**Title**
Regulatory Ambiguity: How Inter-Office Interaction Defines Japanese Environmental Law



**Author**
Hirata, Ayako

**Publication Date**
2016

Peer reviewed|Thesis/dissertation

# Regulatory Ambiguity:

# How Inter-Office Interaction Defines Japanese Environmental Law

By

Ayako Hirata

A dissertation submitted in partial satisfaction of the

requirements for the degree of

Doctor of Philosophy

In

Jurisprudence and Social Policy

In the

Graduate Division of the

University of California, Berkeley

Committee in charge:

Professor Robert A. Kagan

Professor Calvin Morrill

Assistant Professor Rachel Stern

Professor Christopher Ansell

Summer 2016

Abstract

Regulatory Ambiguity:

How Inter-Office Interaction Defines Japanese Environmental Law

By

Ayako Hirata

Doctor of Philosophy in Jurisprudence and Social Policy

University of California, Berkeley

Professor Robert A. Kagan, Chair

How do frontline regulatory offices make sense of and enforce new ambiguous statutes? In order to understand the process of constructing the meaning of ambiguous law at the street-level, this dissertation focuses on horizontal interaction among frontline offices---does inter-organizational interaction between frontline offices influence their interpretations and enforcement decisions, and if so, how and under what conditions?

Based on a national survey and in-depth interviews with frontline regulators, Ministry of Environment, and regulated entities in the context of the Japanese environmental regulations, supplemented by a two-week period of observations on the frontline in Japan, this research shows that inter-office interaction is as important as the micro-level factors (e.g., institutional factors relating to single office and characteristics of individual regulator) for understanding how street-level interpretations and enforcement decisions develop. Faced with legal ambiguity under a decentralized legal system, frontline offices commonly contact peer offices to make sure that their legal interpretation and enforcement decision is appropriate. Such consultation behavior helps develop shared, consistent understandings of which interpretations and enforcement decisions are within the law—what is referred to as *meso-level schemas* in this research. Such schemas function as generators of legal meaning and sources of legitimacy under conditions of legal ambiguity. The term meso-level signifies that this justification mechanism takes place between the local, micro-level (i.e., by individual regulators and within individual offices) and the macro-level of national legal design and top-down mandates. Meso-level schemas rest on horizontal relationships developed among frontline offices that are informally connected to each other.

Quantitative analyses demonstrate that frontline offices belonging to peer office meeting groups are more likely to contact peer offices, and in general, more likely to stringently enforce the statutes than those not so connected. Also, statistical analyses show that different meeting bodies have developed different levels of enforcement stringency, other

relevant variables being controlled. In summary, quantitative analyses indicate that (1) the meaning of ambiguous statutes is influenced not only by individual, micro-level factors but also the inter-organizational dynamics in which street-level offices are situated, and (2) different inter-organizational bodies can develop different meaning of law.

Interview analyses illuminate how inter-office interaction influences street-level enforcement, and reveal three roles of inter-office interaction in shaping the meaning of law, all of which are conducive to generating consistent enforcement across jurisdictions. First, under legal ambiguity and risk/harm uncertainty, consistent enforcement across jurisdictions can work as an endorsement, a signal showing that street-level rule application is accurate and fair. Second, inter-office interaction offers a prototype of interpretation that other offices can follow, and third, it provides a learning opportunity wherein offices can learn enforcement expertise from peer offices.

By focusing on legitimacy concerns of street-level offices, interview analyses also illustrate why and under what conditions meso-level schemas are employed and why they encourage stringent enforcement. The analyses illuminate the mechanisms of how contingent power dynamics between regulatory offices and regulated entities create a strong need for offices to demonstrate enforcement legitimacy vis-à-vis regulated entities, which encourages offices to utilize meso-level schemas. In addition to the significant presence of regulated entities, scarce public scrutiny over Japanese environmental enforcement reinforces the general implementation tendency to emphasize false positive risk (overly regulating non-harmful business activity) rather than false negative risk (not regulating harmful activity). Moreover, insufficient legal expertise, little access to external sources of arguments, and insufficient internal training can hinder frontline offices from enforcing the statutes under legal ambiguity because of the fear of challenges and objections from regulated entities. Under such conditions, meso-level schemas appeal to street-level offices, especially when offices do not find adequate support for making legal arguments about enforcement that may face challenges from regulated entities. For frontline offices with little enforcement expertise and insufficient internal training, meso-level schemas are effective for eliciting compliance, countering possible challenges from regulated entities, and reinforcing their enforcement legitimacy.

The dissertation concludes by joining empirical findings with theoretical arguments, discussing the conditions under which inter-office interaction can play a role in street-level enforcement in other legal contexts, and elucidating policy implications. By incorporating inter-organizational processes of constructing legal meaning into studies of street-level regulatory enforcement, this dissertation provides a fresh approach to street-

level enforcement, inter-organizational dynamics, and more broadly, the dynamics of administrative legitimacy.

# Table of Contents

# Chapter 1. Introduction & Research Methods

## 1.1 Research Questions

Once a new regulatory statute is enacted, one might imagine that the statute is automatically implemented and enforced at the local level. However, this is seldom the case. For street-level enforcement, a major challenge is dealing with legal as well as factual uncertainty. The legal uncertainty typically stems from the ambiguity of law as applied to particular situations. The factual uncertainty involves the risk of harm to others posed by the regulated entities in particular situations.

First, regulatory statutes are inherently ambiguous because they are usually stated in a general manner, leaving room for street-level officials' discretionary judgment in applying a statute in a concrete circumstance. This is particularly true (a) when a regulatory statute has been adopted relatively recently, and (b) when frontline offices responsible for implementation operate under a decentralized system. In such cases, the absence of precedents, established practices, specific regulations, and instructions issued by higher authorities leaves rule-application to street-level regulatory governance.

The second source of uncertainty is the degree of risk of harm posed by arguably law-violating behavior or conditions. Protective regulation such as environmental regulations or safety regulations are typically designed to prevent potential harm, and therefore, to be enforced before harm actually occurs. Under some circumstances, an ostensible violation does not appear to pose a significant risk of harm. On the other hand, due to the difficulty of fact-finding and the complicated causal connections, it is often unclear to regulators whether or not a particular activity such behavior poses a serious risk of harm. Here, street-level enforcement faces a dilemma. An enforcement decision may turn out to be a false positive, where it regulates an entity that actually does not pose harm. Alternatively, an enforcement decision may end up a false negative, where regulators do not regulate an entity that in fact inflicts significant harm.

How do frontline regulatory offices deal with these uncertainties? The way that street-level decision-making translates regulatory statutes and guidelines into practice determines which regulated categories a case falls into, which cases call for enforcement, and eventually, how effective the regulatory statute will be. When ambiguity of law combines with uncertainty of harm, how does a new regulatory statute develop, unfold, and establish its meaning at the frontlines? This dissertation addresses the following research question: how do frontline regulatory offices make sense of and enforce new regulatory statutes?

This research builds on, combines, and contributes to three areas of literature: socio-legal studies of regulation, street-level bureaucracy, and the neo-institutional sociology of organizations. The neo-institutional sociology of organizations offers a useful theoretical

framework for the current inquiry because it provides a rich understanding about how organizations deal with uncertainty. In particular, the Legal Endogeneity theory shares the same interests as this research in how an ambiguous law is concretized. In order to examine the process of constructing the meaning of law, this dissertation is particularly inspired by the analytical lens focusing on inter-organizational interactions as a way in which organizations deal with uncertainty.

On the other hand, socio-legal studies of regulation and of street-level bureaucracy have offered deep insights about street-level rule-application and the interactive nature of regulatory enforcement. The literature contains different national contexts and various kinds of regulations, including environmental regulation. However, in contrast to the focus of this dissertation, they tend to focus on micro-level factors, namely institutional factors of individual offices (e.g., organizational environments, resources, and organizational culture) and factors of individual regulators (e.g., officers' value systems) in order to understand street-level regulatory enforcement. Horizontal interaction among frontline offices has not been systematically investigated in the regulatory studies and the study of street-level bureaucracy, with a new notable exceptions (Grattet and Jenness 2005; Füglister 2012). This research aims to extend and bridge the above three areas of literature by incorporating a focus on the inter-organizational process into our understanding of street-level enforcement.

Starting with the basic question of how frontline offices make sense of and enforce a new ambiguous statute, this dissertation particularly focuses on role of horizontal interaction between street-level offices. Does inter-organizational interaction among frontline offices influence street-level enforcement, and if so, how and under what conditions? Based on both a national survey and in-depth interviews with frontline regulators and regulated entities in the context of the Japanese environmental regulation, this dissertation argues that horizontal consultation between street-level offices is as important as micro-level factors for the street-level enforcement and for an understanding of how meaning of ambiguous law is shaped at the frontline. Empirical data show that frontline offices commonly contact each other to make sure that their legal interpretation and enforcement decision is appropriate. Shared understandings generated by such consultation behavior, which I call *meso-level schema* in this research, functions as a strategy for frontline offices to minimize the uncertainty and to legitimize legal decision-making under conditions of legal ambiguity. Meso-level schema serves to share enforcement experiences, to evolve a collective understanding of what appropriate enforcement should be, and to realize consistent interpretation. Out of the legitimacy concerns vis-à-vis regulated entities as well as the emphasis on the principal of consistency of law, frontline offices find peer office interaction effective to justify their interpretations and enforcement decisions. As such, this research demonstrates that meso-level schema play a role in developing the frontline meaning of ambiguous law and determining the degree of risk of social harm that deserves regulatory enforcement.

***Case Selection***

This study is a case study of how the Japanese regulatory offices make sense of and interpret a new environmental law, especially the enforcement decisions regarding the exercise of coercive power. The Soil Contamination Countermeasures Act (the SCCA) and the Groundwater Prevention Program (the GPP) under the Japanese Clean Water Act (the JCWA) were chosen as the empirical focus.

Why focus on the Japanese soil and groundwater environmental regulations? First, this empirical location presents a sharp contrast to the empirical scene of Legal Endogeneity theory, offering a good setting for extension of the theory. The Legal Endogeneity theory grew out of research conducted in the United States, and in the context of civil rights laws that rest on private enforcement functions as the main enforcement mechanism (e.g., Edelman 2016). An alleged regulatory violation (such as discriminatory procedures in hiring) is claimed by the entities who are the beneficiaries of regulation (such as employees), and enforcement is attempted through private lawsuits. Once the law is implemented, regulatory officials are not the active enforcers. On the other hand, in the Japanese context, the groundwater and soil regulations are enforced primarily by public officials, and beneficiaries of the regulation (i.e., citizens) rarely bring any lawsuits (see Chapter 2 for details). While the Japanese environmental context shares a basic social structure with the US, such as a democratic political system, decentralized legal system, and ambiguous statues with general language, it presents a different national context, different type of law (environmental regulation), and different degree of private enforcement and court intervention (minimal litigation and minimal citizen involvement in enforcement). The ability to contrast the different combinations of regulatory settings, but yet retain an analytical interest in legal ambiguity, provides a unique opportunity to extend our theoretical insight about how ambiguous law develops.

Second, both soil regulation and groundwater regulations are typical of an uncertain environmental situation where the law is ambiguous. This offers a suitable place to examine the research question. The recent adopttion of the statutes, and the general language on statutes and guidelines, present a high level of legal ambiguity. The soil contamination and groundwater contamination represents a great deal of uncertainty of harm due to the low visibility of environmental damage and the uncertainty of whether a particular facility in fact poses significant environmental harm (see Chapter 2 for details). Moreover, the legal ambiguity and uncertainty of environmental damage can allow room for regulated entities to doubt agencies' interpretation and question whether they should actually receive regulatory intervention. Thus, the statutes offer an opportune setting to examine how street-level regulatory offices make sense of and enforce regulatory statutes under the ambiguity of law and the uncertainty of environmental risk, which is critical for effective, reasonable, and legitimate regulatory enforcement.

***Summary and roadmap***

Through the literature of regulations and street-level bureaucracy offers an understanding of how frontline offices enforce a statute, how various their enforcement approaches can be, and what explains the variance, the literature tends to focus on the individual factors. Horizontal interaction among frontline offices, meaning the inter-organizational process that the neo-institutional perspective finds important in connection with uncertainty, has not been emphasized. On the other hand, the neo-institutional explanation of regulatory process focuses on the role of regulated organizations and underestimates the role of regulatory agencies (Gilad 2014). This research incorporates the idea of inter-organizational dynamics into the current understanding of regulation and street-level bureaucracy.

For enforcement practice, ambiguity of law is common and perplexes frontline regulators. Though the Japanese environmental regulations do not represent all types of street-level regulatory enforcement, this case study presents the fundamental difficulty of frontline enforcement caused by legal ambiguity and risk uncertainty. Such an approach allows this case study's findings to provide an in-depth insight into the unfolding process of meaning-making at the frontline. As such, this research will generate evidence that will be helpful for theory and practice.

This dissertation proceeds as follows: the rest of chapter 1 describes the research methods. Chapter 2 reviews the regulatory contexts and organizational environments in which the interpretation and enforcement of new statutes unfolds. It describes the two statutes in this research, their compliance costs, frontline work environment, demographics of street-level officers, decentralized legal system, and political settings. Based on my interviews, survey, and document analysis, this chapter serves as a backdrop for understanding how frontline offices deal with interpretation and enforcement under uncertainty.

Chapter 3 begins the empirical analysis by drawing a detailed portrait of challenges to the frontline over interpretation and enforcement decision, and the discussion of typology of frontline decision-making under legal ambiguity. With concrete examples from my interviews, this chapter elaborates the dilemmas entailed in street-level enforcement and how frontline regulators perceive such ambiguity and uncertainty. It then discusses regulatory offices' common approaches to ambiguity and uncertainty. As such, this chapter helps to understand why and how inter-office interaction comes into play in street-level enforcement.

Drawing on my in-depth interviews and national survey, chapter 4 focuses on inter-office interaction as a strategy to reduce legal ambiguity. The chapter initially situates the present study in the literature's theoretical contexts, and then presents statistical results showing the relationship between inter-office interaction and street-level enforcement. In the context of Japanese soil regulation, inter-office consultation generally encourages stringent enforcement. Statistical analysis also indicates that there are interactive groups of peer offices and that different meanings of statutes are developed within the groups. My interview analysis supports the statistical analysis with qualitative evidence and highlights the effects of the horizontal dynamics on street-level interpretation and enforcement decisions.

Recognizing the significant role of inter-office interaction, chapter 5 delves into the underlying reasons for it and the conditions under which it takes place and influences street-level enforcement. This chapter sheds light on the offices' needs to achieve enforcement legitimacy in order to justify their decision-making under legal ambiguity. It demonstrates that minimal public scrutiny causes frontline offices to pay more attention to winning legitimacy from regulated entities. In so doing, it shows how the principle of fairness and the demonstration of coherent legal interpretation across jurisdictions achieve this end. Additionally, inadequate enforcement expertise due to limited training opportunities, scarce support from professionals such as lawyers and scientists, and the fear of invoking legal challenges from regulated entities also contribute to the strategy of relying on consistent interpretation to justify the enforcement.

The conclusion, chapter 6, brings together the dissertation's empirical findings and discusses their theoretical, methodological, and policy implications. As a theoretical contribution, this dissertation adds the fresh new perspective of inter-office dynamics to street-level enforcement, and enriches the neo-institutional explanation by showing a link between informal relations among individual actors and inter-organizational dynamics. As the methodological implication, this research makes use of the mixture of qualitative and quantitative analysis, and combines the empirical analysis to theoretical argument. As the policy implication, the statistical analysis in the concluding chapter suggests that inter-office consultation has a positive effect on achieving the regulatory goal. In addition, this dissertation vividly shows that professionalization of frontline regulators and increased public access to enforcement activity are quite important for effective regulatory enforcement. The chapter closes with a call for further comparative research, so that we can build a deeper and more general understanding of how ambiguous statutes are shaped at the street-level and how inter-office network structures influence meaning-making dynamics.

## 1.2 Research Methods

To study the mechanisms with which frontline bureaucrats make sense of and interpret ambiguous law this research employs both qualitative and quantitative methods: (1) in-depth interviews with frontline regulators to determine how they manage the ambiguity of law and the risk of environmental damage in enforcing preventive regulations; and (2) a national survey mailed to every frontline regulatory office in charge of the two environmental regulations to detect overall patterns and to test hypotheses that emerges from the qualitative analysis. In addition, this research also involved (3) two-weeks of frontline observation in a regulatory office, as well as (4) in-depth interviews with the regulated businesses and officials at the national Ministry of Environment. All empirical data were gathered, processed, and analyzed by the author. Data were gathered mainly from July 2013 to June 2015, with some follow-up interviews conducted in January and February 2016.

Analyzing both qualitative and quantitative empirical data is relatively uncommon in regulatory studies and socio-legal studies. The combination of both kinds of research methods enables this study to take advantage of the two approaches: quantitative analysis helps to statistically investigate the relationship between inter-office interaction and street-level enforcement, while qualitative analysis offers a rich and deep insight into street-level offices--how they actually negotiate with regulated entities, determine whether or not to apply the rules in a particular case, and manage the ambiguity of law and the risk of environmental damages.

### In-depth interviews

This study conducted in-depth interviews with the frontline offices in charge of the SCCA and the GPP, Ministry of Environment, and the regulated entities. The author conducted a total of 59 interviews with 88 participants, including (1) street-level regulators in charge of soil contamination in 29 offices (54 interviews with 78 regulators), (2) Ministry of Environment (three interviews with three officials), and (3) two regulated companies (two interviews with seven workers). The interviews were mainly conducted between August 2013 and February 2015, followed by eight interviews in January and February 2016. Each interview took 1.5 hours on average, with exceptions of follow-up interviews that sometimes ended within one hour.

As regards with frontline offices and the Ministry of Environment, the interviews were requested to officers in charge of soil and water regulations as their main job. As regards regulated companies, although only two companies are interviewed due to the difficulty of access, interviews were conducted to seven people in a wide variety of positions: from an on-site environmental chief in charge of water and soil environment, to environmental managers in headquarter office. Both of the regulated entities are recognized as leading Japanese business organizations.

In selecting the samples of regulatory offices, I deliberately included key demographic characteristics, such as organizational size, degree of industrialization of their jurisdictions, and degree of stringency in their enforcement actions. The interviews cover both prefectural and municipal offices (31% and 69% respectively), urban and countryside areas, and offices that have issued Orders and those that have not (64 % of offices have issued Orders at least once while 36 % never issued any). Although each office has a unique history and local environmental situation, none of the offices are outliers in key demographic characteristics that can skew the results of analysis. As such, the 29 street-level offices serve as good sites for research.

To gain access to frontline regulatory offices, I contacted them by telephone and email, and occasionally arranged an initial meeting. At the first contact I informed them of my research interests and guaranteed that their office names as well as individual regulators' names would remain confidential. Once I explained the research purpose and assured them confidentiality, they were willing to assist this study, with the exception of two offices that declined due to lack of time.

The interviews took place in their workplaces with a moderate degree of privacy.[1] The interviews typically lasted between one and a half hours and two hours, with follow-up interviews that took less than one hour. With the interviewees' consent, I recorded all interviews and transcribed them for analysis. I sent my interview questions in advance so that they could expect the topics.

The interviews were semi-structured and contained a tripartite structure: an opening section on general description of organizational resources and enforcement activities (number of frontlines, workloads, enforcement activities, and manuals and guidelines); a second section focused on hard cases and the ways in which these were handled (with close attention to consultation within and beyond their office, value systems, coping strategies, and what regulators tried to achieve and avoid); a third section asking regulators' wish-lists for effective enforcement activities and any involvement of citizens or third parties. The interviews ended with the filling out of a background sheet that asked for respondent's demographic characteristics, such as gender, age, and length of career as regulator. The demographic characteristics of interviewed regulators are shown in Table 1.

**Table 1: Demographic Overview of Interviewed Street-Level Regulators**

| | Gender | Average Age | Average Length of Current position | Average Total Time as a Regulator |
|---|---|---|---|---|
| Interviewed regulators | Male: 68<br>Female: 10 | 39.1 years old | 2.2 years | 13.6 years |

The analysis of interview data proceeded in two phases. First, I read all transcribed interview data and developed initial coding categories through "open coding" process (Lofland and Lofland 2006; Charmaz 2006). Second, I refined the initial codes and set foci on emerging patterns, and conducted frontline observation and interviews again with frontline offices, the Ministry of Environment, and the regulated entities. After collecting the qualitative data, focused coding was conducted by using MaxQDA. To control the potential bias in interview analysis, I did "member checks", asking several regulators to assess the plausibility of my categories, interpretations and conclusions. Data triangulation (gathering data from other sources such as interviews with regulated entities and organizational documentation) was also performed in this research.

As for the two-week frontline observation, thanks to assistance from a Japanese professor, I arranged a meeting with high-ranking officials in one prefecture to allow me to accompany their Water & Soil Office from the Department of Environment. In the field, I stayed in the office and spent time with regulators (typically from 8:30am to 8pm), had lunch with them, and

[1] I conducted interviews in a meeting room or in a space with a distance from participants' colleagues or superiors.

observed how they spent their time and how they worked in the office (I was given my own desk and chair next to them). The office was in a large room where each regulator's desks faced each other. The Water & Soil Office had five regulators and shared the same office space with the Air & Chemical Office and the Environmental Evaluation Office. The phones rang frequently, and people were in and out of office. Site inspection took place frequently, so the office often had a couple of regulators out of the office. Regulators in the office stuck to their computers, and sometimes chatted with each other.

This frontline observation differs from ethnography because it lasted only a short period of time. I focused on obtaining a sense of the work environment in which regulators are situated. To document my experiences I logged a field note every day after I returned to the hotel (Emerson, Fretz, and Shaw 2011). The field notes added up to more than 100 pages for two weeks. As well as working in the office, I observed a regional meeting of frontline regulators in order to witness inter-office consultation. (See chapter 4 for peer meeting in details).[2]

The rich and detailed qualitative data gained through in-depth interviews, supplemented by frontline observation, enabled this research to gain deep understanding of the mechanisms of regulators' rule application at frontline enforcement. Interviews allowed me to access the views, values, and perceptions of how regulators dealt with legal ambiguity directly from regulators themselves. Interviews offered me a chance to ask follow up questions to gain more details in the regulators' own words, which provided more nuanced details about their taken-for-granted values, as well as the concerns and goals that underlie their enforcement decisions. The interactions through interviews also allowed me to build trust and rapport with regulators, which hopefully encouraged comfortable and candid interactions.

### Mail Survey

In order to confirm the relationship between inter-office interaction and street-level enforcement and to obtain population-wide data on regulatory offices, a national survey was conducted. Two kinds of survey (one for offices in charge of the SCCA and the other for offices

[2] Observing a single frontline office has the potential to raise concerns about generalization because each office has its unique history, local environmental conditions and demographic characteristics. However, such concerns are minimal, since the frontline observation serves to supplemental the main empirical data of in-depth interviews in 29 offices and a national survey. Moreover, there are good reasons to think that observing this particular office is not likely to skew the research data. According to the various demographic characteristics, this jurisdiction is not significantly different from other jurisdictions. For instance, according to the Annual Report from Cabinet Office in 2012, the jurisdiction has an average GDP. The jurisdiction also has an average population and equal agricultural and industrial production. It is in line with the national trends that the jurisdiction does not have environmental scandals that have attracted public attention. The workload is more or less average for a prefectural office; the average caseload per regulator is 133 (the average caseload for a prefectural office is 98, with a standard deviation of 80). As such, these data indicate that the jurisdiction where I did my work does not skew the empirical data, and therefore serves as a good site for research.

in charge of the GPP) were mailed in February 2015 to every frontline office across the country. The questionnaires were sent with a brochure explaining the research purpose, the author's name and guaranteeing strict confidentiality. The overall response rate was 85.8% (the questionnaire were sent to all 158 offices in charge of the SCCA (136 of them responded) and all 160 offices in charge of the GPP (137 of them responded).[3] Since surveys were sent to all frontline offices, the surveys were free from sampling problems. I had several informants and experts (they were either frontline regulators or researchers) check the drafts of questionnaires and modify the questionnaires accordingly.

Frontline regulators in charge of the SCCA or the GPP were asked to respond to the surveys. Their answers might or might not have been reviewed by their supervisors, and it is likely supervisors did check because this is the usual way of processing documents in offices. This latter is preferable, because such decision-making process (that is, frontline regulators first make a prototype and their supervisors check it) is exactly how enforcement decisions are made.

The surveys focused on perceptions of enforcement, law, and work environments at the office level, with components including (1) organizational resources and workloads (number of frontline regulators, cases, frequency of transfer, and degree of confidence in relevant expertise on law and technology); (2) intra-office consultation (to whom, about what, and how frequently they talk, discuss and consult concerning hard cases); (3) inter-office consultation (to which office, about what, and how frequently they consult); (4) perception of their task environments (assessment of regulated entities, local political conditions, local environment conditions, any response from citizens); (5) ideas about law and regulatory enforcement (including perceptions of effectiveness, fairness, and consistency of enforcement); and (6) individual demographics of respondents (including gender, age, educational background, career length, self-confidence as regulators).

## Limitations

Although this study's methodology has been effective for addressing the research questions, it is important to recognize and discuss its limitations.

### *Generalization*

This research is a case study conducted in particular locations and settings: a study focusing on the organizational process in how to respond to ambiguity of *environmental law* in *Japanese* regulatory offices. As in most case studies, therefore, the findings in this research may be location- and issue-specific. The environmental regulatory offices are one type of regulatory office, which means that they are not necessarily representative of other regulatory agencies and frontline bureaucracies even in Japan, let alone in other countries.

[3] The response rate was surprisingly high. This is mainly because I promised them the survey results in the aggregate if they answer. This high response rate reflects their high interest in street-level statutory enforcement practice.

As a result, this study does not seek to empirically generalize the findings as applying to all kinds of regulatory enforcement, frontline bureaucracies, and environmental regulations in Japan or all over the world. Rather, it is best seen as an effort to investigate theoretically the processes and mechanisms of how frontline offices make sense of and enforce regulatory law under a high level of uncertainty, risk, and ambiguity. In other words, this research is to be understood as an effort of theory-generating (Luker 2008); it aims to generate a theoretical account by identifying the relevant variables and the mechanism through which regulatory offices collectively construct the meaning of ambiguous statutes.

***Social Desirability Biases***

It is possible that this research suffers from social desirability bias: the tendency to present oneself in a favorable light. In this study, social desirability bias could generate regulators' responses that demonstrate successful enforcement in a self-aggrandizing way. They might have been willing to tell me that they didn't have problems enforcing the law, and avoided telling about embarrassing cases that reveal their incompetence or their misuse of discretion.

To avoid social desirability bias, both in interviews and survey questionnaires, I made particular effort to communicate that there is no absolute "right answer" to my questions, due to the law's ambiguity. Also, both in interviews and the survey, I explained that their responses would be treated with strict confidentiality. Additionally, I carefully designed the wording both in interviews and survey so that respondents would not assume that only one particular response is socially desirable. For instance, every time I asked potentially sensitive questions, I ended the questions by mentioning that whereas one person might think A, others might think B, implying that a variety of answers could be reasonable and socially acceptable.

During the interviews, I generally felt respondents answered honestly. On a number of occasions, they recounted stories about troubling cases in which they procrastinated on enforcement decisions, overlooked problems, stretched legal interpretations or conceded arguments. Of course, they may have withheld some problematic issues. However, it is also safe to think that the data gathered are useful for answering research questions.

***

This dissertation asks how frontline offices make sense of and enforce a new ambiguous statute, with a particular focus on how inter-office interaction plays out in the above process. In the next chapter the inquiry begins by setting the scene of Japanese environmental regulation and street-level enforcement.

# Chapter 2. Setting the Scene: Regulatory Contexts and Organizational Structure

This research focuses on two new regulatory statutes and investigates how their meanings have been constructed in the process of regulatory enforcement. Specifically, this research examines frontline enforcement decisions in (1) issuing Investigation Orders in the Soil Contamination Countermeasures Act and (2) applying a new regulated category in the Groundwater Prevention Program.

Chapter 2 reviews the regulatory contexts and organizational environments in which the interpretation and enforcement of new statutes unfolds.

## 2.1 Regulatory Contexts of the Japanese Soil and Groundwater Environment

### The Soil Contamination Countermeasures Act (SCCA)

Soil performs functions vital to human activities and the survival of ecosystems: water is found within and beneath the soil, food products grow in the soil, and air holds vapors from the soil. Due to heavy industrial activities, improper waste management, and inappropriate agricultural practices, soil is often found to be contaminated, which may lead to adverse effects on the health of people, animals, and plants. Direct exposure to contaminated soil (e.g., through inhalation and ingestion) and indirect exposure (e.g., through water supplies) is of particular concern.

Soil contamination matters not only from the environmental and human health perspective but also in terms of socio-economics. Soil contamination, or the risk of contamination, has an adverse impact on land development and transactions by decreasing the property values and preventing potential business transactions. Also, once the contamination is revealed, it comes with an extremely high cost of treatment.

Soil contamination has begun to be recognized both in Japan and globally. For instance, in Japan, it is estimated that 113,000 ha (approx. 436 square miles) of land is contaminated, the property value of which amounts to 43.1 trillion Japanese yen (approx. 431 billion USD) (Japanese Ministry of Environment 2008). In Europe, it is estimated that 340,000 sites are contaminated and likely to require remediation (European Commision Joint Research Centre Institute for Environment and Sustainability 2014). In the United States, it is estimated that there are more than 450,000 brownfields (land that may be compromised by the presence of a hazardous substance, pollutant, or contaminant).[4] 55 Superfund sites (land with abandoned

[4] The term "brownfield" means real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or

hazardous waste) are proposed by the EPA in 2016. The Chinese Environmental Protection Agency reports that one fifth of the country's land is contaminated (Chinese Ministry of Environmental Protection 2014).[5] Over all, the United Nations estimates that 30 % of land is moderately to highly degraded due to erosion, salinization, compaction, acidification and chemical pollution of soils (Food and Agriculture Organization of the United Nations 2015). The United Nations set 2015 as the UN International Year of Soils 2015 in order to raise global awareness about what has been described as "humanities' silent ally."

The first challenge regarding soil contamination is that the overall situation of soil contamination is still unknown. A state first needs to identify the contaminated sites, and make an inventory that is regularly updated and open to the public, in order to successfully monitor and prevent adverse effects on both human health and smooth economic transactions. Even though soil contamination has been recognized as one of the major sources of pollution, preventive and remedial measures have only recently been instituted.

In response to a growing concern over unrecognized soil contamination, the Japanese Soil Contamination Countermeasures Act (the SCCA) introduced in 2010 a new regulatory tool to facilitate identification of contaminated lands. The act requires businesses that undertake a construction project of more than 3000 square meters to submit a form and go through regulatory review. The environmental authorities are supposed to issue an Investigation Order for land that runs the "risk of being contaminated" by the Designated Toxic Substances (§4, SCCA).[6] An Investigation Order requires businesses to do a mandatory soil investigation to identify whether the land is contaminated. The site will be on the national inventory and need additional treatment (e.g., surface sealing, soil containment, or soil removal) or receive regulatory restrictions for construction if contamination is found (see Figure 1). A construction plan less than 3000 square meters or a plan without a "Change to the State of Soil" is not required to go through the regulatory process, since the danger of diffusion of the contaminated soil by construction of such size is not considered significant.

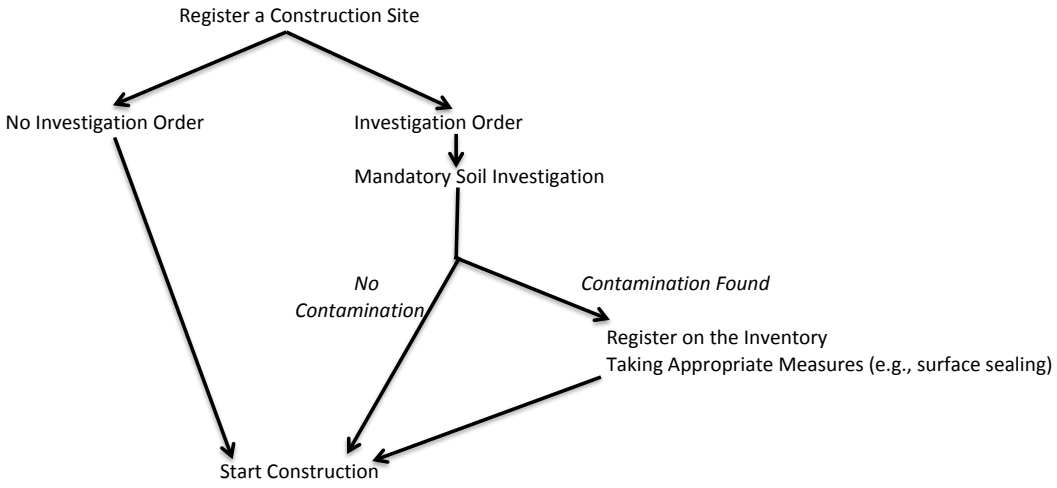
---

contaminant (Public Law 107-118 (H.R. 2869) "Small Business Liability Relief and Brownfields Revitalization Act" 2002).

