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PUNISHING AND PREVENTING POLLUTION IN JAPAN: IS AMERICAN-STYLE CRIMINAL ENFORCEMENT THE SOLUTION?

Robert G. Kondrat[†]

Abstract: Both Japan and the United States face the ongoing threat of intentional and preventable pollution. From 1970 until the mid-1980s, Japan utilized its environmental crime laws to punish and prevent intentional and preventable acts of pollution. After this period, however, the number of environmental crime arrests and prosecutions in Japan declined. In contrast, since the 1980s, the United States has continued to expand the number of prosecutors and investigators dedicated to the enforcement of environmental crime laws. These divergent trends can be explained by the different pollution histories, enforcement personnel structures, regulatory strategies, and case law of the two countries. In recent years, Japan has been plagued by large oil spills and the illegal disposal of industrial waste. By aggressively enforcing its environmental crime laws and increasing criminal fines, Japan can better deter these types of pollution in the future.

I. INTRODUCTION

In 1970, Japan became the first nation in the world to provide criminal sanctions for acts of pollution¹ that endanger human health.² Japan's innovative pollution control laws established an important precedent for other industrialized nations, including the United States.³ Over the past two decades, however, Japan's enforcement of its environmental crime laws has decreased. In contrast, officials in the United States have rapidly expanded the number of prosecutors and investigators dedicated to the enforcement of environmental crime laws. Despite facing similar environmental problems,⁴

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¹ Environmental crime laws could also include laws related to fish and wildlife (i.e., those that punish poaching), endangered species protection, and nuclear energy and radioactive substances. This Comment, however, is limited to an examination of environmental crime laws governing pollution caused by releases of harmful substances into the air, soil, and water.

² MARGARET A. MCKEAN, ENVIRONMENTAL PROTEST AND CITIZEN POLITICS IN JAPAN 20-21 (1981). The United States had laws at this time that prohibited the disposal of waste in designated waterways, but they were intended to protect navigation and did not make the endangerment of human health a crime. See *infra* note 60.

³ For a discussion of the similarities between the environmental laws of the United States and Japan, see generally Susan Ridgley, *Environmental Protection Agreements in Japan and the United States*, 5 PAC. RIM L. & POL'Y J. 639 (1996).

⁴ David P. Hackett, *Environmental Regulation in Japan*, INT'L ENVTL. L. SPECIAL REP. 329, 329 (1992).

these two nations have moved in different directions with regard to the enforcement of their environmental crime laws.

Recently, however, Japan has begun to rediscover the value of its criminal enforcement program. In 1998, Japan's National Police Agency announced that waste disposal companies that continued to dump waste illegally after receiving warnings from the local government would be promptly arrested.⁵ The police, true to their warnings, made a series of arrests for violations of waste disposal laws.⁶ An announcement by the National Police Agency boldly proclaimed a new direction for the enforcement of environmental crime laws in Japan: "We are going to demand criminal charges under every law we can, not only the laws on waste disposal but also those on air and water pollution."⁷

This Comment examines trends in the enforcement of environmental crime laws in Japan and the United States and evaluates Japan's current prosecution efforts. Part II provides an overview of Japan's environmental crime laws. Part III describes the different trends in environmental crime enforcement in the United States and Japan over the past thirty years and presents historical and contemporary explanations for these different trends. Part IV argues that Japan should continue to strengthen its enforcement of environmental crime laws, particularly those related to oil spills and industrial waste disposal, in order to better deter these types of pollution in the future.

II. OVERVIEW OF JAPAN'S CRIMINAL ENFORCEMENT LAWS

In 1970, a special session of the Japanese Diet ("Diet") initiated a new era of environmental protection in Japan. During this session, the Diet passed or amended fourteen laws⁸ that were designed to reduce and prevent

⁵ *Dumpers to Be Charged*, ASAHI SHINBUN, June 25, 1998, available in 1998 WL 12788416.

⁶ In June 1998, Kyoto prefectural police sought to bring criminal charges against four companies and a total of 87 employees and employers for violations of 10 pollution laws. *Id.* In August 1999, the police arrested officials from waste-producing firms for the first time. *Police Arrest 4 in Illegal Disposal of Used Oil*, Japan Econ. Newswire, Aug. 24, 1999, available in WESTLAW, Japan Econ. Newswire. Four officials from three oil refining firms were arrested for failing to draw up legal contracts to dispose of 1,000 drums of used oil. *Id.*

⁷ *Dumpers to Be Charged*, *supra* note 5. In support of this pronouncement, 36 police officers were loaned from prefectural police headquarters to the industrial waste departments of local governments. The officers accompanied local government officials on inspections of industrial waste disposal sites and stakeouts of illegal dumps. *Id.*

⁸ The amended laws included the Basic Law for Environmental Pollution Control, the Air Pollution Control Law, the Noise Regulation Law, the Road Traffic Law, the Sewage Law, the Natural Parks Law, the Poisonous and Hazardous Substances Control Law, and the Agricultural Chemicals Regulation Law. Chao-chan Cheng, *A Comparative Study of the Formation and Development of Air & Water Pollution*

pollution,⁹ giving Japan the strictest anti-pollution laws in the world.¹⁰ Among these was the first law to criminalize acts of pollution that endanger of human health.¹¹ Prior to the passage of these laws, the principal law imposing criminal sanctions for acts of pollution in Japan was contained in the Criminal Code, which criminalizes negligent acts that cause death or injury¹² and the intentional pollution of drinking water.¹³ The new laws substantially broadened the scope of criminal liability for acts of pollution.¹⁴

The Law for Punishment of Crimes Relating to Environmental Pollution Pertaining to Human Health¹⁵ ("Environmental Pollution Crime Law") was perhaps the most revolutionary environmental law passed by the Diet in 1970.¹⁶ This law was Japan's first attempt to levy economic sanctions or penalties on polluters whose pollution activities jeopardized public health.¹⁷ The Environmental Pollution Crime Law punishes intentional, as well as negligent, acts of pollution.¹⁸ Unlike the Criminal

Control Laws in Taiwan and Japan, 3 PAC. RIM L. & POL'Y J. S-43, S-69 (1993). The new laws included the Law Concerning Entrepreneurs' Bearing of the Cost of Public Pollution Control Works, the Law for Punishment of Environmental Pollution Crimes Relating to Human Health, the Water Pollution Control Law, the Marine Pollution Prevention Law, the Waste Disposal and Public Cleansing Law, and the Law Relating to Soil Pollution Control in Arable Lands. *Id.*

⁹ MCKEAN, *supra* note 2, at 20-21. For this reason, the 1970 Diet became known as the "Pollution Diet." *Id.*

¹⁰ JEFFERY BROADBENT, ENVIRONMENTAL POLITICS IN JAPAN: NETWORKS OF POWER AND PROTEST 20 (1998). Broadbent refers to this event as the "pollution miracle." *Id.*

¹¹ MCKEAN, *supra* note 2, at 21. The particular statute was the Law for Punishment of Crimes Relating to Environmental Pollution Pertaining to Human Health. Hito no Kenkō ni Kakaru Kōgai Hanzai no Shobatsu ni Kansuru Hōritsu [Law for Punishment of Crimes Relating to Environmental Pollution Pertaining to Human Health] (adopted Dec. 25, 1970) Law No. 142 [hereinafter Environmental Pollution Crime Law], reprinted in ROPPŌ ZENSHO [COMPENDIUM OF LAWS] 2864 (1999), translated in 7 EHS LAW BULL. SERIES YB (1996) [hereinafter ENVIRONMENTAL LAWS (1996)]. This law has also been referred to as the "Law on Punishment of Pollution Offenses Affecting Human Health," the "Law for the Punishment of Crises Relating to Environmental Pollution," and the "Law for Punishment of Environmental Pollution Crimes Relating to Human Health." Hiroshi Oda, *The Role of Criminal Law in Pollution Control*, in ENVIRONMENTAL POLICY IN JAPAN 183, 183 (Shigeto Tsuru & Helmut Weidner eds., 1989); George F. Curran III, *Pacific Rim Environmental Regulation: A Western Perspective of Several Countries' Environmental Liability Laws*, 3 J. INT'L L. & PRAC. 47, 51 (1994); ENVIRONMENT AGENCY, QUALITY OF THE ENVIRONMENT IN JAPAN 136 (1975) [hereinafter ENVIRONMENT AGENCY (1975)].

