and ‘Power Politics Theory (Elites Theory).’ Especially, advocacy coalition theory is regarded to become an interesting alternative framework among them. In this sense, this study would have been more extensive if it had integrated and compared both approaches from Matland (1995)’s and Sabatier (1999)’s. Taking another approaches other than Matland’s model will provide further understanding of policy change process.

Furthermore, the analysis depended largely on the literatures and news materials and supplemented it with the interview it conducted. Four experts from different fields were interviewed to better understand the general situations and to keep the objectivity, and interview articles on newspapers were also used. However, more people from other fields that were not included in these interviews would have been helpful to reveal hidden events that occurred during the policy implementation process.

Still, this study has a significance in that it elaborated on the model of Matland (1995) and applied the model to the real world. With the modified analytical framework presented by the study, the anti-ocean dumping policy in South Korea was ascertained to have changed through the experimental, symbolic and political implementation stages. The goal ambiguity of the policy was resolved in the course of time. Yet, the level of conflict increased. When it comes to the ambiguity, it started strong due to the emulation mechanism in the adoption process. The high degree of goal ambiguity resolved itself with the passage of time as all parties realized the importance of the anti-ocean dumping regime.

However, the same was not true for the case of conflict; the conflict level remained high. The reasons for the difficulty in resolving the conflict are the following: first, the issue of resource distribution occurred because there were so many actors and areas that needed compensation while the government had only a limited amount of resources. Second, there was need for a joint decision among different actors regarding the distribution of resources, and the existence of multiple actors with different interests elevated the level of conflict. Third, discrepancy arose among goals of each relevant actor. For example, the goal of government was to effectively prohibit dumping at sea as soon as possible, while the goal of private sector businesses was to maximize governmental compensation, if hampering the legislation of the policy itself was not possible. Meanwhile, there existed another discrepancy between the central and local governments, although both belong to the 'governmental' sector against private sector. All these differences in goals became the cause of conflict. Lastly, the gap in understanding the goal of anti-ocean dumping policy also functioned as one of the main reasons to create a strong

conflict. In this circumstance, the issue of absence of organization for the work coordination remains unsolved.

To conclude, South Korea shall finally be able to clear its name from the dishonor of “the only ocean dumping country among OECD members” when the implementation of the anti-ocean dumping regime is secured to enter the administration stage, the most stable type of implementation. However, the presence of organization for coordination and deliberation is essential to achieve this goal.

Table 6. Summary

	<b>Ambiguity</b>	<b>Conflict</b>	<b>Expected Type of Implementation</b>	<b>Actual Type of Implementation</b>
<b>1st stage (prior to 2009.1)</b>	H	L	Experimental	Experimental
<b>2nd stage (2009.1 - 2011.10)</b>	H	H	Symbolic	Symbolic
<b>3rd stage (2011.10 to present)</b>	L	H	Political	Political

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## 국문초록

### 한국의 해양투기 금지레짐: 정책확산과 집행 과정

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본 연구는 우리나라 해양투기 금지정책의 형성과 집행과정을 정책확산론과 정책 집행론의 융합적 관점에서 분석한다. 비교정치학적 관점에서 볼 때 우리나라의 해양투기 금지정책의 변동과정은 매우 독특하다. 국제규범이 국내로 확산 및 수용되는 과정에서는 별다른 저항이 없었지만 구체적인 정책으로 적용 및 내재화 되는 과정에서는 많은 갈등과 저항이 발생한 것이다. 정책의 내용과 집행방식은 계속 진화해 왔으나 아직 완전히 뿌리내렸다고 판단하기는 이르다.

이에 대해 본 연구는 Richard Matland의 모호성-갈등 모형을 재구성하여 보다 체계적인 분석틀을 제시한다. Matland의 모형은 정책목표의 모호성과 정책 갈등의 두 가지를 독립변수로 두어 정책집행의 단계를 구분한다. 이에 기반을 두어 본 연구는 우리나라의 해양투기 금지정책의 변천을 살펴보고 각 시기별로 정책목표의 모호성과 정책 갈등이 어떻게, 그리고 왜 변화해왔는지를 분석한다.

분석결과는 다음과 같다. 첫째, 정책확산 단계에서 모방기제가 작동함에 따라 해양투기 금지레짐의 내재화 과정에서 상당기간동안 정책목표의 모호성이 지속되었다. 둘째, 조정기구의 부재, 특히 중앙부처 간의 정책 조정 실패가 정책참여자들 간의 갈등을 고조시켰다. 셋째, 지난 20여 년간 우리나라의 해양투기 금지정책은 실험적 집행→상징적 집행→정치적 집행의 변동과정을 거쳐 왔다. 특히 정

치적 집행의 특징을 보이는 최근에는 정책목표 모호성은 낮아졌지만, 정책 대상 집단에 대한 구체적 금지의무 부과에 따라 높은 수준의 갈등이 지속되고 있다. 보다 안정적인 정책집행을 위해서 중앙부처와 지방정부 간의 조정능력 확보가 요구된다.

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주요어: 해양투기, 런던의정서, 정책확산, 내재화, 조정, 모호성-갈등 모형

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