[5] http://www.mep.gov.cn/gkml/hbb/qt/201404/t20140417_270670.htm

[6] The SCCA lists 25 substances as Designated Toxic Substances that pose a significant health risk. Designated Toxic Substances include, for instance, lead, cyanide, benzene, and phosphorus compounds. Designated Toxic Substances present in gasoline, pesticides, and other chemicals found in factories, hospitals, and industrial waste sites.

**Figure 1: Regulatory Process of Investigation Order in the SCCA**




## Social Impact Of Investigation Order

Every new regulatory measure is designed to meet public demands, which also create new obligations on regulated entities and can change prior practices through the new incentive structure. This is true in the case of Investigation Orders, which has created new costly obligations that also generate new practices to deal with the regulatory costs.

### *Compliance Cost and its Unpredictability*

An Investigation Order imposes an economic burden on businesses. Mandatory soil investigation triggered by the Order not only costs on average 3.7 million Japanese yen (approx. 37,000 USD),[7] but also disrupts the construction schedule---which can be more costly than the investigation. Once an Investigation Order is issued, the landowner is required to conduct a site investigation with prescribed methods and report the result to the regulatory office. The soil investigation includes a thorough examination of land use history by reviewing any relevant documents such as facility arrangement plans, piping arrangement diagram, and lists of Designated Toxic Substances. Then soil excavation follows. Although it is roughly estimated that the whole process would take approximately 4 months, it can take longer and this is difficult to predict because of the uncertainty of the degree of contamination. The delay and unpredictability of scheduling means additional financial costs, because companies plan their businesses based on when the construction will be completed, Mandatory soil investigation triggered by an Order disrupts the original plan and creates insecurity for business activity. One of the interviewed regulators said: "by the time they [regulated entities] file a final construction plan, their schedule is fixed---when to complete construction, when to start operating, and when

[7] "Report for Soil Investigation and Contamination Countermeasures FY 2013" (Geo-Environmental Protection Center 2013)

to sell products. Delaying the construction is far from acceptable. But, we, as a regulatory office, need to issue an Investigation Order when necessary. [i3]"

The delayed construction also entails social costs—the costs of delaying socially valuable new projects. For instance, the renovation of a hospital could be a target of the mandatory soil investigation, causing a delay in providing additional or improved health facilities to the community. Of course financial burdens on regulated entities is the major compliance cost; such social costs are associated with Investigation Orders.

Once contamination is found, treatments need to follow. The treatment costs vary from millions to billions in Japanese yen (approx. from tens of thousands to tens of millions of USD), depending on individual parameters, such as the size of the land, types of Designated Toxic Substances, methods of treatment, depth of drilling, and groundwater pathways. Identified contaminated sites are registered on the national inventory until the contamination is cleared. The registered land is subject to regulatory supervision such as construction restrictions or management of the land. Property values can be adversely affected as well.

***Motivation for Voluntary Soil Investigation***

An Investigation Order can provide an incentive for voluntary investigation prior to submitting the required form because (1) the required form needs to be filled out with the final, detailed construction plan, (2) the regulatory office might disrupt construction schedules through Investigation Order, and (3) there is uncertainty of whether the site investigation will find any contamination. Instead of receiving the Order for mandatory investigation, prior voluntary investigation allows landowners to foresee and coordinate the construction schedules based on their own investigation results. If their voluntary investigation does not find soil contamination, landowners merely need to submit these results along with other required forms and go through a regulatory review. Upon receipt of such investigation results, the regulatory office will let them start the construction. If the voluntary investigation reveals contamination, the business organization might reconsider the construction project. Or, even if they decide to carry out the construction, the regulatory office will not order an Investigation Order since soil investigation has already been conducted. Rather, regulatory office requires the landowner to properly conduct the construction[8] and advises the landowner to register the site on the national inventory through Article 14 of the SCCA.[9] Due to greater predictability of the costs and construction schedule, voluntary soil investigation can be spurred on the possibility of Investigation Order.

[8] The following construction needs to be done with prescribed methods to prevent contaminated soil from spreading and dumping.

[9] A landowner may voluntarily register the contaminated land to the national inventory (§ 14 SCCA).

***Investigation Orders and Identified Contaminated Sites***

Since 2010, when the SCCA took effect, regulatory offices have issued Investigation Orders at approximately 2% ratio nationwide.[10] In 2013, for instance, an Investigation Order was issued to 142 cases out of 10,848 registrations (Ministry of Environment, Annual Report of the Soil Contamination Countermeasures Act). Although the reasons for the numbers of Orders are beyond the scope of this research, a number of parameters are presumably involved: a large number of sites do not have any history of Designated Toxic Substances; landowners do prior voluntary investigations; so-called "enforcement style" of Japanese environmental regulators is not conducive to issuing Orders (Kitamura 2000; Kitamura 1997; Aoki 2000); landowners do not plan to develop their lands with a high risk of soil contamination, etc.

The total number of identified contaminated sites shows a steady increase since the SCCA came into effect in 2010. After 4 years of implementation, the identified contaminated sites amount to 1295, six times more than in 2009.

**Table 2: Investigation Orders and Identified Contaminated Sites**

| | 2009 | 2010 (SCCA took effect) | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|
| Article 4 Registration | --- | 10,815 | 9,525 | 9,949 | 10,848 |
| Investigation Order | --- | 270 (2.5%) | 180 (1.9%) | 126 (1.3%) | 142 (1.3%) |
| Voluntary Registration for Contaminated Sites (§14) | --- | 89 | 241 | 303 | 298 |
| Identified Contaminated Site in total | 202 | 380 | 666 | 930 | 1295 |

Source: Annual Report of Enforcement of the Soil Contamination Countermeasures Act (Japanese Ministry of Environment).

[10] Considering that Japanese regulatory agencies infrequently issue Orders in general, this rate is actually higher compared to other regulations on environmental pollution. There were no Orders (0%) issued in 2013 under the Japanese Clean Air Act, whereas 4571 informal warning letters were issued. In implementing the Japanese Clean Water Act, Order was issued to 11 cases out of 39490 inspections (0.3%) and 8759 informal warning letters were issued in 2013.

## The Groundwater Prevention Regulation

Like the soil environment, underground water plays an essential role in providing a drinking, industrial, and agricultural water supply. Unfortunately, similarly to the soil environment, underground water is also susceptible to pollutants, such as gasoline, oil, fertilizers and other toxic materials that can seep into the ground and cause groundwater contamination.

Considering that groundwater provides 25 % of drinking water and that it is extremely difficult to clean up groundwater contamination once it occurs,[11] the Groundwater Prevention Program (the GPP) was introduced in 2012 in the Japanese Clean Water Act (JCWA) to put a strong emphasis on groundwater pollution prevention.

One of the regulatory goals is to prevent unintentional leakage of toxic liquid from storage tanks. The regulatory program has broadened the range of regulated facilities to adopt new measures to prevent such leakage. Specifically, the regulatory program has created a new regulated category called "Storage of Toxic Liquid." The statute defines it as a storage facility that contains liquid wholly or partly including Designated Toxic Substances such as lead (§5 (3), JCWA). Once considered to be a Storage of Toxic Liquid, such facility must meet the "Structure Standards" that involves thickening the floor surface with an additional coating or building a dyke (low wall) against potential leakage.

The GPP began to be implemented in 2013. According to the Annual Report (FY 2013) of the Japanese Clean Water Act, 3196 companies were considered to have Storage of Toxic Liquid. (Japanese Ministry of Environment 2013)

**Table 3: Companies with "Storage of Toxic Liquid"**

| | Companies with Storage of Toxic Liquid |
|---|---|
| **2013** | 3,196 |

Source: Annual report of Water Pollution Control Act (FY2013)

[11] "Annual Statistics on the Environment", the Japanese Ministry of Environment (2013).

## Social Impact of Being Categorized as Storage Facility of Toxic Liquid

### *A Wide Range of Regulated Entities*

Comparing to the SCCA requiring investigation of large construction projects, the GPP covers a much wider range of enterprises in terms of size and industry. The regulated enterprises range from family owned dry cleaning shops, to small- or middle-sized factories, to large-sized chemical factories. Whether small or big, and whatever industries, the GPP applies once a company deals with even a drop of toxic liquid.[12] In this sense, the regulatory program is relevant to a broad range of companies.

The wide variety of regulated industries covered suggests the difficulty agencies encounter in enforcing that set of rules uniformly. Since facility settings are different from site to site, applying the general rules to local settings demands a balancing act between flexibility and consistency, especially when frontline offices desire meaningful and reasonable law enforcement.

### Heavy Compliance Cost of Meeting Regulatory Requirements

A Storage of Toxic Liquid facility is required to meet the Structure Standards pertaining to (1) floor and circuit, (2) piping, (3) ditch and drainpipe, and (4) underground storage---all to prevent toxic water from silting into the ground. The typical requirements include thickening the floor with additional coating and making a dyke around the facilities against accidental leakage. Also, some companies install automatic leakage sensors; others move up the piping above ground so as to easily detect leakage. Once identified as engaging in Storage of Toxic Liquid, regulated entities must go through a regulatory review about their measurements. Regulatory office checks for the effectiveness of these and may require further measures if the proposed measures seem to be insufficient. Regulated entities are required to conduct periodic checks on the facilities and keep inspection records (§14(5) JWCA).

Obviously, compliance costs can be high. One estimate shows that floor coating alone costs from 10,000 yen (100USD) to 100,000 (1000USD) per square meter (per 10.8 square feet), depending on the surface material and its thickness (Kanto Bureau of Ministry of Economy, Trade, and Industry 2012). Based on this estimate, even a small factory of 50 square meters (538 square feet) must invest from 500,000 yen (5,000 USD) to 5,000,000 yen (50,000 USD). This estimate indicates that the GPP can impose heavy compliance costs. In addition, monitoring and recordkeeping requirements increase administrative costs. Given that there are large numbers of small- and middle-sized companies under the regulatory program, the high compliance cost can critically affect which preventive measures regulated entities take. Large companies also need to incur heavy compliance costs to cover many facilities within their large sites.

Table 4 summarizes the SCCA and the GPP.

---

[12] The GPP lists its 28 Designated Toxic Substances, 25 of which are the 25 Designated Toxic Substances listed in the SCCA (§ 2 JWCA Ordinance).

**Table 4: Summary of the Regulatory Statutes in this Research (SCCA and GPP)**

| | Regulatory Goals | Frontline Regulatory Offices | Year when the statute came into effect | Regulated entities | Enforcement action | Compliance costs |
|---|---|---|---|---|---|---|
| The Soil Contamination Countermeasures Act (SCCA) | To identify contaminated land and to prevent health hazard caused by soil contamination | 158 local governments (47 prefectures and 111 cities) | 2010 | An entity which undertakes a construction project more than 3000 square meters. Compared to the GPP, the size of regulated entities here is bigger. Typical regulated industries include gas stations, hospitals, dry cleaning businesses, and factories using Designated Toxic Substances. | An Investigation Order might be issued to land that runs the "risk of being contaminated." | An entity is required to do a mandatory soil investigation. In addition to investigation costs (approx.37,000 USD), disrupted construction schedule and treatment costs (when contamination is identified) is also entailed. |
| The Groundwater Prevention Program (GPP) | By regulating water spill into the underground, it aims to prevent groundwater pollution and to secure citizens' health and conserve the environment. | 160 local governments (47 prefectures and 113 cities) | 2012 | An entity that has a Storage of Toxic Liquid facility containing Designated Toxic Substances. Compared to the SCCA, regulated entities include small to big businesses and a wider range of industries. | Regulators categorize a facility as Storage of Toxic Liquid, based on businesses' registration. | Regulated entities must meet Structure Standards. This involves significant equipment investment such as thickening floor surface or building a dyke against potential leakage. |

## 2.2 Environmental Regulatory Offices In Japan

The organizational setting of frontline environmental offices is another important backdrop for understanding street-level interpretation and enforcement. This section briefly outlines the organizational environments and political settings of the street-level offices.

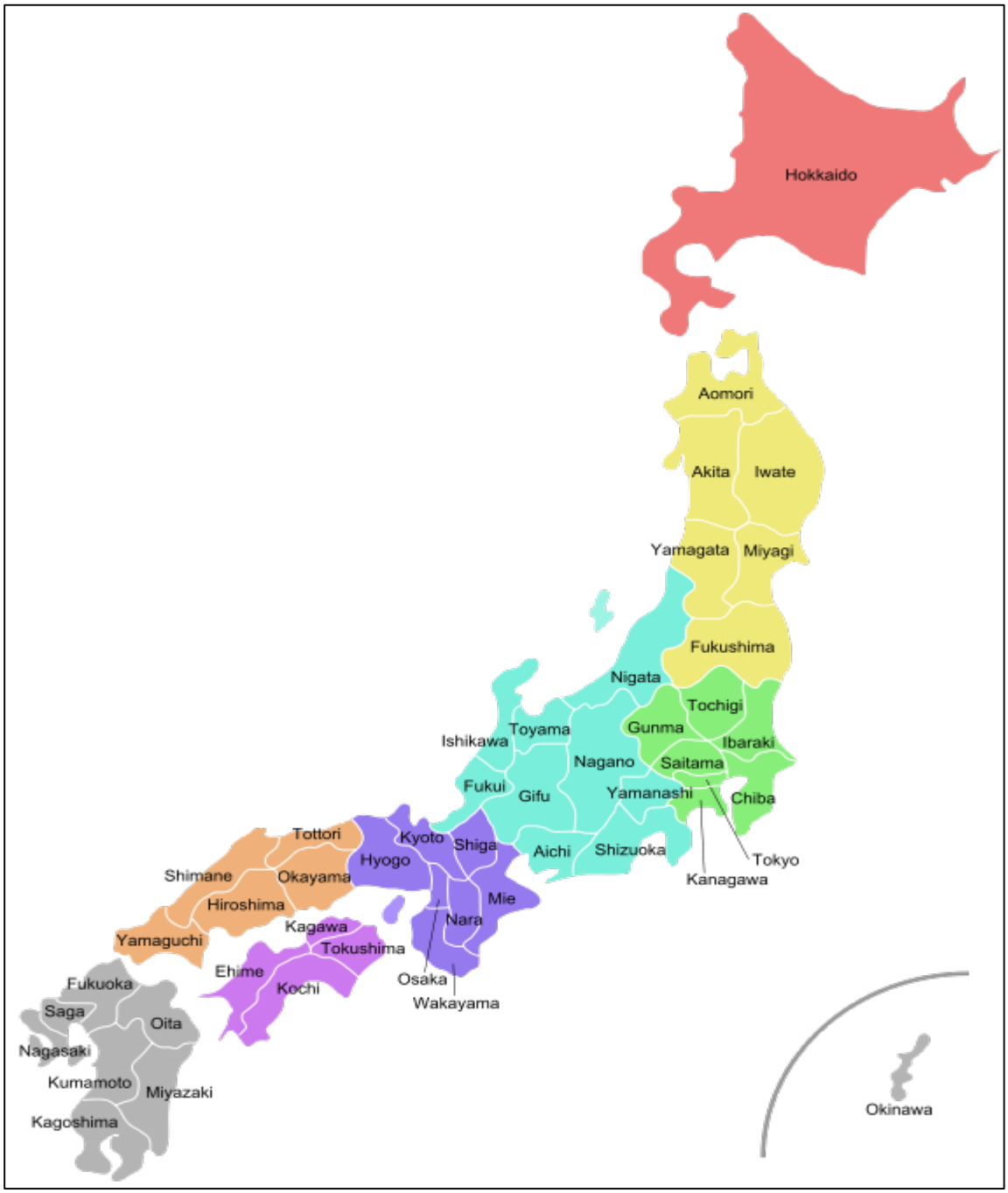
### Institutional Settings

***Decentralized structure***

Enforcement of environmental regulation in Japan is traditionally decentralized. Ministry of Environment does not directly enforce statutes. Permit issuing, compliance monitoring, and regulatory enforcement take place at the local government level (either prefecture or municipality). Each of the 158 local governments (47 prefectures and 111 municipalities) has its own environmental regulatory office in charge of the SCCA and the GPP.[13] Each office has its own exclusive jurisdiction and its own political leader (governor or mayor). Figure 2 shows the 47 prefectures in Japan. Municipalities are geographically located in the prefectures but they have their own environmental offices enforcing the two regulations in their jurisdictions.

[13] For the GPP, an additional two municipalities have the authority to implement and enforce the statute.

**Figure 2. Regulatory Jurisdictions**




This decentralized regulatory system exists in order to respond to local environmental conditions, and recently, has been reinforced by the current Japanese political trend to promote

decentralization.[14] In the context of environmental regulation, the Local Autonomy Act stipulates that each regulatory office in local government is in charge of interpretation and enforcement of regulatory law (the Local Autonomy Act, §2 (8)). Ministry of Environment sets nationwide regulatory laws, subordinate rules and gridlines; however, the Ministry does not enforce the law on its own and does not specify rule application in a particular case. Regulators often told me in the interviews that even when frontline office inquires whether to apply the statute to a specific case, the Ministry often allows frontline office to decide it on their own [i7, i17, i47, i55]. My interviews with officers of the Ministry confirm this hands-off attitude; they responded that the street-level office in local government is the one in charge, and is responsible for interpretation and enforcement [i49, i50]. Given such decentralized structure, although regulatory offices in local governments share the same regulatory statutes and guidelines, each street-level office is autonomous in terms of interpretation and enforcement of the statutes.

***Frontline Office: Decision-Making Process, Organizational resources, and Demographics of Frontline Regulators***

A local government, whether it is a prefecture or municipality, is organized into divisions responsible for various tasks. The Department of Environment is one of those divisions: within the department, there is typically the Water & Soil Office that administers environmental laws and policies related to water and soil environment.[15] This Water & Soil Office is the street-level office that interprets, implements, and enforces the two regulations---i.e., the subject of this research.[16] According to my survey, the offices have on average 5.8 frontline regulators in total, 2.4 regulators in charge of the SCCA, and 2.6 regulators in charge of the GPP. There is no in-house lawyer present in the office.

As is the case for many frontline workplaces (e.g., Lipsky 1980; Bardach and Kagan 1982) the street-level offices suffer from the lack of an adequate workforce. In my interviews, regulators often mentioned heavy workloads with few regulators. Their job ranges from permit issuance and regulatory reviews of applications, to periodic inspection and regulatory enforcement. Since the SCCA and the JCWA to which the GPP belongs are the major statutes for the water and soil environment, the interviewed regulators responded that around 60-70 % of their workload is related to the two laws. The rest of their time is devoted to the implementation of other laws, such as the Private Sewage System Act, and local ordinances related to the water and soil environment.

---

[14] For instance, the Decentralization Promotion Act (1995) and the Act on Promotion of Decentralization Reform (2006) were made to promote delegation of central government's authority to local governments.

[15] Only 8 % of local governments (n=14) implement the two statutes in separate offices, such as the Water Office and the Soil Office, or the Water Office and the Chemical Substance Office.

[16] The term "street-level" is interchangeably used with "frontline" in this research.

*Decision-Making Process*

Frontline regulators work as a team, and enforcement decisions are made through hierarchical review. When a draft made by regulator(s) in charge of the SCCA or GPP is approved by supervisors, an enforcement decision is made. This decision-making procedure, called *kessai* procedure, is the way Japanese administrative offices make decisions. Before gaining approval, regulators consult with supervisors, especially with their immediate superiors. After approval, the decision is made in the name of the Office. As a result, frontline regulators consider frontline interpretation and enforcement decisions as a product of their office, not of their individual decisions.

How many approvals frontline regulators need depends on the type of decision. In an Investigation Order issuance, regulators commonly need to have approval of two or three superiors, while rule-application of Storage of Toxic Liquid commonly requires the approval of two superiors.

*Frequent Personnel Transfer*

When you look at a Japanese public administration office, frequent personal transfer is probably one of the most evident management practices in the organization. Frontline regulators are moved to another office or department within the same local government every few years. My survey respondents, i.e., the street-level regulators in charge of either the SCCA or the GPP, have worked in the Water & Soil Office on average for 2.3 years and for 2.7 years, respectively. In my survey, the offices answered that the average work period in the Water & Soil Office is 2.9 years, even though 53.4% of the offices (n=146) answered that they do not have any fixed period.[17]

Frequent transfer is ubiquitous in Japanese administration offices. First, frequent personnel transfer reflects the overall management orientation to train public officials to manage a wide variety of public issues and policies. In other words, frontline officials in Japan are expected to become generalists who have a broad and balanced perspective on policy issues, rather than specialists who have a deep understanding of one specific policy (Morita 2000). Second, frequent transfer in a regulatory office is expected to prevent corruption by regulated entities. Frequent transfer is relevant to promotion as well. Promotion takes place at the time of transfer, based on the length of career. As a fiscal year comes to an end, a favorite topic among regulators concerns their transfers and possible promotions: where they might be transferred and to what position.

Frequency of transfer influences legal and technical expertise available in the office. Skilled, experienced workers can foster the office's professional expertise, but the process of becoming experienced regulators takes time. While frequent transfer can allow regulators to have a broad view of environmental issues and can prevent corruption, it is not conducive to developing and maintaining the organizational memory of expertise and experience that is

[17] This is consistent with my interviewed regulators: they have worked in the SCCA or the GPP for 2.2 years on average.

necessary for effective enforcement. Considering the abstract legal design, technical judgment, and negotiation skills required for interpretation and enforcement of the two statutes, the two to three years of work experience in the street-level offices seems to regulators short [i21, i35, i69].[18] Frequent personnel transfer, together with decreasing financial budgets and increasing caseloads, makes it difficult for frontline offices to offer sufficient internal training. Some regulators have concerns that the offices struggle to successfully transfer enforcement experiences and knowledge from current regulators to new regulators, because regulators are now too busy to train new regulators [i5], there is insufficient internal discussion [i30, i41], or there are no experienced regulators in the office [i21, i26].

*Demographic Characteristics of Frontline Regulators*

Frontline regulators are local government personnel hired by either the prefecture or the municipality. Table 5 shows the demographic characteristics of survey respondents, from which profile of street-level regulators can be inferred. The average age is approximately 35.4 years. The majority of them are hired as technical personnel who specialize in environmental issues. They hold either a Bachelor degree (58.5%, n=144), a Master degree (37.4%, n=92), or a Doctor degree (0.4%, n=1) in natural sciences. Male regulators are the majority (83.3%, n=201). On average, they started to work in local governments in 2004, which means that they have worked in their local government for 10.2 years. In their entire career, they have worked on average 2.3 years and 2.7 years on the SCCA and GPP, respectively.

**Table 5: Demographic Characteristics of Frontline Regulators (Survey Respondents)**

| Educational Background | Average Age | Gender | Entire Career | As SCCA or GPP regulators |
|---|---|---|---|---|
| Bachelor (58.5%) (n=144)<br>Master (37.4%) (n=92)<br>Doctor (0.4%) (n=1) | 35.4 years old | Male 83.3% (n=201)<br>Female 16.7% (n=42) | 10.2 years | 2.3 years (SCCA)<br>2.7 years (GPP) |

## Task Environments and Political Environments of the SCCA and the GPP

### *Task Environments: Low Visibility of Environmental Damage and High Compliance Costs*

Task environment factors---namely, visibility of noncompliance, cost of compliance, and regulated entities' willingness to comply---influence what kind of enforcement strategy will work and will shape street-level enforcement decisions (Kagan 1994). Task environment in this

[18] Sometimes, frontline regulators return to the Water & Soil Office after working in different offices for a few years. However, only two interviewees have such career in my interviews.

case can be summarized in two points: low visibility of environmental harm and high compliance costs.

Low visibility of environmental harm is endemic to both soil and underground water environments. The spill and infiltration of toxic materials into soil and groundwater occurs under the ground, which makes it quite difficult to monitor. Also, the environmental damage become identified only long after the start of the leakage. The low visibility of environmental harm makes regulatory offices dependent on the regulated entities for information: regulated entities are the better informed parties because only regulated entities know what material they used on the site and operate in the immediate vicinity to the potential leakage. However, even worse, regulated entities themselves might not know the land use history in detail if the current company just recently acquired the land without detailed information about the land use history. Or, companies might not have sufficient records about past land use. Low visibility of environmental damage creates information asymmetry and factual uncertainty, which places street-level offices in a difficult position to judge environmental risk.

As explained in section 2.1, it is expensive for regulated companies to comply with both the SCCA and the GPP. When regulated entities see the cost of compliance as very high and placing them at a disadvantage with their competitors, regulatory offices will likely meet stiff resistance. The resistance will be stronger if regulated entities feel that an expensive investigation will indicate no substantial environmental damage and health concerns, or that an expensive investment to meet Structure Standards will be unnecessary for groundwater protection. High compliance cost of the SCCA and the GPP can invite opposition to the enforcement, which could make negotiation with regulated entities contentious.

While regulated entities as far as the SCCA is concerned are relatively big companies that can bear high compliance cost, regulated entities in the GPP vary in terms of size and ability to absorb compliance costs. Some small- or middle-sized companies owning Storage of Toxic Liquid facilities might not be able to complete the required measurement because of their weak finances.[19] The ability to bear compliance costs, together with the social costs of closing down small firms which cannot afford to comply, can influence the stringency of enforcement (Thornton, Kagan, and Gunningham 2008).

The task environments of the SCCA and the GPP---low visibility of environmental damage and high compliance costs---situate street-level offices in a challenging position for suitable enforcement. While mistaken leniency might lead to catastrophe in the future, mistaken legalism might impair the regulated entities' willingness to comply.

[19] Although there are several loan programs and aid funds to support small- and middle-sized companies to comply with the SCCA and GPP, the eligibility is limited. Also, these programs are not widely known. One report shows that only 17 % of small-, or middle-sized companies know of such loans and aid fund programs (Kanto Bureau of Ministry of Economy, Trade, and Industry 2013).

***Political Environment: Little Public Scrutiny and the Need for Industries' Cooperation***

Johnson (2002) calls the work environment of Japanese prosecutors as a "paradise for a prosecutor." One of the reasons for this is that there is little risk of political intervention, which leaves prosecutors insulated from public scrutiny and strong political pressures (Johnson 2002). This situation holds true in the environmental regulatory offices in Japan, at least as concerns the soil and groundwater regulatory statutes (Kitamura 1997). Compared to the environmental regulatory contexts in the United States, for example, the soil and groundwater regulatory statutes in Japan are not frequent targets of public scrutiny. Most cases in their workloads are processed without any attention from the public, including media, environmental NGOs, and local residents.[20]

Indeed, in my interviews, I always asked whether frontline regulators have had experience in receiving complaints or concerns from the public about soil and groundwater environment, and I heard such stories in only four out of 78 interviewees. The following quote was the typical response: "we rarely receive concerns or criticisms from citizens [i7]" My survey also shows that 36.2% of offices (n=96) answered that they have not received any complaints or inquiries from citizens regarding water and soil environment, and 46.4% (n=123) answered that they had a few responses.[21] There has been no lawsuit brought by a citizen against a regulatory office to demand more stringent enforcement regarding Investigation Order issuance or rule-application of Storage of Toxic Liquid, because of the limited legal standing in administrative lawsuits in Japan. As these data suggest, the frontline regulatory offices in the Japanese soil and groundwater environment are generally insulated from public pressure.

Of course catastrophes and scandals can happen, which then create a mass of inquiries and criticisms from the public and might trigger political intervention by political leaders. However, media coverage of soil contamination and groundwater contamination has been relatively limited so far. During the last two years, the number of newspaper articles on soil contamination and on groundwater contamination amounted to 54 and 84, respectively.[22] This is relatively small compared to 436 on air pollution and 1217 on nuclear power plants.

---

[20] Environmental NGOs in Japan are not as active in soil and groundwater as in air, water, and forestry preservation. According to the report from Environmental Restoration and Conservation Agency (2009-2012), only 15.4% (n=743) of environmental NGOs are engaged in the water and soil environment. NGOs are predominantly engaged in environmental education the most (36.7%, n=1767), and secondly in nature preservation such as forest preservation and park management (33.6%, n=1626) (Environmental Restoration and Conservation Agency 2009-2012)

[21] The survey question sent to GPP offices asked for citizens' response to the overall water environment, not limited to the groundwater environment. The citizens' responses tended to be more frequent in the GPP survey, compared to the SCCA survey, due to the visibility of water degradation in river, lake, and sea,.

[22] I used KIKUZO, the Asahi Shinbun (one of the big three newspaper companies in Japan) Article Archive. I searched for "the Soil Contamination Countermeasures Act" and "Groundwater Contamination" for the period of July 2013 to June 2015, the period of my fieldwork. In searching for the groundwater contamination, I conditioned the search to omit

The lack of available information about enforcement activity, due to the limited information disclosure to the public, plays a critical role in eliciting little public scrutiny. Enforcement data such as noncompliance cases or the lists of regulated entities are not easily accessible to the public. It is necessary (1) to go directly to the office to browse the lists or (2) to process onerous disclosure procedures in order to access detailed enforcement information. Moreover, even if information disclosure is requested, the requested information might not be fully available if frontline offices consider such disclose would infringe on private entities' legitimate interests (The Act on Access to Information Held by Administrative Organs §5-2). As a result, frontline regulators normally do not face an influx of inquiries and concerns from the public. Lack of easily accessible enforcement information, associated with low visibility of environmental harm, keeps pressure from the public to a minimum. As a consequence, frontline regulatory offices generally enjoy a significant amount of autonomy and discretionary privilege in their enforcement decisions (Kitamura 1997).

At least on the face of it, political pressure from regulated entities is not intense either. Since the types of regulated entities vary, they are not organized to wield political influence as a whole on either Ministry of Environment or street-level regulatory offices. Of course, there are industrial associations in major production sections that are involved in the policy-making process (Aoki 2000; Milhaupt and Miller 2000), but no particular interest groups exert significant influence in street-level enforcement processes once a policy begins to be implemented. Political leaders, whether governors or mayors, do not pay close attention to the frontline enforcement of the soil and groundwater regulations, because these environmental areas are not in the political forefront. So far, no single lawsuit has been brought to challenge offices' legal interpretations and enforcement regarding the Investigation Order of the SCCA and rule application of Storage of Toxic Liquid of the GPP. Political pressure from regulated entities is not as visible and intense as in the United States.

The lack of overall political pressure from regulated entities, however, does not eliminate the possibility of strong industry influences in enforcement decisions. The pressure usually takes an informal form: regulated entities may go to local lawmakers to have them badger regulatory offices so as to change enforcement actions; or they may petition Ministry of Environment to reform the regulation and its enforcement proceedings. More realistically and more frequently, however, regulated entities can wield their influence and negotiate with regulators in exchange for their future cooperation. Compliance behavior, including hard engineering, managerial and supervisory work can only be done by the regulated entities. Regulated entities are better suited for discerning potential environmental harm. Knowing the need to obtain industries' cooperation for reasonable and effective regulation, regulatory offices tend to avoid endangering their relationships with regulated entities (Hirata 2014). In this sense, the pressure from regulated entities comes through more relational and case-based routes, rather than through politically institutionalized structures.

---

articles related to groundwater contamination caused by the nuclear power plants in order to focus on the GPP.

As a consequence, the pressure from regulated entities, combined with little public scrutiny, looms larger in frontline enforcement than the pressure from the public. It is safe to say that the political situation entails more possibility of backlash against stringent enforcement from regulated entities than the possibility of public criticism of lax and insufficient enforcement.

## 2.3. Decision-Making Process: the Normal Implementation Process and Frontline Office's Enforcement Options

Although street-level offices are faced with hard cases, frontline workers do not face difficult ambiguous cases all the time, as Maynard-Moody and Portillo (2010) say. More often, the bulk of their cases are seamlessly processed as routine once the meaning of statute and implementation practice has been established. The regulatory interaction takes place between frontline offices (regulators and their bosses) and regulated entities (employees in charge of compliance with environmental regulations), and rarely involves lawyers from either side. This section illustrates what the usual implementation process looks like in both the SCCA and the GPP.

***The Usual Implementation Processes: the SCCA***

Frontline regulatory offices process a regulatory review of a registered construction plan as follows: they normally have prior meeting(s) with regulated entities, then receive a set of required forms, decide whether the statute applies to the case at hand and issue an Investigation Order if necessary.