¹² Keihō [Criminal Code] (adopted Apr. 24, 1907, multiple amendments) Law No. 45, reprinted in ROPPŌ ZENSHO [COMPENDIUM OF LAWS] 2843 (1999), translated in 2 EHS LAW BULL. SERIES PA (1996). See Oda, *supra* note 11, at 183 (discussing Articles 204 and 205).

¹³ See Oda, *supra* note 11, at 183 (discussing Articles 142 to 146).

¹⁴ The Criminal Code was first adopted in 1907. *Id.* The Criminal Code was seldom used in pollution cases for a variety of reasons. *Id.* at 187. First, there was great difficulty in proving the causal relationship between an act of pollution and death or injury. *Id.* It was also difficult to prove negligence under the statute. *Id.*

¹⁵ Environmental Pollution Crime Law, *supra* note 11, at YB 1-YB 2.

¹⁶ JULIAN GRESSER ET AL., ENVIRONMENTAL LAW IN JAPAN 261 (1981).

¹⁷ *Id.* at 261 & n.208.

¹⁸ Oda, *supra* note 11, at 185.

Code, which punishes negligent acts only when they cause actual harm to human health, the Environmental Pollution Crime Law punishes negligent acts that pose a risk to human health, even if there is no showing of actual harm.¹⁹ While the Environmental Pollution Crime Law was conceptually innovative when it was passed, its scope is limited in a number of ways,²⁰ and it has rarely been used.²¹

Two frequently employed environmental crime laws in Japan are the Waste Disposal and Public Cleansing Law ("Waste Disposal Law")²² and the Law Concerning Prevention of Marine Pollution and Marine Disasters ("Marine Pollution Law").²³ The Waste Disposal Law was passed to prevent injuries to public health caused by the disposal of waste and toxic chemicals.²⁴ It requires business owners to provide notice to the Japanese government before importing, manufacturing, or using new chemicals.²⁵ The Marine Pollution Law governs the discharge of oil and waste from

¹⁹ *Id.* at 185-86. Under Articles 204 and 205 of the Criminal Code, it is only a crime to cause actual injury or death through negligence. *Id.* at 183, 186. Article 3 of the Environmental Pollution Crime Law addresses pollution crimes involving negligence. ENVIRONMENTAL LAWS (1996), *supra* note 11, at YB 1-YB 2.

²⁰ Oda, *supra* note 11, at 185. First, the Environmental Pollution Crime Law only governs industrial pollution emitted in the course of entrepreneurial activities and does not extend to pollution by citizens. *Id.* Second, the law only targets water and air pollution and does not deal with other types of pollution. *Id.* Finally, the law does not address pollution incidents involving multiple discharges that jointly cause damage. *Id.* The overall purpose of the law is to prevent pollution affecting human health by punishing acts of pollution that are undertaken in the course of business. *Id.* Article 1 emphasizes that the law works in coordination with other measures, implying that criminal sanctions are neither the only nor the primary means to prevent pollution. *Id.*

²¹ See GRESSER ET AL., *supra* note 16, at 261 & n.209. In 1976, only four cases were referred to the prosecutor's office under the Environmental Pollution Crime Law. *Id.* By 1989, there were only four court judgments involving the law. Oda, *supra* note 11, at 188. In 1993, only one person was reported for violating the law. ENVIRONMENT AGENCY, QUALITY OF THE ENVIRONMENT IN JAPAN 711 (1995) [hereinafter ENVIRONMENT AGENCY (1995)]. An Environment Agency report is also called a "White Paper on the Environment." Preface to ENVIRONMENT AGENCY, QUALITY OF THE ENVIRONMENT IN JAPAN (1980) [hereinafter ENVIRONMENT AGENCY (1980)]. It is an annual report on the environment that is submitted to the Diet pursuant to Article 7 of the Basic Law for Environmental Pollution Control. *Id.*

²² Haikibutsu no Shori Oyobi Seisō ni Kansuru Hōritsu [Waste Disposal and Public Cleansing Law] (adopted Dec. 25, 1970, multiple amendments) Law No. 137 [hereinafter Waste Disposal Law], reprinted in ROPPO ZENSHO [COMPENDIUM OF LAWS] 2034 (1999), translated in ENVIRONMENT AGENCY, ENVIRONMENTAL LAWS AND REGULATIONS IN JAPAN 10 (1976) [hereinafter ENVIRONMENTAL LAWS (1976)]. See also Curran III, *supra* note 11, at 52.

²³ Kaijō Osen Oyobi Kaijō Saigai no Bōshi ni Kansuru Hōritsu [Law Concerning Prevention of Marine Pollution and Marine Disasters] (adopted Dec. 25, 1970, multiple amendments) Law No. 136 [hereinafter Marine Pollution Law], reprinted in ROPPO ZENSHO [COMPENDIUM OF LAWS] 1969 (1999), translated in 7 EHS LAW BULL. SERIES YE (1970).

²⁴ Curran III, *supra* note 11, at 52.

²⁵ *Id.*

ships²⁶ and provides fines of up to ten million yen (approximately \$100,000) for oil spills.²⁷

The other significant environmental crime laws in Japan relate to regulatory compliance enforcement. The two most prominent laws in this area are the Law on Prevention of Water Pollution ("Water Pollution Control Law")²⁸ and the Law on Prevention of Air Pollution ("Air Pollution Control Law").²⁹ Unlike the Environmental Pollution Crime Law, which punishes those who harm or endanger human health, these laws punish industrial facilities and responsible company officials who violate emission standards or fail to comply with administrative orders that direct them to install pollution control devices.³⁰ Under the Air Pollution Control Law, violators are subject to punishment if they (1) fail to observe emission standards, (2) fail to comply with an administrative order to change a plan for installment of pollution control devices, or (3) submit false reports to an administrative agency.³¹ The Water Pollution Control Law contains similar provisions.³²

While Japan's Environment Agency³³ generally sets the environmental policies, standards, and objectives to be achieved, regulatory enforcement and implementation of these standards is the responsibility of local governments.³⁴ Japan's forty-seven prefectures³⁵ oversee and monitor industries within their respective jurisdictions to ensure compliance with various environmental laws.³⁶ Local governments are authorized to regulate environmental issues through private pollution control contracts between industrial plants and the communities in which they are located.³⁷

²⁶ ENVIRONMENT AGENCY, QUALITY OF THE ENVIRONMENT IN JAPAN 294 (1987) [hereinafter ENVIRONMENT AGENCY (1987)].

²⁷ *Oil Spill Culprits Jumping Bail*, DAILY YOMIURI, Oct. 25, 1996, available in 1996 WL 13028056.

²⁸ Suishitsu Odaku Bōshi Hō [Water Pollution Prevention Law] (adopted Dec. 25, 1970, multiple amendments) Law No. 138 [hereinafter Water Pollution Control Law], reprinted in ROPPŌ ZENSHO [COMPENDIUM OF LAWS] 1956 (1999), translated in 7 EHS LAW BULL. SERIES YD (1996).

²⁹ Taiki Osen Bōshi Hō [Air Pollution Prevention Law] (adopted June 10, 1968, multiple amendments) Law No. 97 [hereinafter Air Pollution Control Law], reprinted in ROPPŌ ZENSHO [COMPENDIUM OF LAWS] 1948 (1999), translated in 7 EHS LAW BULL. SERIES YC (1996). The 1970 amendments added criminal sanctions. Oda, *supra* note 11, at 186.

