



CHAPTER FOUR

DOMESTIC ENFORCEMENT STRATEGIES

INTRODUCTION

This chapter presents a selection of the best literature on domestic enforcement strategies, focusing on deterrence, detection, and sanctions. The discussion here complements and extends the discussion in previous chapters about the various theories of compliance at the international and domestic levels, with an emphasis on some of the more specific strategies available to policy-makers to strengthen compliance at the national level.

DETERRENCE: AN OVERVIEW

The definition of “deter” is “to prevent or discourage from acting, as by means of fear or doubt.”¹ The principle of deterrence underlies many existing environmental compliance activities. For instance, the U.S. Environmental Protection Agency’s compliance monitoring and enforcement programs are premised on deterrence, and most of the Agency’s enforcement response and penalty policies reflect this principle. Moreover, the U.S. Supreme Court has identified deterrence as a key underlying element of penalties assessed to redress environmental violations.²

There are two types of deterrence: specific and general.³ Specific deterrence is the effect that an agency’s activity targeting a particular firm has on that firm’s subsequent environmental performance. General deterrence, on the other hand, is the effect that an agency’s enforcement activity has on the behavior of a large number of persons or firms, not just the one targeted firm. EPA’s programs are aimed at providing both

¹ THE AMERICAN HERITAGE DICTIONARY (2d College ed. 1982).

² *Friends of the Earth v. Laidlaw Evtl. Servs., Inc.*, 528 U.S. 167(2000).

³ Mark Cohen, *Empirical Research on the Deterrent Effect of Environmental Monitoring and Enforcement*, 30 ELR 10245 (2000).



types of deterrence: they are designed to not only identify specific violators and make them comply but also to deter the violators and all other similarly situated actors from future non-compliance.⁴

Whatever deterrence strategies the public agencies may choose, they generally include the following four elements to be successful: 1) a high likelihood that violations will be detected; 2) swift and predictable responses to violations; 3) responses that include appropriate sanctions; and 4) a perception among violators that the first three elements are present.⁵

The first excerpt in this chapter, by Jon D. Silberman, analyzes the concept of deterrence.⁶ Silberman provides an excellent overview of deterrence theory and demonstrates how public agencies and private citizens may use deterrence to promote environmental compliance. The article also reviews numerous studies documenting and analyzing the deterrent, motivational, and performance-related effects of compliance and enforcement activities such as monitoring, technical assistance, and the use of market forces and community pressure.

DETECTION: INSPECTIONS AND MONITORING

Deterrence starts with detection. Compliance monitoring can include conducting inspections; requiring self-monitoring by regulated entities; conducting monitoring of various media in particular areas; taking samples; and reviewing citizen complaints.⁷ These activities help identify and document non-compliance and provide the basis for enforcement actions, as well as program evaluation.⁸

⁴ See Jon D. Silberman, *Does Environmental Deterrence Work? Evidence and Experience Say Yes, But We Need to Understand How and Why*, 30 ELR 10523 (2000). [Excerpted in this Chapter].

⁵ See *The Basis for Compliance and Enforcement*, available at <http://www.inece.org/principals/ch2.pdf>. See also U.S. ENVIRONMENTAL PROTECTION AGENCY, COMMUNICATIONS STRATEGIES FOR ENFORCEMENT PROGRAMS, CAPACITY BUILDING SUPPORT DOCUMENT, INTERNATIONAL TRAINING WORKSHOP, 21 (1996) (emphasizing the importance of creating the right perception: "It is crucial to make [the regulated community] see and believe there is a good chance to get caught if they offend the rules.")

⁶ Silberman, *supra* note 4.

⁷ SCIENCE APPLICATIONS INTERNATIONAL CORPORATION, ENVIRONMENTAL AND HEALTH SCIENCES GROUP, MULTIMEDIA INSPECTION PROTOCOLS: INTERNATIONAL EXAMPLES, 5 (1996) (hereinafter "Multimedia Inspection Protocol").

⁸ INTERNATIONAL NETWORK FOR ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT, PRINCIPLES OF ENVIRONMENTAL ENFORCEMENT, Chapter 6, 1 (1992), available at <http://www.inece.org/enforcementprinciples.html> (hereinafter "INECE principles").