Prior Meeting: collection of facts and negotiation with regulated entities

It is usually the case that street-level office has face-to-face meeting(s) with regulated entities before the latter submits a set of required forms. While this meeting is in order to explain how to fill out the format and what documents companies need to file so as to assist the submission in the required manner, the meeting often serves as the first phase of enforcement process and negotiations. During the meeting, regulators answer inquiries from regulated entities about what requirements the entities need to satisfy, what is subject to the Investigation Order clause and what is not. Some entities might argue that their land is unlikely to be considered contaminated and the regulatory statute does not apply. For instance, a company might argue that the land has been a rice field without any risk of soil contamination. If so, regulators would request an official land registration certificate that backs up the claim. If the given land was formerly used as a factory, regulators might ask the business to submit any relevant registration forms and internal documents in order to learn the details about the operation and any indication of the risk of soil contamination.

Regulatory offices initiate the collection of facts and regulated entities respond as requested. In the early meetings, regulators try to obtain as much information as possible about

the land history. They ask questions, listen to entities' explanations about the past and current land conditions, and ask for the submission of any relevant documents, such as regular inspection records, facilities' official documents or records of use, storage, and disposal of Designated Toxic Substances if any. While in a simple case they might or might not have a brief meeting (e.g., the proposed land is in a mountain area or agricultural fields without any previous land use), in a complicated case they might have several long meetings. Regulated entities might need to come back with more information concerning past land use, and might modify the original construction plan. Typical examples of hard cases include but are not limited to: the land in question was arguably used as the final landfill site without adequate records; or the land has been used for multiple operations that possibly have involved Designated Toxic Substance use.

According to my interviews, regulated entities are nervous about the unpredictability caused by the possible Investigation Order as well as the investigation and possible treatment costs [i15, i17, i18]. Unpredictability includes whether an Order will be issued, when the mandatory investigation will end, whether the contamination will be found, and if found, to what degree, and how much treatment will cost.

While frontline office might suggest that an issuance of Investigation Order is probable, they rarely impart that information prior to the submission of the required form. Through interactions with regulators, it is not unusual that a regulated business will change its initial plans or cancel the construction once they realize that its first plan might incur heavy regulatory requirements. Concerned about the unpredictability, some regulated entities decide to do a voluntary soil investigation and to come back to the regulatory review later with their investigation results.

Receiving a Required Form for Construction Plan

Submission of a construction plan is legally required when (1) an entity plans construction on land more than 3000$m^2$ and (2) the construction involves a "Change to the State of Soil" (§4 (1) SCCA). The above two reflect an aim of the SCCA to prevent potential diffusion of contaminated soil. As the next chapter explains, the meaning of Change to the State of Soil can be an issue in some cases, since it determines whether a case can be subject to the Order, absent any specification of contents in the SCCA Guideline.

Those submitted plans go to the regulatory review. The volume of the submitted file can vary; a simple case is less than one inch, whereas a file of complicated case is more than one meter thick (approx. 40 inches). A frontline office makes a decision whether or not to issue an Investigation Order no more than 30 days after they receive the submission.

Investigation Order: To issue or not to issue

Once a street-level regulatory office receives a required application form, they search for more facts if necessary. Regulators will look at official records, old maps, and aerial photos in order to confirm past and current land conditions and to check the credibility of the application contents. If Designated Toxic Substances might have been produced, used, stored, or buried in

the land, regulators also check topographical maps and maps with water wells to gauge the flow of groundwater and try to judge whether the drinking water has a risk of contamination. Regulators also seek relevant records from other departments if necessary. For instance, if the land was used as a gas station, regulators contact the fire department to learn if the gas station was operated without gasoline spills, because fire departments administer relevant safety regulations and gas stations are supposed to report the oil spill to a fire department.

Relevant facts are not always available; if, for example, the land use was too old to retrieve pertinent documents, there may be no official records as to toxic substances. Other possibilities are that the business did not report spills of toxic substances, did not register the use of toxic substances, or just does not have any records. In the real world, regulatory offices may well need to make an enforcement decision with limited information.

With all the available facts in hand regulatory offices then decide whether to issue an Investigation Order. They decide whether the site run the "risk of being contaminated (§4(2) SCCA)," i.e., the criterion of Order issuance. What is involved here is a combination of legal, technical, and factual judgments associated with values, risk, and cost-benefit considerations. In issuing an Order, regulators ask themselves: Is our legal interpretation ok? Are the facts strong enough to issue an Order, a formal procedure that can be a subject of lawsuit? Might this particular land history and the use of Designated Toxic Substance cause soil contamination, and if so, to what degree? Are regulatory interventions called for in this case? Through addressing such questions, frontline decisions take on the task of determining the extent of risk that the law intends to regulate. This process transforms "law on the book" into "law in action", the very process of creating the meaning of law.

<u>After the decision-making process concerning an Investigation Order</u>

When the land history indicates Designated Toxic Substances, the case is processed as a potential target for an Investigation Order. In this case, regulators meet the regulated entity again to explain the Order issuance and give instructions for the necessary soil investigation methods, such as what materials need to be investigated, where to perform the drilling survey, and how many holes are required. During this process, frontline offices expect to have disagreements with the regulated entity because regulators prefer a thorough soil investigation (hopefully beyond the legal requirements) to ascertain whether the land is contaminated or not; such investigation is expensive and takes time. Regulators might need to meet the regulated entities several time to induce them to comply. Presumably, regulated entities will follow the Order once it is issued; no single case of Order issuance has been challenged in a court.

Since only 2 % of cases receive the Investigation Order, the usual implementation process ends up without issuing an Order. The regulated entities undertake their construction 30 days after the application submission.

***The Usual Implementation Process: Groundwater Prevention Program (GPP)***

With the introduction of the new category called Storage of Toxic Liquid, frontline offices first need to identify which facilities or containers must be regulated. The legal design itself is simple; regulated companies register their containers as Storage of Toxic Liquid, and meet the "Structure Standards" for the regulated containers. Frontline offices are supposed to make sure that companies accurately register their facilities and satisfy the required standards. However, the reality is not simple: some regulated companies do not even know that the new category was established and will be applicable to them; others do not know whether their facilities will be categorized as such or whether they satisfy the standards. Therefore, regulatory offices first do outreach activities, such as holding briefing sessions and sending brochures explaining the GPP, to all entities that have registered their facilities under the JCWA. They also answer inquiries from regulated companies on a case-by-case basis.

To identify what facilities fall into the new regulated category, site inspection is time-consuming but the most effective. Frontline offices therefore visit companies and factories operating with Designated Toxic Substances to let them know the new regulation, and observe the operation site in order to determine whether such facilities are regarded as Storage of Toxic Liquid. In the site inspection, regulators check the following: drains, floor coating, and tanks and similar equipment that pertain to the Storage of Toxic Liquid. They check the locations of the tanks, how long the toxic liquid remains in them and whether the tanks are fixed to the ground. For instance, in one frontline office, they visited approximately 160 regulated entities in total between 2013 and 2014 to check the Storage of Toxic Liquid facilities [i39].

Then regulators talk with the regulated businesses to finalize the rule application. This serves as negotiation over what the statute means in a particular case, based on how they interpret the written rules (i.e., the statute and GPP guidelines) and the circumstances of the facilities. The regulators take the initiative, but as might be expected, a regulated business might disagree with the rule application and argue that the regulatory intervention does not make sense. In order to persuade businesses, regulators usually mention the purpose of the regulatory program and the companies' responsibilities and liability for groundwater contamination. Since regulators wish to gain compliance from regulated entities and avoid conflicts, they are eager to demonstrate both legal and substantive justification for their decisions.

The challenge here is when to make exceptions. As explained before, if a facility is deemed a part of operating facilities (i.e., the facility is used for production, not for storage), or as junction tanks or movable tanks, it is not seen as Storage of Toxic Liquid, and is thus free from the consequent regulatory requirements (the GPP Guideline p.12-13). Also, the GPP applies even if a facility deals only with a single drop of toxic liquid containing Designated Toxic Substances; for some, this casts doubt on whether the regulatory requirement is necessary at all for such paltry use of toxic substances. The low visibility of groundwater pollution compounds the difficulty of justifying regulatory interventions. One regulator told me:

> Each company has different facility arrangements. We go to factories and see all facilities, deciding where the law applies and where not. This is a lot of work. And the regulation sometimes appears to me too strict… As a frontline regulator, this statute is pretty difficult to implement. [i46]

## 2.4 Conclusion

Street-level interpretation and enforcement of statutes evolves against the backdrop of regulatory contexts, varied workplace environments, regulatory task environment, and regulatory agency's political setting. This chapter outlined the setting of this study: the regulatory contexts and organizational settings of the frontline offices. Thanks to a decentralized system, general language in statutes and guidelines, lack of political controversy, scarce public scrutiny, and extremely rare court intervention, street-level offices of environmental regulation in Japan enjoy wide discretion in interpreting and enforcing the statutes. Meanwhile, frontline offices suffer from a shortage of labor and a huge caseload. Frequent transfer, while it has benefits, can increase the organizational cost to maintain experienced street-level regulators working within specific statutes. Indeed, during the interviews, some regulators mentioned that their offices struggle to transfer the expertise of SCCA or GPP enforcement to new commers.

A crucial factor is that both the SCCA and the GPP inherently involve low visibility of environmental damage, high compliance cost, and ambiguity of statutes. Damage to soil and groundwater environment is either hard to detect or yet to occur. Both Investigation Order and the "Storage of Toxic Liquid" impose high compliance costs on regulated entities. Due to their recent adoption, the meaning of the statutes has not been established across regulators and regulated entities, which leaves the statutes highly ambiguous. The setting of the SCCA and GPP enforcement, therefore, officers a good site to investigate the current research question: how street-level offices make sense of regulatory statues under uncertainty. The next chapter discusses in greater detail the frontline challenges and their coping strategies for interpretation and enforcement of the regulatory statutes.

# Chapter 3. The Challenges of Interpretation and Enforcement of Regulatory Law

## 3.1. A Regulator's Dilemma: Environmental Risk and Frontline Enforcement

In implementing a protective regulation where regulators enforce the law against potential dangers, regulators are faced with a dilemma. An enforcement decision may turn out to be a false positive, where regulators apply a regulation to an entity that does not actually pose environmental harm. Alternatively, an enforcement decision may end up a false negative, where regulators do not regulate an entity that actually inflicts significant environmental harm.

This is a fundamental tradeoff for environmental regulators because trying to reduce false positives leads to increasing false negatives, resulting in ineffective enforcement where catastrophic environmental harm may not be prevented, thereby provoking public criticism. On the other hand, if regulators pay too much attention to decreasing false negatives, this leads to increasing false positives with the result that enforcement imposes unnecessary cost on the regulated entities and faces a backlash from them.

It is recognized that the tradeoff emerges in the policy-making process of precautionary regulations (Vogel 2012) and this has also been recognized in studies of regulatory enforcement (Scholz 1984; Bardach and Kagan 1982; Kagan 1994). This dilemma rises from uncertainty about environmental damage: regulators are not certain about whether each case at hand contains an environmental risk worth regulating because the damages have not happened or identified yet. In other words, this is a situation in which street-level bureaucracy is required to manage a risk, i.e., judge the degree of environmental risk and enforce the statute accordingly.

While regulatory statute itself could offer a framework to approach to the dilemma, ambiguous statutes do not specify whether to enforce in a particular case, leaving frontline offices a great room for legal interpretation and risk judgment. This situation is particularly true in a decentralized legal system where a central government delegates enforcement to local governments and does not issue specified guidelines and manuals.[23] Indeed, the guideline of SCCA issued from the Ministry devotes only 16 pages out of the total 774 pages to the criteria of

[23] Even in a regulatory system with specific guidelines, the challenge still persists. This is due to ambiguities of written rules as applied to a concrete, real-life circumstance, or if the written rules are nevertheless specific, they may be over-inclusive in imposing heavy regulatory costs on cases. While ambiguous law does not provide street-level offices clear-cut, specific, and decisive grounds in each enforcement decision and always remains open to street-level interpretation, the overly restrictive interpretation is conducive to unreasonable enforcement results in particular situations (Bardach and Kagan 1982).

when to issue an Investigation Order.[24] A regulator said, "the guideline tells us the way in which we should apply the law, but still, it's ambiguous. It doesn't speculate enough how to apply the law to a specific case. [i6]"

The challenges of interpretation and enforcement become significant when regulators are faced with ambiguity of law, uncertainty of contamination, and high compliance costs for industry. This chapter first elaborates the ways in which the enforcement challenges come up in this research context and then summarizes regulators' interpretive strategies to deal with the challenges.

## 3.2. Ambiguity of law, Uncertainty of Contamination, and Heavy Burdens on Industry

### *1. Ambiguity of Law*

Ambiguity of law arises sharply with regard to an Investigation Order issuance. The statute states that regulatory offices may issue an Investigation Order if the land is assessed as having "a risk of being contaminated" by Designated Toxic Substances. The criteria are set forth in the subsequent rules, an Ordinance of the Ministry of the Environment, as follows:

> A land is considered for Investigation Order issuance as having a risk of being contaminated when:
> 1. the land shows that its contamination exceeds the Soil Absorption Standard
> 2. Designated Toxic Substances were buried, spread, leaked, or seep into the soil
> 3. the land has been owned by factories where Designated Toxic Substances were produced, used, or processed
> 4. the land has been owned by factories where Designated Toxic Substances were stored or kept
> 5. there is any other equivalent risk of soil contamination as listed through 2 to 4.
>
> (the Ordinance of the SCCA §26)

The above are the only criteria stated in the official rules. There are a 774 page SCCA guideline and a 16 page Q&A used as supplemented guides, but the guideline devotes only 16 pages and the Q&A uses 5 pages for Investigation Order. This total of 21 pages of instruction are all that street-level offices can use in deciding whether to issue an Investigation Order. Considering various case-specific situations, the statues and guidelines seem to regulators overly short, simple, and general. One regulator said:

---

[24] Compared to the US legal design, Japanese environmental pollution statues tend to be less specific, leaving a large room for street-level discretion. Compared pollution control statutes in the United States, the United Kingdom, and Japan, Cooter and Ginsburg (1996) shows that the Japan's air pollution statutes are almost the same length as the British counterpart and 90 percent shorter than the US counterpart. Japan's water pollution statutes is four times longer than UK counterpart and 80 percent shorter than US counterpart (Cooter and Ginsburg 1996).

> With regard to the Investigation Order, the statute says that an such Order is issued if there is a significant risk of soil contamination. But what is the significant risk? How do we know that? The Ordinance lists five conditions but these don't cover every case. [i13]

Another regulator had trouble interpreting the "Change to the State of Soil." Since Change to the State of Soil decides whether a case needs to go through regulatory review, its meaning can be critical, especially when the land at hand appears to have a land use history with Designated Toxic Substances.

> We have had trouble interpreting what "Changes to the State of Soil" means in some cases. The SCCA guideline says that "Changes to the State of Soil refers to any actions involving excavations and changes to the state of land." That's it… What about spraying seeds in a large agricultural field? What about installing heavy solar panels that cause 5-10 inches of land subsidence? The meaning of Changes to the State of Soil is quite important because it decides whether a land is subject to Investigation Order, but the law does not say anything about it. [i14]

Ambiguity of law is also evident in the GPP. Frontline offices decide whether a facility falls into the new regulated category, Storage of Toxic Liquid. The definition of the Storage of Toxic Liquid in the statute is not helpful; it defines Storage of Toxic Liquid too briefly as a storage facility that contains Designated Toxic Substances (the JCWA §5(3)). Moreover, as is true in any regulatory statutes, there are many exceptions that complicate frontline enforcement decisions. For instance, once a facility is deemed to be part of operating facilities, junction tanks or movable tanks, such a facility does not fall into the regulatory category (the GPP guideline p.12-13). A drum container, for instance, might or might not be considered as belonging to the regulated categories, depending on the particular conditions. The GPP guideline says:

> In the first place, a Storage of Toxic Liquid shall be a container fixed in a place for awhile for purpose of storing. Since a drum container is normally used as a movable container, the regulation does not apply here. However, if a drum container is fixed on the ground and used as storage for toxic liquid in practice, the drum container can be considered as a Storage of Toxic Liquid. (the GPP Guideline page.14)

The regulatory rule does not specify what constitutes the difference between the Storage of Toxic Liquid and other tanks, such as movable tanks or parts of operating facilities. What about a tank that adjoins the operating facilities and holds toxic liquid for 48 hours? Is that deemed as Storage of Toxic Liquid or as junction tanks? Are the 48 hours long enough for considering it storage? Only 18 pages of instruction is offered to street-level offices as to what counts as Storage of Toxic Liquid (The GPP guideline devotes nine out of 151 pages and the associated Q&A uses nine out of 24 pages).

The recent adoption of the SCCA and GPP increases the ambiguity of law, because there have not been accumulated precedents and institutionalized understandings indicating what is an appropriate enforcement decision:

> This regulatory program [the GPP] was just launched. It hasn't got enough cases yet. It's hard for us. We haven't developed any clear standards showing how far the law goes. [i40]

Having had less than five years of implementation, the two regulatory programs exhibit a high level of ambiguity.

Of course, simple and less-specific statutes have an advantage---it allows frontline regulators to enforce statutes in a flexible manner so as to produce the results that appear most reasonable or just in each particular case. However, abstract law does not offer explicit rules that help regulators to justify their enforcement as consistent, predictable, and non-arbitrary enforcement decisions.

***2. Uncertainty of Environmental Damages and High Compliance Costs***

In the enforcement of SCCA Investigation Order, the uncertainty arises from the fact that nobody knows whether soil contamination is present or absent until the soil investigation is completed. By definition, frontline offices issue an Investigation Order without knowing whether the site at hand is contaminated. Regulatory enforcement under such uncertainty involves two difficulties at the street-level decision-making: first, regulators need to identify the pollution sources, and second, they need to judge whether the sources pose a significant soil contamination risk that deserves the enforcement action. The following cases illustrate the two challenges.

***A. Difficulty of Fact-finding***

It is often the case that regulators have a hard time confirming what was there in the land. For instance, nothing is left indicating what substances were used on the site because the business shut down quite a long time ago. Or, the landowner might not even know the previous land use because the landowner simply inherited the land or bought it without specific knowledge about substances that would have been used by previous owners/tenants. Or, finally, the landowner might pretend to know nothing about any use of hazardous substances to avoid mandatory soil investigation.

The following case, drawn from my field observation, offers a good example of the difficulty of obtaining facts to figure out whether the land needs regulatory intervention. The case also serves as an example of how street-level regulators do their job and communicate with each other in the office.

*Case A: Golf Courses---Missing Records*

A young regulator, Aki (pseudonym), is the only regulator in charge of the SCCA in his office. One day, a case of solar panel construction came to him. The registration form said that the land was the site of former golf courses.

Aki thinks he might need to issue an Investigation Order because some golf courses spread pesticides that include Designated Toxic Substances, which can be assessed as a "risk of being contaminated". An aerial photograph shows the land covered with vegetation, suggesting that the land has been dormant for a long time.

Aki first checked official records about the golf course to ascertain whether pesticides were used. However, he didn't find such records.

Next, he looked for the results of water emission checkups conducted for every golf course in the jurisdiction. He would decide that the land would not be assessed as containing a risk of soil contamination should checkup results not exceed the emission standard.

However, the golf course was not on the checkup records either. He became upset, wondering why no documents had any information about the golf course. In all events, he needed to know something to make a decision about Investigation Order. He called the prefectural lab and asked if they have any emission checkup records concerning the golf course.

From an experienced colleague Aki had learned that the Agricultural Engineering Office monitors pesticide use. He called the office to ask if they have any records about the golf course and its pesticide use, but was told they do not because the golf course did not register their pesticide use. Aki was disappointed. The Agricultural Engineering Office told him that they require a registration only from a golf course with 18 holes. So the golf course Aki was inquiring about might have operated with less than 18 holes, perhaps 9 holes. At any rate, the inquiry to the Agricultural Engineering Office was fruitless.

Just after finishing the inquiry call, Aki talked with a colleague and asked if the local municipal office knows anything about the pesticide use on the land. The colleague doubted it, but mentioned that the municipal office might know when and for how long the golf course had operated. So, Aki called them to learn about the golf courses in order for the SCCA enforcement, then waited for their callback.

While Aki was making phone calls and talking with his colleague, the sub-director in his section had noticed Aki was dealing with something difficult. When Aki finished the call to the municipal office, the sub-director approached him and asked what was going on. Aki explained that he had been working on a potential Investigation Order case about which his office does not have any record. After giving a short summary to the sub-director, Aki returned to his desk. He was troubled and wondered what he could do.

After a while, he had a return call from the lab, informing him that they don't have any emission checkup records on the golf course for the last 10 years.

Some moments later Aki received a call from the municipal office. Thanks to this call, he finally grasped the whole picture. The golf course was originally planned to operate with full

18 holes, but it faced wide local opposition and ended up not opening for business. Then the golf course changed its name, reduced its size, and started to operate with 9 holes. The area of registered land to be used for solar panels was not in that area used for the golf course. The land had first been leveled, but because of local opposition, was left derelict. Aki now understood why he couldn't find any records about the golf course. After the call, the sub-director came to him, asking "is it clear now?" "Yes, it's clear", Aki replied with a relieved smile and started to explain the whole history of the land.

Since that part of the registered land was not used as a golf course, Aki thought no pesticides had been used on the land. He decided not to issue the Investigation Order. The office director approved this enforcement decision and the matter was concluded.

The above story illustrates how frontline offices have a hard time obtaining confirming facts to make an enforcement decision. The search for such facts sometimes requires patient and steady effort. In the above case, the regulator first turned to the record of the JCWA, then the record of water inspection. After this unsuccessful search, he called the prefectural lab, the Agricultural Engineering Office, and the local municipal office. This search took him half a day.

***B. Difficulty of Risk Judgment***

Another challenge for street-level regulatory enforcement involves risk judgment, i.e., estimating what degree of pollution regulated entities present.

Aki, the frontline regulator in the case A, mentioned his risk judgment on the pesticide use on the golf course:

> Even if the golf course used pesticide with Designated Toxic Substances, I don't think we would issue an Investigation Order, because the groundwater sampling in that region don't detect toxic substances... If the golf course used a proper amount of pesticide in an appropriate way, it doesn't seem as a risk of soil contamination, right? If you nevertheless consider the land contains the risk of contamination and issue an Investigation Order, then the land for the soil investigation ends up being quite large. I mean, even with a single pesticide use, costly soil investigation is required. But on the other hand, farming is waived from the SCCA regulatory scheme. But they might use the same pesticide, too! So, I don't think we would issue the Order if a groundwater sampling doesn't detect any toxic substances. We need to show solid evidence for Investigation Order. Otherwise, we would be challenged. [i14]

Street-level enforcement with uncertainty involves false positives and false negatives. Here, the regulator paid more attention to false positive, where regulatory offices unreasonably impose regulatory burden. With appropriate pesticide use, which is inferred from the groundwater sampling from that region, he does not consider that the land contains a contamination risk warranting an Investigation Order. By using analogy ("farming is waived

from the SCCA regulatory scheme. But they might use the same pesticide, too"), cost-benefit analysis ("then the land for the soil investigation ends up being quite large. I mean, even with a single pesticide use, costly soil investigation is required"), and the lack of evidence showing groundwater contamination ("the groundwater sampling in that region don't detect toxic substances"), the street-level risk judgment was made.

Street-level risk judgment is not necessarily consistent across offices; different frontline offices may reach different risk judgments in similar cases, as the following cases illustrate.

*Case B: Former Gas Stations:*

Gas stations store their gasoline in underground tanks. Gasoline contains benzene and lead, both of which are Designated Toxic Substances. How much risk of soil contamination does a defunct gas station present? Is the risk large enough to assess that the land presents a "risk of being contaminated" and deserves an Investigation Order?

Risk judgment and enforcement decision of an Investigation Order varies office by office. Some offices said, "gasoline contains benzene, so we issue an Order [i9]" or "you issue the Order, right? Gasoline has lead and benzene [i6], " while others said "gas station is regulated by the Fire Service Law and they are supposed to operate accordingly. Can we assess such gas station as presenting a risk of soil contamination? Unless soil contamination is clear, our office doesn't issue the Order to gas stations [i28] "

*Case C: Pesticide Use in an Agricultural Experimental Station*

An agricultural experimental station is a research center for developing new agricultural technology, such as introduction of new crops. Since some pesticides contain Designated Toxic Substances, the pesticide use in such sites became an issue: is the risk of soil contamination significant enough for an Investigation Order? Given that farming is waived from the SCCA,[25] what's the difference between ordinary farmlands, on one hand, and fields within the agricultural experimental station, on the other? The experimental stations can be seen as essentially different from normal farmlands because they may use a wide range of, and large amount of, pesticides in the field, which might present a significant risk of soil contamination. However, it is uncertain whether the experimental station holds a risk of contamination worth receiving an Investigation Order.

Enforcement decisions differ from office to office. Some offices think that the use of pesticide in an agricultural experiment station by itself constitutes solid grounds for legitimating an Investigation Order, while other offices do not.

The above two cases demonstrate the difficulty of judging risk and the different enforcement decisions reached by different street-level offices. While all street-level offices attempt to collect solid grounds to point up a contamination risk worthy of regulatory intervention, they also manifest differences as to what exactly they recognize as solid grounds.

[25] Ordinance for Enforcement of the SCCA, §25.

Thus for some offices, the mere presence of a gas station constitutes the solid ground that justifies an Investigation Order; while other offices need additional facts, such as a report by a gas station owner of tank leakage under the Fire Service Law. Likely, for some office, the mere existence of an agricultural experimental station presents a risk of contamination that deserves an Investigation Order, while it does not for other offices. Uncertainty of contamination can lead to different enforcement decisions.

### *C. High Costs of Compliance*

The high cost of soil investigation exacerbates the enforcement challenge. Frontline offices consider two kinds of costs: financial burdens imposed on the regulated entities and social costs triggered by regulatory enforcement.

First, especially for the SCCA, social cost is relevant in the sense that a mandatory soil investigation might cause a delay in providing additional or improved social services. Below is an example in which Investigation Order might trigger the delay of welfare service.

> *Case D: Nursery Center on an Old Factory Site*
> Lack of child day care centers is one of the serious social problems in Japan. A regulatory office received a construction plan for a nursery on an old cement factory site. Although adding a day care center helps the local government to reduce the wait-list for nurseries, the regulators in the Water & Soil Office had a concern about possible chromium pollution in the soil. At the same time, they were also concerned that if they order a mandatory investigation and if soil contamination is identified, that would put the plan of building a new nursery on hold, resulting in the failure to address the urgent social problem.

Like the above case, social costs matter to the agencies in enforcement decisions. In this case, there was no legal ambiguity---since the frontline office found that the Q&A instruction from Ministry clearly says that old cement sites are targets of Investigation Order, they issued the Order. To the regulators in charge of the case, "that decision was really hard to make. [i4]" In order to minimize the negative effect, the office "speeded up the process of Order issuance and soil investigation [i4]"

However, the biggest challenge to regulators regarding compliance costs is financial burdens on regulated entities. Soil investigation triggered by the Investigation Order imposes a financial burden on regulated entities through investigation costs and any associated costs caused by delayed construction. Moreover, once soil contamination is identified and registered in the national contaminated land inventory, refinement costs and a decrease in property values cause other financial burdens.

The high compliance costs, accompanied by the uncertainty of soil contamination, make enforcement decision easily open to industry challenges, as the following case illustrates.

*Case E: Hospital Re-construction*

A hospital submits their re-construction plan over 3000 $m^2$. Since they have used blood testers[26] that contain cyanide, one of the Designated Toxic Substances, the regulatory office issued an Investigation Order. The hospital opposed. They argued that soil contamination should not be happening because they have appropriately managed the testers and the cyanide used in the testers is such a small amount. They came to the meeting with the company making the blood tester; the representative said that the company had not heard that the use of their blood tester triggered the Investigation Order. Since the hospital planned the re-construction while continuing to operate, they wanted to complete the construction as soon as possible, but the mandatory soil investigation would delay the construction with additional costs.

Given the small amount of the Designated Toxic Substances and their appropriate disposal, the regulated entity believed that they did not pose a risk of soil contamination deserving of an Investigation Order. High compliance cost and uncertainty of contamination cause regulated entities to question reasonableness of enforcement and make it difficult them to accept the enforcement.

Regulated entities' doubt toward street-level rule-application can happen in the GPP, as case F illustrates.

*Case F: Plating Company and additional coating on the floor*

Plating companies use the Designated Toxic Substances (e.g., lead or cyanide). The GPP requires them to install additional coating on the floor to prevent unnoticed leakage of Designated Toxic Substances into the soil and groundwater. One street-level office faced resistance from companies. The plating companies argued that additional coating is too expensive and almost impossible due to the current piping layout. Additionally, they insisted that the required additional coating is unnecessary because their floors are already covered by one meter-depth concrete.

As with the hospital in case E, the plating companies insisted that their current measurement is enough to prevent possible groundwater contamination. The necessity of additional measures is hard to probe, given the uncertainty of contamination and high compliance cost. High compliance cost is particularly critical because plating companies are mostly small- or middle-sized companies, indicating that their financial conditions are not ready for absorbing additional compliance costs.

Street-level offices are aware of companies' potential doubts, which makes the offices determined to justify their enforcement decision. The excerpt below is from a street-level

[26] A blood tester is a medical device to measure blood components such as white blood cells and blood platelets.

regulator in charge of the SCCA. It demonstrates how street-level regulators try to balance uncertainty of contamination with financial cost for the regulated entities.

> "One might think that we should do a thorough soil investigation of any cases so that we can clarify the uncertainty and know the (non)presence of soil contamination in every single case. But we can't issue an Investigation Order like that, because the Order mandates a private business to spend lots of money. We need to present solid grounds to order the mandatory investigation. Without solid grounds, we don't issue an Order, even though a given piece of land seems to pose some risk of soil contamination. So there is a gap between the risk of soil contamination and the actual soil investigations conducted by our enforcement decisions. We need to enforce the regulation in a way that reduces the gap." [i6]

The conflict between false positives and false negatives emerges sharply. The uncertainty of contamination, ambiguity of law, and high compliance costs get entangled at street-level regulation. This creates a situation that makes the regulatory office keen on demonstrating the legitimacy of its interpretation and enforcement. However, without any court judgment and detailed guidelines from the Ministry, what in fact makes a regulatory office believe that it succeeds in legitimating its interpretation and enforcement action?

To explore the question, the following section summarizes the interview data and classifies the interpretive mechanisms frontline regulators employ to reason their interpretation and enforcement of law. It will introduce the horizontal construction of meaning of law, the focus of the next chapter.

## 3.3 Typology of Decision-Making and Interpretive Mechanisms

Through a systematic interview analysis, it is clear that frontline offices take two approaches---which I call the intra-office approach and the inter-office approach--- when they face a case involving legal ambiguity, uncertainty of contamination, and high compliance cost.

***Intra-office Approach: consultation within the office***

Intra-office consultation is the first strategy for frontline regulators to deal with a new, ambiguous case. Regulators chat, discuss, and consult with colleagues and bosses about whether the regulatory intervention applies to a specific case. As in other agencies, discussion, explanation, criticism, and authoritative definition within the office develop the mutually understood meaning of the statutes (Kagan 1978).

This inward approach clears up uncertainty by referring to previous, similar cases. A strong emphasis on consistency of rule application and the office's established conventions encourage them to adopt the previous case-handling. The following excerpts illustrate that consistency of enforcement is the first strategy to take when facing legal ambiguity.

> When the statute seems ambiguous, say, and we can interpret it in two ways, we search for precedents in our office. If we overlook our past decisions and make an opposite enforcement decision, that's the most terrible thing. So we determine whether our office has had similar cases before. [i55]

The quote below illustrates the way in which conventions are taught to newcomers and shape their understanding of how the statute is supposed to apply. When asked about how his office handles the interpretation of "a risk of being contaminated," the first-year regulator answered:

> Our office has never issued an Investigation Order so far. I asked the reason of the previous regulator in charge, because you'll definitely see some cases that presumably entail a risk of contamination. He replied that even though the statute is designed to issue an Investigation Order, our office has recommended that the companies do a voluntary soil investigation before submitting the required formats. He said an Investigation Order is too much burden on the regulated companies. I was, like, "oh I see, that's what we've been doing here…" And while I'm doing this job, I have the same feeling. Requesting the voluntary investigation results is better than issuing an Order. [i17]

Both excerpts indicate that consistency of enforcement is particularly emphasized in dealing with ambiguous cases.[27] Discussion with colleagues and managers starts with the question of whether there have been similar cases before in the office. Once they find similar cases in terms of similar industries, similar facilities, or similar environmental conditions, consistency of rule application weighs in. Although they pay attention to "make sure that the rule application makes sense in the case at hand [i42]," the impulse to avoid injustice and possible criticism for treating similar cases differently is prevalent [i5, i14, i17, i42, i47, i66].