³⁰ Oda, *supra* note 11, at 186.

³¹ *Id.* at 186-87.

³² *Id.* at 187.

³³ The Environment Agency is an executive body under the Prime Minister's Office and is headed by a director general, who is a member of the Cabinet and holds the rank of state minister. GRESSER ET AL., *supra* note 16, at 234. The Environment Agency has four principal bureaus: Planning and Coordination, Nature Conservation, Air Quality, and Water Quality. *Id.*

³⁴ Curran III, *supra* note 11, at 51.

³⁵ Ridgley, *supra* note 3, at 51 & n.16. A prefecture is a localized government institution somewhat analogous to an American state. *Id.*

³⁶ Curran III, *supra* note 11, at 51.

³⁷ *Id.* at 52.

Prefectures are also authorized to adopt regulations with criminal sanctions, provided that the sanctions do not include imprisonment exceeding two years.³⁸ Under the Air Pollution Control Law, for example, a prefectural governor may request that the owner of an industrial facility supply emissions data, and prefectural officials are authorized to inspect industrial facilities on a regular basis.³⁹ Under Article 14, prefectural governors also have the authority to order industrial facilities to reduce the level of pollutants in emissions or to suspend the operations of facilities when they are in violation of emission standards and pose a risk to human health or the environment.⁴⁰ Article 33 subjects individuals who fail to comply with an order from the governor to imprisonment and criminal fines.⁴¹

In summary, Japan's environmental crime laws provide a solid statutory foundation for the prosecution of a variety of crimes related to different acts of pollution. However, as a senior official of the Environment Agency once declared, "Having laws enacted is not enough. They must be enforced."⁴² As explained in Part III, Japan's environmental crime laws have not been enforced with the same rigor as those in the United States.

III. DIFFERENCES IN ENVIRONMENTAL CRIME PROSECUTION PATTERNS IN JAPAN AND THE UNITED STATES

A. *Historical Trends in the Enforcement of Environmental Crime Laws in Japan*

Japan's environmental crime laws have been enforced with varying degrees of intensity since they were enacted in 1970. The enforcement of most non-marine environmental crime laws in Japan originates with the police.⁴³ The National Police Agency has a special section that deals with

³⁸ Oda, *supra* note 11, at 187. A number of municipalities and prefectures have passed ordinances that govern pollution. MCKEAN, *supra* note 2, at 243. They often include higher pollution standards and stiffer fines and jail terms than the laws passed at the national level by the Diet. *Id.*

³⁹ GRESSER ET AL., *supra* note 16, at 260-61.

⁴⁰ ENVIRONMENTAL LAWS (1996), *supra* note 11, at YC 18-19.

⁴¹ *Id.* at YC 42.

⁴² Saburo Kawanishi, *Foreword* to ENVIRONMENT AGENCY, QUALITY OF THE ENVIRONMENT IN JAPAN (1976) [hereinafter ENVIRONMENT AGENCY (1976)].

⁴³ Cases involving oil spills from vessels fall within the jurisdiction of the Maritime Safety Agency ("MSA"). See ENVIRONMENT AGENCY (1987), *supra* note 26, at 294; see also ENVIRONMENT AGENCY (1995), *supra* note 21, at 662. Besides handling cases involving the Marine Pollution Law, the MSA also handles cases involving the Water Pollution Control Law and the Waste Disposal Law. See ENVIRONMENT AGENCY (1987), *supra* note 26, at 294. Between 1981 and 1983, the MSA referred 4,101 cases to authorities. ENVIRONMENT AGENCY, QUALITY OF THE ENVIRONMENT IN JAPAN 206 (1984) [hereinafter

pollution cases.⁴⁴ The police in turn refer pollution cases to the Public Prosecutor's Office, which is staffed by prosecutors that specialize in pollution crimes.⁴⁵ Local environmental administrators can also refer cases to criminal prosecutors, but for the reasons discussed below, this is rarely done.⁴⁶

Since almost all persons arrested for environmental crimes are referred for prosecution,⁴⁷ one of the most effective indicators of the enforcement of environmental crime laws in Japan is the number of arrests made by police.⁴⁸ Figure 1 shows the number of arrests made by the police for environmental crimes. During the first nine years of criminal enforcement (1971 to 1979), the number of arrests grew substantially every year.⁴⁹ Arrests peaked in 1984, a year in which the Environment Agency proudly announced that the number of arrests for "vicious" offenses was increasing.⁵⁰ After 1985, however, there was a dramatic five-year decrease in arrests.⁵¹ Through the early 1990s, arrest numbers remained at pre-1974

ENVIRONMENT AGENCY (1984)]. The MSA monitors and controls marine pollution in Japanese waters with patrol boats, helicopters, and aircraft. ENVIRONMENT AGENCY (1995), *supra* note 21, at 662.

⁴⁴ Oda, *supra* note 11, at 189.

⁴⁵ *Id.* Prosecutors in Japan are sometimes referred to as procurators. A. Didrick Castberg, *Prosecutorial Independence*, 16 UCLA PAC. BASIN L.J. 38, 38 n.1 (1997). Procurators are responsible for prosecuting criminal charges on behalf of the state and serve a function similar to district attorneys and federal prosecutors in the United States. MCKEAN, *supra* note 2, at 68-69.

⁴⁶ GRESSER ET AL., *supra* note 16, at 261.

⁴⁷ Between 1991 and 1994, police referred between 96% and 98% of the reported violations for prosecution. ENVIRONMENT AGENCY (1995), *supra* note 21, at 710.

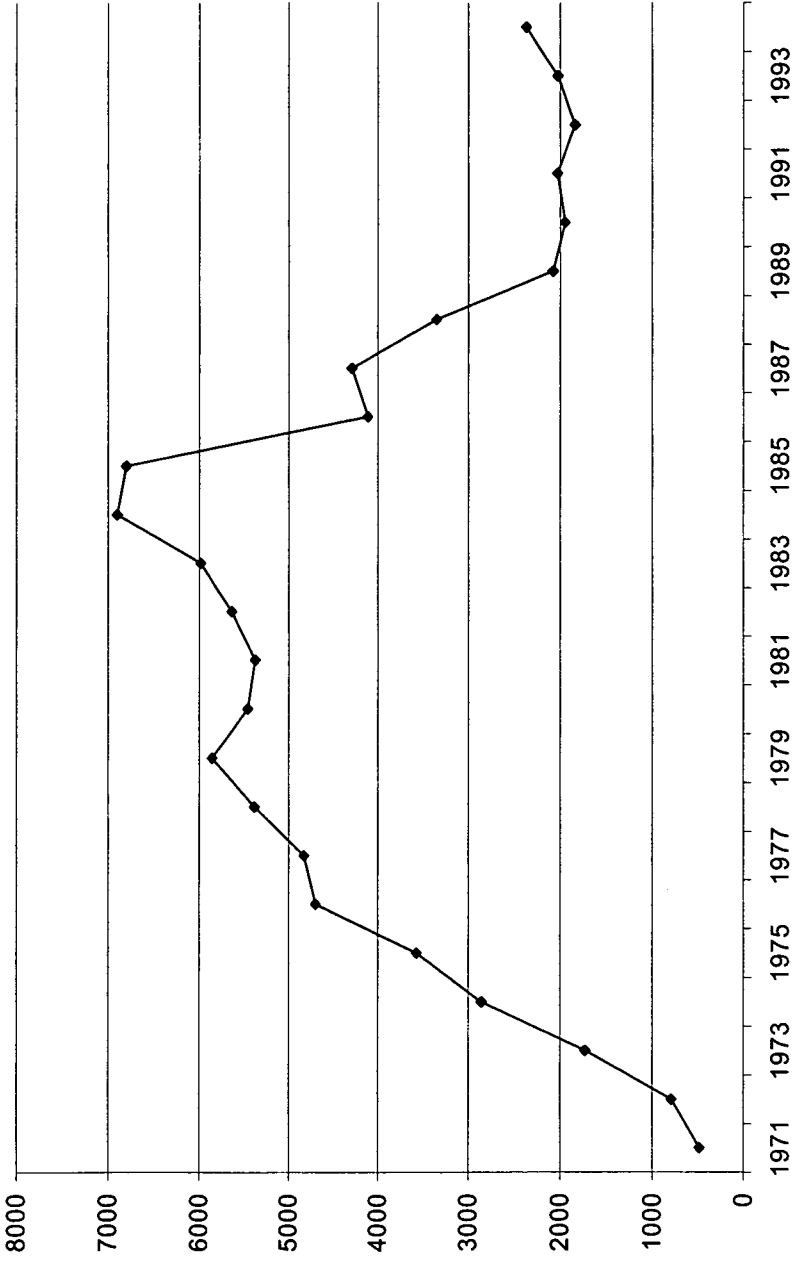
⁴⁸ While these figures only include cases involving the police and not maritime pollution cases involving the MSA, they do reflect overall trends.