The inspector's role is not to interpret the law and make the final institutional or agency determination of compliance, but rather to gather facts about a facility, collect and analyze documentation, and record observations. The inspectors then organize their observations and supporting documentation into a body of data for review against standards set forth in law. These investigation and inspection phases are often repeated until enough information is documented to perform an evaluation of compliance.⁹

A compliance inspection usually goes through the following basic phases:¹⁰ 1) site selection;¹¹ 2) preparation;¹² 3) entry and opening conference;¹³ 4) field investigation, including interviewing and collecting evidence;¹⁴ 5) records investigation and review;¹⁵ 6) closing conference;¹⁶

⁹ U.S. ENVIRONMENTAL PROTECTION AGENCY, CONDUCTING ENVIRONMENTAL COMPLIANCE INSPECTIONS, INSPECTOR'S FIELD MANUAL, INTERNATIONAL EDITION, iii (2002), available at <http://www.inece.org/manual/> (hereinafter "EPA Field Manual").

¹⁰ *Id.* at 7. See also EUROPEAN UNION NETWORK FOR THE IMPLEMENTATION AND ENFORCEMENT OF ENVIRONMENTAL LAW, IMPEL MINIMUM CRITERIA FOR INSPECTION, 4 (1997).

¹¹ Inspection sites are selected using the following four criteria: (1) random selection of sites from all of the identifiable members of a regulated community, frequently referred to as a "neutral inspection scheme"; (2) a selection that emphasizes a specific sector of the identifiable regulated community, usually based on enforcement history, potential threat, or other clearly researched criteria; (3) a selection based on information received from the public or other external sources such as a tip or complaint; (4) emergency responses. An agency must explain how it weighed each of these criteria in a written and public compliance monitoring report so the public can see that the selections were made in a fair and transparent manner. See EPA Field Manual, *supra* note 9, at 8.

¹² This phase entails such things as reviewing all available information, contacting everyone who may have relevant information, getting administrative clearances, and making necessary arrangements if samples need to be taken. *Id.* at 10.

¹³ Most public agencies seek to obtain consensual entry first. If the entry is denied, they try to explain again why the entry is necessary. If denied again, authorization to enter may be granted by a legal authority. *Id.* at 14. The purpose of an opening conference is to let the facility know what the agency plans to do and why, and also to learn more about the facility operation, plant layout, management structure, the plant processes, plant safety, and other information relevant for the investigation. *Id.*

¹⁴ The two most common methods of field investigation are 1) the facility tour and 2) the process-based investigation. *Id.* at 17. An interview is one of the inspector's most useful tools for gathering information. *Id.* at 20. Evidence is anything that provides verifiable information that can be used to establish, certify, prove, substantiate, or support an assertion. *Id.* at 25. It can include physical samples, photographs, and copies of facility documents. See INECE principles, *supra* note 8, at Chapter 6, 3.

¹⁵ A record is any means of memorializing an event, person, place, or thing. Inspectors have the authority to review relevant firm records to determine compliance. The following are some common records that may be of relevance for the inspectors: annual reports; production records; shipping reports; manifests; inventory records; sales reports; process records; permits; quality control records; waste management records; environmental

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7) report writing;¹⁷ 8) referral for follow-up/enforcement;¹⁸ and 9) appearance as a witness, if civil or criminal enforcement actions are necessary.

Inspection activities can be broadly divided into routine inspections and inspections in response to complaints or incidents. The bulk of inspections are routine.¹⁹ Given the limited resources of many enforcement and compliance agencies, they must target their scarce inspection resources to achieve maximum effects. They often do so by targeting specific sources and determining the appropriate level of inspection.²⁰ For instance, agencies may encourage simpler, less expensive inspections for sources that are likely to be in compliance, while they invest in more expensive and intensive inspection programs for those sources that are less likely to be in compliance.²¹ Agencies also use a “tiered” inspection level to conserve resources. Tiered inspections “postpon[e] resource-intensive inspections until lower-level inspection and monitoring warrant the expense.”²² In other words, they begin with less expensive inspection

management system; employee training records; self-monitoring records; discharge monitoring reports; licenses; articles of incorporation; property records; logs; maintenance records; spill reports; safety records; and accident reports. EPA Field Manual, *supra* note 9 at 40.

¹⁶ The closing conference provides an opportunity to confirm inspectors’ observations and review preliminary findings with facility personnel. *Id.* at 46.

¹⁷ The objective for generating the report is to organize and coordinate all documentation and potential evidence in a comprehensive, understandable and usable manner.

¹⁸ Examples of follow-up actions include: issuing a letter to the company; informing other inspecting bodies of the findings and observations; planning a follow-up inspection; writing notices; and possibly initiating a criminal or civil action to induce compliance. See EUROPEAN UNION NETWORK FOR THE IMPLEMENTATION AND ENFORCEMENT OF ENVIRONMENTAL LAW, IMPEL REFERENCE BOOK FOR ENVIRONMENTAL INSPECTION, 35 (1999) (hereinafter “IMPEL Reference Book”).