Regulators indicated that consistency leads to fairness that is essential for legitimate enforcement. One regulator said, "as a regulator enforcing the law, it's not permissible to treat like cases differently. It's unfair [i25]." Another said, "maintaining fairness in our jurisdiction is most important [i55]. " Consistent enforcement can demonstrate fair enforcement.[28] Adopting

---

[27] While the strong tendency of emphasis on consistent rule application is pointed out in the Japanese prosecution organizations (Johnson 1998), consistency is emphasized in many administrative and regulatory contexts (Kagan 1978; Mashaw 1985).

[28] Street-level regulators believe that inconsistent rule application indicates arbitrary enforcement by individual regulators. To street-level offices, consistent enforcement is understood not as a part of the dilemma between consistency and responsiveness in a particular case, but as a part of the dichotomy between organizational consistency and individual arbitrariness. From that point of view, consistent enforcement is particularly weighty in justifying their decisions. Studies of regulatory compliance indicate that regulated businesses regard consistency of enforcement (particularly among competitors) extremely important, as discussed in Chapter 5 more in detail (Thornton, Gunningham, and Kagan 2005a; Kagan, Gunningham, and Thornton 2011).

similar cases is the most demonstrable and quickest way to justify enforcement decisions, and therefore, street-level offices first search for any similar cases in their offices.

In enforcing a newly introduced regulation, however, a street-level office does not always find similar cases in its jurisdiction. Then intra-office consultation focuses on (1) the aim of the regulatory statutes, (2) the amount of work, and above all, (3) consideration of substantial risk. With respect to the first criterion, one regulator, "Our job is based on the statute. It's fundamental that our decision follows the aim of the statute [i6]." Another regulator said, "the aim of the SCCA is to require companies to do a soil investigation. They are required to do that not because we arbitrarily want them to do the investigation… It's important to think why this statute was made and why companies need to do an investigation. [i16]" In short, street-level regulators try to justify their interpretation and thereby enforcement action by drawing on the purpose of the statute.

Achieving the purpose of the statute inevitably involves a judgment of substantial environmental risk. Through site visits, fact reviews, and interviews with regulated entities street-level regulators develop a basic idea of how serious a case would be and whether the case deserves regulatory supervision. Types of Designated Toxic Substances and site conditions are discussed (such as facility structure, history of use, the amount of used Designated Toxic Substances, the surroundings, and geological layer and underground water current).

In judging substantial risk, the trustworthiness of regulated entities can be taken into account. One regulator enforcing the SCCA says, "That company asks too many what-if questions. We guess they are trying to get away from the regulatory requirement. They would probably be thinking, 'we'll undertake this construction procedure because the Investigation Order clause doesn't apply'. So we're vigilant. [i14]"

On the other hand, the amount of work regulators would need to do can influence how to deal with new, ambiguous cases. Some street-level bureaucrats are open about their tendency to reduce the amount of their work. Inclined to avoid the difficult work of persuading opposing regulated companies, they interpret the statute in a way that minimizes the requirements[29]. One municipal regulator explains his office's unwillingness to apply the GPP. Faced with the resistance from the regulated entities, the regulatory office decided not to require the additional coating to the existing plating companies (see Case F). He says, "it's difficult to apply such new, strict regulation to the existing companies and to persuade them to comply with it. It's a lot of work. We're trying to interpret the statute as much as possible in a way that minimizes the burden on the existing entities. [i39]"

Nevertheless, substantial risk judgment also does take place, even when frontline offices are inclined to take a too accommodating interpretation. When considering the substantial environmental risk, the above regulatory office bought the regulated entity's argument: the floors of the existing plating companies already have one-meter concrete depth, which suggests that additional coating is an unnecessary investment to prevent underground water pollution. In a

[29] Due to concerns about legal or political complaint by regulated entities, legal coercion is not thought to be as a likely way of persuading them to comply.

different office, regulators did not buy the regulated entity's argument and required regulatory compliance: "since the registration shows that the Designated Toxic Substances were on their site, we told the regulated entity to clear up the risk of contamination by doing a soil investigation.[i82]"

Whether considering the aim of the statute or the amount of work, intra-office discussion boils down to the risk judgment and the justification logics, when faced with a new, ambiguous case without precedents. Is this amount of coating enough to prevent the pollution? Is this kind of previous land use considered as being at risk of soil contamination? What kind of facts do they need to judge sufficient in order to decide that the environmental risk that deserves an Investigation Order?

Both my interviews and survey explicitly show that, in addition to intra-office consultation, *inter-office* interaction is also quite common in street-level decision-making of risk judgment to justify their rule application. This inter-organizational construction of meaning of law has not been systematically investigated in the literature so far. The following section briefly introduces this additional interpretive approach which will be taken up further in Chapter 4 and Chapter 5.

**Inter-office Approach:** ***Inter-Office Consultation and Inquiry to Ministry of Environment***

Inter-office approach is taken when frontline offices reach out to other organizations to enhance the justification of their legal interpretation and risk judgment. There are two aspects to this approach; (1) frontline offices consult an organization with higher authority (Ministry of Environment); and (2) frontline offices try to firm up their legitimacy by showing that their interpretations are consistent with those of peer offices. The fact that street-level offices take inter-office approach suggests that interpretation and enforcement of statutes---that is, the very process of constructing the meaning of law---is developed through inter-organizational dynamics, rather than within a single organization. It also indicates that interpretation and enforcement of statutes is influenced not only by vertical authority structure but also by horizontal interactions in which an office consults peer offices.

*Inquiry to Ministry of Environment:*

Even though interpretation and enforcement is delegated to frontline offices, they may address Ministry of Environment, the body that drafted and supervises the two regulatory statutes. ("When the statute is not clear and a definite rule interpretation is not reached, Ministry of Environment is the go-to office. [i17]") Support by the Ministry is considered the quickest and most effective way to justify legal interpretation. Regulated businesses might cast doubts on a frontline office's rule interpretation in cases where the interpretation and consequent rule application will impose high compliance costs. Once approval or specific instruction from the Ministry is gained, however, street-level offices carry out the Ministry's instruction without question, and the ambiguity is cleared up, at least in their minds.

Street-level offices consider that the Ministry's approval guarantees the correctness of their interpretation and enforcement. Following is an excerpt where one office consults the Ministry to confirm their interpretation with respect to Investigation Order issuance. The question at hand is whether a case exempt from the Article 3 investigation is still subject to the Investigation Order clause.[30] The company strongly argues that because they are exempt from the Article 3 soil investigation, should be exempt from the Investigation Order clause as well.

> That case was severe. The company firmly refused the investigation. They brought up the statute terms and argued that they are exempt from the Article 3 investigation responsibility, so they should be exempted from the Investigation Order clause as well. All of us think that the company is subject to the Investigation Order clause, but we were saying that we need solid evidence to back us up… We consulted the Ministry and they say that it's ok to do what we're thinking. [i5]

The above example nicely illustrates that the Ministry can offer a conclusive interpretation and help street-level offices to justify their interpretation and enforcement to the regulated.

However, as already mentioned before, the approach to the Ministry is not always successful because the Ministry frequently does not offer a definitive answer. The Ministry often leaves the rule interpretation to frontline offices and responds, "frontline regulatory offices are the ones in charge and are responsible for interpretation and enforcement or the statute [i49, i50]," without offering any specific instructions.

Regulators in frontline offices then explore another way to substantiate their legal interpretation. Consultation with peer offices is frequently mentioned as a means for justifying their interpretation and enforcement decisions of new, ambiguous regulatory statutes.

> We can contact Ministry of Environment, but they'll probably answer that it's up to us. So we check how peer offices interpret and enforce the statute in similar cases to decide on sensible implementation in our jurisdiction. [i47]

## 3.4. Conclusion

The street-level regulatory offices are placed in a challenging position in implementing the newly made protective regulations, as this chapter elaborated. Because of the uncertainty of damage, street-level regulatory offices are faced with a dilemma between false positive and false

[30] Article 3 mandates a soil investigation when a business closes a facility operated with Designated Toxic Substances. The Article 3 requirement can be waived when (1) the site continues to be used as the site of the registered factory or (2) the site with the closing facility continues to be used as a part of a residence (only when the factory is small and the factory is attached to the residence of the owner.) (SCCA §3, the Ordinance of SCCA §16(2))

negative decisions. The ambiguity of law and the decentralized system leave frontline offices much large room for discretion in interpretation and enforcement. Due to the yet-to-be-identified environmental damages, ambiguity of law, and high compliance costs, the street-level offices need to show some rationale, evidence, or persuasive argument to demonstrate the legitimacy of their enforcement decision.

Regulators in these offices, like regulators in other countries, engage in internal discussion to determine whether to apply statutes to specific cases (Kagan 1978; Jewell 2007; Sandfort 2000). In the environmental offices in Japan, the discussion becomes most intense when the statute appears to impose a heavy regulatory burden on the regulated entities. In these discussions, they focus on the purpose of the statute, consistency with previous cases, and pressures for timesaving ways of case-handling. But they pay most attention to the judgment about substantial risk to the environment and to the legal justification of enforcement decision. They discuss how much environmental damage is at stake, and how the validity of their enforcement decision can be demonstrated. Through discussion with colleagues, consultation with bosses, and casual conversation in the office, intra-office interaction shapes their understanding of whether the risk at hand needs to be regulated and whether the enforcement action is legally defensible. Such interaction culminates in what they believe the statute to mean in a specific case (Kagan 1978).

Interestingly, the street-level offices engage not only in intra-office consultation, but frequently reach out to peer frontline offices in order to make sure that their interpretation and subsequent enforcement is not "incorrect". Based on theoretical and empirical considerations, the following chapters explain how this inter-office interaction influences the ways in which street-level offices face the challenges of interpretation and enforcement of regulatory statutes. Chapter 4 will discuss in detail the collective network mechanism of constructing the meaning of law and how the horizontal interaction affects the stringency of enforcement.

# Chapter 4. A Meso-level Schema: What role does inter-office consultation play in street-level regulatory enforcement?

It is widely recognized that street-level interpretation and enforcement play a critical role in defining, making, and institutionalizing the meaning of law (Lipsky 1980; Kagan 1978; P. J. May and Wood 2003; Hawkins and Thomas 1984; S. W. Maynard-Moody and Musheno 2003).

An important but often unnoticed process of street-level interpretation of statute is that frontline offices make sense of law across multiple levels. In order to understand how street-level offices enforce statutes, most previous studies have focused on micro-level factors, namely, institutional factors of single office (e.g., organizational resources and environments, organizational cultures) and individual characteristics of regulators (e.g., officers' value systems). Or, some other studies have focused on macro-level factors, such as national legal design. However, as the interviews in Chapter 3 suggest, frontline offices not only tap into resources and conditions within the office or their superior authorities, but also reach out to peer offices in charge of the same statutes in different jurisdictions in order to clarify ambiguity and uncertainty.

This chapter focuses on inter-office interaction (e.g., meso-level schema) that frontline offices deploy when enforcing new, ambiguous regulatory statutes. The analysis is based on in-depth interviews with frontline regulators, a national survey to every frontline office in charge of the SCCA and the GPP, two weeks of participatory observation, and enforcement statistics reports by Ministry of Environment in the context of SCCA enforcement. This chapter argues that horizontal interaction between street-level offices is as important as micro-level characteristics in understanding how regulatory offices make sense of and enforce the ambiguous statutes. This chapter first develops our theoretical understanding of how inter-organizational processes relate to street-level enforcement. Then it goes on to present quantitative and qualitative analysis showing that street-level offices use inter-office interaction as an interpretive strategy, showing how different meanings of the statute evolve in different organizational networks and what roles inter-office interaction plays in constructing meaning of law at the local level.

## 4.1 Theoretical Considerations

The analysis draws on socio-legal studies of regulation and street-level bureaucracy investigating how frontline regulators enforce the law, and also on neo-institutional organizational studies of how organizations collectively construct the meaning of law in pursuit of legitimacy. The analysis bridges these three literatures

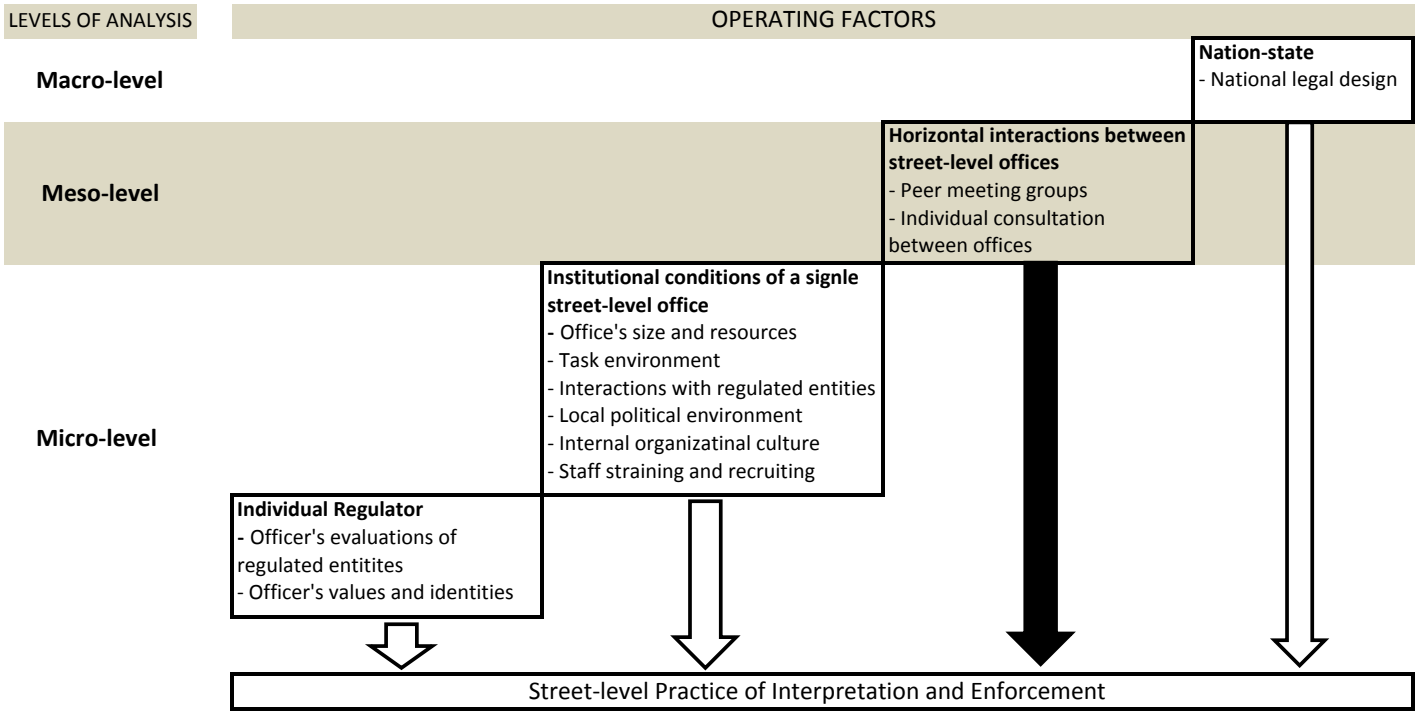
by illustrating how collective meaning-making unfolds in street-level offices and the conditions under which inter-office interactions matter in the interpretation and enforcement of regulatory law.

### Introducing Meso-level Analysis

Scholarship on regulation and street-level bureaucracy has investigated how frontline agencies enforce regulatory statutes and what leads to effective regulation. Previous research has shown that street-level enforcement varies even if regulatory agencies implement the same statutes, and argued that the following factors influence variation: the agency's size and resources, interactions with regulated entities, the task environment (e.g., compliance cost, visibility of violation, and willingness and readiness of regulated entities to comply), the local political environment, frontline officers' training and recruiting, the officer's evaluations of target population, officers' values and identities, and nationwide legal design (Bardach and Kagan 1982; Pires 2008; Hutter 1989; Ayers and Braithwaite 1992; Aoki and Cioffi 1999; Kagan 1994; Pautz 2009; Gunningham 1987; Lo and Fryxell 2003; S. W. Maynard-Moody and Musheno 2003; Oberfield 2008; Peter May and Winter 2000; P. J. May and Winter 2011; Scholz and Wei 1986).

While considerable research has investigated factors influencing street-level enforcement, previous efforts have engaged in either micro-level analysis and focused on characteristics of individual offices and regulators, or macro-level analysis to explain how national legal systems affect street-level enforcement. We know much less about meso-level factors, especially horizontal, inter-organizational interactions among frontline agencies. While this research fully acknowledges that both micro-level and macro-level conditions play a significant role, it introduces a fresh meso-level perspective--inter-office interactions among peer offices--to improve our understanding of how street-level offices interpret and enforce regulatory statutes (see Figure 3).

**Figure 3: Levels of analysis for street-level offices' interpretation and enforcement**




*Note: Meso-level factors, the focus of this research, are stressed.*

Why does this study focus on the meso-level (inter-office interactions)? There are two reasons. The first reason stems from neo-institutional scholarship on the sociology of organizations. A rich tradition of work argues that organizations faced with uncertainty (in this case, legal ambiguity and risk of environmental damage) conform to the norms and cognitive frameworks shared by others who operate in the same inter-organizational field (social spaces constituted by all similar organizations and affiliated entities). In pursuit of legitimacy (which in turn plays key roles in organizational survival), organizations adopt peer organizations' practices and, in so doing, incorporate collective understandings of what is believed to be legitimate behavior. These shared understandings eventually evolve into the meaning of law (Mayer & Rowan 1977; DiMaggio and Powell 1983; Edelman 1992).

In order to understand street-level agencies behavior and practice, neo-institutional theory suggests inter-organizational dynamics is significant, particularly within the fields. Neo-institutional theory predicts that inter-organizational settings and shared cognitive expectations influence how street-level offices deal with ambiguous law and environmental uncertainty, which eventually affects how

regulatory offices enforce the law and the effectiveness of regulatory enforcement. Based on both qualitative and quantitative data, this study explores such inter-office interaction on street-level legal interpretation and enforcement.

Second, this study introduces meso-level analysis because a growing body of research suggests that horizontal inter-office interaction among regulatory agencies helps shape the meaning of law. For instance, peer offices have an influence in shaping a local police office's operational definition of hate crime in California (Grattet and Jenness 2005). Another study argues that horizontal interactions, such as meetings between local-level offices, can affect how health care policies and the implementation practices spread in Switzerland (Füglister 2012b). Goldman and Foldy (2015) discuss a case where frontline officers of housing agencies gather together from different jurisdictions to devise standards to guide their implementation of ambiguous directives in an unnamed northern state of the United States. (Goldman and Foldy 2015). Scholarly interest is growing about the mechanisms and conditions under which inter-organizational dynamics affect legal meaning-making in local offices.

By focusing on meso-level analysis, this research draws on and bridges literature on the socio-legal studies of regulation, street-level bureaucracy, and neo-institutional organizational sociology. In order to understand how regulatory statutes are shaped and distilled into a tangible meaning, socio-legal studies of regulation and street-level bureaucracy have focused on the micro-level factors. Neo-institutional empirical studies, in contrast, focus on regulated businesses and how legal meaning is shaped through inter-organizational dynamics in compliance efforts (Edelman, Uggen, and Erlanger 1999; Edelman and Talesh 2011; Talesh 2009). Little research, however, has explored to the mechanism of inter-office meaning-making on the *regulating* side---how street-level regulatory offices interact with each other and collectively construct the meaning of law in a decentralized legal system. This research is an attempt to bridge the literatures and start a conversation about this gap.

## A Meso-level Schema: Inter-Organizational Processes of Meaning-Making at the Local Level

Neo-institutional scholarship on the sociology of organizations offers a powerful theoretical framework for understanding how organizations deal with uncertainty and on what they base their legitimacy of their structures and practices. This is useful for understanding how inter-office influences work in regulatory agencies faced with uncertainty in interpretation and enforcement. In their classic piece on "institutional isomorphism," DiMaggio & Powell (1983) outline three processes that generate similarity in organizational structures and practices across a

population of organizations pursuing legitimacy while dealing with uncertainty. The three processes are coercive, mimetic, and normative.

Coercive process is evident when an organization adopts a specific policy or practice from a higher governmental authority in order to obtain legitimacy. The imposition of a standard and policy is typically backed up with sanctions or inducement. In this research context, the coercive pressure is exerted if an organization with higher authority (e.g., the Ministry of Environment) mandates every frontline office to make a specific legal interpretation and enforcement in certain types of cases. While this process might fit in other regulatory enforcement fields, it is not well suited to street-level enforcement of environmental regulation in this study, where street-level offices have a wide discretion in interpretation and enforcement under a decentralized system.[31] Therefore, coercive process is not expected to operate in this context.

Mimetic and normative processes are the processes relevant to the present inquiry. Mimetic process manifests when an organization imitates other organizations' approaches in order to minimize uncertainty surrounding technology, goal, or environment. Typically, organizations model themselves after peer organizations that are apparently more successful or legitimate. Mimetic process in street-level regulatory enforcement is observed when frontline offices faced with ambiguous statutes and uncertainty of environmental damages simply copy peer offices' interpretation and enforcement. The modeled office could be an office with which the office needing to make a decision regularly interacts or an office that regulates the same business industries. Mimetic pressure is likely because, in addition to the inherent vagueness of law itself, newly adopted statutes exhibit a high level of ambiguity due to the lack of precedents. In addition, street-level offices need to deal with the uncertainty over false positives and false negatives in enforcing protective regulation. Mimetic processes are expected to be observed in street-level offices that seek legitimacy of their legal interpretation and enforcement under such ambiguous, uncertain situations.

Lastly, normative process operates when organizations adopt approaches and practices that are introduced by professional sources. As regulatory statutes cover more complicated and specialized environmental issues, professionals both in law and environmental science have gained influence in shaping organizational structures and practices by promoting stories about validity, effectiveness, and acceptability of particular practices. In the regulatory implementation context, while professional associations (lawyers and scientists) and social movement groups (environmental NGOs, community groups) can typically exert normative influence, professional sources can also be found within the governmental system, such as

[31] As explained in Chapter 2, the Japanese Ministry of Environment delegates interpretation and enforcement of the statutes and rarely dictates a specific decision.

government research and training institutes, prefectural institutes of environmental sciences, and street-level offices that have more expertise and experience of enforcement. Which organization wields normative influence needs to be determined through empirical investigation (DiMaggio and Powell 1983). In the present research, professional sources external to government system are not active. My survey to the SCCA frontline offices shows that only 14.8% (n=20) of street-level offices consult professional experts (lawyers or scientists) about their work and every interviewed regulator said that environmental NGOs are not active on issues related to soil pollution. Rather, professional sources are mostly found within the government, such as the National Environmental Research and Training Institute (NETI) in Tokyo and prefectural institutes of environmental science, both of which regularly offer technical training to street-level regulators. Among the professional sources within the governmental system, however, the most common source is big, well-resourced frontline offices in urban areas; they can exert a normative influence on small offices by virtue of the sheer volume of their case experience and relatively rich organizational resources. In a decentralized system, one can find some hierarchy in expertise among the offices, where some offices are considered to be more knowledgeable and professional than others and serve as sources of expertise (Binz-Scharf, Lazer, and Mergel 2012). In the SCCA enforcement, a normative process is expected to be evident mostly within the governmental system, not derived from external bodies such as professional associations, NGOs, or community groups.

In order to understand street-level interpretations and enforcement as a product of organizational isomorphism, one needs to take into consideration the rich and frequent interactions among offices. Compared to organizational structures, ideas and practices in organizations are less visible from the outside and involve complex details. Meetings, workshops, and individual networks are the typical channels that connect organizations, which encourages them to share organizational practice (e.g., Edelman, Uggen, and Erlanger 1999). Considering the low-visibility and complexity of street-level implementation practices, inter-organizational meaning-making process is likely to occur within groups that have frequent and rich interactions. Since frequent interactions are likely between a limited number of members (Granovettor 1982), there are expected to be clusters of offices with frequent interaction; these would operate in relative independence from other clusters and thus different meanings of law would evolve in different organizational networks.

Thus, the inter-office influence warrants investigation. How do street-level offices deal with environmental risk and legal ambiguity? What role does inter-office interaction play in making sense of and enforcing regulatory statutes? Drawing on a national survey of SCCA frontline offices, this chapter first

empirically examines these questions from a quantitative perspective, then uses with interview analysis to develop a more detailed discussion.

## 4.2 Data and Variables

### Survey Data

In order to examine how inter-office interaction matter in street-level interpretation and enforcement of regulatory statutes, a national survey was conducted (for more details, see Chapter 1 and Appendix). I conducted the survey in February 2015 and the overall response rate was 86.0% (n=136/158). Frontline regulators in charge of soil environment were asked to respond to the survey.

The survey focused on the enforcement and work environments at the office level, with components including (1) organizational resources and workloads (number of frontline regulators, frequency of transfer, and degree of confidence in relevant expertise on law and environmental science); (2) intra-office consultation (how frequently they talk, discuss and consult within the office about cases); (3) inter-office interaction (whether the office is a member of peer meeting group, whether they individually contact peer offices to share the case-handlings, and if so, which offices they contacted); (4) perception of the task environments (assessment of regulated entities, response from citizens); (5) ideas about law and regulatory enforcement (including perceptions of effectiveness, fairness, and consistency of enforcement); and (6) individual demographics of respondents (including gender, age, educational background, career length, confidence in their expertise in law and environmental science).

#### *Dependent Variables: Investigation Order*

Enforcement activity of street-level regulatory offices reflects their understanding of regulatory statutes, which ultimately substantiates what the statutes actually mean in the real world. This research uses the total number of Investigation Orders that have been issued for the first four years since the statute took effect (2010 to 2013). The data was collected from the Enforcement Statistics of the Soil Contamination Countermeasures Act FY2010-FY2013 issued by the Ministry.

#### *Independent Variables: Inter-office interactions*

In-depth interviews show that inter-office interaction, when it occurs, takes place in two ways. One is through peer meetings with other street-level offices and the other is individual phone calls from one office to another. The following three questions from the survey were used to measure inter-office interactions: (1) whether an office participates in a regular meeting with peer offices (group membership), (2) which offices are members of a peer meeting group if indeed they belong to such a

group, and (3) whether an office conferred with a peer office when faced with a difficulty in interpreting the statutes this fiscal year.

It is useful here to explain the peer meetings. According to the in-depth interviews, some street-level offices have a peer office meeting to discuss their enforcement practices and how peer offices would interpret the statute in a particular case. The meetings are geographically based; the members are, for example, prefectures in the same regions, municipalities in the same prefecture, or a prefecture and municipalities located in the prefecture. The meetings are typically held once a year.

It appears that peer office meetings are a long-established practice and no one interviewed knew exactly when, how, and why meetings started. It is likely that, however meetings originated in the 1970s when Japan faced an urgent need to tackle severe water pollution in order to respond to regional pollution and coordinate regulatory enforcement. Since then, the peer meetings have become a place to discuss the implementation of water and soil environmental regulations among membership offices. Over the past decades, according to the interviews, some peer meetings ended due to local governments' financial deficits (i.e., tight budgets, small staff members, and increase of caseloads) or improvement of the environment [i1, i23, i55]. For current street-level officers, the peer meeting is an established routine [i3, i7, i12, i43, i86].

Group membership serves as a good indication of inter-office interactions because the meeting not only offers a place to learn how peer offices interpret and enforce statutes, but also fosters individual networks among offices that facilitate inter-office interaction between, say, two peer offices after the meeting. As explained later, both interview and survey data demonstrate that offices that belong to groups are more likely to contact peer offices. Therefore, group membership is used as a proxy for inter-office interaction. Since the survey found out that there are eleven peer meeting groups, eleven peer meeting group dummy variables are also made for the models.

### *Control Variables*

In addition to the key independent variables, there are relevant controls in the models, as described below.

- The number of cases: the number of sites planned for construction from 2010-2013. Regulatory offices check all sites to determine whether Investigation Order applies. Data is collected from the Enforcement Statistics of the Soil Contamination Countermeasures Act FY2010-FY2013.

- Caseload per regulators: the number of cases divided by the number of street-level regulators. The number of regulators per office is collected by the survey and the

number of cases is collected from Enforcement Statistics of the Soil Contamination Countermeasures Act FY2013.

- Type of street-level office: a street-level office at prefectural level is coded 1 and at the municipality level is coded 0.

**Table 6.** Descriptive Statistics of Variables in Regression Models

| Variables | Mean | S.D | Minimum | Maximum |
|---|---|---|---|---|
| ***Dependent Variables*** | | | | |
| Number of issued Investigation Order | 4.59 | 8.005 | 0 | 52 |
| ***Independent Variables*** | | | | |
| Group membership | 0.559 | 0.498 | 0 | 1 |
| Peer Meeting Group 1 | 0.051 | 0.221 | 0 | 1 |
| Peer Meeting Group 2 | 0.074 | 0.262 | 0 | 1 |
| Peer Meeting Group 3 | 0.066 | 0.250 | 0 | 1 |
| Peer Meeting Group 4 | 0.051 | 0.221 | 0 | 1 |
| Peer Meeting Group 5 | 0.044 | 0.206 | 0 | 1 |
| Peer Meeting Group 6 | 0.038 | 0.189 | 0 | 1 |
| Peer Meeting Group 7 | 0.037 | 0.189 | 0 | 1 |
| Peer Meeting Group 8 | 0.059 | 0.236 | 0 | 1 |
| Peer Meeting Group 9 | 0.088 | 0.285 | 0 | 1 |
| Peer Meeting Group 10 | 0.022 | 0.147 | 0 | 1 |
| Peer Meeting Group 11 | 0.029 | 0.170 | 0 | 1 |
| ***Control Variables*** | | | | |
| Number of cases | 266.6 | 518.9 | 19 | 5498 |
| Caseload | 40.45 | 60.60 | 0.75 | 356 |
| Prefecture | 0.309 | 0.464 | 0 | 1 |
| Confidence in expertise | 4.507 | 1.271 | 1 | 7 |
| Intra-office consultation | 5.806 | 1.427 | 1 | 7 |
| Urban/rural | 78.62 | 95.14 | 5.482 | 501.70 |
| Percentage of LDP in local assembly | 0.401 | 0.141 | 0.088 | 0.759 |
| Information disclosure | 0.440 | 0.498 | 0 | 1 |
| Severe assessment of regulated entities | 3.163 | 0.864 | 1 | 5 |

- Confidence in expertise: confidence in enforcement expertise is measured by an index variable generated from responses to two questions: “My office has adequate legal expertise for enforcing the regulatory program” and “My office has adequate

technical expertise for enforcing the regulatory program" (Cronbach's alpha for reliability is 0.88). The variable is coded from 1 (not at all) to 7 (very much).

- Urban/rural: the inverse number of the percentage of the number of workers in agriculture, fishing and forestry to the number of total workers. I relied on the National Census 2010.

- statute and its guideline are ambiguous and do not specify clear-cut standards for enforcement (e.g., enforcement decision on the Investigation Order). In such a situation, do you discuss with the following people how to handle such a case? If so, how often: colleague, predecessor, team leader, and manager." The variable is coded from 1 (don't discuss) to 6 (always discuss).

- Local political situation: this is measured by the percentage of Liberal Democratic Party (LDP) members in local assembly. I relied on the report of Political Party Affiliation of Local Assembly Members (Ministry of Internal Affairs and Communication) for prefectural local assemblies. For municipal-level offices, I visited all websites to count the LDP members to make the data set since there are no statistics available. Since LDP is a conservative, pro-business party, it is expected that a local government with more LDP members in its assembly would issue fewer Investigation Orders.

- Information disclosure: this is measured by a binary variable identifying the office that received Request of Information Disclosure on the Soil Contamination Countermeasures Act during the fiscal year of the survey.

- Severe assessment of the regulated entities: this is measured by a response to the question, "Regulated businesses protest against enforcement when the enforcement appears unreasonable to them." The variable is coded from 1 (untrue) to 5 (true).

## 4.3 Survey Findings

### A Meso-level Schema for approaching legal ambiguity and environmental risk

Interaction between offices commonly occurs when street-level offices are required to make enforcement decisions under uncertainty. 74.3% of street-level offices (n=101) answered that they conferred with peer offices when they were not sure how to interpret and enforce the statutes during fiscal year 2014.