⁴⁹ One 1980 report noted that there had been a "steady increase in recent years in the number of criminal prosecutions for pollution-related offenses." Marshall Lee Miller et al., *Environmental Law in Japan: An Overview*, 2 E. ASIAN EXEC. REP. 3, 20 (1980). The specific arrest figures are: 1971 (482), 1972 (791), 1973 (1,727), 1974 (2,856), 1975 (3,572), ENVIRONMENT AGENCY (1976), *supra* note 42, at 221; 1976 (4,697), 1977 (4,827), 1978 (5,383), ENVIRONMENT AGENCY, QUALITY OF THE ENVIRONMENT IN JAPAN 257 (1979) [hereinafter ENVIRONMENT AGENCY (1979)]; 1979 (5,855), ENVIRONMENT AGENCY (1980), *supra* note 21, at 292; 1980 (5,456), 1981 (5,374), 1982 (5,637), 1983 (5,983), ENVIRONMENT AGENCY (1984), *supra* note 43, at 274; 1984 (6,902), 1985 (6,805), 1986 (4,113), ENVIRONMENT AGENCY (1987), *supra* note 26, at 293; 1987 (4,289), 1988 (3,350), 1989 (2,075), ENVIRONMENT AGENCY, QUALITY OF THE ENVIRONMENT IN JAPAN 401 (1990) [hereinafter ENVIRONMENT AGENCY (1990)]; 1990 (1,946), 1991 (2,028), 1992 (1,835), 1993 (2,024), 1994 (2,365), ENVIRONMENT AGENCY (1995), *supra* note 21, at 708.

⁵⁰ The Environment Agency later stated that these offenses included failing to install wastewater treatment facilities, avoiding the use of treatment facilities in order to cut costs, and discharging untreated wastewater through illegal drainage in order to avoid effluent standards. ENVIRONMENT AGENCY (1984), *supra* note 43, at 275. The Environment Agency also noted that a number of offenses were committed by local public bodies, including city-run meat works. *Id.*

⁵¹ ENVIRONMENT AGENCY (1987), *supra* note 26, at 293. Between 1985 and 1989, the total number of arrests for pollution offenses dropped from 6,805 to 2,075. Annual water pollution arrests decreased from 494 to 45, and annual waste disposal arrests dropped from 6,261 to 2,019. ENVIRONMENT AGENCY (1990), *supra* note 49, at 401.

Figure 1. Police Arrests for Pollution Crimes in Japan, 1971-1994.



levels.⁵²

The vast majority of environmental crime arrests have been for violations of the Waste Disposal Law.⁵³ Of the remaining arrests, most have been for violations of the Water Pollution Control Law.⁵⁴ The number of arrests for violations of these laws has decreased in a manner consistent with the overall decrease in the number of arrests since 1984.⁵⁵ There have been virtually no arrests for violations of the Air Pollution Control Law, the Environmental Pollution Crime Law, and other environmental laws since the 1980s.⁵⁶ Another indicator of the intensity of environmental crime prosecution, the indictment rate,⁵⁷ has also dropped. The indictment rate, which was as high as 69% in 1972,⁵⁸ dropped to 55.8% in 1990.⁵⁹

⁵² ENVIRONMENT AGENCY (1995), *supra* note 21, at 708.

⁵³ Oda, *supra* note 11, at 188. The proportion of arrests for violations of the Waste Disposal Law has increased over time: 1978 (85.4% of arrests), ENVIRONMENT AGENCY (1979), *supra* note 49, at 258; 1986 (93.7% of arrests), ENVIRONMENT AGENCY (1987), *supra* note 26, at 293; 1994 (98.3% of arrests), ENVIRONMENT AGENCY (1995), *supra* note 21, at 708.

⁵⁴ Some of the leading violators of water pollution effluent standards are the food industry (30.2%), the metal product manufacturing industry (20.2%), and the cement product manufacturing industry (11.2%). ENVIRONMENT AGENCY (1984), *supra* note 43, at 275. The specific Water Pollution Control Law arrest figures are: 1975 (291), ENVIRONMENT AGENCY (1976), *supra* note 42, at 221; 1978 (340), ENVIRONMENT AGENCY (1979), *supra* note 49, at 258; 1979 (860), 1980 (829), 1981 (664), 1982 (692), 1983 (668), ENVIRONMENT AGENCY (1984), *supra* note 43, at 274; 1984 (745), 1985 (494), 1986 (210), 1987 (211), 1988 (150), 1989 (45), ENVIRONMENT AGENCY (1990), *supra* note 49, at 515; 1990 (52), 1991 (51), 1992 (34), 1993 (29), 1994 (18), ENVIRONMENT AGENCY (1995), *supra* note 21, at 708.

⁵⁵ In 1994, for example, of the 2,365 pollution arrests, only 18 arrests were for violations of the Water Pollution Control Law. ENVIRONMENT AGENCY (1995), *supra* note 21, at 708.

⁵⁶ Between 1993 and 1994, there was only one reported violation of the Environmental Pollution Crime Law, and there were no reported criminal violations of the Air Pollution Control Law. ENVIRONMENT AGENCY (1995), *supra* note 21, at 711. In 1986, while 4,113 people were arrested for pollution crimes, only 3.6% of these arrests were for violations of the Water Pollution Control Law. There were only two cases involving the Air Pollution Control Law. Oda, *supra* note 11, at 188. In 1979, there were 5,855 arrests. ENVIRONMENT AGENCY (1984), *supra* note 43, at 274. There were 312 arrests for violations of the Water Pollution Control Law (5.3%), and 113 arrests (1.9%) for violations of the River Law. ENVIRONMENT AGENCY (1980), *supra* note 21, at 293. Figures for pollution arrests by police (these figures do not include MSA arrests) for violations of laws other than the Waste Disposal Law and Water Pollution Control Act are: 1975 (864), ENVIRONMENT AGENCY (1979), *supra* note 49, at 257; 1979 (217), 1980 (225), 1981 (189), 1982 (217), 1983 (87), ENVIRONMENT AGENCY (1984), *supra* note 43, at 274; 1984 (97), 1985 (50), 1986 (17), ENVIRONMENT AGENCY (1987), *supra* note 26, at 293; 1987 (20), 1988 (2), 1989 (11), ENVIRONMENT AGENCY (1990), *supra* note 49, at 401; 1990 (4), 1991 (7), 1992 (13), 1993 (3), 1994 (8), ENVIRONMENT AGENCY (1995), *supra* note 21, at 708.

⁵⁷ The indictment ratio can be calculated by dividing the number of persons indicted by the total number of persons referred for prosecution. ENVIRONMENT AGENCY (1995), *supra* note 21, at 710.