¹⁹ *Id.* There are different approaches to conducting these inspections. For example, Lana Friesen suggests placing firms at random into the target group and removing them from the group only when an inspection reveals that the firm is in compliance. Lana Friesen, *Targeting Enforcement to Improve Compliance with Environmental Regulations*, 46 J. ENVTL ECON. & MGMT. 72 (2003). In contrast, Hentschel and Randall suggest that the firms should be targeted based on the firms’ past compliance reputation. In other words, unlike Friesen, they suggest targeting them only if they have a bad reputation of compliance. E. Hentschel & S. Randall, *An Integrated Strategy to Reduce Monitoring and Enforcement Costs*, 15 ENVTL & RES. ECON. 57 (2000).

²⁰ See INECE principles, *supra* note 8 at Chapter 6, 5; see also INTEGRATED POLLUTION PREVENTION AND CONTROL, REFERENCE DOCUMENT ON THE GENERAL PRINCIPLES OF MONITORING, 65 (2003); Gro Rødland and Angela Miller, *Results from Monitoring Compliance and Enforcement, Norway 1993*, 3rd INECE Conference Proceedings, Vol. 2 (1994), available at <http://www.inece.org> (listing criteria for prioritizing inspections).

²¹ INECE principles, *supra* note 8 at Chapter 6, 5.

²² *Id.*



measures and progress to a more intensive level if the monitoring data indicate continued violation.²³

Some examples of criteria that help public agencies determine the appropriate frequency of inspections include: the number of complaints; the pollution capability or risk caused by an installation (including the potential danger of the substances used); emission type (single medium v. multiple media); recipient type (e.g., air, soil, water); geographical area (residential, industrial, or recreational); season of the year; operator self-monitoring; and the existence of and cooperation with other inspection programs (e.g., national monitoring programs, programs in voluntary agreements, or other environmental contracts).²⁴

Traditionally, most inspection programs addressed a single environmental medium, such as air, land, or water. However, recognizing that most environmental problems cut across numerous media, government agencies have started stressing environmental performance from a multimedia perspective.²⁵

The second and third excerpts in this chapter are scholarly works on inspections and monitoring activities. Mark Cohen reviews numerous empirical studies on the effectiveness of monitoring and enforcement activities in deterring individuals and firms from violating environmental laws.²⁶ The second piece is an excerpt from Ngoc Sinh Nguyen and Van Vui Phung, who studied Vietnam's large-scale environmental inspection of enterprises in 1997.²⁷ The inspection activity proved very successful, increasing public awareness and providing useful information for future work on environmental inspections in that country.

²³ *Id.*

²⁴ IMPEL Reference Book, *supra* note 18 at 35, 54-55.

²⁵ Multimedia Inspection Protocols, *supra* note 7 at 5; INECE principles, Chapter 10, *supra* note 8; INECE, *Multimedia (Integrated) Permitting and Inspection Summary of Workshop 2D*, 5th INECE Conference Proceedings, Vol. 2 (1998), available at <http://www.inece.org> (noting that current interest in developing multimedia approaches is largely driven by the European Community Directive on Integrated Pollution Production and Control).

²⁶ Cohen, *supra* note 3.

²⁷ Ngoc Sinh Nguyen & Van Vui Phung, *A Large Scale Survey Using Environmental Inspections to Assess and Enforce the Implementation of the Law on Environmental Protection in Vietnam*, 1997, 5th INECE Conference Proceedings, Vol. 1 (1998), available at <http://www.inece.org>.



SANCTIONS: FINES AND OTHER REMEDIES

Appropriate sanctions are critical for establishing the necessary credible threat to compel compliance.²⁸ Sanctions range from issuance of formal administrative orders, formal notices of non-compliance, and administrative consent orders, to fines, property seizures, facility closures, and imprisonment.²⁹ In common law countries, a “Porter Remedy” – where violating firms are forced to re-evaluate their technologies and processes – may also be imposed as a sanction.³⁰ Moreover, regulators may choose from numerous kinds of monetary penalties, including fines specified per day per violation; punitive damages, including treble damages for violation for the failure to comply with a government order; reimbursement for government clean-up expenses; and even barring the violating firms from government loans, guarantees, contracts, or financial assistance.³¹

When imposing these monetary sanctions, regulators must keep several things in mind.³² First, while theory and practice suggest high fines are

²⁸ See Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 (2) J. POLITICAL ECON., 169 (1968). Chester Bowles has estimated that 20 % of the regulated population automatically complies with any regulation, 5 % attempts to evade it, and the remaining 75 % complies as long as they think that the 5 % will be caught and punished. CHESTER BOWLES, *PROMISES TO KEEP: MY YEARS IN PUBLIC SERVICE, 1941-1969*, 25 (1971).