The survey in this research shows that 55.9% of street-level offices (n=76) belong to peer meeting groups. There are eleven peer meeting bodies working on the SCCA.

Membership in such a peer meeting body is positively related to whether the office confers with peer offices to deal with legal ambiguity and environmental risk. Table 7 shows that offices belonging to a peer meeting group are more likely use the direct inter-office interaction as an interpretive strategy. This result is consistent with Füglister (2012), which emphasizes the role of inter-governmental bodies in facilitating the communication on policy and implementation among membership offices.

**Table 7: Peer Meeting Group Membership and Individual Contact**

| | Did not confer with peer offices | Conferred with peer offices | Total |
|---|---|---|---|
| No membership | 21 (35%) | 39 (65%) | 60 |
| Membership | 14 (18.4%) | 62 (81.6%) | 76 |
| Total | 35 (25.7%) | 101 (74.2%) | 136 |

Chi square test < 0.05

The survey shows that the peer offices to be conferred with are not randomly chosen. Rather, the choices of which office to contact are consistent. Specifically, offices belonging to a peer-meeting group have a strong tendency to confer within the same group and not with offices beyond the group. The survey shows that offices contacted members of their peer meeting bodies at the rate of 89%. Taken together, the quantitative data suggest that once a street-level office joins the inter-organizational network, (1) inter-organizational interaction about interpretation and enforcement are facilitated, and (2) such interaction takes place within specific groups and rarely occurs beyond the group.

### Regression Analysis: Inter-Office Interaction and Enforcement

Table 8 shows the results of Poisson regression analysis concerning the influence of inter-office interaction on enforcement. Model 1 examines the influence of controlling variables on the Order issuance, and Model 2 examines whether group membership has an impact on enforcement. The result of Model 2 shows that even after relevant micro-level characteristics are controlled, peer group membership itself influences the enforcement decision-making. In the context of the SCCA, offices belonging to a peer-meeting group are generally more likely to enforce the

statute (i.e., more likely to issue an Investigation Order). This finding reflects the roles of peer office meetings, insufficient legal support to frontline offices, and the need to bolster enforcement legitimacy to regulated entities, as the following interview findings and Chapter 5 elaborate later. In a street-level enforcement context where frontline offices consider themselves under-resourced to counter legal challenges from regulated entities, inter-office interaction can be a good opportunity to advance their enforcement expertise and to make sure they do not make "incorrect" interpretation in enforcement. The statistical result showing that the offices with confidence in their enforcement expertise are more likely to issue an Order, whereas offices with more internal discussion are less likely issue an Order reflects such offices' typical defensive stance and the importance of enforcement expertise for enforcement decision. It is likely that the more inter-office interaction is available for street-level offices, the more enforcement expertise, experiences, and the norms among peer offices an office can learn, which can facilitate issuing an Investigation Order should that be necessary.

**Table 8: Poisson Regression Models for the Investigation Order Issuance**

| | **Model 1** | **Model 2** | **Model 3** |
|---|---|---|---|
| ***Independent Variables*** | | | |
| Group Membership | | 0.424*** | |
| | | (0.104) | |
| Peer Meeting Group 1 | | | 1.201 *** |
| | | | (0.188) |
| Peer Meeting Group 2 | | | 0.795 *** |
| | | | (0.238) |
| Peer Meeting Group 3 | | | 0.995 *** |
| | | | (0.156) |
| Peer Meeting Group 4 | | | 1.020 *** |
| | | | (0.236) |
| Peer Meeting Group 5 | | | 0.950 *** |
| | | | (0.181) |
| Peer Meeting Group 6 | | | 0.646 *** |
| | | | (0.194) |
| Peer Meeting Group 7 | | | 0.302 |
| | | | (0.285) |
| Peer Meeting Group 8 | | | -0.246 |
| | | | (0.230) |
| Peer Meeting Group 9 | | | -1.050*** |
| | | | (0.254) |
| Peer Meeting Group 10 | | | -0.688 |
| | | | (0.420) |

| | | | |
|---|---|---|---|
| Peer Meeting Group 11 | | | -2.229 * (1.007) |
| ***Control Variables*** | | | |
| Number of Cases | 0.00018 (0.00011) | 0.00024* (0.00011) | 0.00026 * (0.00011) |
| Caseload | -0.00136 (0.00101) | -0.00150 (0.00103) | -0.00140 (0.00101) |
| Prefecture | 0.631*** (0.130) | 0.442 ** (0.140) | 0.585 *** (0.162) |
| Confidence in expertise | 0.230*** (0.045) | 0.272 *** (0.047) | 0.311 *** (0.051) |
| Intra-office consultation | -0.182** (0.059) | -0.193 *** (0.058) | -0.266 *** (0.061) |
| Urban/rural | 0.00113* (0.00053) | 0.00050 (0.00056) | -0.00011 (0.00069) |
| Percentage of LDP in local assembly | -0.328 (0.382) | -0.233 (0.379) | 0.575 (0.475) |
| Information disclosure | 0.269** (0.095) | 0.234* (0.094) | 0.357 *** (0.100) |
| Severe assessment of regulated entities | 0.188*** (0.055) | 0.197 *** (0.053) | 0.177 ** (0.055) |
| **Intercepts** | 0.187 (0.372) | -0.168 (0.382) | -0.426 (0.436) |
| **N** | 129 | 129 | 129 |
| **AIC** | 1079.5 | 1064.4 | 924.2 |

*p<0.05, **p<0.01, ***p<0.001. Standard deviation in parentheses.

Besides meso-level influence, micro-level characteristics are also statistically significant. Offices with more cases, offices at the prefectural level, offices with more confidence in their enforcement expertise, offices that have received Information Disclosure Requests, and offices having severe assessment of regulated entities are more likely to issue an Investigation Order. These results are consistent with the literature's argument that active enforcement is likely when (1) organizational resources are adequate, (2) advocates of stringent enforcement are strong, to which information disclosure contributes, and (3) the assessment of regulated business is severe (Kagan 1994; Hutter 1989; Gunningham 1987; S. W. Maynard-Moody and Musheno 2003). Although the caseload lost statistical significance, its result with regard to Order issuance were negative, which is consistent with the literature. The percentage of LDP members in local assembly and

the degree of industrialization in jurisdictions lose statistical significance. This might be because (1) the SCCA implementation is not a politically controversial issue that sharply reflects parties' political agendas, and (2) even though soil contamination is more likely to occur in urban areas, rural areas are not immune from contamination due to the final disposal sites and landfilling.

In sum, model 2 shows that even after controlling micro-level characteristics such as organizational resources, intra-office consultation, task environment, local political and economic situations, and the office's subjective assessment of itself and regulated entities, the meso-level factor has an impact on enforcement at the street-level. Frontline offices readily available for inter-office interaction though group membership are more likely to stringently enforce the statutes in the SCCA context.

Although inter-office interaction can lead to isomorphic practices, it in itself does not necessarily determine the degree of enforcement stringency. Therefore, model 3 includes the eleven peer group dummy variables to examine whether inter-office interactions within the groups have any influence on enforcement. The result demonstrates that each group has its own tendency in the degree of enforcement even after controlling the effects from micro-level characteristics. Some groups are more likely to issue an Investigation Order and others are less likely, compared to the offices lacking such group membership. Specifically, street-level offices in Group 1, 2, 3, 4, 5, and 6 are more likely to issue an Investigation Order, while offices in Group 9 and 11 are less likely to issue the Order. This finding suggests that group membership and inter-office interactions based on the membership influence the construction of the meaning of the statute, which influences how they enforce the new ambiguous statute. The ways in which peer offices make sense and enforce the statute can vary across the groups.

To give another way of presenting the result, Figure 4 shows the boxplots of the peer meeting groups and the percentage of issued Investigation Orders (ANOVA $< 0.01$). Along with the regression results, this result also suggests that offices belonging to different peer meeting groups tend to enforce the statute differently, which indicates that the meaning of law can separately and independently evolve within different groups. Figure 5 sums up three types of groups: groups encouraging Order issuance (Peer Meeting Group 1,2,3,4,5, and 6), groups discouraging Order issuance (Peer Meeting Group 9 and 11), and offices without any group membership.

**Figure 4: Investigation Order and Peer Meeting Groups**

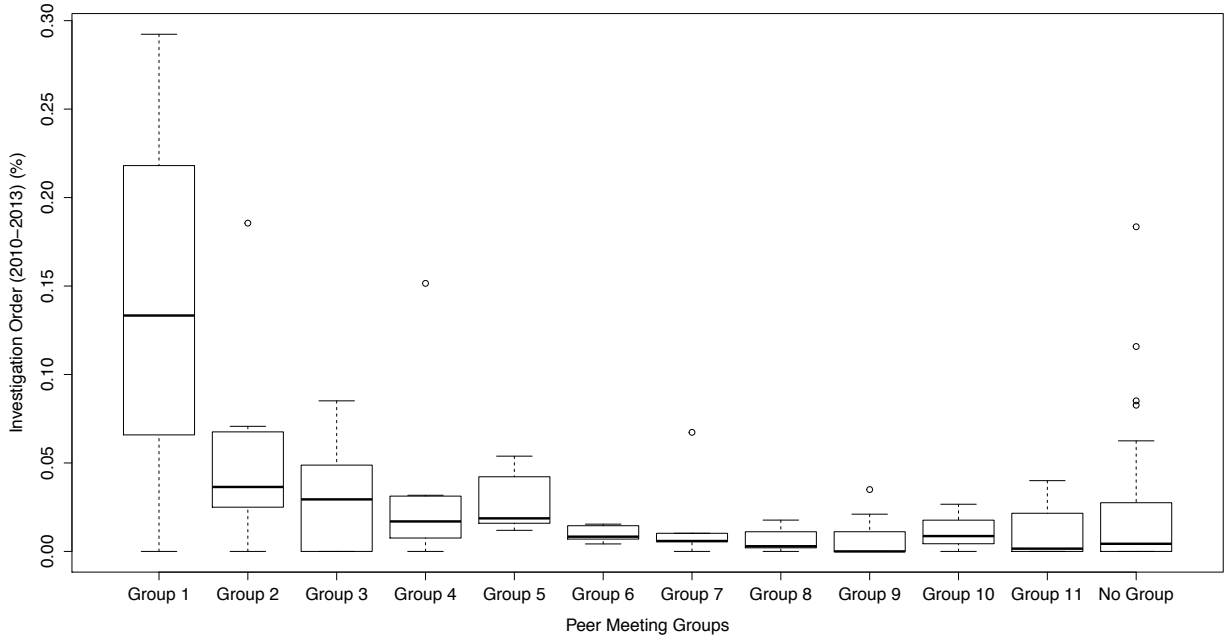
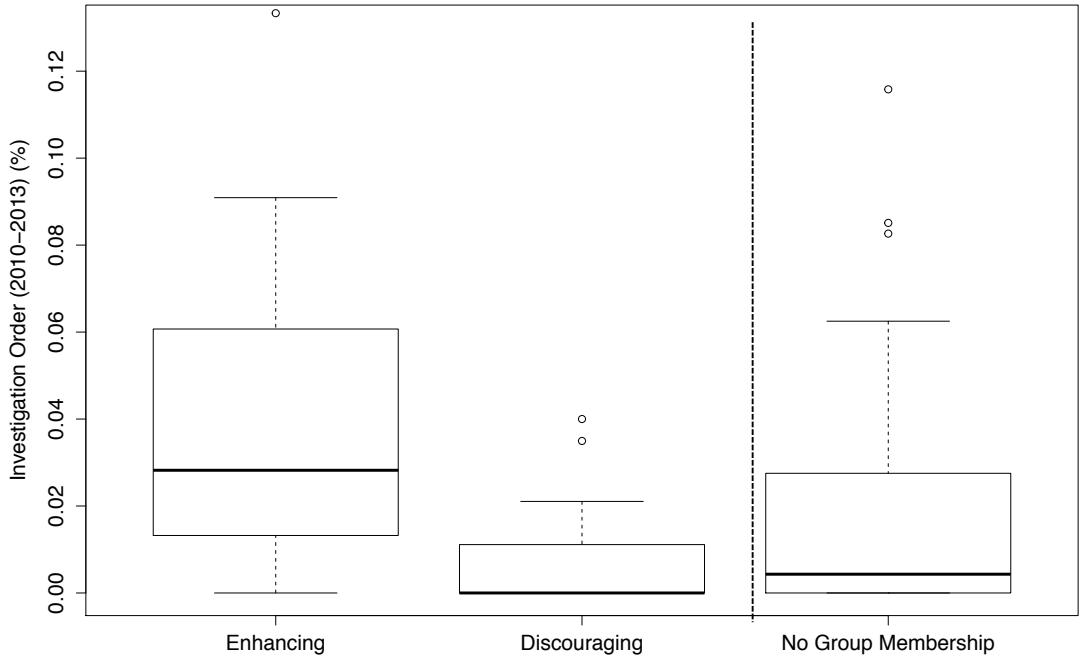



**Figure 5: Enhancing Groups and Discouraging Groups for Enforcement**



## 4.4 Interview Findings

***Inter-office interaction as an interpretive strategy***

Inter-office interaction as an interpretive strategy was evident in the qualitative interview data, as illustrated by the following quote by an officer in an office belonging to Peer Meeting Group 7:

> When we are still not quite sure how to interpret the statute even after having team discussions and checking the rules, guidelines and precedents, we contact our peer offices to see what they did in similar cases. [i4]

When street-level offices face ambiguous statutes, they first try to deal with them within their office, for example, having a discussion within their team, consulting the boss or experienced colleagues, and checking guidelines and precedents (Chapter 3. also, e.g., Kagan 1978). Inter-office interaction occurs when these attempts do not clear up their concerns. This pattern (inter-office interaction follows intra-office consultation) is reported in every case of inter-office interactions.

It is also common that the established peer meeting bodies play a role in (1) facilitating inter-office interaction within the groups and (2) observing group boundaries with respect to which offices are conferred with. Interview data illustrate how Peer Office Meeting facilitates inter-office consultation by fostering interpersonal relationship:

> "We know all the regulators in office A through the peer meeting, so we freely contact them. [i3]"

Likewise, the excerpt below is from an interview with a street-level regulator, who started to work in the Water & Soil Office this year, when asked about his first attendance at the peer meeting:

> At the meeting, I got to know regulators from K prefecture. So now I can call them when I have a concern about interpretation and rule-application… I hadn't contacted any other offices before the meeting, but after this, I'll do that. [i17]

His attendance at the peer meeting gave him an opportunity to make acquaintances in peer offices, which encouraged him to contact them when he tackles an interpretation issue. The quotes above are consistent with the social network literature, showing that pre-existing interpersonal relationships are an important determinant for choosing a source of advice (e.g., Granovetter 1973; Binz-Scharf, Lazer, and Mergel 2012). Likewise, regular inter-office interaction relies on interpersonal relationships and such interpersonal relationships can be developed

through the peer meeting bodies. Street-level rule-application involves case-specific facts, legal issues, and technical consideration. Such complex information is easily shared among people who already know each other.

While Peer Office Meeting facilitates inter-office interaction within the group, it also helps mark group boundaries. The following quote suggests that group membership also limits the interactions. After being asked why his office does not confer with non-member offices in their group, a regulator responded:

> "it's too much. If we contact offices beyond the group, we would need to contact too many offices then. That's a lot of work…and once we contact several offices in the group, the answers we'd get would be the same anyway." [i31]

This excerpt suggests that the number of peer offices to which a frontline office reaches out is limited[32]. Inter-office consultation is expensive---not necessarily in terms of money, but in terms of time and additional work that consultation requires. Finding out what offices are good to ask, reaching out to them, and taking their responses into consideration takes time; i.e., it takes up limited resources and slows down decision-making. Being efficient is critical to a public street-level office coping with the constant pressure of tight budget and a large number of cases. Accordingly, interview data indicate that a frontline office interacts with a limited number of offices and that Peer Office Meeting helps to both facilitate interaction within the group and delimit interaction beyond the group, in line with the survey findings.

***How inter-Office Interaction Contributes to Constructing the Meaning of Law***

Under ambiguity and uncertainty, frontline offices learn how peer offices interpret and enforce the new statutes, which can weigh in their enforcement decision-making. The following excerpts illustrate a way in which peer office can exert influence over how to interpret a new regulatory clause. Regulators, recounting recent peer meetings, said that they discussed when to issue the Investigation Order:

> "The standard of Investigation Order issuance is vague. I mean, you don't see the clear-cut criteria from the statute. Frontline offices have a large discretion in this regard. We grope around to learn when to apply it. The investigation Order clause has been a major topic in the recent meetings. [i33]"

> "At the last meeting, one frontline office asked how many Investigation Orders participating offices have issued so far and on what grounds they did so [i3]"

[32] My survey of SCCA frontline offices shows that frontline offices consulted to an average of 3.6 peer offices during the 2014 fiscal year.

Peer Meeting offer a place where frontline offices talk each other to alleviate the ambiguity and uncertainty and to guess what enforcement is appropriate by referring to peer offices' decision-making. Learning how frequently peer offices issue an Order can be helpful to determine the stringency of enforcement for an office. Frontline offices, confronted with legal ambiguity, turn to peer offices "to make up their minds to issue an Order [i3]".

Another regulator mentioned that they share their interpretations of law at the meeting:

> "At the meeting, different offices might come to different conclusions, such as whether to issue or not to issue an Order. Sure, every case has different contexts. But all of us at the meeting pay close attention to the legal grounds that other offices employ for their decision-making. [i13]"

By sharing how offices have dealt with enforcement decision-making, frontline offices try to have a sense of how to interpret and enforce ambiguous statutes. The following excerpt also illustrates that two frontline offices reached to the same conclusion. The two offices belong to the same peer meeting group. An office called another office to learn whether the office had issued an Investigation Order to a golf course that had used pesticides:

> I got a call from B prefecture about whether my office had issued an Investigation Order to a golf course where construction was planned. I said no, but we ended up talking about when we should issue an Order. I said that the amount of pesticides used in the golf course should be considered. He agreed. He mentioned that pesticide use on a golf course is not worth the Investigation Order unless its use is an inappropriate amount, considering that an appropriate use of pesticide in farming is waived from the mandatory soil investigation in the SCCA. We agreed on this. We were saying that if a golf course had used pesticide in an appropriate manner, the Investigation Order does not apply. [i14]

The above excerpt illustrate how the two offices reached the same enforcement decision about a golf course and Investigation Order. By considering the substantial risk (the amount of pesticide use) and using an analogy (pesticide use in farmland is waived from soil investigation), the two offices converge in a conclusion that they will not issue an Order to a golf course unless the pesticide use is beyond an appropriate amount.

***Meanings of law unfolding within different groups***

As the survey findings suggest, in-depth interviews also indicate that different meaning of law can unfold within different peer meeting groups. One example illustrates a difference over the meaning of the "risk of being contaminated," the criterion for issuing an Investigation Order. One office in Peer Group 4 explained:

> It's just a risk. It does not require showing the existence of contamination. A possibility of contamination suffices. Once there is a risk, we can issue an Order… Once there is a construction plan over 3000 $m^2$ and there is a record showing the use of Designated Toxic Substance, we'll issue an Order. [i1]

Another office in the same group employs similar decision-making.

> Once we have any type of records or registrations showing the use of Designated Toxic Substance at the site, we'll issue an Order anyway, even if the entity actually didn't use it. [i8]

On the other hand, offices in Peer Group 6 take a more accommodating stance. Gasoline contains benzene and lead, Designated Toxic Substances. Even if such Designated Toxic Substances were clearly on the site according to the records, both offices in Peer Group 6 require further facts to presume a "risk of being contaminated" to issue an Order.

> A gas station is regulated by the Fire Service Law and they are supposed to operate accordingly. Can we assess such gas station as presenting a risk of soil contamination? Unless soil contamination is clear, our office doesn't issue the Order to gas stations [i28]

> We don't assess gas station as running "risk of being contaminated." We check the Fire Department to learn whether there were any gasoline spills. If there is no record of spill, we don't consider there is a "risk of being contaminated" so our office does not issue an Order. [i12]

Examples from in-depth interviews supplement the survey findings--- the Peer Office Meeting's role to facilitate inter-office interaction and to mark group boundaries, and a tendency for different meaning of law to unfold in different groups. Of course, the interview and survey data do not argue that inter-office interaction exclusively determines street-level meaning of law. While acknowledging that micro-level factors such as intra-office consultation, organizational and political structure, matters in enforcement decision-making, both

qualitative and quantitative data show that frontline offices faced with legal ambiguity make use of the meso-level schema to figure out the meaning of statute.

## 4.5 Roles of Inter-Office Interaction

Having said that inter-office interaction influences street-level interpretation, what role does inter-office consultation play in the street-level enforcement? How does inter-office interaction influence the construction of meaning of law at the local level? Three answers emerged from the interviews: (1) it narrows the discrepancies in enforcement decision-making, (2) it offers prototypes of interpretation that other offices can imitate, and (3) it provides a learning opportunity where under-resourced offices can learn expertise from experienced offices. Although I recognize that these three roles overlap in actual situations, this distinction serves as a helpful analytical tool to focus on the mechanisms of inter-organizational interactions.

***Inter-office Interaction as a conduit for consistency***

The first role inter-office interaction plays is to narrow the gap in interpretation and enforcement within group membership. It has been widely reported that peer consultation helps to achieve consistency of frontline implementation of law. The field experiments in Ho (forthcoming) demonstrate that peer consultations improve consistency and accuracy of food safety regulatory enforcement. Kaufman (1960) explains how the deliberation with peers at regular meetings and the constant rotation of officers help to generate integrative decision-making at the frontline (Kaufman 1960). Johnson (1990) describes how close deliberation elicits a high consistency of criminal justice among Japanese prosecutors. Focusing on the meetings of peer organizations in Switzerland, Fuglister (2011) shows that intergovernmental meetings for health care works as a channel for policy diffusion and encourages the membership offices to adopt a particular policy and its implementation practice that are considered to be successful. This literature suggests that peer interaction can facilitate convergence of street-level implementation to a certain degree, or narrow the differences among frontline offices[33].

Along with the literature, my interviews indicate that decision-making by peer offices can establish a range of enforcement decision-making—although inter-office interaction does not always converge in the same enforcement decision, it still narrows the range of decision-making. The following excerpt is an example of how

[33] Of course, not every inter-office interaction leads to the same interpretation. Different interpretations and enforcement decisions still remain, considering that no two cases present the exact same conditions. Even within the same case, there can still remain some inconsistency among individual regulators (Ho, forthcoming).

inter-office interaction can encourage an office to toe the line in conformity with peer offices:

> We contact peer offices to check the trend, how they have dealt with similar cases. Our office then makes a decision suitable to our case, based on what we learned from them. [i47]

Another regulator contacted peer offices in the same meeting group to learn whether they had dealt with a construction case at a concrete factory site and whether they had issued an Order. (Concrete could contain hexavalent chromium, a Designated Toxic Substance.)

> We haven't had similar cases so far. So, if peer offices had experienced this type of case, and if they issued the Order, we'd like to know on what basis they issued the Order. Then, we'd do similarly once peer offices' legal grounds look ok with us. [i4]

While frontline regulators remarked that Peer Office Meeting does not completely unify enforcement decision-making [i5, i13, i47], the above excerpts illustrate that they nevertheless base their own enforcement stringency on peer offices' enforcement activity[34]. Under the legal ambiguity and uncertainty of environmental

---

[34] In the context of GPP, Peer Office Meeting also limit the range of rule-application, while there are cases in which Peer Office Meetings do not converge in one single conclusion. One of the cases concerned whether to apply the new regulated category to a type of tank. The following excerpt is from a regulator who attended Peer Office Meeting. Learning that some offices considered the type of tank as a regulated category and others did not, he remarked that his office would not consider the facility as the Storage of Toxic Liquid. He said:

> When you have a tank that isn't attached to the ground but you won't move it anyway once you put the liquid in it, does it fall into the new regulated category, Storage of Toxic Liquid? Peer offices in the Meeting apply the regulation differently. For some offices, it applies and for others it does not. So I thought we can decide it on a case-by-case basis. In this case, I'll not apply the statute.[i47]

However, inter-office interaction still discourages the offices from taking an enforcement decision outside the range of those of peer offices. Speaking about the potential influence of peer offices, the above regulator continued:

> But if it turned out that all offices in the Peer Office Meeting considered this type of tank as Storage of Toxic Liquid, I would have to treat this case like that. [i47]

harm, inter-office interaction can give the offices a sense of to what extent the enforcement is within an appropriate range ("At the last meeting, one frontline office asked how many Investigations Order participating offices have issued so far and on what grounds they did so [i3]").

Street-level offices try to avoid making idiosyncratic and different interpretations than those of most peer offices because they believe such enforcement decisions can invite doubts by regulated entities. (see Chapter 5 for more detailed discussion). This may be due to the frontline regulators' desire for psychological reassurance ("when you learn that your office's decision to issue the Order is not so different from what peer offices are doing, it's reassuring." [i3]), or due to concern about legal consistency and legitimacy ("it's unfair that only our jurisdiction is too strict [i46]"). It is fair to say that inter-office consultation is positively related to inter-office consistency in frontline implementation of statutes.

***Providing a prototype for imitation***

The second role that inter-office interaction can play is to offer prototypes that peer offices can imitate. This is an extension of the first role. The following interview excerpt is from a regulator working in a municipality regulatory office:

> When we have a concern whether to issue an Investigation Order, we contact the [prefectural] office to learn whether they have issued the Order in similar cases. If they issued the Order before, we would check their argument and issue an Order on the same grounds, if their argument works in our case. If they didn't issue the Order, we won't do that either…
>
> A high school building was going to be demolished. Every high school has a science lab with toxic materials, you know. Toxic materials such as benzene and heavy metal must have been used and disposed of there. The thing is, we have no record. They didn't register any kind of forms [that show the high school used such materials]... So we called the [prefectural] office to learn whether they have had a case of demolishment of a high school building. They didn't, so I asked if they would issue an Investigation Order in this case. They were doubtful about the Order issuance unless the high school said they used toxic materials…We don't think we will issue the Order this case. [i7]

This respondent makes clear that his municipal-level office relies on the prefectural office. It contacts the prefectural-level office to learn what the latter would decide, which will become the consulting office's enforcement decision as well ("issue an Order on the same grounds", "If they didn't issue the Order, we won't do that either"). Although this imitation approach was not adopted by every municipal-level office, interviewees frequently reported that municipal-level offices

tend to follow the lead of prefectural-level offices. From the municipal offices' point of view, the prefectural-level offices are better equipped to interpret and enforce the statutes. They "have experienced more cases of a wider variety [i13, i28, i33]" and "have more regulators [i13, i30]." Interpretation and enforcement decision of such offices is deemed as reliable, and can be transferred though inter-office interaction and work as a prototype that other offices can imitate.

***Providing a learning opportunity***

The third role of inter-office interaction is to provide a learning opportunity for under-resourced or little experienced frontline offices:

> "F prefecture, unlike our prefecture, has an independent team working on the soil environment. Our office is responsible for both soil and water environment, and I am the only regulator in charge of the soil environment… F prefecture has four regulators working exclusively on the SCCA. They are knowledgeable and have more experience than we do… My predecessor advised me to contact F prefecture when I have a question about the SCCA, and I did so when our office had a case in which we ended up issuing an Investigation Order. Soil contamination rises in an industrial area, but our office has not handled such cases because our jurisdiction is mostly rice fields and farms… But F prefecture is different. They have industrial areas and many land developments. F prefecture has more experience and knowledge in enforcement, so I called them." [i14]

This regulator, the only regulator working on the SCCA at his office, called prefecture F when he was not sure whether a case at hand falls into Change of the State of Soil, the criteria determining whether a case needs to go through regulatory review. As to the inquiry call, he continues:

> "We also talked about how we should evaluate the environmental damage. That's very instructive and broadens my perspective. I read guidelines, but regulators in other offices have experienced what the guideline doesn't tell. Case experiences from peer regulators are very helpful. I also appreciate that I have these peers I can easily ask. [i14]"

The role of providing a learning opportunity is evident, especially when an office seeking advice admits their limited implementation experience and limited resources. One regulator in the municipal-level office mentioned that Peer Office Meeting is necessary for his office to learn about enforcement cases:

> Our jurisdiction is pretty small, because our office is municipal level. So when a type of enforcement case comes up, that will probably be our first case. If our office was prefectural level, we could accumulate experience and knowledge, so that

> would not be a problem though... In this sense, Peer Office Meeting is a great learning opportunity for us. Through the meeting, we can learn what kind of cases can occur and how to deal with them. We need to learn about enforcement cases as much as possible. [i13]

Another regulator acknowledges that they can learn about the actual cases through inter-office interaction:

> We learn a great deal from the cases that other jurisdictions have experienced. These cases are new to us and, of course, these cases are not covered by the guidelines issued by the Ministry. [i15]

Expertise and experience are necessary for effective enforcement. Since jurisdictions with large populations tend to enjoy more regulators and receive a wider range of cases, knowledge spreads from well-resourced frontline offices (prefectural offices or municipal offices with more than 1 million population) to under-resourced frontline offices. Offices with little-experienced find it quite helpful [i13, i14, i15].

***Links to Institutional Isomorphism***

Institutional isomorphism predicts that ideas and practices in organizations will become similar under uncertainty. Three roles of inter-office interaction can be understood as specific mechanisms of how the isomorphic processes play out in the Japanese regulatory frontline. A certain degree of convergence and imitation is consistent with what mimetic and normative isomorphism predicts: organizations faced with ambiguity follow peer organizations that look successful or legitimate. Inter-office interaction as a learning opportunity resembles normative isomorphism, where organizations adopt the practices that professional sources advise. It is well recognized that meetings, conferences, or workshops can facilitate the spread of a certain type of practice and ideas (Edelman, Uggen, and Erlanger 1999; Dobbin 2009; Füglister 2012b). Street-level offices pursuing legitimacy of their enforcement can turn to more resourced, experienced offices to seek advice. They are willing to adopt enforcement practices that the more resourced offices employ. Under legal ambiguity and environmental uncertainty, interpretation and enforcement of peer offices (especially more resourced, experienced offices) can act as (1) a centripetal force to narrow the discrepancies in enforcement decision-making, (2) a prototype that is deemed appropriate, and (3) a learning opportunity of enforcement knowledge from which another office can learn. Inter-office interaction, therefore, is conducive to facilitating similar meanings of law among group membership offices.

Three things need to be acknowledged. First, inter-office interaction is rather clustered, not an open platform where any frontline office joins. As both survey and interview data show, frontline offices tend to interact within the Peer Meeting Group,

not beyond the group boundary. Considering that offices belonging to Peer Meeting Group are more likely to employ meso-level schema, and that they contact membership offices when reaching out to peer offices, different meaning of law can evolve in different groups, as discussed before. In other words, isomorphism is observed within the group, but not beyond the group, because there are inadequate inter-office interactions beyond the groups that can convey implementation practices and understandings of law.

Second, it should also be noted that inter-office interaction does not include lawyers or scientists who possess legal or technical expertise. Frontline regulators, even though the majority of them have a B.A. or a M.A. in natural sciences, do not always have considerable technical knowledge in the soil or groundwater environments, let alone legal expertise; there is no lawyer in their office. This means that interpretation and enforcement shared though inter-office interaction are not necessarily allied to substantive effectiveness or judicial decision-making. In other words, there remains a possibility that they might develop interpretation and enforcement that are not effective from the standpoint of environmental science, or are too lenient or too stringent from the standpoint of legal professionals.

Third, this chapter introduced excerpts from interviews at street-level offices that participate in peer meeting bodies and that have contacted the member offices in their peer meeting bodies. However, this does not exclude the possibility that offices that do not participate in the peer meeting bodies also have inter-office interaction; nor does it mean that every office participating in the peer meeting body contacts peer offices. Indeed, the interview data include offices that are not members of any peer meeting body, yet have contacted other offices,[35] as well as offices that feel they do not need to contact any peer offices.[36]

## 4.6 Enforcement and Regulatory Goals in the Current Context

This chapter shows that frontline offices with more informal networks with peer offices are generally more likely to enforce strictly. Does Investigation Order issuance really helps achieve regulatory goals in the current context? Even though effectiveness of enforcement is hard to empirically and rigorously examine, such consideration is necessary for regulatory research. The following is an attempt to conduct such an examination, using available data regarding the SCCA.