⁵⁸ Of 2,177 cases received by the Public Prosecutor's Office, 1,492 resulted in indictments. GRESSER ET AL., *supra* note 16, at 469 n.211.

⁵⁹ Indictment ratios in the 1990s were as follows: 1991 (57.7%), 1992 (59.1%), 1993 (56.0%), 1994 (62.6%). ENVIRONMENT AGENCY (1995), *supra* note 21, at 710. In 1994, the overall indictment ratio for environmental pollution offenses was 62.6%. The indictment ratios for the Waste Disposal Law, the Water Pollution Control Law, and the Marine Pollution Law were 68.5%, 65.5%, and 49.1%, respectively. *Id.* at 712. The indictment ratio was as high as 73% in 1977. GRESSER ET AL., *supra* note 16, at 469 n.211.

B. *The Expansion of Environmental Crime Prosecution in the United States*

In contrast to Japan, environmental crime prosecution in the United States has expanded rapidly over the past two decades. Although there have been criminal penalties for certain environmental violations in the United States since 1899,⁶⁰ most environmental crime provisions were added after 1970.⁶¹ Until the early 1980s, however, most of the laws in existence were rarely enforced. During the 1970s, only twenty-five environmental crimes were prosecuted at the federal level.⁶² This trend changed dramatically in the early 1980s, when the Environmental Protection Agency ("EPA") created a new Office of Criminal Enforcement,⁶³ and the Department of Justice ("DOJ") created the Environmental Crimes Unit (now called the Environmental Crimes Section).⁶⁴ These changes brought about a dramatic increase in the number of prosecutions and the amount of fines imposed.⁶⁵ Between 1983 and 1986, the number of indictments for environmental

Ratios were very similar a decade later. In 1986, for example, the indictment rate was 72%. Oda, *supra* note 11, at 188.

⁶⁰ The Refuse Act of 1899, 30 Stat. 1152, and the Rivers and Harbors Appropriation Act of 1899, 30 Stat. 1148, were the first U.S. laws to provide criminal penalties for environmental harm. These laws were intended to maintain the navigability of waters, and were not intended to protect human health or the environment. The laws authorized fines of up to \$2,500 and up to one year in prison for the disposal of refuse or waste in designated navigable waterways and for the excavation or filling in of navigable waterways without authorization. DONALD A. CARR ET AL., ENVIRONMENTAL CRIMINAL LIABILITY: AVOIDING AND DEFENDING ENFORCEMENT ACTIONS I (1995).

⁶¹ See Clean Air Act Amendments of 1970, Pub. L. No. 91-604, § 4, 1970 U.S.C.C.A.N. (84 Stat.) 1954, 1968; Clean Air Act Amendments of 1977, Pub. L. No. 95-95, § 308, 1977 U.S.C.C.A.N. (91 Stat.) 685, 780; Clean Water Act of Oct. 18, 1972, Pub. L. No. 92-500, 86 Stat. 816; Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), Pub. L. No. 96-510, 94 Stat. 2767 (1980); Resource Conservation and Recovery Act ("RCRA"), Pub. L. No. 94-580, 90 Stat. 2795 (1976); CARR ET AL., *supra* note 60, at 3-4, 6.

⁶² CARR ET AL., *supra* note 60, at 5.

⁶³ The Office of Criminal Enforcement was created in 1981. ENVIRONMENTAL LAW INSTITUTE ("ELI"), ENVIRONMENTAL CRIMES DESKBOOK 7 (1996) [hereinafter ELI]. In October 1982, the first group of experienced criminal investigators reported to work at the EPA. *Id.* This has been recognized as the official birthday of the federal government's criminal environmental enforcement program. See Helen J. Brunner, *Environmental Criminal Enforcement: A Retrospective View*, 22 ENVTL. L. 1315 (1992).

⁶⁴ F. Henry Habicht II, *The Federal Perspective on Environmental Criminal Enforcement: How to Remain on the Civil Side*, 17 ENVTL. L. REP. 10478, 10479 (1987). The Environmental Crimes Unit was established in November 1982 and focused on RCRA cases, complex cases, multidistrict cases, and cases for which a U.S. Attorney requested assistance from the Department of Justice ("DOJ"). CARR ET AL., *supra* note 60, at 9. When the group was upgraded to a permanent section within the Environment and Natural Resources Division of DOJ in 1987, it was given primary responsibility for the prosecution of any matter referred by the EPA. *Id.* By 1992, the Environmental Crimes Section had grown to 28 attorneys. ELI, *supra* note 63, at 7.

⁶⁵ The average fine in an environmental crime case is now \$1.9 million. Thomas M. Downs, *The Enforcement Pipeline: A Significant Discharge of Environmental Enforcement Cases*, SD19 ALI-ABA 199, 204 (1998), available in WESTLAW, Texts & Periodicals-All Law Reviews, Texts & Bar Journals.

crimes doubled, the number of guilty pleas and convictions increased by 300%, criminal fines increased by 600%, and jail time increased by 1300%.⁶⁶

Criminal enforcement continued to expand throughout the 1980s and 1990s⁶⁷ and was further strengthened when Congress passed the Pollution Prosecution Act of 1990.⁶⁸ The law called for a 400% increase in the number of EPA criminal investigators.⁶⁹ In fiscal year ("FY") 1990, the Environmental Crimes Section obtained 134 indictments for environmental crimes and had an overall conviction rate of 95%.⁷⁰ This was the largest number of indictments ever recorded in its history and a 33% increase over FY 1989.⁷¹ Between FY 1995 and FY 1996, criminal fines tripled from \$23 million to \$76.6 million.⁷² The EPA has also continued to expand its criminal enforcement efforts.⁷³

C. *Explanations for Why Criminal Enforcement Has Been Less Prevalent in Japan Than in the United States*

1. *Different Pollution Histories*

One important consideration in understanding the current difference in enforcement strategies in the United States and Japan is public opinion regarding the criminalization of acts of pollution. Prosecutors in the United

⁶⁶ Edward F. Novak & Charles W. Steese, *Survey of Federal and State Environmental Crime Legislation*, 34 ARIZ. L. REV. 571, 572 (1992).

⁶⁷ ELI, *supra* note 63, at 87. While there was some annual variation, the number of guilty pleas and convictions continued to increase between 1983 and 1994. The figures are: fiscal year ("FY") 1983 (40), FY 1984 (32), FY 1985 (37), FY 1986 (67), FY 1987 (86), FY 1988 (63), FY 1989 (107), FY 1990 (85), FY 1991 (96), FY 1992 (104), FY 1993 (168), FY 1994 (124). *Id.*

⁶⁸ Pollution Prosecution Act of 1990, Pub. L. No. 101B593, § 202(a), 104 Stat. 2962 (codified at 42 U.S.C. § 4321 (1994)). CARR ET AL., *supra* note 60, at 5.

⁶⁹ JOEL A. MINTZ, ENFORCEMENT AT THE EPA: HIGH STAKES AND HARD CHOICES 93 (1990). Two American commentators summed up the effect of this law by observing, "It is a serious understatement to say that the enforcement of corporate environmental crime has been in rapid evolution in the last few years." Donald A. Carr & William L. Thomas, *Devising a Compliance Strategy Under the ISO 14000 Environmental Management Standards*, 15 PACE ENVTL. L. REV. 85, 88 (1997).

⁷⁰ Roger J. Marzulla & Brett G. Kappel, *Nowhere to Run, Nowhere to Hide: Criminal Liability for Violations of Environmental Statutes in the 1990s*, 16 COLUM. J. ENVTL. L. 201, 204 (1991). Between October 1, 1987, and May 31, 1993, there was an overall conviction rate of 91.1%. Christopher Huber et al., *Environmental Crimes*, 33 AM. CRIM. L. REV. 607, 612 (1996).