²⁹ See Jay P. Simshack & Michael B. Ward, *Regulator Reputation, Enforcement & Environmental Compliance*, J. ENVTL. ECON. & MGMT. (forthcoming 2005); Nandini Dasgupta, *Environmental Enforcement and Small Industries in India: Reworking the Problem in the Poverty Context*, 28(5) WORLD DEV. 945 (2000). For criminal enforcement actions, see Chapter Ten: Regulator's Choice of Strategies. For an excellent overview of sanctions available to European governments, see MAASTRICHT EUROPEAN INSTITUTE FOR TRANSNATIONAL LEGAL RESEARCH, FINAL REPORT: CRIMINAL PENALTIES IN EU MEMBER STATES' ENVIRONMENTAL LAW, 186 (2002); Huglo, Lepage & Partners Counsel, *Criminal Penalties in EU Member States' Environmental Law*, 29 (2003) available at http://europa.eu.int/comm/environment/crime/criminal_penalties2.pdf.

³⁰ See Chapter Thirteen: Compliance & Competitiveness: The Porter Hypothesis.

³¹ INECE principles, *supra* note 8 at Chapter 7, 2.

³² Several studies indicate that most enforcement agencies levy fines against less than 5% of the firms that receive a Notice of Violation. When fines are assessed, they tend to be small, with average penalties ranging from \$45 to \$24,250. See W. Harrington, *Enforcement leverage when penalties are restricted*, 37 J. PUBLIC ECON., 29, 30 (1988); see also U.S. ENVIRONMENTAL PROTECTION AGENCY, *A PILOT FOR PERFORMANCE ANALYSIS OF SELECTED COMPONENTS OF THE NATIONAL ENFORCEMENT AND COMPLIANCE ASSURANCE PROGRAM* (2003) (stating that “Data for EPA and the states for FY 1999-2001 show that a low percentage (9% -13%) of enforcement actions are taken timely and appropriately, only 39% -40% of formal actions result in penalties, [and] penalties are low (about \$5,000 per action).”); Mark A. Cohen, *Monitoring and Enforcement of Environmental Policy*, 3 (1998), reprinted at http://www.worldbank.org/nipr/work_paper/cohen/cohen.pdf (suggesting that “the median administrative fine imposed by the U.S. EPA in 1995 was \$4,000, while the average fine was \$10,181 and the maximum fine was \$125,000.”) (citing K. Lear, *An Empirical Examination of EPA Administrative Penalties*, Working Paper (1998)).



more effective than low fines, the laws and the political context under which they operate constrain agencies from raising fines as they wish. Second, excessively high fines – where most violators could not afford to pay them – run the risk of undermining their deterrent effect. Thus, an appropriate fine is one that is sufficient to recoup any economic benefits of non-compliance the violators may otherwise realize, plus some form of gravity component to ensure proper deterrence.³³

The final excerpts in this chapter discuss numerous sanctioning measures and their effectiveness in inducing environmental compliance. The fourth excerpt, by INECE, introduces several types of sanctions that may be imposed on violators and the factors that need to be considered when monetary penalties are used.³⁴

The fifth excerpt presents Jay P. Shimshack and Michael B. Ward's 2004 study comparing the effectiveness of fines and other sanctions.³⁵ The authors find that a fine may deter not only the sanctioned firm (specific deterrence) but also other plants in the same jurisdiction (general deterrence) by credibly signaling to them the regulator's willingness to levy penalties should similar violations occur.

Finally, the chapter concludes with Nandini Dasgupta's article analyzing the sanction-based strategies used in India.³⁶ Dasgupta suggests that the sanctions used in that country are too strict and ineffective for small industries. Instead of relying solely on very stringent sanction mechanisms, Dasgupta believes that "packages of incentives and penalties" or a "carrot-and-stick policy" – where different combinations of enforcement strategies are used – would be more efficient, effective, and successful.

³³ U.S. Environmental Protection Agency, Oversight of State and Local Penalty Assessments: Revisions to the Policy Framework for State/EPA Agreements, Memorandum from Steven A. Herman, Assistant Administrator (July 20, 1993), at 5, *available at* <http://www.epa.gov/compliance/resources/policies/planning/state/oversgt-penal-mem.pdf>; U.S. Environmental Protection Agency, A Framework for Statute-Specific Approaches To Penalty Assessments: Implementing EPA's Policy On Civil Penalties, EPA General Enforcement Policy #Gm - 22 (Effective Feb 16 1984).

³⁴ INECE principles, *supra* note 8 at Chapter 7.

³⁵ Shimshack & Ward, *supra* note 29.

³⁶ Dasgupta, *supra* note 29.