One of the aims of the SCCA is to identify contaminated land so that proper management and supervision can prevent the spread of contamination and secure

[35] "We emailed City F, Prefecture F, Prefecture A and Prefecture C, all of whom I got to know at the training organized by the National Environmental Research and Training Institute [i46]"

[36] "We don't contact other offices… most issues are cleared up through discussion within our office [i5]"

citizens' health (SCCA §1). Since identification is the first step for proper management of contaminated land, it can be said that the greater the number of registrations for contaminated land, the more likely the land is to receive proper management, and therefore, the more likely the regulatory aim is to be achieved. In this sense, the data showing the number of registered contaminated lands can be used as a proxy of regulatory effectiveness.

In order to have a sense of regulatory effectiveness, the Poisson regression models have been tested. The dependent variable is the total number of registered contaminated lands (2010 to 2013) in each jurisdiction, and the independent variable is the total number of Investigation Orders (2010 to 2013) in each jurisdiction, both of which are collected from the Enforcement Statistics of the Soil Contamination Countermeasures Act FY 2010-2013. As controlling variables, the total number of cases (2010 to 2013), the number of voluntary registrations for contaminated land (2010 to 2013), and the degree of urbanness are included as well[37].

Table 9 shows the results of Poisson regression models. Model 1 examines the influence of control variables, and Model 2 includes the number of Order issuances (i.e., enforcement) to see whether Order issuance has a significant impact on identification of contaminated lands. The result shows that enforcement activity has a positive effect on identification of contaminated lands even after relevant variables are controlled.[38] In other words, frontline offices issuing more Orders are more likely to have contaminated land identified, which suggests that more contaminated lands receive proper management. This facilitates the regulatory aim of preventing the spread of contamination and securing citizens' health.

---

[37] The total number of cases and the number of voluntary registrations also are taken from the Enforcement Statistics of the Soil Contamination Countermeasures Act FY 2010-2013.The degree of urbanness is the inverse number of the percentage of the number of workers in agriculture, fishing and forestry to the number of total workers (taken from the National Census 2010). The number of cases and the degree of urbanness are the same variable used in the regression models in Chapter 4.

[38] As expected, the all four variables have a positive influence over identification of contaminated land: (1) The more overall construction cases are filed, (2) the more voluntary registrations as contaminated land are filed, (3) the more urban a jurisdiction is, (4) the more Investigation Orders are issued, and the more contaminated lands are identified. The reduction of AIC values from Model 1 to Model 2 indicates the importance of the Investigation Order issuance to explain the identification of contaminated lands.

**Table 9: Poisson Regression Models for Registered Contaminated Land**

| | Model 1 | Model 2 |
|---|---|---|
| Investigation Order | | 0.029 *** (0.0023) |
| Number of Cases | 0.00012 ** (0.00004) | 0.00017 *** (0.00004) |
| Voluntary registration for contaminated land | 0.088 *** (0.0031) | 0.066 *** (0.0038) |
| Urban/Rural | 0.0007 * (0.0003) | 0.0010 ** (0.0003) |
| Intercept | 1.422 *** (0.050) | 1.309 *** (0.052) |
| AIC | 1007.9 | 865.19 |
| N | 134 | 134 |

When it comes to regulatory effectiveness, one also needs to pay attention to the risk of "overregulation." Regulatory office that too easily issues Investigation Orders produces more false positives and requires heavy costs and delays on businesses that turn out to be unnecessary. However, such risk of "overregulation" should be minimal, because (1) the percentage of issuing Investigation Orders is as low as 2 % across the nation and (2) inter-office consultation seems to guard against idiosyncratic and overaggressive enforcement by a particular office.

## 4.7 Conclusion

This chapter focuses on the role that inter-office interaction plays in interpreting and enforcing statutes with legal ambiguity and environmental uncertainty. Both qualitative and quantitative analyses demonstrate that inter-office interaction works as an interpretive strategy and has an impact on the ways in which frontline offices make sense of and enforce the new, ambiguous statutes.

Quantitative analyses confirm that inter-office interaction, facilitated by peer group membership, is as important as micro-level characteristics. Generally, offices belonging to a Peer Meeting Group are more likely to stringently enforce the SCCA. Also, both regression and ANOVA results suggest that different peer meeting groups develop different meanings of law.

Interview analysis supports the above argument with rich qualitative accounts. The in-depth interviews demonstrate that inter-office consultation is fostered through interpersonal relationships within the established group memberships; it also discourages inter-office interaction beyond the group.

Also, by focusing on three roles that inter-office interaction can play, this chapter illustrates how meanings of a statute unfold in inter-organizational dynamics and how inter-office interaction encourages the offices to enforce the ambiguous statute similarly. In addition, inter-office interaction reveals the differences in interpretation and enforcement across jurisdictions and thus discourages decision-making that is out of line with that of peer offices. At the same time, in pursuit of legitimacy, street-level offices in doubt about enforcement tap into peer offices' practices to make sure of the appropriateness of their interpretation and enforcement. Thus, the three roles of inter-office interaction—imitation, learning from each other and lessening diversions in practices--all contribute to alleviating the ambiguity and uncertainty frontline offices are confronted with. They incorporate the collective understanding of what is appropriate and construct the meaning of law at the frontline level. As neo-institutional empirical studies predict, this meso-level interaction functions as importantly as micro-level characteristics.

Given the general relationship between inter-office consultation and the tendency to issue Investigation Orders, the last section of this chapter briefly discusses its connection to regulatory effectiveness. Although the examination is quite limited due to the availablity of data, more Investigation Orders seems to have a positive effect on the regulatory aim of preventing the spread of contamination and securing citizens' health.

The remaining question is: Why? What drives frontline offices to employ the meso-level schema? The simple answer is to bolster the legitimacy of frontline interpretation and enforcement decisions. This stems particularly from (1) frontline regulators' values cherishing fairness and consistency as a principal of justice, (2) the widespread idea that uniformity indicates correctness of legal interpretation, (3) inadequate legal support and expertise of frontline offices, and foremost, (4) the need to demonstrate enforcement legitimacy toward regulated entities. All this will be discussed in detail in the next chapter.

# Chapter 5. Inter-office Consultation as a Source of Legitimacy: Conditions of Meso-level Schema

In enforcing a protective regulation, regulatory agencies are called on to fulfill two roles: protect a public good (such as environmental protection) and appropriately employ the coercive power of the state when needed. Both requirements need to be satisfied, or at least considered, in order to maintain legitimacy of street-level regulatory enforcement. Legitimacy refers to the view that "the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (Suchman 1995:574). If a regulatory office fails to show the legitimacy of its enforcement action and inaction, this can easily lead not only to unsuccessful regulatory attempts, but also to loss of social support. Thus, its organizational survival would be threatened. Whether an enforcement decision is considered as legitimate (or at least, would not raise questions about legitimacy) is highly significant for frontline decision-making.

Since what considered legitimate differs between different social audiences, the discussion here needs to clarify to whom frontline offices try to signal their legitimacy. The key audiences in this research context are regulated entities and citizens: entities who bear regulatory costs and citizens who benefit from the regulation.

For regulated entities, the appropriate use of legal coercion is a major issue. Enforcement that is too stringent and regulatory burdens that seem unnecessary cause regulated entities to doubt street-level offices' interpretation and enforcement. This creates stiff resistance, resulting in costly and unsuccessful regulatory attempts to coerce compliance, an enforcement style that Bardach & Kagan (1982) call "legalistic enforcement." On the other hand, whether street-level offices effectively protect the public good is the main concern for citizens. Accidents, catastrophes, and scandals, including revelations of lax enforcement or regulatory incompetence, indicate that regulatory enforcement is failing, leaving offices under severe external scrutiny as to whether the enforcement action or inaction was appropriate.

The need to signal legitimacy of interpretation and enforcement is both critical and challenging given the uncertainty of risks and legal ambiguity. With regard to both audiences, while street-level offices need to demonstrate that their interpretation and enforcement is appropriate, reasonable, and in line with the purpose of regulations, there are no clear standards in statutes and no visible environmental harm that they can draw upon to show this.

This chapter delves into the underlying reasons and conditions of inter-office consultation, the key to which, I found, is the offices' quest for legitimacy. This

chapter discusses the fundamental needs for frontline offices to win legitimacy concerning their interpretation and enforcement of ambiguous statutes. Based on the previous chapter showing that inter-office interaction plays a role in facilitating consistent decision-making among frontline offices, this chapter shows why and under what conditions frontline offices turn to the meso-level schema. Since the two relevant audiences are regulated entities and citizens, they are discussed in turn in the following sections.

## 5.1 Enforcement Legitimacy vis-à-vis Regulated Entities

Regulatory enforcement is an exercise of government power. Regulatory offices can impose enormous costs for compliance, restrict business activities, impose fines, and shut down businesses. The question in regulatory implementation is always whether a regulatory burden is reasonably imposed in a particular case. If regulated entities consider an enforcement decision inappropriate, it may lead to stiff resistance, conflicts with regulators, and even, prolonged legal battles, all of which hamper long-term, stable regulatory compliance, and eventually frustrate regulatory goals (Bardach and Kagan 1982).

My qualitative data indicate that there are two background factors that drive street-level offices to put a strong emphasis on enforcement legitimacy vis-à-vis regulated entities: the need to gain voluntary compliance through persuasion, and the underlying tendency toward conflict over the meaning of law. These two factors reflect two fundamental, contrasting, relationships with regulated entities--- mutual trust and reciprocity for compliance and effective regulation on the one hand, and the confrontational, sometimes adversarial, relationship on the other.

### A. For Gaining Voluntary Compliance

Even though the command-and-control approach rests on deterrence to secure compliance, it does not preclude a cooperative regulatory style (e.g., Ayers and Braithwaite 1992; Bardach and Kagan 1982; Hawkins and Thomas 1984; Hirata 2014; P. May and Winter 1999; Nielsen and Parker 2009; Scholz 1984). In fact, in order to achieve regulatory goals, frontline regulatory offices find it necessary to elicit cooperation from regulated entities. Actual compliance with regulations, such as installment of abatement equipment, management of internal compliance systems, and supervision, can only be done by regulated entities. Regulated entities know more about their use of toxic materials than regulators. Moreover, deterrence requires constant monitoring and punishment, which is too costly for street-level offices with limited resources.

Such regulatory conditions clearly imply that voluntary compliance is critical for successful, effective, and efficient regulation. A “good inspector” seeks to signal reasonableness of regulatory enforcement to bring about voluntary compliance

through persuasion and attentive listening (Bardach and Kagan 1982). Deterrence is still needed when necessary, but persuasion and inducement to cooperate are effective for the most part (Bardach and Kagan 1982; Ayers and Braithwaite 1992; Pires 2008).

Similarly, regulators in the SCCA and the GPP acknowledge the importance of persuasion for compliance. Typically, they mention the police in order to differentiate themselves from them, e.g.,: "we're not the police. We need companies' cooperation for compliance. With mutual trust, implementation can be successful.[i43] "

Demonstrating enforcement legitimacy is a key part of persuasion, especially when rule application will raise costs for regulated entities. Through continuous interactions with regulated entities, street-level offices try to demonstrate that enforcement decisions are fair, reasonable, and in line with law. One regulator said that his office repeatedly explained the reasons of Investigation Order issuance in a particular case:

> "Before issuing an Investigation Order, we paid considerable attention to get them understand why the Investigation Order was to be issued in their case. It seemed that they didn't know the SCCA so much. We kept talking with them until they got it. [i15]"

Under legal ambiguity and uncertainty of environmental harm, consistency of enforcement works as a strong signal that decision-making is legitimate. From a normative point of view, consistency---treating like cases alike--- is a basic principle of justice. Consistency across jurisdictions can satisfy regulators' concerns for fair enforcement: "I think it's not good if our office's interpretation is very different from other offices…we have the same statutes across the country. [i3]"

In addition to the normative principle, consistency is important to securing compliance because regulated entities care about fair treatment. Regulated entities have a "desire not to be suckered"(Kahan 1996). They care about how other entities are treated by frontline offices as well as how they themselves are treated. Consistent enforcement can reassure companies that they are not foolish for complying, because their competitors incur the same regulatory costs (Thornton, Gunningham, and Kagan 2005b; Kagan, Gunningham, and Thornton 2011). While consistency may pose a challenge when juxtaposed with other principles, such as responsiveness and effectiveness, apparent inconsistency in frontline implementations can be easily observed from the outside, which might be regarded as unreliable and unfair enforcement.

My qualitative data abound with examples of how inconsistency leads to businesses' resistance and the resulting emphasis on consistency across frontline

office. Here are some typical quotes from regulators who explicitly connected compliance and consistency.[39]

> "If we treat similar cases in a different way, they [regulated entities] won't trust us. We shouldn't change legal interpretation in similar cases. [i14]"

> "Some businesses have several factories in different jurisdictions. A wide discrepancy in legal interpretation across jurisdictions is not acceptable. Plus, C prefecture [a peer office in the nearby jurisdiction] also found it difficult to decide whether this type of facility should fall into the regulated category, so we shared our interpretation [i15]"

> "If our office and neighboring offices interpret the statutes and apply them differently, regulated entities would be confused and frustrated. Many companies have their sites across jurisdictions. Yes, they know that we have some inter-office inconsistencies, but if the difference appears too wide to accept, regulated entities would start to refuse to comply. [i55]"

One case vividly illustrates that regulated entities care about consistency and that frontline offices respond to that. A hospital planned to reconstruct their old buildings and the office was about to issue an Investigation Order to the site (see also Case E in Chapter 3). The use of Designated Toxic Substance (cyanide) was evident because the hospital had registered its use for blood testers[40] in accordance with the local regulation. The hospital opposed the Order issuance. They pointed out the unfairness in regulatory enforcement. As one of the regulators involved recalled it:

> The hospital said that you could find many hospitals using the same blood testers containing cyanide which had not registered their use. It insisted that it followed the law, registered the use of cyanide, and then got the mandatory investigation. The hospital representatives said that they're pretty sure that

[39] Examples go on and on: "regulated entities having factories in different jurisdictions frequently claim that another office treated them differently [i33]"; "some companies have factories across different jurisdictions. They sometimes say that another office requires less than our office does [i43]"; "if a company has branches across the nation, they would say another office interpreted in a quite different way. The company said that another office accepted this, so our office should accept this too [i45]."

[40] A blood tester is a medical device to measure blood components such as white blood cells and blood platelets.

> some hospitals are not required to do the mandatory investigation simply because those hospitals didn't follow the registration requirement from the outset…
> So, our office mailed every hospital and clinic in our jurisdiction a letter of notification to make sure that they have registered the use of Designated Toxic Substance for blood testers. The hospital was aware of this process, and then agreed to the mandatory investigation. We showed them that they were not the only one to bear regulatory costs. [i16]

In this case, the hospital resisted because they believed other hospitals in the same situation shirked the required registration, and therefore, did not carry the same regulatory burdens. The office, acknowledging the importance of consistent enforcement and its influence on compliance, responded to the frustration by asking every hospital to register. The regulator's remark ("we showed them that they were not the only one to bear regulatory costs") illustrates the frontline office's concern about consistent enforcement. The regulator emphasized that "we need to show that we're not favoring any entities. We follow the law. [i16]" Consistency is an effective way to show this.[41]

### B. Underlying Tendency Toward Conflict Over the Meaning of Law

The need to demonstrate enforcement legitimacy also comes from the inherent tension between the regulatory agencies and regulated entities. Both parties have contrasting stakes in regulatory implementation; the regulatory agencies seek to ensure environmental protection, while regulated entities pay primary attention to compliance costs. Such fundamentally different interests sometimes generate tension over the meaning of the law. Confronting a new regulatory statute that contains high ambiguity, each party is inclined to interpret the statute in its favor. Frontline regulatory offices read the statute to secure environmental protection, while

---

[41] Of course, the logic of consistency is not always employed. I heard frontline regulators say that they maintain interpretation and enforcement different from those of other offices [i9, i28, i30, i45]. Even for a given company, diverse sites, environmental conditions, potential harm, and surroundings of facilities can vary, which leads to a different rule-application. Also, even when regulated entities point out different enforcement applications of other offices, some regulators speculate that regulated entities mention only lenient enforcement cases to achieve milder enforcement ("they're probably mentioning the most lenient decision [i45]"). Frontline offices sometimes resort to different justifications, such as a specific response to a certain environmental situation and a specific context. However, it is nevertheless true that frontline offices pay attention to consistency, especially in the SCCA and the GPP, where legal ambiguity and uncertainty exist.

regulated entities read the statute to minimize regulatory costs and burdens. Ambiguity of a new statute can lead to a tug-of-war over its meaning. As an environmental manager of a company told me in an interview: "when there is an ambiguity in the statute, that means we have much room for negotiation with regulators. [i75]"

The significant influence of regulated entities on the meaning of law has been widely identified in neo-institutional empirical studies. Neo-institutional organizational studies have demonstrated how business values shape the way organizations respond to law and compliance. These studies have argued that law becomes endogenous in that the businesses, the very target that a regulatory statute is designed to regulate come to define what the law regulates, and legislatures and courts defer to business' ideas and practices. For instance, business communities have broadened the term "diversity" to incorporate legal requirements into business practice under equal employment law (Edelman, Uggen, and Erlanger 1999; Dobbin 2009; Edelman, Fuller, and Mara- Drita 2001); automobile manufacturers weakened the impact of California's consumer protection laws by creating industry-dominated dispute resolution venues and infused existing business values such as efficiency and customer satisfaction into the issue of consumer protection (Talesh 2009).

While the legal endogeneity model tends to underestimate the regulator's influence over shaping the meaning of law (Gilad 2014), the argument clearly demonstrates that regulated entities can (and do) try to leverage their professional and practical expertise to shape what an abstract statute means. Considering that court intervention is extremely rare in the implementation of the SCCA and the GPP, frontline interpretation and enforcement of statutes—the outcome reached through interaction between regulatory offices and regulated entities---become the de facto meaning of law.

***Regulated entities: Serious competitor for constructing the meaning of law***

In line with the legal endogeneity model, a limited set of interviews with regulated companies indicates regulated businesses' significant influence on constructing the meaning of law at the frontline.[42] This in turn causes frontline regulatory offices, when they experience or fear conflict with inductry, to demonstrate that they are correctively and legitimately enforcing the law. The following excerpt is from a big chemical company regulated by both the SCCA and the GPP. When asked how they dealt with the new ambiguous statutes, an on-site Environmental Section Chief responded:

---

[42] I conducted two interviews with two regulated entities, both leading Japanese business organizations. Even though I was able to gain access to only two companies due to the difficulty of access, I interviewed seven people in a variety of positions: from an on-site environmental chief to environmental managers in headquarters.

> "When a regulatory program has just been launched, such as when the SCCA and the GPP have just gone into effect, we first carefully read the guidelines issued by Ministry of Environment and make our own interpretation of which facilities the regulation is applicable to. Then we share the interpretation with other regulated firms located in the same industrial regions and make our rule applications similar and coherent. Then, when I'm talking about our facilities with the frontline office, I explain that all of the regulated firms in this industrial area think this is how we interpret the regulatory terms. Once we set the shared interpretation of what facility is considered as the Storage of Toxic Liquid and show it to the regulators, they wouldn't say no. If I showed only our company's interpretation, the regulatory office might doubt it and require us to incorporate its own idea. But if we bring the shared interpretation reached by all firms in the area, they [regulatory office] will just have to say ok. In this way, we've dealt with the new regulations and do our business smoothly. [i77]"

The above excerpt clearly illustrates underlying tensions over the content of law and how regulated entities can lead the process of constructing the meaning of law at the frontline. Regulatory statutes and subsequent guidelines are available for both regulatory offices and regulated entities. Regulated entities are the ones who are most familiar with their facilities and potential environmental dangers, which is something regulatory offices value. They can leverage their familiarity with the practices and legal knowledge to interpret the law in their way, and propose it as an appropriate application in the case at hand. They can mobilize business networks to strengthen the impact of their interpretation ("we share the interpretation with other regulated firms located in the same industrial regions and make our rule applications the same and coherent."). In above case, the careful examination of statutes and collaborative interpretation with other regulated businesses could cause regulatory office to accept the businesses' interpretations. ("Once we set the shared interpretation of what facility is considered as the Storage of Toxic Liquid and show it to the regulators, they wouldn't say no… In this way, we've dealt with the new regulations and do our business smoothly.")[43]

[43] The interviewee finds collective action as a great strength in negotiating with regulatory offices. Compared to a different jurisdiction where the company's factory is the only one, the factory in which he works is located in a heavy industrial area where many other companies operate. In such an area, "companies can unite and lead the negotiation with regulators, whereas in a jurisdiction with very few factory sites, we [the regulated entity] are weaker [i77]"

The regulators' acceptance in above case reflects frontline offices' recognition of their relative unfamiliarity about regulated activities and technical knowledge. Regulators admitted that regulated entities are sometimes more knowledgeable than they are: "compared to the regulated entities, we are surely less familiar with the regulated facilities and operations. [i37]" The frequent transfer of regulators is one of the reasons for this. If regulated entities uniformly show the same rule-application, regulatory deference is tempting because the implication is that the proposed rule-application makes practical sense.

Besides, as discussed in the previous section, frontline regulators who value cooperative relationship for voluntary compliance are reluctant to contest the rule-application shared by regulated entities and to disturb the relationship with regulated entities, unless the interpretation is beyond the regulators' acceptable range. Inter-office consultation functions to determine and confirm which interpretation is within such acceptable range and which is not.

It is likely that big companies can wield their influence over the meaning of law not only by virtue of their technical expertise and business network, but also from their own legal knowledge. Employees in private companies tend to work on a specific environmental statute longer than frontline regulators. One regulator said:

> "big companies have environmental staffs with considerable legal knowledge…Without demonstrating legal grounds, they will not be convinced. We, frontline regulators, are routinely transferred to different jobs every three to five years, so we don't invest a great deal of time to master a particular statute. On the other hand, environmental workers in such big corporations can spend more than 10 years on the environmental laws. We have a shorter time to learn the statutes, but still need to implement them. Some regulators find it difficult to make a legal argument against these corporate people. [i33]"

There is not enough information that shows whether or not the company's influence over meaning of law led to an ineffective, watered-down regulation in the above case. Rather, above excerpts from the regulated entity and regulators suggest that at the minimum regulated entities, especially when they are big companies with a capacity to manage legal terms, technical knowledge, and the business networks, are tough competitors over the meaning of the law at the frontline.

Interviews with frontline regulators indicate that they recognize businesses' influence and keep a wary eye on it. For instance, a regulator of the SCCA said, "when it comes to interpretation of statutes, major general constructors have experienced many cases across jurisdictions. They are knowledgeable about how we and other frontline offices interpret the statutes. They might say to us, "this part of

the statute means that, right?" We need to be vigilant about such assertions. Don't instantly accept them. We've got to think it over. Don't answer such questions instantly and carelessly. [i45]" Another regulator of the SCCA explained a possible conflict over the meaning of a statute: "since we read the guideline as regulators, we understand it in the regulatory-oriented way. But, if regulated entities read the same part, it's possible that they reach the opposite conclusion and consider the case at hand not subject to the Investigation Order. It's a battle over interpretation... So, we need to prepare for that. [i13]"

Even though such tension does not surface in the frontline encounters with regulated entities all the time [i12, i22, i82], a potential conflict over the meaning of law always exists in a regulatory interaction [i5, i9, i10, i13, i17, i28, i30, i33, i39, i40, i45]. Street-level enforcement decision, such as the Investigation Order issuance and application of the Storage of Toxic Liquid rule, might harm companies' profits. The underlying tension and businesses' capacity to influence shaping the meaning of law in turn drives frontline offices to demonstrate their enforcement legitimacy to the regulated entities, so that regulated businesses would ultimately defer to the office's ideas of what the statutes mean in a particular case.

***Seeking Consistency and Fear of Making a "Mistake"***

As mentioned in Chapter 4, a powerful back-up strategy for interpretation and enforcement is inter-office consultation and consequent inter-office consistency. The underlying tension and the potential challenge by regulated entities force street-level offices to make sure that their interpretation and enforcement is not a "mistake." To them, a "mistake" of enforcement means a possible legal challenge in which they might lose. When I asked what would happen when they made a "mistake" in an enforcement decision, they responded:

> "The worst scenario is to get sued for imposing too much investment cost. [i39]"

> "The statute doesn't give any clear standards for what is specifically required to meet compliance. Without such standards with specific guides, we don't know. What if we impose a regulatory burden, the regulated entities challenge it in a court, and then it turns out that our enforcement decision is beyond what the statute says? We would be held accountable for that. [i40]"

> "The Investigation Order is a financial burden for regulated entities. So, when a company doubts the enforcement decision, we need to show why the regulation applies to them. If our reasoning is incorrect, we're in trouble. [i3]"

The fear of making a "mistake" in enforcement decision is widespread in interviews ([i1, i3, i7, i8, i9, i11, i12, i16, i18, i30, i33, i39, i40, i42, i88]), and regulators focus on defending themselves from the most realistic threat to their legitimacy, i.e., opposition from regulated entities. As discussed in the following section, the Japanese administrative law system makes it hard for third parties (e.g., citizens and environmental NGOs) to be legally involved in enforcement processes, while there is frequent communication with regulated entities throughout the enforcement process---including face-to-face meetings prior to registration, during case processing, and after an Investigation Order issuance (see more details in Chapter 2). This legal design is conducive to imposing on frontline offices a stronger pressure to demonstrate legitimacy vis-à-vis regulated entities than vis-à-vis citizens. One regulator said, "we cannot help being cautious about whether a particular case constitutes a "risk" deserving an Order... When a regulated entity argues that the statute does not apply to their case, we need to respond to it. If the statute has a clear standard, we could just show it. But the statute here is actually quite vague. That makes us hold back from employing the power of the law. [i42]" Another regulator said, "issuing Investigation Order takes a lot of guts [i30]."

Street-level regulators mentioned why losing litigation is to be avoided. (1) Litigation adds more work to an already heavy workload ([i16, i39, i88]). (2) It generates a great deal of uncertainty about the possible result, affects on other cases, and impacts the office's political, social, and financial situation. For instance, a loss in litigation and the consequent compensation would harm the local government's budget, and then would be criticized in the local assembly ([i1, i7]). (3) Legal confrontation does not tally with role perception that emphasizes persuasion over coercion, and such failure could affect one's career as a regulator ([i86]). Finally, (4) the loss would limit their available enforcement strategies ([i11]). Involvement in litigation is believed to generate undesirable uncertainty and negative impacts for frontline offices. They cannot foresee how much workload they will have and what tasks they will need to do, as well as what will happen with the office's current political, social, and financial status, and how individual career paths will be affected.

Interestingly, while frontline offices are obsessively concerned about the negative influence of litigation, no one in my interviews has experienced any litigation, or even has heard about any. In fact, there has been no litigation brought by regulated entities over either the Investigation Order issuance or application for the Storage of Toxic Liquid. Nevertheless, litigation aversion looms large for street-level offices.[44] Whenever they discuss Order issuance, they take the greatest care to "ensure that the Order issuance is surely within what the law says.[i10]" A regulator

[44] The unfamiliarity of legal challenge might contribute to increase the subjective possibility of such negative contingencies (Kahneman and Tversky 1979).

said, “we don’t issue an Order that might lose in litigation. [i9]” The fear of losing litigation is more a symbolic concern than a practical one.

Evaluating whether a particular enforcement decision is within or beyond the law requires skills to make legal arguments.[45] In theory, such skill can be available for frontline office through their own legal knowledge, legal support from professionals, and outside authorities such as instruction from Ministry of Environment. However, my interviews revealed that legal support from outside, such as advice from lawyers and instructions from the Ministry of Environment, is minimal and, frontline offices manage legal arguments on their own. Under the principle of decentralization, Ministry of Environment takes a hands-off approach and does not instruct detailed enforcement decision-making (Chapter 2). Unlike many regulatory agencies in the United States, Japanese frontline offices do not have in-house lawyers; all members of offices are frontline regulators with a background in natural sciences instead of law (Chapter 2). As to assistance from lawyers outside office, during my interviews, I have only heard of one instance in which frontline offices consulted outside lawyers concerning interpretation and enforcement of the statutes [i84]. This suggests that legal professionals are not commonly involved when making enforcement decisions at the frontline and that even if frontline offices care about whether their enforcement action is within or beyond the law, they do not find sufficient outside sources to estimate what enforcement action is legally accepted. This points out that internal discussion and training at the office is critical for the development of skills in making legal as well as technical arguments to counter regulated entities.

In the office, frontline regulators learn how to make legal arguments through internal training, where new regulators take workshops and lectures, and where experienced colleagues work together with new regulators in on-the-job training. Internal discussion within the office is another place where frontline regulators develop and maintain legal knowledge regarding enforcement as an organization.

The extent to which frontline offices engage in internal training and internal discussion varies, according to my interviews. Some offices explained their internal training programs and regular internal discussion as developing the office’s legal enforcement capacities, including legal knowledge [i2, i23, i45]. On the other hand, other offices expressed concerns about struggling to organize and maintain

---

[45] If a statute is relatively general or vague, what is required is professional regulatory expertise—what is the best way of balancing the conflicting values of environmental protection and economic efficiency, assessing degrees of risk, and evaluating what is at stake. The ambiguity means that there are conflicting legal interpretations available. In this sense, legal analysis cannot resolve the issue. Rather, dealing with ambiguity requires skills in making legal arguments that justify regulators’ decisions as a sensible enforcement action. In that sense, legal skills are a part of necessary skills for professional regulatory expertise.

institutional memory of legal knowledge [i18, i20, i21, i26, i30, i37, i41, i47, i55]. A shrinking budget and decreasing number of regulators, combined with an increasing caseload, do not easily allow them to maintain trainings. The regulator in charge of the SCCA or the GPP might be the only responsible person at the office. Also, regulators might not find the time to walk new regulators through implementation and enforcement. In the following excerpt a regulator admitted that his office finds it hard to train its new regulators as a team and leaves their learning up to the efforts of individual regulators: "Ideally, we wish we could support new regulators by having them work with experienced colleagues. But our office receives so many cases that we simply cannot afford that. Our office just lets new regulators learn on their own. [i18]"

Given that frontline officers have minimal access to external sources of information, such as advice from lawyers and instructions from Ministry of Environment, preparedness for potential confrontation with regulated entities over legal interpretation and enforcement decisions varies across frontline offices. This reflects offices' responses to whether they are ready to issue an Investigation Order. While a few offices showed confidence in their legal argument for the Order ("we are confident in our Order issuance decision. [i2]"), most offices expressed their insecurity as to whether their enforcement decision is within the law and indicated that they were not sufficiently prepared for possible legal contingencies. They find it tough to enforce the ambiguous statutes solely on their own legal arguments. In that case, they tend to take a cautious attitude toward exercising the power of law, as the following excerpt illustrates.

> "An Order issuance could provoke a suit. When we were discussing this case, we were not 100% sure whether Order issuance in this case is absolutely right, if being scrutinized from all angles. The statute doesn't specify when we can issue an Order, you know. So, you could understand it in different ways. From some regulators' point of view, the situation at hand was not sufficient for issuing the Order. To them, the situation might cause the Order issuance to be seen as a mistake [i30]"

The above excerpt illustrates a typical conservative pattern in which frontline office refrains from enforcing the statutes stringently due to their fear of making a "mistake" (i.e., getting sued by regulated entities). Insufficient legal resources/support, combined with frequent transfer and limited organizational resources on the one hand, and little public scrutiny on the other (discussed later), contribute to the conservative stance in regulatory enforcement. This regulatory diffidence is consistent with what Gunningham (1987) found in Australian mine inspectors, where the agency's limited resources, the powerful regulated entities, and

absence of any constituency challenges to the regulatory agency caused mine inspectors to take an extremely accommodating approach (Gunningham 1987).