⁷¹ Marzulla & Kappel, *supra* note 70, at 201.

⁷² Carr & Thomas, *supra* note 69, at 92.

⁷³ Downs, *supra* note 65, at 201. During FY 1997, the EPA referred the largest number of civil and criminal enforcement cases in its history to the DOJ (426 civil cases and 278 criminal cases) and assessed more civil and criminal penalties than in any other one-year period in its history (\$95.1 million and \$169.3 million, respectively). *Id.*

States and Japan have broad discretion in deciding whether or not to prosecute an offender.⁷⁴ One crucial factor in this decisionmaking process in both countries is the degree to which the public demands prosecution of offenders.⁷⁵ Public desire for prosecution is often a byproduct of heightened awareness of a particular crime, which can be prompted in the environmental context by media coverage of particularly shocking environmental incidents.⁷⁶ The timing of two separate environmental incidents, one in Japan and the other in the United States, may explain why the present public desire for prosecution is different in the two countries and why criminal prosecution is less frequent in Japan today.

In the 1960s and 1970s, there were a number of highly publicized intentional acts of pollution in both Japan and the United States. In Japan, most attention was centered on the "Big Four" pollution cases,⁷⁷ while in the United States, media attention focused on the Love Canal scandal.⁷⁸ In the years following this period of elevated environmental consciousness, neither country experienced a pollution incident that gripped national public attention in the same manner as the events of the previous decades. This changed in 1989, however, when America experienced one of the worst and most publicized acts of pollution in its history, the *Exxon Valdez* oil spill in Prince William Sound, Alaska.⁷⁹

⁷⁴ Oda, *supra* note 11, at 188.

⁷⁵ See Robert D. Fluharty & Robert E. Lannan, *Criminal Liability for Environmental Law Violations by Coal Operators*, 93 W. VA. L. REV. 599, 602 (1991); Castberg, *supra* note 45.

⁷⁶ See Steven L. Humphreys, Comment, *An Enemy of the People: Prosecuting the Corporate Polluter as a Common Law Criminal*, 39 AM. U. L. REV. 311, 311-15 (1990).

⁷⁷ MCKEAN, *supra* note 2, at 20. The "Big Four" cases include the Niigata and Kumamoto cases (involving mercury poisoning), the Yokkaichi City case (involving air pollution from oil refineries and petrochemical and power plants), and the Toyama *itai-itai* case (involving cadmium poisoning). GRESSER ET AL., *supra* note 16, at 29-30.

⁷⁸ Love Canal was a residential area of Niagara Falls where large quantities of solid and liquid waste had been buried underground. In 1978, these wastes began to seep into the basements and playrooms of houses. Roger C. Dower, *Hazardous Wastes*, in PUBLIC POLICIES FOR ENVIRONMENTAL PROTECTION 151, 151 (Paul R. Portney ed., 1990). Two hundred and thirty-seven families had to be permanently evacuated from their homes. MINTZ, *supra* note 69, at 33. As Roger Dower notes, "One can almost mark 1978 as the year when public attention shifted radically toward the view of hazardous waste disposal as a national environmental problem. . . . Today, no other environmental problem is more well-publicized or higher on the public agenda than hazardous wastes" Dower, *supra*, at 151. For more on the publicity surrounding Love Canal, see Alexa B. Pappas, *The Clean Air Act Amendments of 1990 Enhanced Criminal Liability*, 3 VILL. ENVTL. L.J. 181, 204 n.16 (1992).

⁷⁹ The *TV Exxon Valdez* ran aground on Bligh Reef in Prince William Sound on the evening of March 23-24, 1989, and spilled approximately 11 million gallons of North Slope crude oil, making the *Exxon Valdez* spill the largest oil spill in U.S. history. The oil spread through Prince William Sound, the Gulf of Alaska, and lower Cook Inlet, and affected more than 1,200 miles of coastline, including portions of the Chugach National Forest, Alaska Maritime, Kodiak, Alaska Peninsula/Bechrof National Wildlife Refuges, Kenai Fjords National Park, Katmai National Park and Preserve, and Aniakchak National Monument and Preserve. *Summary of Injuries to Natural Resources As a Result of the Exxon Valdez Oil*

There is strong evidence that the *Exxon Valdez* spill was a crucial event in the development of American public attitudes towards environmental crime,⁸⁰ because it generated a renewed sense of public outrage over pollution.⁸¹ While oil spills often generate a significant amount of media attention,⁸² the facts surrounding the *Exxon Valdez* spill⁸³ sparked particular outrage and "shocking headlines."⁸⁴ While many Americans perceived environmental violations as criminal offenses long before the spill,⁸⁵ the *Exxon Valdez* spill sparked a reawakening of environmental consciousness and public antagonism towards polluters.⁸⁶ The spill served as a catalyst for the passage of the Oil Pollution Act of 1990, which strengthened criminal penalties for oil spills.⁸⁷ That same year, Congress also strengthened the criminal provisions of the Clean Air Act.⁸⁸ Commentators have noted that the criminal prosecution of Exxon was prompted by the public outcry over the *Exxon Valdez* spill and have further suggested that the \$125 million criminal fine paid by Exxon was designed to

Spill, 56 FED. REG 14,687, 14,687-88 (1991). As a result of the spill, over 1,000 sea otters and over 36,000 birds, including over 144 bald eagles, died. *Id.* at 146890-91.

⁸⁰ A 1991 study showed that 84% of Americans believe that damaging the environment is a serious crime. Theodore M. Hammett & Joel Epstein, U.S. DEP'T OF JUSTICE, LOCAL PROSECUTION OF ENVIRONMENTAL CRIME xiii (1993).

⁸¹ See Webster J. Arceneaux III, *Potential Criminal Liability in the Coal Fields Under the Clean Water Act: A Defense Perspective*, 95 W. VA. L. REV. 691, 706 (1993). The *Exxon Valdez* spill has also been deemed the "the largest environmental crime in U.S. history." Thomas Koenig & Michael Rustad, "Criminals" As Corporate Just Deserts, 31 U. MICH. J.L. REF. 289, 331 (1998).

⁸² See Jonathon K. Waldron, *Oil Spill Legal Issues and Criminal Enforcement*, SB43 ALI-ABA 157, 160 (1997), available in WESTLAW, Texts & Periodicals-All Law Reviews, Texts & Bar Journals.

⁸³ The ecological sensitivity of the area, the magnitude of the spill (approximately 11 million gallons), EXXON's awareness that Captain Joseph Hazelwood had an alcohol problem, and the fact that the ship's third mate was navigating the ship at the time of the accident all fueled public outrage over the spill. See Stephen Raucher, *Raising the Stakes for Environmental Polluters: The Exxon Valdez Criminal Prosecution*, 19 ECOLOGY L.Q. 147, 176 (1992); CARR ET AL., *supra* note 60, at 37.

⁸⁴ Novak & Steese, *supra* note 66, at 571-72. Such headlines contribute to "increased outrage against polluters." *Id.*; see also ROBERT V. PERCIVAL ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY 138 (1996).

⁸⁵ In a 1984 survey of 60,000 Americans in which people ranked crimes in order of severity, environmental crime ranked seventh, above heroin smuggling. Judson W. Starr, *Countering Environmental Crimes*, 13 B.C. ENVTL. AFF. L. REV. 379, 380 n.1 (1986) (citing U.S. DEP'T OF JUSTICE, BUREAU OF JUSTICE STATISTICS BULLETIN, Jan. 1984).

⁸⁶ See PERCIVAL ET AL., *supra* note 84, at 3. ("Twenty years after the 1969 Santa Barbara oil spill galvanized the American environmental movement, the *Exxon Valdez* joined Chernobyl and Bhopal as symbols of environmental disasters spawned by the intersection of human carelessness and modern technology.") *Id.*

⁸⁷ See Waldron, *supra* note 82, at 159.