***Inter-office interaction as a source of legitimacy***

Considering such a situation---namely, significant influence of regulated entities, an office's tendency to avoid "mistakes", insufficient legal support from lawyers and the Ministry, frequent personnel transfer, and the concern over an office's own capacity to develop skills in making legal as well as technical arguments---inter-office consultation and consequent inter-office consistency can be highly important in order to shore up the legitimacy of their interpretation and enforcement. Particularly, such conditions explain the overall tendency that offices belonging to Peer Office Meeting Groups are more likely to do stringent enforcement. Once membership offices similarly interpret and enforce the law, or once inter-office consultation indicates that imposing a regulatory burden didn't turn out to be a "mistake," frontline offices can feel more secure and confident to do stringent enforcement. This is a pattern of behavior whereby inter-office consultation defines the meaning of law at the frontlines. One regulator in charge of the SCCA said:

> According to the guideline, it looks like we need to issue an Investigation Order in this case, but am I making the right decision? I sometimes feel anxious. And I'm pretty sure that other frontline regulators in other offices feel the same way. When you learn that your office's decision to issue the Order is not so different than what peer offices are doing, it's reassuring. It backs you up. It tells you that issuing Investigation Order is not a mistake."[i3]

The above response illustrates that consistency with peer offices suggests the correctness of the enforcement decision, which reassures frontline regulators in exercising the power of law. Another regulator in the GPP similarly remarked:

> As a regulator in charge, there are some enforcement decisions that you don't feel confident enough about…So, when peer offices handle them in the same way, you can explain your enforcement decision. To wit, "I apply the law in this way *and* peer offices make the same decision". That's a big difference. [i47]
> *(Italics show respondent's emphasis)*

Another regulator described how the lack of information from peer offices discourages his office from regulatory enforcement:

> As each of us realizes that we lack experience and knowledge, learning the enforcement experience of peer offices is incredibly reassuring for us. But what if you don't have any such information? You've got to fight against regulated entities without expertise and knowledge. This makes you enormously anxious when enforcing the statute. [i30]

As the battle analogy suggests ("you've got to fight against regulated entities without expertise and knowledge"), the two parties' potential conflict rises up to the surface through enforcement decision such as Order issuance. Inter-office consultation and consequent inter-office consistency can offer a source of legitimacy indicating their interpretation is not wrong, particularly for frontline offices without sufficient legal support, insecure about their own legal argument and about potential confrontation with regulated entities over the meaning of ambiguous statutes.

***Normative View Based on Fairness and Consistency***

Besides confirming correctness of legal interpretation through inter-office interaction, frontline regulators do care about consistency as a principle of law. They believe that inter-office consistency shows that the offices' decision is not an arbitrary, unreasonable regulatory burden. The emphasis on consistency demonstrates that frontline offices find impartiality and non-arbitrariness a normative requirement for public officials, as the following excerpts indicate.

> "We have the same statute, so we should treat like cases alike. [i42]"

> "Personally, I think using same statute should result in the same conclusion. For example, there are two similar companies; one happens to be located in our jurisdiction and the other does not. If our office requires stricter regulatory burdens than the other jurisdiction, while lenient enforcement is also ok with the statute, then the first company would see it as unfair. [i30]"

Inter-office consistency can persuasively demonstrate fairness and non-arbitrariness of the exercise of power of law. This normative ground also supports legitimacy of interpretation and enforcement at the frontline.

***Summary: Legitimacy vis-à-vis Regulated Entities***

This section has discussed the two factors that require frontline regulators to demonstrate enforcement legitimacy to regulated entities: the need to elicit

cooperation from regulated entities for successful and effective regulation, and the need to defend office's enforcement decision that may be exposed to challenges from regulated businesses. Inter-office consultation and inter-office consistency matter for the two different but related factors. For the first, inter-office consistency can enhance cooperation because regulated entities care about consistent and fair regulatory burdens among competitors. For the latter, inter-office consultation and inter-office consistency can reassure frontline offices that their enforcement decision is within the law, based on the belief that similar interpretation suggests correct legal interpretation. Also, inter-jurisdiction consistency can demonstrate that the enforcement is not arbitrary; rather, the enforcement decision is reasonably based on the purpose of the law, which explains the appropriateness of regulatory burdens. In order to uphold their enforcement decision re a new, ambiguous statute under environmental uncertainty, inter-jurisdiction consistency can provide a powerful justification.[46]

In the context of the Japanese soil and ground water regulations, inter-office consultation and inter-office consistency can contribute to stringent enforcement in the following ways. Given (1) the insufficient opportunity to develop legal skills due to street-level offices' limited resources and (2) the little public scrutiny rooted in the Japanese administrative law system, frontline offices in the SCCA and the GPP are in a situation that would have them normally take a quite conservative stance in order not to risk litigation from regulated entities. By providing yet an opportunity to share similar interpretations and to learn enforcement decisions that were not challenged by regulated entities, inter-office consultation is one strategy that can in part make up for the insufficient opportunities for legal justification. With inter-office consistency, frontline office can be more willing to make an enforcement decision that has been shown to be safe, i.e., not a legal "mistake."

## 5.2 Legitimacy vis-à-vis Citizens: the Weaker Pressure

Another audience for demonstrations of regulatory legitimacy is citizens, the beneficiaries of regulatory statutes. Widely publicized catastrophes and scandals that reveal excessively lenient or ineffective regulatory enforcement often trigger criticism of frontline offices, perhaps followed by political scrutiny of the office's enforcement decision-making. This would disrupt their routine and, worse, threaten their organizational autonomy. Consequently, frontline offices need to maintain regulatory legitimacy, i.e., the citizens' understanding that frontline offices in their jurisdiction properly enforce the statute to protect the environment.

---

[46] Acknowledging that, supervisors sometimes encourage frontline regulators to check with peer offices on how to handle a new, ambiguous case [i7, i13] ("my boss frequently asks me how peer offices are handling it [i7]").

Given the uncertainty of environmental harm that may be out of sight underground, inter-office consistency can contribute to shore up office's legitimacy to citizens in the same manner as to regulated entities. Uncertainty leaves the question open of what is an effective regulatory intervention. No one can predict environmental damage ex ante, including citizens who are usually laypersons and not capable of judging whether an enforcement decision makes sense for regulatory purpose in a particular case. From a normative perspective of fairness and the rule-of-thumb that a conclusion supported by a majority is more or less a decent solution, inter-office consistency can provide symbolic evidence suggesting that frontline offices are implementing the statutes in a sound and appropriate manner.

The following case shows how frontline offices employ inter-office consistency to justify their decision-making to the general public. This case is about derelict meteorological stations found with abandoned batteries across three jurisdictions. The batteries might have caused soil contamination.[47] Inter-office consistency was considered in the decision of what remedies and countermeasures to take. A regulator dealing with the case said: "if different jurisdictions took different approaches to this case, mass media or the general public might question the reason for the difference and agencies might not be able to answer well. I don't think all the three jurisdictions should necessarily make the same decision, but they need to be in line. [i14]" This excerpt nicely illustrates that inter-office consistency can be used as an effective strategy to buttress the regulatory intervention. Frontline offices believe that an aligned regulatory approach can work as a gesture to indicate that the offices are implementing the regulation legitimately.

On the other hand, once an environmental harm becomes more visible or generates more fear, citizens care more about an *effective* regulatory intervention, and accordingly, frontline offices do not put a large emphasis on enforcement *consistency*. In my interviews, I heard two cases where residents were actively involved with the SCCA enforcement process: a shopping-mall construction case and an apartment construction case. In both cases, citizens opposed the construction and expressed concerns about soil contamination and the spread of the allegedly contaminated soil during the construction process. In response to citizens, frontline offices in both cases stressed that they follow the law [i5, i18], and as a result, enforced the statute to make the regulated entities do soil investigation. That is, they instructed regulated entities to investigate the soil in the prescribed manner (either through an Investigation Order or voluntary soil investigation), disclose the investigation results, and take legally required, or even stricter, countermeasures

[47] The three meteorological stations are owned and were used by the Japan Meteorological Agency, which suggests that those cases are similar. Since these meteorological stations are located in remote mountain areas, the health risk caused from soil contamination seemed not acute.

(either capping the surface or replacing the soil). Mentioning the possibility of an Information Disclosure Request or even litigation from residents, the regulator in the mall construction case said: "We've got to dutifully follow the law. Otherwise we cannot be accountable for our enforcement. [i18]"[48] In both cases, what they did to "follow the law" was to apply the statutes, and when statutes are ambiguous, make what they believe "the most appropriate and logical decision [i18]," which they saw as the enforcement of mandatory soil investigation. Inter-jurisdiction consistency, in both cases, was not used as a strategy to buttress the legitimacy toward citizens. This is partly because frontline offices deemed those cases rare and partly because frontline offices thought inter-office consistency did not sound convincing to the local residents. Also, since the regulated entities in both cases were "very cooperative [i18]" to frontline offices due to the companies' needs to ease the safety concerns of local residents, regulators felt no need to convince regulated entities that the interpretations and enforcement decisions were correct and legitimate.

The above excerpts indicate that (1) frontline offices care about whether their decision-making appears appropriate to the citizens and that (2) they sometimes employ inter-office consistency and sometimes not, depending on what they believe sounds most compelling to the citizens. However, it should be noted that enforcement cases that draw public attention are rare with the Japanese soil and groundwater statutes. My interviews reflect their rare occurrence; out of 78 regulators, I heard only two cases involving citizens. In addition, media coverage has been scarce in the issue of soil contamination and groundwater contamination[49]. Consequently, it is fair to say that, compared to the constant pressure to show legitimacy to regulated entities, the pressure for legitimacy to citizens is weaker for frontline offices.

This lower priority of legitimacy to citizens stems from the following institutional factors: (1) the much more frequent encounter with regulated entities, (2) the limited legal path for the general public to nudge frontline offices to do strict enforcement, and (3) the limited information disclosure system in Japanese administrative law. Since the previous section discussed the first factor in detail, I will briefly discuss the second and third factors below. Both factors contribute to there being little public scrutiny. This in turn leads to frontline offices' tendency to place a greater emphasis on minimizing false positive errors (from overly regulating

[48] He continues: "we must maintain our neutrality and base ourselves on the law. [i18]" The other regulator in the apartment construction case said: "In interacting with the citizens, we make it clear that our decision-making is completely based on the law. [i5]"

[49] As mentioned above, during the last two years, the number of newspaper articles on soil contamination and on groundwater contamination amounted to 54 and 84, respectively (see Chapter 2).

non-harmful business activity) than on minimizing false negative errors (from not regulating harmful business activity).

***Limited Access to Frontline Regulatory Enforcement for the General Public***

The Japanese Administrative Litigation Act has traditionally set a strict standard for legal standing to sue. This leads to a situation in which the general public or Environmental NGOs find it difficult to bring a lawsuit that demands more strict regulatory intervention to protect the environment.[50] Consequently, frontline offices pay little attention to the likelihood of litigation brought by citizens.[51]

Besides the limited legal involvement available to the general public, limited information disclosure to the public allows frontline office to focus more on the legitimacy vis-à-vis regulated entities than vis-à-vis citizens. Frontline offices do not offer enforcement information in an easily available manner. One needs to go through quite onerous procedures to attain enforcement information, such as detailed enforcement records, companies' violation histories, or what regulators have requested in the Administrative Guidance. Should such disclosure be requested, the information might turn out not to be offered when frontline office considers that the information disclosure would infringe regulated entities' legitimate interests.[52]

---

[50] To become a plaintiff in a lawsuit to demand a strict enforcement action, the party is required to show that their "legally protected right" is infringed by the failure of agency's action. Since courts narrowly interpret the "legally protected right" and recognize it only for entities whose health and/or economic conditions are damaged, they have not found the legal standing for Environmental NGOs. Also, a plaintiff needs to satisfy a high standard to win the case, including the requirement to show that the inaction of the administrative agency was an infringement of the law.

[51] A recent legal reform might change the traditional administrative litigation rules, however. The amended Administrative Procedure Act opens a new path that can involve the general public in the regulatory enforcement; it says that anyone can demand that a public office take Administrative Disposition or Guidance when one finds a regulatory noncompliance (Administrative Procedure Act §36-3). In response to the request, a public office is required to conduct an investigation, and when necessary, the office is required to make either an Administrative Disposition or Guidance (§36-3(3)). The amended Act grants anyone (either individuals or organizations) the right to take part in the enforcement process, which can increase the involvement of the general public and Environmental NGOs in regulatory enforcement. Since the amended Act took effect in April 2016 though, whether this clause will make frontline offices pay more attention to maintain legitimacy toward citizens is yet to be revealed.

[52] The information disclosure act sets out the occasions in which requirement of disclosure is waived for agencies. Among such occasions is the one in which a public agency does not need to disclose information if they find that private entity's legitimate interests, such as rights and competitiveness, would be harmed by the disclosure (The Act on Access to Information Held by Administrative Organs§ 5-2).

Limited information disclosure weakens citizens' involvement in enforcement. Even if the legal route to claim more stringent enforcement is available, the involvement of citizens and environmental NGOs is practically not realistic because the necessary information re regulatory enforcement is hard to obtain. This is particularly true due to the low visibility of environmental damage by soil and groundwater contamination. Indeed, my interviews suggest that frontline offices rarely receive complaints from local residents about the SCCA and the GPP [i3, i7, i17].

In summary, little public scrutiny stemming from the administrative legal system and limited information disclosure places frontline offices in a situation that is conducive to focusing more on legitimacy to regulated entities, and less on that to citizens. Frontline offices turn to inter-office consultation and inter-office consistency as an interpretive strategy to bolster legitimacy, but such legitimacy applies more to the relationship with regulated entities.[53]

## 5.3. Conclusion

Frontline regulatory enforcement entails coercive power and considerable discretion based on the legal interpretation and the reading of situations. At the same time, frontline offices are the regular objects of criticism from regulated entities and the general public---whether for too rigid or too lenient enforcement. This chapter has discussed why and under what conditions frontline offices, confronted with legal ambiguity and uncertainty of environmental damage, resort to inter-office interactions. The key to understand the inter-organizational interaction is regulatory offices' quest for legitimacy. Analyzing legitimacy vis-à-vis regulated entities and vis-à-vis the general public separately, this chapter discusses how the principle of fairness and the demonstration of coherent legal interpretation across jurisdictions provide a sound foundation for demonstrating legitimacy particularly to regulated entities. Due to limited public scrutiny and more frequent encounter with regulated entities, this chapter also suggested that legitimacy vis-à-vis regulated entities tends to weigh more heavily the legitimacy vis-à-vis citizens. This will lead regulatory enforcement to put more emphasis on false positive risks (overly regulating non-harmful business activity) than on false negative risks (not regulating harmful business activity).

In relation to regulated entities, this inter-office interaction and consequent inter-office consistency meet both the need to elicit cooperation from regulated entities and the need to counter arguments from regulated entities. For the former, it is reassuring and acceptable to regulated entities that regulatory burdens are imposed

[53] A comparative discussion is warranted comparing Japanese regulatory power dynamics with those in other liberal democratic countries.

equally upon competitors, which enhances the willingness to comply. For the latter, coherent legal interpretation and enforcement among jurisdictions can help frontline offices demonstrate that their decision-making is non-arbitrary and within the law. Aligned interpretation and enforcement is also reassuring for frontline regulators, since their decision-making appears not to be a legal "mistake" after it is shared, recognized, and adopted by membership offices.

After Chapter 4 shows that inter-office consultation overall helps to enhance stricter regulatory enforcement.[54] Discussion in this chapter analyzed the institutional factors to explain such an overall tendency---the potentially significant influence of regulated entities on meaning of law, the offices' fear of making a legal "mistake", scarce public scrutiny, and therefore the defensive regulatory approach that leads frontline offices to enforce the law only when an enforcement decision seems guaranteed not to be a "mistake". This is especially true when the offices find themselves with insufficient organizational resources, including insufficient legal skills. Frontline offices are prone to frequent transfer of personnel, are not given detailed instructions from Ministry of Environment, and are without professional support from lawyers. Internal development through on-the-job training, internal discussions, and workshops play a critical role to develop their enforcement expertise, but decreasing resources have generated a wide variation of how much each office can develop such skills on its own. Acknowledging their slimming down resources erodes the office's confidence in its interpretation and enforcement decisions. Insufficient legal support makes coherent, consistent interpretation with peer offices more appealing for frontline offices in order to legitimate their decision-making. Also, inter-office interaction develops and strengthens the common understandings of what the law means in the actual settings among offices. Inter-office interaction can function as a source of legal meaning and this source is influential particularly for those offices without sufficient legal skills that hesitate to enforce the statutes.

[54] Even offices that are more likely to issue Investigation Orders are legal risk averse. However, they are also more likely to be confident and comfortable in making legal arguments to justify their enforcement decisions.

# Chapter 6. Conclusion: Demonstrating Legitimacy of Enforcement

This research starts with the basic question: how do street-level offices deal with legal ambiguity and environmental risk in enforcing regulatory statutes? After illustrating the challenges of interpretation and enforcement of new ambiguous regulatory statutes in Chapter 3, the focus of the current inquiry is on the role that inter-office interaction plays in managing the challenge. Based on the insights from neo-institutional analysis of how organizations deal with uncertainty, this research incorporates an inter-organizational process of constructing the meaning of law into the studies of street-level regulatory enforcement.

Both qualitative and quantitative analyses demonstrate that inter-office interaction works as an interpretive strategy and has an impact on the ways in which frontline offices make sense of and enforce the new ambiguous statute. In pursuit of legitimacy, street-level offices tap into peer offices' practices and enforcement decisions to make sure of the appropriateness of their own interpretation and enforcement. This research refers to the shared, consistent understandings of which interpretation and enforcement decisions are within the law as *meso-level schemas.* Meso-level schemas are employed when frontline offices faced with legal ambiguity utilize their informal networks with peer offices and emphasize consistent enforcement decisions across jurisdictions in order to reduce the uncertainty and to demonstrate the legitimacy of their decision-making. The term meso-level signifies that this justification mechanism takes place between the local, micro-level (i.e., by individual regulators and within individual frontline offices), and the macro-level of national legal design and top-down mandates. Meso-level schemas rest on horizontal relationships developed among frontline offices that are informally connected each other.

Quantitative analysis in Chapter 4 confirms that inter-office consultation, facilitated by peer group membership, is as important as micro-level characteristics for shaping the meaning of law at the frontline. In the context of the SCCA, frontline offices with peer meeting membership are more likely to consult peer offices in the same group, and in general, more likely to enforce the statute strictly. Both qualitative and quantitative data show that while group membership fosters inter-

office interaction,[55] once formed such groups remain fixed; once an office is a member of a peer meeting body, inter-office interaction takes place within the group and rarely occurs beyond the group. Along the same lines, the statistical analysis shows that different peer meeting groups have developed different levels of enforcement stringency, other relevant variables being controlled. Both quantitative and qualitative analysis indicates that (1) meaning of ambiguous statutes is influenced not only by the individual, micro-level factors but also the inter-organizational dynamics in which the street-level offices are situated, and (2) different inter-organizational bodies can evolve different meanings of law.

Chapter 4 then discussed three roles of inter-office interaction in shaping the meaning of law at the frontline. All of these are conducive to generating consistent enforcement across peer offices, though of course inter-office consultation does not always lead to the same conclusion. First, it helps narrow the discrepancies in interpretation and enforcement decision-making among membership offices. Street-level offices try to avoid making idiosyncratic interpretations that differ from those of peer offices. Consistent enforcement across jurisdictions can work as an endorsement, showing that their rule application is not incorrect, and also can satisfy the regulators' concern about fair enforcement. Second, it offers prototypes of interpretation that other offices can imitate. Interpretation and enforcement decisions of experienced and resourced offices are considered as reliable to follow. Third, it provides a learning opportunity wherein offices can learn enforcement expertise from peer offices, which is especially important for under-resourced or little experienced frontline offices. Knowledge spreads from well-resourced offices to under-resourced offices. These three roles can be understood as concrete mechanisms of isomorphic process played out in the Japanese regulatory frontline. Inter-office consultation generates meso-level schema, reduces uncertainty, and influences interpretation and enforcement at the frontline. However, meso-level shema still allows differences among different groups and different offices, because it stems from the clustered groups of offices and may yield other legitimate strategies, such as an emphasis on effectiveness through individual case-by-case treatment.

By focusing on the legitimacy concerns of street-level offices, Chapter 5 delves into why and under what conditions meso-level schema is employed, and why inter-office consultation in general encourages stringent enforcement in the current research context. Three background factors are discussed. The first is that, in agencies enforcing costly-to-comply-with regulation against business firms, a strong

---

[55] "We know each other through the regional peer office meeting…We often call the peer offices to ask if they have similar cases and how they have interpreted the provision. We receive such inquiry calls from peer offices as well." [i3]

need for enforcement legitimacy vis-à-vis regulated entities exists. Winning voluntary compliance from regulated entities requires legitimate grounds. In addition, regulated entities, especially big ones, can wield their practical and legal skills to counter the offices' interpretation and to offer their views on meaning of statutes. In turn, frontline offices not only need to elicit compliance through persuasion but also need to counter any challenge in order to demonstrate that their interpretation is appropriate. Such need to demonstrate legitimacy is constant throughout the relationship with regulated entities. While frontline offices have legitimacy concerns vis-à-vis the general public, scarce public scrutiny due to limited information disclosure and low visibility of environmental damage causes offices to pay closer attention to enforcement legitimacy vis-à-vis regulated entities.

Second, meso-level schema can successfully address the two fundamental and conflicting needs for demonstrating legitimacy vis-à-vis regulated entities. Demonstrating legitimacy based on consistency is effective for eliciting compliance, because regulated entities are often intensely concerned about being treated equally with their competitors (Thornton, Gunningham, and Kagan 2005; Kahan 1996; Von Richthofen 2002). As long as the rule is consistently applied, regulated entities have no grounds to blame officials and are more likely to accept the regulatory office's interpretation and enforcement decisions (Kagan 1978). In addition, inter-office consultation and the ensuing consistency can also work as a powerful backup against possible challenge and rejection by the regulated entities. Consistent interpretation can work as a gesture to indicate the correctness of legal decision-making. This can also reassure frontline offices themselves that they are not making an incorrect interpretation, i.e., not running the risk of a lawsuits which they may lose.

The third background factor encouraging meso-level schema relates to the various degree of legal skills that frontline regulators possess, the limited access to external sources of legal arguments, and self-identification as bureaucrats rather than as professionals. While street-level offices pay obsessively large attention to whether a particular enforcement decision is within or beyond the law, self-evaluation of legal skills for enforcement varies across offices. While some offices expressed their confidence in their enforcement decision-making and answered that they hold internal training and frequent discussion to develop their enforcement expertise, other offices expressed concerns about maintaining enforcement capacities, including the capacity to make a sound legal argument. The decreasing number of officers, increasing workloads, frequent transfers, and rare interaction with legal professionals cause such offices to emphasize avoiding a false positive risk more than a false negative risk.

Given the three background factors, meso-level schema is appealing and influential to street-level offices, especially when internal training and intra-office

consultation fail to offer adequate support to make legal arguments about enforcement that may face challenges from regulated entities.

## Theoretical Implications

These research findings have three implications for our understanding of street-level regulatory enforcement and, more broadly, construction of meaning of statutes and administrative justice.

### 1. Contribution to Regulatory Studies and Street-Level Bureaucracy Studies

This research explores a new aspect of regulatory enforcement: inter-office dynamics relate to street-level interpretation and enforcement. The inquiry moves beyond examination of micro-level and macro-level characteristics, which has dominated previous scholarship on regulatory studies and street-level bureaucracy. This research suggests the possibility that an inter-office process of constructing the meaning of law can occur among street-level regulatory offices in other legal contexts. This introduces a new perspective to understand street-level enforcement, frontline agencies' handling of ambiguous statutes, and the evolving process of meaning of law at the local level.

Based on the discussion in Chapter 5, this research proposes that the following may contributes to that possibility: (1) a highly decentralized system, (2) a high level of legal ambiguity and uncertainty of social harm, (3) inadequate internal training to support statutory enforcement, (4) scarcity of access to professional expertise in legal as well as technical arguments, and (5) a strong need of offices to demonstrate legitimacy to enforcement targets. More investigation is warranted in order to examine the conditions under which such inter-office interaction has a significant influence in street-level enforcement.

### 2. Contribution to Neo-institutionalism and the Legal Endogeneity theory

While this research was inspired by the inter-organizational dynamics that neo-institutional sociology of organization highlights, it offers implications for neo-institutionalism and Legal Endogeneity theory by reexamining what aspect is focused on in the study of institutionalization and how the meaning of regulatory statutes is shaped at the frontline.

First, this research combines the analytical perspectives of old institutionalism and neo-institutionalism. Among differences between the two standpoints, one of them is the focus of analysis: old institutionalism emphasizes the role of informal, contextual relationships with individual actors, while neo-institutionalism emphasizes the broader structural aspect and the organizational field

(Hirsch and Lounsbury 1997; Selznick 1996). This research bridges these two outlooks in that it emphasizes the role of concrete, informal networks among regulatory offices and also discusses how such relationship plays out in inter-organizational dynamics. In other words, while this research draws on neo-institutional analysis by focusing on isomorphic mechanisms taking place among peer offices, it also shows, with concrete empirical evidence, the important role of informal relations among offices in generating such inter-office dynamics.

The second contribution relates to the relationship between the research findings here and Legal Endogeneity theory. Like the current inquiry, Legal Endogeneity theory examines the process of shaping the meaning of ambiguous law. It explains how regulated organizations infuse their value systems into ambiguous law, and eventually shape the meaning of law by institutionalizing their ideas of compliance and winning deference from courts and other legal institutions. However, unlike this theory's description of regulatory offices as having limited influence, this research has shown a distinctly different relationship between regulated organizations and regulatory offices---the contingent power dynamics and regulatory offices' active role in shaping the meaning of law (see also Gilad 2014).

This stark difference reflects the various enforcement systems the contemporary regulatory structure employs. Legal Endogeneity theory empirically rests on the civil rights laws in the United States, where regulatory enforcement is done through private lawsuits. On the other hand, the empirical context of this research is the environmental law in Japan, where street-level regulators enforce the statute by direct inspection, and legal action from citizens is extremely rare.

This difference in enforcement arrangements contributes to the very different roles of regulatory agencies, in the two differing contexts, in constructing the meaning of ambiguous law. On one hand, in the regulatory system where enforcement is carried out through private lawsuits and grievance, regulatory agencies may influence the policy-making process, but limit their meaning-making role in the daily implementation (Edelman, Uggen, and Erlanger 1999; Edelman 2016; Dobbin 2009). On the other hand, in the enforcement process where regulators undertake active enforcement through regular inspection, face-to-face negotiation, and power of sanctions and persuasion, they wield a significant influence in shaping the meaning of law at the frontline. Chapter 5 offers a sense of fluctuating power dynamics, where both frontline offices and regulated entities engage in, compete for, and influence the construction of meaning of law. Regulatory offices must produce legitimacy of their interpretation and enforcement to take a lead in the competitive, contingent process, which encourages them to employ meso-level schema. This research vividly demonstrates that different enforcement structures produce different

theoretical understandings of how meaning of law is shaped.[56] Namely, this research suggests the significance of regulators' daily involvement in enforcement, monitoring, and sanctioning.

The significance of enforcement arrangements has an implication for the trend toward self-regulation. Self-regulation is the systematic undertaking by regulated organizations of regulatory governance that is traditionally given to government regulators, including standard-setting, compliance monitoring, and enforcement (Short 2013; Short and Toffel 2010; Black 2008). Acknowledging the impact of regulators' presence at the frontline, this research speculates that self-regulation, while touted for its potential effectiveness, might have consequences similar to those that legal endogeneity theory predicts, unless governmental regulators maintain their presence at the frontline to monitor and sanction.[57] Once enforcement architecture transforms the regulators' role from active enforcer to a mere background configuration, it is speculated that here regulated organizations wield their influence.

Of course the mere presence of regulators at the frontline does not always guarantee the achievement of the regulatory goals. There might be regulatory capture, or limited resourced offices might shun enforcing statues because of the risk of challenges and backlash from regulated entities, as we observed in the previous chapter. Nevertheless, the presence of regulators secures a possibility of striving for the public good (such as environmental protection), especially when they are under constant pressure from the public to achieve statutory goals.

---

[56] In the Japanese environmental context, while both regulatory agencies and regulated entities play a major role in making the meaning of law, citizens are not present in the process. This limited role of citizens in the enforcement process has a theoretical link to Galanter's argument of "haves" and "have nots" (Galanter 1974; Edelman and Suchman 1999). He argues that in a contemporary society, the "haves" come ahead as repeat players in terms of knowledge and access to experts, and that they impede the effort of "have nots" to achieve their rights through the legal system. The contrast between "haves" and "have nots" is applicable to the Japanese environmental context in the sense that (1) regulatory agencies and regulated entities are both "haves" and the overall equal power balance allows them to compete for the meaning of law, whereas (2) the citizens, i.e., one-shooters are normally shut out of the enforcement system due to limited information disclosure.

[57] Short (2013) and Short and Toffell (2010) discuss the conditions under which self-regulation successfully achieve public regulatory goals. They argue that the first condition of successful self-regulation is that government regulators have sufficient resources available for regular inspections and imposing of sanctions (Short 2013; Short and Toffel 2010), which is consistent with my speculation.

### 3. Contribution to Administrative Justice

The third theoretical implication relates to the fundamental dilemma for law enforcement---the dilemma of consistency vs responsiveness. With regard to legitimacy, this issue ultimately leads us to discuss administrative justice. Mashaw (1983) defines administrative justice as "the qualities of a decision process that provides arguments for acceptability of its decisions" (Mashaw 1983/1985) and presents three models of different legitimacy arguments, two of which are relevant to the current discussion. One is the bureaucratic model, where the legitimacy of decisions rests on accurate and consistent implementation of centrally formulated policies. Under this model, regulatory agencies quickly process cases and sustain consistent rule-application. At the same time, it is conducive to rule-bound inflexible decisions, insensitive to important but undocumented features, and unresponsive to individual needs and situations. The other is the professional model, where the decisions are legitimized by professionals' knowledge and their ability to pursue the statutory goals. Under this model, more discretionary decision-making is allowed, leaving it possible to be responsive to individual cases.

This research has demonstrated that frontline offices may depend on inter-office consistency to legitimize their interpretation and enforcement. This legitimacy strategy is more associated with the bureaucratic model where consistent interpretation is considered as appropriate, rather than the professional model that allows more case-specific, individualized treatment. A unique feature of this research finding is that while the justification through the bureaucratic model is usually taken by minimizing frontline discretion (such as in setting detailed manuals and guidelines (e.g., Benish 2014; Howe, Hardy, and Cooney 2013)) this research finds a case where even in the decentralized enforcement system with wide frontline discretion, the emphasis on consistent decision-making is still appealing to regulatory offices. Although interview data showed that frontline offices care about responsive, case-by-case rule-application, when it comes to interpretation and enforcement that may attract close attention from the outside (such as possible challenges from regulated entities), the emphasis on consistent interpretation is a strength. The weak emphasis on professionalization of regulators, and their self-identification as public officials rather than professionals, seem to contribute to the emphasis on consistency as a signal of appropriate rule application. In addition, the following factors, such as (a) the target population of rule application (regulated entities in this research) who are concerned about equal treatment with competitors, and (b) the Japanese cultural tendency to favor equal treatment above individualized treatment, seem to encourage the bureaucratic model for administrative legitimacy.[58]

[58] It should be noted that even though meso-level schema emphasize on the strength of the legitimacy argument based on consistency, it still allows variations in interpretation and enforcement, as discussed in Chapter 4 and 5.

A comparative perspective is warranted for further discussion. Since legitimacy ultimately depends on what decisions the relevant audiences deem as appropriate, comparative research would be helpful to understand under what conditions regulatory agencies emphasize either consistency or responsiveness in order to appeal administrative accountability to relevant audiences. Given that the number of regulatory statutes is increasing in order to address the emerging risks and uncertainties, it is especially important to understand how regulatory agencies, once the statute is implemented, decide what constitutes appropriate enforcement and how they try to legitimate their enforcement action under uncertainty.

## Methodological Implication

This research takes a multi-method approach: in-depth interviews with both regulators and regulated entities, two weeks of frontline observation of a frontline office, a national survey to every frontline offices in charge of the SCCA and the GPP, and the analysis of document issued by Ministry of Environment. Qualitative data enabled this research to generate theoretical arguments based on rich and thorough description of the process of frontline interpretations and enforcement decisions. Quantitative analysis confirms the meso-level schema and its relationship to street-level enforcement statistically. Since the focus on the role of inter-office interaction is a relatively new topic in the literature, the combination of qualitative and quantitative empirical analysis has allowed this research to explore the process of frontline enforcement, to generate theoretical insights with concrete examples, and to statistically demonstrate the overall relationship between inter-office dynamics and street-level enforcement in a way that stimulates further investigation.

## Policy Implication

### 1. Meso-level Interaction and Regulatory Goals

In Chapter 4 and 5, we have observed that inter-office interaction generally encourages offices to issue Investigation Orders by offering enforcement expertise and mitigating the fear of making incorrect interpretations. Offices with inadequate case experience find inter-office interaction particularly helpful. Given the statistical result in Chapter 4 indicating that Order issuance encourages the identification and proper management of contaminated lands, it can be said that inter-office interaction works beneficially for the regulatory goals in the current context. From this standpoint, inter-office interaction is recommended.

It should be noted that meso-level schemas do not guarantee decision-making that balances false positive risks and false negative risks. In other words, frontline interpretations shared with peer offices might turn out to be “overregulating”, issuing

too easily Investigation Orders that requires unnecessary heavy costs and construction delays, or might turn out to be intolerably lenient, failing to prevent environmental damage by lax regulatory supervision.