⁸⁸ Kevin A. Gaynor et al., *Criminal Enforcement of Environmental Laws*, in ENVIRONMENTAL LITIGATION 215, 215-16 (Janet S. Kole & Larry D. Espel eds., 1st ed. 1998). Conduct which was a misdemeanor under the pre-1990 Clean Air Act is now classified as a felony. *Id.*

“soothe public outrage, satisfying the perceived need for revenge.”⁸⁹ In short, the spill played a significant role in shaping the widespread public support that now exists for the enforcement of environmental crime laws in the United States.⁹⁰

The absence of a high-profile pollution incident in Japan in the 1980s and early 1990s may explain why the enforcement of environmental crime laws waned in that country. Relatively minor pollution incidents continued to occur in Japan throughout the 1980s and 1990s.⁹¹ However, Japan did not experience an incident analogous to the *Exxon Valdez* spill until 1997, when the Russian oil tanker *Nakhodka* caused the worst oil spill in Japan’s history. A 1989 survey by the United Nations revealed that Japan had the lowest level of concern and awareness of environmental issues among fourteen countries surveyed.⁹² International environmental groups could not attract members in Japan.⁹³ Prosecutors in Japan did not face the same degree of public pressure to prosecute environmental crimes as American prosecutors because there were fewer highly publicized pollution incidents in Japan.

2. *Criminal Sanctions Were Rarely Needed to Achieve Regulatory Compliance in Japan*

The second reason why Japan has a substantially smaller environmental crime program than the United States is that criminal enforcement has not been as necessary in Japan to ensure that industrial facilities comply with environmental regulations. Using criminal enforcement to achieve regulatory compliance was one of the initial

⁸⁹ Raucher, *supra* note 83, at 181. The public’s desire for prosecution manifested itself in the years following the spill, when the Department of Justice’s perceived failure to prosecute environmental crime cases became an issue in the 1992 presidential election and even prompted a Congressional investigation. Richard J. Lazarus, *Meeting the Demands of Integration in the Evolution of Environmental Law: Reforming Environmental Criminal Law*, 83 GEO. L.J. 2407, 2410 (1995). The Department of Justice was accused of “letting criminals off the hook” and “letting politics get in the way of prosecutions.” *Id.*

⁹⁰ Kathleen F. Brickey, *Environmental Crime at the Crossroads: The Intersection of Environmental and Criminal Law Theory*, 71 TUL. L. REV. 487, 487 (1996); James M. Strock, *Environmental Criminal Enforcement Priorities for the 1990s*, 59 GEO. WASH. L. REV. 916, 919 (1991).

⁹¹ For example, the MSA’s records indicate that there were a number of marine oil spills throughout this period, but few if any were significant enough to receive attention in major news accounts: 1987 (627 incidents), 1988 (593 incidents), 1989 (605 incidents), ENVIRONMENT AGENCY (1990), *supra* note 49, at 362; 1990 (583 incidents), 1991 (527 incidents), 1992 (473 incidents), 1993 (445 incidents), 1994 (373 incidents), ENVIRONMENT AGENCY (1995), *supra* note 21, at 659.

⁹² Jonathon Porritt, *Open Space: No Campaigning for the Environment Please—We’re Japanese*, DAILY TELEGRAPH, Oct. 26, 1991, at 103.

⁹³ After two years of “intense activity” leading up to 1991, Greenpeace Japan had added only 300 members. The World Wide Fund for Nature had 10,000 members, compared to more than two million in the United States. There were, however, more than 3,000 grassroots groups with small memberships. *Id.*

catalysts for the expansion of the American program.⁹⁴ Before 1980, the United States, like Japan, rarely used criminal prosecution as a means of enforcing environmental laws.⁹⁵ Commentators have noted that this was because the newly formed EPA was still in a "maturing" process of working out the intricacies of its new regulatory programs.⁹⁶ Others have noted that the complexity and technical sophistication inherent in the new laws forced the EPA to provide a transition period to allow industry and the judicial system to become acclimated to the new legal regime.⁹⁷ During these early years, the EPA relied on civil and administrative enforcement as its primary enforcement mechanisms.⁹⁸

By the early 1980s, however, EPA officials realized that civil remedies alone were not producing adequate compliance. A significant number of industry officials simply regarded civil penalties for environmental violations as a cost of doing business.⁹⁹ In order to deter and punish this mentality, the Department of Justice began to utilize the criminal provisions of environmental laws that had remained largely dormant throughout the previous decade.¹⁰⁰ The primary targets of criminal prosecution were individuals and corporations that ignored or flouted the law.¹⁰¹ In recent years, prosecutors have expanded this strategy by targeting "responsible corporate officers," believing that prosecuting individuals has a stronger deterrent effect than merely prosecuting corporations.¹⁰² Unlike small civil penalties of a few thousand dollars, imprisonment and multi-

⁹⁴ CARR ET AL., *supra* note 60, at 5.

⁹⁵ *Id.*

⁹⁶ *Id.* See also Colleen C. Murnane, *Criminal Sanctions for Deterrence Are a Needed Weapon, but Self-Initiated Auditing Is Even Better: Keeping the Environment Clean and Responsible Corporate Officers Out of Jail*, 55 OHIO ST. L.J. 1181, 1183 (1994).

⁹⁷ CARR ET AL., *supra* note 60, at 5.

⁹⁸ *Id.*

⁹⁹ CARR ET AL., *supra* note 60, at 5-6. As one commentator noted, "The cost of violating environmental laws seemed to be a small enough price to pay compared to the cost of compliance." Dick Thornburgh, *Criminal Enforcement of Environmental Laws—A National Priority*, 59 GEO. WASH. L. REV. 775, 776 n.3 (1991).

¹⁰⁰ CARR ET AL., *supra* note 60, at 5-6.

¹⁰¹ *Id.*

¹⁰² Under the responsible corporate officer doctrine, an officer may be convicted of knowingly violating the law even if the officer did not personally carry out the act constituting the violation, provided that the officer has partial responsibility for the furtherance of the illegal activity and has actual knowledge of the misconduct. Huber et al., *supra* note 70, at 616-17 (citing Barry M. Hartman & Charles A. Monaco, *The Present Use of the Responsible Corporate Officer Doctrine in the Criminal Enforcement of Environmental Laws*, 23 ENVTL. L. REP. 10, 145 (1993)).

million dollar criminal fines cannot simply be absorbed as a cost of doing business.¹⁰³

In contrast to the United States, Japan generally did not need a criminal enforcement program to ensure regulatory compliance by its regulated industries. In the United States, where industry and government often view each other more as adversaries than allies,¹⁰⁴ criminal enforcement was necessary to prevent pollution by companies that ignored or flouted environmental laws.¹⁰⁵ Such tactics were not as necessary in Japan. Commentators have noted that in Japan, industry has a more cooperative relationship with the government¹⁰⁶ and does not oppose regulation in the same manner as industry in the United States.¹⁰⁷ The principal methods of inducing compliance with environmental regulations in Japan have been discussion, negotiation, and warning.¹⁰⁸

Rather than employing coercive measures, Japanese governmental administrators responsible for ensuring regulatory compliance are known to prefer a technique called "administrative guidance."¹⁰⁹ Administrators encourage violators to comply by utilizing the leverage they have to deny licenses or required permits.¹¹⁰ While not unique to Japan, administrative guidance has been particularly successful in Japan,¹¹¹ and the government

¹⁰³ CARR ET AL., *supra* note 60, at 5-6. The 1990 amendments to the Clean Air Act tried to remove economic incentives to pollute by setting fines at twice the gross pecuniary loss caused by the illegal act, or twice the gross pecuniary gain to the defendant from his illegal act, whichever is greater. *Id.* at 3 n.25.

¹⁰⁴ GRESSER ET AL., *supra* note 16, at 280.