The risk of overregulation, on one hand, seems to be minimal since the Investigation Orders have been issued only at 2% ratio nationwide and inter-office interaction seems to guard against idiosyncratic and overaggressive enforcement by a particular office.[59]

The risk of laxity, on the other hand, is more substantial because such inter-office interaction takes place only among frontline offices that have a huge concern over legitimacy vis-à-vis regulated entities. Inter-office interaction may end up overly focusing on minimizing false positive errors; such one-sided interpretation might then shared and institutionalized among membership offices[60]. Indeed, there are two Peer Meeting Groups that tend to issue fewer Investigation Orders compared to offices without group membership (Chapter 4). Inter-office interaction could also contribute to the deterioration of street-level enforcement if offices just imitate peer offices' practices without due consideration of enforcement outcomes.

Nevertheless, the supplemental supporting role that inter-office consultation can play for street-level offices cannot be ignored, given the acknowledged paucity of training resources for frontline regulators. For reasonable enforcement, expertise and skills in making legal as well as technical arguments play an important role in how well frontline regulators carefully balance the aim of the statute and case-specific conditions. Even though some concerns remain, it is fair to say that inter-office interaction has the potential to support frontline offices whose organizational resources has been decreasing, by offering enforcement examples and expertise from peer offices (Goldman and Foldy 2011). More close-to-the-ground empirical research is necessary to understand when inter-office interaction is desirable and when it is not.

### 2. The Importance of Professionalization and Public Scrutiny

Professionalization of frontline regulators is another important aspect of policy. Given the power dynamics vis-a-vis regulated entities (see Chapter 5), a system to develop enforcement expertise is essential for frontline offices. Also, interpretation and enforcement decision guided by the purpose of law requires

---

[59] There is still a possibility that frontline offices overregulate business entities by forcing voluntary soil investigation through Administrative Guidance with the threat of Investigation Orders. However, there is no data available to examine such a possibility.

[60] The design of inter-office interaction should be considered in way that promotes a balanced decision-making, such as including external professionals from law and environmental science.

frontline regulators not only to emphasize the legality by consistent rule-application but also highlight its effectiveness through responsive decision-making tailored for individual cases. For effective and sound enforcement, frontline regulators need to acquire professional regulatory expertise to judge what is the best way of balancing the conflicting values of environmental protection and economic efficiency.

For professionalization of frontline regulators, a place for deliberation with peer regulators is necessary. Regulators tease out multiple aspects of real, complex enforcement cases, such as environmental risks, practicalities, compliance costs, business's willingness to comply, and sound legal arguments. Through deliberation, they can explore options and determine which is the most compelling and effective.

Internal discussion and on-the-job training is the primary place for deliberative dialogue, but inter-office interaction offer such opportunity as well. This research describes that some frontline offices rarely hold intensive deliberative discussion due to heavy caseloads, fewer experienced regulators, or poor management. To acknowledge the importance of deliberative discussion and to have more frequent internal discussion is quite important for professionalization. Also, superiors in frontline offices need to recognize that their management skills play an important role in whether such deliberation will be facilitated or not. As to inter-office interaction, not only merely sharing their enforcement experiences but also exchanging their views and ideas of better enforcement decisions will facilitates professionalization. Peer Office Meeting Groups can solicit external experts, such as lawyers or environmental scientists, in order to make better legal as well as technical judgments.

This research shows that frontline regulators tend to describe interpretations and enforcement decisions as "correct" or "incorrect" (Chapter 5). However, legal ambiguity means that there are conflicting interpretations available and that frontline offices have a wide discretion in order to do an effective enforcement tailored for individual cases. Instead of discussing whether particular interpretations and enforcement decisions are legally "correct" or "incorrect," it will be more fruitful to focus on what is a "better" enforcement decision during discussion.

Lastly, this research observed that limited public scrutiny leads to placing increased importance on legitimacy vis-a-vis regulated entities. Under the current structure, while embeds the need for minimizing the false positive risks, the counterbalancing power, i.e., the drive to consider false negative risk, is not embedded as deeply, and rather rests on the regulator's individual determination of the public good. The enforcement structure needs to take into account the concern about false negative risk as well as false positive risk.

Intensifying public scrutiny through increased information disclosure is the first, and most important step toward a balanced external pressure for enforcement decisions. For instance, in the United States, a detailed facility report such as

enforcement actions and compliance/violation histories of each regulated entity is easily accessible through the Internet.[61] If such information become public in Japan in an easily accessible, comprehensible, and comparable way, it will create institutional structures that facilitate a more balanced emphasis on minimizing false negative risks as well as false positive risks.

## Future Research

This research provides a foundation for future work. First, a comparative perspective is warranted to explore the relationship among street-level enforcement, inter-office interaction, and the legitimacy arguments that can be accepted by the relevant audience. Future research could compare the similar statutes in different countries and examine the conditions and mechanisms concerning how meso-level schema are employed (or not employed). It could illuminate the similarities and differences in legitimacy arguments employed by the administrative agencies in different national, cultural, and social contexts. Such a comparative perspective would enrich our theoretical understanding of the advantages and disadvantages of inter-office interactions, and more generally, our understanding of street-level decision-making and its administrative accountability.

Second, the process of professionalization of frontline regulators is also worth further investigation. This research suggests that inter-office dynamics as well as internal training affects professionalization of frontline regulators. It also suggests that the degree of professionalization influences the struggle over the meaning of law with regulated entities and the level of confidence regulators would have when employing their discretion. Further attention to how frontline regulators are trained through training programs, internal discussion and socialization, and their inter-office network structures may deepen our understanding of how the meaning of ambiguous statutes is shaped at the local level.

[61] https://echo.epa.gov/facilities/facility-search

## Appendix: Survey Questionnaire

**PART ONE: Your Office and its Task**
The first section asks you to tell your office's tasks and organizational resources.

(1) Number of full-time regulators in your office

- We have (  ) full-time regulators in our office.
- (  ) of them are hired as technical officials

(2) Number of full-time regulators who are in charge of the Soil Contamination Countermeasures Act.

- We have (  ) regulators who are in charge of the Soil Contamination Countermeasures Act.
- (  ) of them are hired as technical officials.

(3) How often do regulators get transferred to another frontline office in your agency?

- Approximately, every_____years.

- Our agency does not have such regular transfer cycle.

(4) What regulation(s) is your office in charge of besides the SCCA? Please circle all the regulations that your office is responsible for enforcement.

- The Water Pollution Control Act
- The Private Sewerage System Act
- The Air Pollution Control Act
- Noise Regulation Act
- Vibration Regulation Act
- The Offensive Odor Control Act
- Others (Please specify:  )

**PART TWO: WORK ENVIRONMENT**
The questions in this section gather information on interactions within your office and the environment where you work.

(1) Imagine when the law and its guideline are ambiguous and do not specify clear-cut standards for enforcement (e.g., enforcement decision on the SCCA §4). In such a situation, do you discuss with the following people how to handle such a case? If so, how often? Please circle the number that best reflects how often you discuss a case with the following people.

- Colleagues in your office

1----------2----------3----------4----------5----------6
don't discuss rarely discuss sometimes discuss discuss often discuss always discuss

- Predecessor

1----------2----------3----------4----------5----------6
don't discuss rarely discuss sometimes discuss discuss often discuss always discuss

- Team Leader

1----------2----------3----------4----------5----------6
don't discuss rarely discuss sometimes discuss discuss often discuss always discuss

- Office Manager

1----------2----------3----------4----------5----------6
don't discuss rarely discuss sometimes discuss discuss often discuss always discuss

(2) Imagine when the law and its guideline are ambiguous and do not specify clear-cut standards for enforcement (e.g., enforcement decision on the SCCA §4). In such a situation, do you consult the following people in order to attain legal knowledge, technical knowledge, or hands-on know-how? If so, how often? Please circle the number that best reflects how often you consult the following people.

- Colleagues in your office

1----------2----------3----------4----------5----------6
don't discuss rarely discuss sometimes discuss discuss often discuss always discuss

- Predecessor

1----------2----------3----------4----------5----------6
don't discuss rarely discuss sometimes discuss discuss often discuss always discuss

- Team Leader

1----------2----------3----------4----------5----------6

don't discuss rarely discuss sometimes discuss discuss often discuss always discuss

- Office Manager

1----------2----------3----------4----------5----------6
don't discuss rarely discuss sometimes discuss discuss often discuss always discuss

(3) The following is a series of statements regarding the environment of frontline office. Please circle the number that best reflects the extent to which the following statement holds true for you and your office.

"I have colleague(s) in my office I can easily ask questions regarding the SCCA."

1----------2----------3----------4----------5
Untrue somewhat ture neutral somewhat ture true

"I have colleague(s) in my agency I can easily ask questions regarding the SCCA."

1----------2----------3----------4----------5
Untrue somewhat ture neutral somewhat ture true

"Our office has enough time for the SCCA enforcement."

1----------2----------3----------4----------5
Untrue somewhat ture neutral somewhat ture true

"Our office spends too much time for filling out administrative documents."

1----------2----------3----------4----------5
Untrue somewhat ture neutral somewhat ture true

"Our office has enough regulators for the SCCA enforcement."

1----------2----------3----------4----------5
Untrue somewhat ture neutral somewhat ture true

"Our office is confident that we have legal expertise for the SCCA enforcement."

1----------2----------3----------4----------5
Untrue somewhat ture neutral somewhat ture true

"Our office is confident that we have technical expertise for the SCCA enforcement."

1----------2----------3----------4----------5

Untrue somewhat true neutral somewhat true

"Our office can gather enough site-level information for the SCCA enforcement."

1----------2----------3----------4----------5

Untrue somewhat true neutral somewhat true

"Our office regularly receives advices from professionals in the soil environment (e.g., researchers)."

1----------2----------3----------4----------5

Untrue somewhat true neutral somewhat true

**PART THREE: Interaction with peer offices**

The questions in this section gather information on the opportunity to communicate with your peer offices that enforce the SCCA in different regions.

(1) Did anyone in your office take part in the Soil Environment Workshop held by the Ministry of Environment this fiscal year?

1. Yes
2. No

(2) Does your office have any regular meetings with peer offices that enforce the SCCA in different regions? Please circle all opportunities that your office has for the communication with peer offices and write how frequent the meetings take place per year.

( )1. National Level Meeting

(which offices participate in?:_____ frequency:_____/ year)

( )2. Regional Level Meeting

(which offices participate in?:_____ frequency:_____/ year)

( )3. Prefectural Level Meeting

(which offices participate in?:_____ frequency:_____/ year)

( )4.Regular meeting with particular office(s)

(which offices participate in?:_____ frequency:_____/ year)

(3) During this fiscal year, has your office find any part of the SCCA ambiguous for making an enforcement decision?

1. Yes, we have.

2. No, we have not
(Pease go to the question (4) below)

(3-1) If so, has your office consulted peer offices about how to deal with a particular case? For instance your office might have asked peer offices whether they have dealt with similar cases in their region.
Please include any types of consultation, ranging from informal inquiry call, email, to official documents.

1. Yes, our office has consulted peer offices this year.
➔ Approximately ( ) times
➔ Which peer offices did your office consult? (If your office has consulted two or more peer offices, please write them all as far as you remember.)
(Peer offices your office have consulted:_____)
(_____)

2. No, our office did not consult peer offices this year.
➔ How did your office handle the ambiguity?
( )

(4) Do you know regulators working in different regions you can easily ask questions regarding the SCCA? If so, how many regulators?

1. Yes, I know such regulators in different regions.
➔ How many regulators?
Approximately ( ) people

➔ Which frontline office(s) do(es) the above regulator(s) belong to? Please write the offices' name(s) below.
( )

2. No, I don't know such regulators in different regions.

(5) During this fiscal year, has your office received any consultation(s) from peer offices enforcing the SCCA in different regions? Please include any types of consultation--- ranging from informal inquiry call, email, to official documents.

1. Yes, our office has received such consultation(s).
➔ How many times?
Approximately ( ) times

➔ From which frontline office(s)? Please write the offices' name(s) below.
( )

2. No, our office has not received such consultation(s) this fiscal year.

(6) If your office sees any frontline offices as the leader(s) of the SCCA enforcement, please write them below.

( )

(7) During this fiscal year, has your office consult the Ministry of Environment?

1. Yes, we have.
➔ Approximately ( ) times

2. No, we have not.

**PART FOUR: TASK ENVIRONMENTS**
The questions in this section gathers information about (1) regulated entities and citizens with whom you deal and (2) the current soil environment in your jurisdiction.

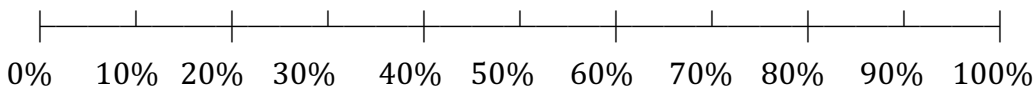
(1) During this fiscal year, has your office received request(s) of the Information Disclosure?
1. Yes, we have.
➔ ( ) times

2. No, we have not.

(2) During this fiscal year, have your office received from citizens any inquiries, concerns, or criticism about SCCA, such as but not limited to, necessity of soil investigation, investigation methods, soil excavation, and transportation of contaminated soil?

1----------2----------3----------4----------5
Never Rarely Occasionally A moderate amount A great deal

(3) In your office's jurisdiction, approximately how much underground water is used for drinking?



(4) The following is a series of statements regarding the situations of frontline office. Please circle the number that best reflects the extent to which each statement holds true for your office.

"The local legislature provides adequate support for enforcement."

1----------2----------3----------4----------5

Untrue somewhat neutral somewhat true

"The governor (or city mayor) provides adequate support for enforcement."

1----------2----------3----------4----------5

Untrue somewhat neutral somewhat true

"There is a possibility that our office gets sued from a regulated company."

1----------2----------3----------4----------5

Untrue somewhat neutral somewhat true

"There is a possibility that citizens criticize our enforcement for under-enforcement."

1----------2----------3----------4----------5

Untrue somewhat neutral somewhat true

"There is a possibility that mass media comes to know and reports a soil contamination case that we haven't detected yet."

1----------2----------3----------4----------5

Untrue somewhat neutral somewhat true

"Our office imagines that the soil in our office's jurisdiction have a high possibility of being contaminated."

1----------2----------3----------4----------5

Untrue somewhat neutral somewhat true

"Overall, regulated companies in our jurisdiction have legal expertise in the SCCA."

1----------2----------3----------4----------5

Untrue somewhat neutral somewhat true

"Overall, regulated companies in our jurisdiction have technical expertise in soil investigation."

1----------2----------3----------4----------5

Untrue somewhat neutral somewhat true

"Overall, the licensed soil investigation companies in our jurisdiction have legal expertise in the SCCA. "

1----------2----------3----------4----------5

Untrue somewhat neutral somewhat true

"Overall, the licensed soil investigation companies in our jurisdiction have experienced many SCCA enforcement cases."

1----------2----------3----------4----------5

Untrue somewhat neutral somewhat true

**PART FIVE ENFORCEMENT APPROACH**

This section asks you about the basic approach of how your office enforces the law.

(1) The following is pairs of statements regarding the basic ideas of how to enforce the law. For each pair of statements, please circle the number that reflects the closest to your office's enforcement approach.

A: "We should avoid imposing too much regulation on regulated companies."
B: "We should avoid imposing insufficient regulation on regulated companies."

A← 1----------2----------3----------4----------5 →B

Close to A somewhat close to A Neutral somewhat close to B Close to B

A: "We try to regulate the business activities that is evident to cause environmental harm."
B: "We try to regulate the business activities that potentially cause environmental harm."

A← 1----------2----------3----------4----------5 →B

Close to A somewhat close to A Neutral somewhat close to B Close to B

A: "We try to make an enforcement decision that regulated companies will agree with."
B: "We make an enforcement decision even if the regulated companies will not agree with."

A← 1----------2----------3----------4----------5 →B

Close to A somewhat close to A Neutral somewhat close to B Close to B

A: "We need to enforce the law even when we feel the enforcement might not make sense at the scene."
B: "We do not enforce the law when we feel the enforcement might not make sense at the scene, even if the law apparently says to do so."

A← 1----------2----------3----------4----------5 →B

Close to A somewhat close to A Neutral somewhat close to B Close to B

A: "Consistent enforcement is the best way to ensure accountability."
B: "Flexible enforcement is the best way to ensure accountability"

A← 1----------2----------3----------4----------5 →B

Close to A somewhat close to A Neutral somewhat close to B Close to B

(2) The following is a series of statements regarding the basic ideas of how to enforce the law. Please circle the number that best reflects the extent to which each statement holds true for your office.

"Enforcing the SCCA in consistent with peer offices is necessary for ensuring accountability."

1----------2----------3----------4----------5

Untrue somewhat neutral somewhat true

"We feel pressure to enforce the SCCA even when we feel such enforcement does not make sense at the scene."

1----------2----------3----------4----------5

Untrue somewhat neutral somewhat true

**PART SIX: YOUR EXPERIENCE AND TRAINING**
The last section asks you to provide your background and experiences.

(1) What is your gender? (please circle one)

1. Male
2. Female

(2) What is your age?

( ) years old

(3) How much schooling have you completed? Please circle your highest educational attainment.

1. High school diploma
2. Associate degree in college
3. Bachelor's degree
4. Master's degree
5. Ph.D. degree

(4) How long have your been in charge of the SCCA enforcement?

For (  ) year(s) and (  ) month(s)

(5) In what year did you begin working for your agency (prefecture government or city government)?

YEAR: (  )

(6) The following is a series of statements regarding your experiences and self-evaluation. Please circle the number that best reflects your self-review.

"I'm confident that I have technical expertise."

1----------2----------3----------4----------5
Untrue somewhat neutral somewhat true

"I'm confident that I have considerable experiences in the SCCA enforcement."

1----------2----------3----------4----------5
Untrue somewhat neutral somewhat true

"I'm confident that I have legal expertise."

1----------2----------3----------4----------5
Untrue somewhat neutral somewhat true

**********

THANK YOU VERY MUCH FOR YOUR ASSISTANCE!
If you have any comments, please write them below.

## Bibliography


Aoki, Kazumasu. 2000. “Comparing Japanese and American Industrial Effluent Control: A Case Study of the Consequences of Contrasting Regulatory Styles.” *Law & Policy* 22 (3-4): 319–51.

Aoki, Kazumasu, and John Cioffi. 1999. “Poles Apart: Industrial Waste Management Regulation and Enforcement in the United States and Japan.” *Law & Policy* 21 (3): 213–45.

Ayers, Ian, and John Braithwaite. 1992. *Responsive Regulation*. New York: Oxford University Press.

Bardach, Eugene, and Robert Kagan. 1982. *Going by the Book: The Problem of Regulatory Unreasonableness*. Transaction Pub.

Benish, Avishai. 2014. “Outsourcing, Discretion, and Administrative Justice: Exploring the Acceptability of Privatized Decision Making.” *Law & Policy* 36 (2): 113–33.

Binz-Scharf, Maria Christina, David Lazer, and Ines Mergel. 2012. “Searching for Answers Networks of Practice Among Public Administrators.” *The American Review of Public Administration* 42 (2): 202–25. http://arp.sagepub.com/content/42/2/202.short.

Black, Julia. 2008. “Constructing and Contesting Legitimacy and Accountability in Polycentric Regulatory Regimes.” *Regulation & Governance* 2 (2): 137–64.

Charmaz, Kathy. 2006. *Constructing Grounded Theory*. Sage.

Chinese Ministry of Environmental Protection. 2014. “Report on National Review of Soil Contamination.” http://www.mep.gov.cn/gkml/hbb/qt/201404/t20140417_270670.htm.

Cooter, Robert D., and Tom Ginsburg. 1996. “Comparative Judicial Discretion: An Empirical Test of Economic Models.” *International Review of Law and Economics* 16 (3): 295–313.

DiMaggio, Paul J., and Walter W. Powell. 1983. “The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields.” *American Sociological Review* 48 (2): 147–60.

Dobbin, Frank. 2009. *Inventing Equal Opportunity*. Princeton University Press.

Edelman, Lauren B. 1992. “Legal Ambiguity and Symbolic Structures: Organizational Mediation of Civil Rights Law.” *American Journal of Sociology* 97 (6): 1531–76.

———. 2016. *Working Law*. The University of Chicago Press.

Edelman, Lauren B., Sally Riggs Fuller, and Iona Mara-Drita. 2001. “Diversity Rhetoric and the Managerialization of Law.” *American Journal of Sociology* 106 (6): 1589–1641.
Edelman, Lauren B., and Mark C. Suchman. 1999. “When the‘ Haves’ Hold Court: Speculations on the Organizational Internalization of Law.” *Law and Society Review*, 941–91.
Edelman, Lauren B., and Shauhin A. Talesh. 2011. “To Comply or Not to Comply—That Isn’t the Question: How Organizations Construct the Meaning of Compliance’.” *Explaining Compliance: Business Responses to Regulation*, 103–22.
Edelman, Lauren B., Uggen, and Howard S. Erlanger. 1999. “The Endogeneity of Legal Regulation: Grievance Procedures as Rational Myth.” *American Journal of Sociology* 105 (2): 406–54.
Emerson, Robert M., Rachel I. Fretz, and Linda L. Shaw. 2011. *Writing Ethnographic Fieldnotes*. University of Chicago Press.
Environmental Restoration and Conservation Agency. 2009. “Environmental NGOs （環境 NGO 総覧｜地球環境基金の情報館｜独立行政法人環境再生保全機構）.” 2012. https://www.erca.go.jp/jfge/ngo/shosai.html.
European Commision Joint Research Centre Institute for Environment and Sustainability. 2014. *JRC Referenc Report: Programs in the Management Contaminated Sites in Europe*.
Food and Agriculture Organization of the United Nations. 2015. “Status of the World’s Soil Resources. Technical Summary.” http://www.fao.org/documents/card/en/c/39bc9f2b-7493-4ab6-b024-feeaf49d4d01.
Füglister, Katharina. 2012a. “Where Does Learning Take Place? The Role of Intergovernmental Cooperation in Policy Diffusion.” *European Journal of Political Research* 51 (3): 316–49.
———. 2012b. “Where Does Learning Take Place? The Role of Intergovernmental Cooperation in Policy Diffusion.” *European Journal of Political Research* 51 (3): 316–49.
Galanter, Marc. 1974. “Why the‘ Haves’ Come out Ahead: Speculations on the Limits of Legal Change.” *Law & Society Review* 9 (1): 95–160.
Geo-Environmental Protection Center. 2013. “Report for Soil Investigation and Contamination Countermeasures FY 2013.”
Gilad, Sharon. 2014. “Beyond Endogeneity: How Firms and Regulators Co-Construct the Meaning of Regulation.” *Law & Policy* 36 (2): 134–64. \
Goldman, Laurie S., and Erica Gabrielle Foldy. 2011. “What Front-Line Workers Talk about When They Talk about Practice: The Influence of Task and

Group Structure on Peer Discussion Groups." *Working Paper*. http://max-cmshost-02.maxwell.syr.edu/uploadedFiles/conferences/pmrc/Files/Goldman%20and%20Foldy%202%20What%20Front-Line%20Workers%20Talk%20about%20When%20They%20Talk%20about%20Practice%20-.pdf.

———. 2015. "The Space before Action: The Role of Peer Discussion Groups in Frontline Service Provision." *Social Service Review* 89 (1): 166–202. doi:10.1086/680319.

Granovetter, Mark S. 1973. "The Strength of Weak Ties." *American Journal of Sociology*, 1360–80.

Grattet, Ryken, and Valerie Jenness. 2005. "The Reconstitution of Law in Local Settings: Agency Discretion, Ambiguity, and a Surplus of Law in the Policing of Hate Crime." *Law & Society Review* 39 (4): 893–942.

Gunningham, Neil. 1987. "Negotiated Non-Compliance: A Case Study of Regulatory Failure." *Law & Policy* 9 (1): 69–95.

Hawkins, Keith O., and John John Michael Thomas. 1984. *Enforcing Regulation*. Kluwer Academic Pub.

Hirata, Ayako. 2014. "9. Regulatory Enforcement of Environmental Law in Japan: An Analysis of the Implementation of the Water Pollution Control Act." *The Changing Role of Law in Japan: Empirical Studies in Culture, Society and Policy Making*, 133.

Hirsch, Paul M., and Michael Lounsbury. 1997. "Ending the Family Quarrel toward a Reconciliation of 'old' and 'new' Institutionalisms." *American Behavioral Scientist* 40 (4): 406–18.

Howe, John, Tess Hardy, and Sean Cooney. 2013. "Mandate, Discretion, and Professionalisation in an Employment Standards Enforcement Agency: An Antipodean Experience." *Law & Policy* 35 (1-2): 81–108.

Hutter, Bridget M. 1989. "Variations in Regulatory Enforcement Styles." *Law & Policy* 11 (2): 153–74.

Japanese Ministry of Environment. 2008. "Final Report of Advisory Board for Soil Contamination Countermeasures (土壌環境施策に関するありかた検討会報告参考資料)."

———. 2010. "Annual Report of Enforcement of the Soil Contamination Countermeasures Act." http://www.env.go.jp/water/dojo/chosa.html.

———. 2013. "Annual Report of Enforcement of the Japanese Clean Water Act." http://www.env.go.jp/water/impure/law_chosa.html.

Jewell, Christopher J. 2007. *Agents of the Welfare State: How Caseworkers Respond to Need in the United States, Germany, and Sweden*. Palgrave Macmillan.

Johnson, David T. 1998. "The Organization of Prosecution and the Possibility of Order." *Law and Society Review*, 247–308.

———. 2002. *The Japanese Way of Justice: Prosecuting Crime in Japan*. Oxford University Press.

Kagan, Robert A. 1978. *Regulatory Justice: Implementing a Wage-Price Freeze*. Russell Sage Foundation.

———. 1994. "Regulatory Enforcement." *Handbook of Regulation and Administrative Law* 383: 383–85.

Kagan, Robert A., Neil Gunningham, and Dorothy Thornton. 2011. "Fear, Duty, and Regulatory Compliance: Lessons from Three Research Projects." In *Explaining Compliance: Business Responses to Regulation*, edited by Christine Parker and Vibeke Lehmann Nielsen, 37–58. Edward Elgar Pub.

Kahan, Dan M. 1996. "What Do Alternative Sanctions Mean?" *The University of Chicago Law Review* 63 (2): 591–653.

Kahneman, Daniel, and Amos Tversky. 1979. "Prospect Theory: An Analysis of Decision under Risk." *Econometrica* 47 (2): 263–91.

Kanto Bureau of Ministry of Economy, Trade, and Industry. 2012. "Casebook of Voluntary Measurements for Groundwater Pollution Prevention."

———. 2013. "'Report on Measurements for Groundwater Pollution Prevention in the Small- and Middle-Sized Companies in Kanto Region' （「関東経済産業局管内の中小企業等の工場・事業等における地下水汚染未然防止のための具体策に関する調査」平成２４年度中小企業等産業公害防止対策調査）."

Kaufman, Herbert. 1960. *The Forest Ranger: A Study in Administrative Behavior*. REP SPL. Routledge.

Kitamura, Yoshinobu. 1997. *Enforcement and Local Governments 『(行政執行過程と自治体』）*.

———. 2000. "Regulatory Enforcement in Local Government in Japan." *Law & Policy* 22 (3-4): 305–18.

Lipsky, Michael. 1980. *Street-Level Bureaucracy: Dilemmas of the Individual in Public Service, 30th Anniversary Expanded Edition*. 30 Anv Exp. Russell Sage Foundation.

Lo, Carlos WH, and Gerald E. Fryxell. 2003. "Enforcement Styles among Environmental Protection Officials in China." *Journal of Public Policy* 23 (1): 81–115.

Lofland, John, and Lyn H. Lofland. 2006. *Analyzing Social Settings*. Wadsworth Publishing Company Belmont, CA.

Luker, Kristin. 2008. *Salsa Dancing Into the Social Sciences*. Harvard University Press.

Mashaw, Jerry L. 1985. *Bureaucratic Justice: Managing Social Security Disability Claims*. Yale University Press.

Maynard-Moody, Steven, and Shannon Portillo. 2010. "Street-Level Bureaucracy Theory." In *The Oxford Handbook of American Bureaucracy*, edited by Robert Durant. Oxford University Press.

Maynard-Moody, Steven Williams, and Michael Craig Musheno. 2003. *Cops, Teachers, Counselors: Stories from the Front Lines of Public Service*. University of Michigan Press.

May, PeterJ, and Søren Winter. 1999. "Regulatory Enforcement and Compliance: Examining Danish Agro-Environmental Policy." *Journal of Policy Analysis and Management* 18 (4): 625–51.

May, Peter J., and Soren C. Winter. 2011. "Regulatory Enforcement Styles and Compliance." In *Explaining Compliance: Business Responses to Regulation*, edited by Christine Parker and Vibeke Lehmann Nielsen, 222–44. Edward Elgar Pub.

May, Peter J., and Robert S. Wood. 2003. "At the Regulatory Front Lines: Inspectors' Enforcement Styles and Regulatory Compliance." *Journal of Public Administration Research and Theory* 13 (2): 117–39.

May, Peter, and Soren Winter. 2000. "Reconsidering Styles of Regulatory Enforcement: Patterns in Danish Agro-Environmental Inspection." *Law & Policy* 22 (2): 143–73.

Milhaupt, Curtis, and Geoffrey Miller. 2000. "Regulatory Failure and the Collapse of Japan's Home Mortgage Lending Industry: A Legal and Economic Analysis." *Law & Policy* 22 (3-4): 245–90.

Morita, Akira. 2000. *Contemporary Administrative Office (現代の行政)*. 改訂版. 放送大学教育振興会.

Nielsen, Vibeke Lehmann, and Christine Parker. 2009. "Testing Responsive Regulation in Regulatory Enforcement." *Regulation & Governance* 3 (4): 376–99.

Oberfield, Zachary W. 2008. *Becoming the Man: How Street-Level Bureaucrats Develop Their Workplace Identities and Views*. ProQuest.

Pautz, Michelle C. 2009. "Trust between Regulators and the Regulated: A Case Study of Environmental Inspectors and Facility Personnel in Virginia." *Politics & Policy* 37 (5): 1047–72.

Pires, Roberto. 2008. “Promoting Sustainable Compliance: Styles of Labour Inspection and Compliance Outcomes in Brazil.” *International Labour Review* 147 (2-3): 199–229.

Sandfort, Jodi R. 2000. “Moving Beyond Discretion and Outcomes: Examining Public Management from the Front Lines of the Welfare System.” *Journal of Public Administration Research and Theory* 10 (4): 729–56.

Scholz, John T. 1984. “Voluntary Compliance and Regulatory Enforcement.” *Law & Policy* 6 (4): 385–404.

Scholz, John T., and Feng Heng Wei. 1986. “Regulatory Enforcement in a Federalist System.” *American Political Science Review* 80 (04): 1249–70.

Selznick, Philip. 1996. “Institutionalism‘ Old’ and‘ New.’” *Administrative Science Quarterly*, 270–77.

Short, Jodi L. 2013. “Self-Regulation in the Regulatory Void ‘Blue Moon’ or ‘Bad Moon’?” *The ANNALS of the American Academy of Political and Social Science* 649 (1): 22–34.

Short, Jodi L., and Michael W. Toffel. 2010. “Making Self-Regulation More Than Merely Symbolic: The Critical Role of the Legal Environment.” *Administrative Science Quarterly* 55 (3): 361–96.

Suchman, Mark C. 1995. “Managing Legitimacy: Strategic and Institutional Approaches.” *The Academy of Management Review* 20 (3): 571–610.

Talesh, Shauhin A. 2009. “The Privatization of Public Legal Rights: How Manufacturers Construct the Meaning of Consumer Law.” *Law & Society Review* 43 (3): 527–62.

Thornton, Dorothy, Neil A. Gunningham, and Robert A. Kagan. 2005a. “General Deterrence and Corporate Environmental Behavior*.” *Law & Policy* 27 (2): 262–88.

———. 2005b. “General Deterrence and Corporate Environmental Behavior*.” *Law & Policy* 27 (2): 262–88.

Thornton, Dorothy, Robert A. Kagan, and Neil Gunningham. 2008. “Compliance Costs, Regulation, and Environmental Performance: Controlling Truck Emissions in the US.” *Regulation & Governance* 2 (3): 275–92.

Vogel, David. 2012. *The Politics of Precaution: Regulating Health, Safety, and Environmental Risks in Europe and the United States*. Princeton University Press.

Von Richthofen, Wolfgang. 2002. *Labour Inspection: A Guide to the Profession*. International Labour Organization.