¹⁰⁵ See CARR ET AL., *supra* note 60, at 5.

¹⁰⁶ The contrast between the two nations was noted by a group of state officials from the U.S. Council of State Governments, which toured Japan in 1988 to learn more about environmental management there. COUNCIL OF STATE GOV'T, ENVIRONMENTAL MANAGEMENT IN JAPAN: WHAT CAN THE STATES LEARN? 4 (1988). A report summarizing their conclusions noted:

Enforcement of environmental standards is handled in a much less confrontational way. Use of litigation is considered to be an absolute last resort. Instead, negotiation and consensus building is the route taken. Their process may take a considerable amount of time, although U.S. litigation can also be a lengthy process. There appears to be a cultural aversion to litigation that does not exist here [in the U.S.].

Id.

¹⁰⁷ GRESSER ET AL., *supra* note 16, at 280.

¹⁰⁸ *Id.* at 260.

¹⁰⁹ Shiro Kawashima, *A Survey of Environmental Law and Policy in Japan*, 20 N.C. J. INT'L L. & COM. REG. 231, 257-58 (1995).

¹¹⁰ *Id.* The only limitation on an agency using administrative guidance is that it cannot violate the law. Ridgley, *supra* note 3, at 655.

¹¹¹ See generally Michael K. Young, *Judicial Review of Administrative Guidance: Governmentally Encouraged Consensual Dispute Resolution in Japan*, 84 COLUM. L. REV. 923 (1995). While Japan is not the only country that utilizes administrative guidance, Japanese bureaucrats are unique in the extent to which they rely on informal mechanisms to achieve regulatory goals. John O. Haley, *Administrative Guidance Versus Formal Regulation: Resolving the Paradox of Industrial Policy*, in LAW AND TRADE ISSUES OF THE JAPANESE ECONOMY 107 (Gary R. Saxonhouse & Kozo Yamamura eds., 1986).

has been able to persuade industrial facilities to comply with even the strictest regulations without having to resort to formal legal mechanisms.¹¹² Administrative guidance, however, generally has focused on achieving compliance with emission standards, and, as discussed in Part IV, criminal enforcement is still needed to deter violations by companies that generate or handle environmentally harmful substances such as petroleum or industrial waste.¹¹³

The legacy of administrative guidance has been to greatly discourage the prosecution of environmental crimes in Japan and to inhibit the growth of Japan's criminal enforcement program. Environmental administrators believe that administrative guidance is a more effective and flexible tool than a lengthy criminal trial and are reluctant to refer a pollution case to criminal prosecutors.¹¹⁴ Because industry also prefers the guidance approach, officials feel that the chance of achieving compliance is greater when administrative guidance is used.¹¹⁵ Local administrators also fear that by surrendering a matter to prosecutors, they lose the opportunity to attach additional conditions that can supplement existing statutory provisions and regulations.¹¹⁶ These factors, and the important historical differences between the regulatory environments of the United States and Japan, have played a significant role in the different patterns of environmental crime prosecution in the United States and Japan today.

3. *The Integration of Environmental Crime into the Traditional Criminal Justice System in Japan*

One of the most important distinctions between the environmental crime enforcement programs in the United States and Japan is the degree to which these programs are integrated into the traditional criminal justice system of the respective countries. Environmental crime personnel in Japan consist largely of police who respond to and investigate reported crimes and local prosecutors who bring criminal charges against violators.¹¹⁷ These personnel are more fully integrated into the larger criminal justice system than their American counterparts.¹¹⁸ In the United States, the investigation

¹¹² Miller et al., *supra* note 49, at 20.

¹¹³ See GRESSER ET AL., *supra* note 16, at 259-61; see *infra* Part IV.B.

¹¹⁴ GRESSER ET AL., *supra* note 16, at 261.

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ Oda, *supra* note 11, at 187-89.

¹¹⁸ The National Police Agency has a special section dealing with pollution cases, and the Public Prosecutor's Office has prosecutors that specialize in pollution cases. Oda, *supra* note 11, at 187-89. One

of most pollution crimes is handled by federal authorities and not by local police.¹¹⁹ Instead of using police detectives, the federal government has a specialized group of environmental crime investigators in the EPA's Office of Criminal Enforcement.¹²⁰ In addition, a significant proportion of environmental crimes in the United States are prosecuted at the federal level by the Department of Justice and the ninety-four¹²¹ regional United States Attorney's Offices.¹²² These organizational differences help explain the differing frequency with which environmental crimes are prosecuted in the United States and Japan.

- a. *Integration of environmental crime into the traditional criminal justice system reduces the likelihood that polluters will be apprehended and leads to a more reactive enforcement program*

Japan's decision to integrate the investigation and prosecution of environmental crime into the traditional criminal justice system has had a number of impacts, particularly in relation to the apprehension and detection of criminals. Since environmental officials at Japan's Environment Agency prefer administrative guidance and rarely refer cases to prosecutors, the investigation of most environmental crimes in Japan originates with the police.¹²³ Japanese police have the power to investigate pollution-related offenses on their own initiative, but generally choose not to exercise this power.¹²⁴ Instead, the police usually investigate only after a citizen has filed a pollution complaint.¹²⁵ In contrast, the EPA is known to conduct "surprise searches" of industrial facilities, a tactic that has been described as "a key weapon in the arsenal" of its criminal enforcement program.¹²⁶

commentator noted that these changes were only made "after years of twists and turns in police organization to control pollution-related crime." Y. Inoue, *Police Must Prepare Strategy Ahead of Nursing-Care Insurance System*, DAILY YOMIURI, Jan. 19, 2000, available in 2000 WL 4642108.

¹¹⁹ As one Department of Justice publication noted, "local criminal enforcement is still in its relative infancy in the United States . . ." Hammett & Epstein, *supra* note 80, at iii. A few major metropolitan areas have developed environmental crime programs. Los Angeles County, for example, has an Environmental Crimes Strike Force with eight full-time investigators. John F. Cooney et al., *Criminal Enforcement of Environmental Laws: Part I*, 25 ENVTL. L. REP. 10459, 10474 (1995).

¹²⁰ CARR ET AL., *supra* note 60, at 8. These investigators are sometimes assisted by the Federal Bureau of Investigation ("FBI"). *Id.*

¹²¹ Theodore L. Garrett, *Reinventing EPA Enforcement*, 12 NAT. RESOURCES & ENV'T 180, 180 (1998).

¹²² CARR ET AL., *supra* note 60, at 110-11.

¹²³ Oda, *supra* note 11, at 189; GRESSER ET AL., *supra* note 16, at 261; *see supra* Part III.A.2.

¹²⁴ GRESSER ET AL., *supra* note 16, at 261.

¹²⁵ *Id.*

¹²⁶ CARR ET AL., *supra* note 60, at 44.

Japan's reliance on citizen complaints is a strategy that works very poorly in the environmental crime context and contributes to the relatively low number of prosecutions there.¹²⁷ One principal consequence of relying on citizen complaints is that pollution will only be reported when it is observed by citizens. The result is that pollution that is not visible (e.g., groundwater contamination), that cannot be perceived by sight or smell, or that occurs in remote, unpopulated areas often escapes detection. Government reports from the 1970s¹²⁸ indicate that the police were focusing on polluters in heavily industrialized areas such as the Seto Inland Sea and metropolitan cities such as Tokyo.¹²⁹ It is highly likely that more surreptitious acts of pollution in less-populated areas, such as the dumping of industrial waste in mountainous regions, go unreported.¹³⁰ As early as 1979, the Environment Agency noted that "Techniques for eluding prosecution are becoming increasingly shrewd,"¹³¹ and "[m]uch ingenuity was employed to conceal" violations.¹³² This suggests that a significant number of environmental crimes in Japan remain undetected or are not prosecuted.

In the United States, the foundation of the environmental crime program is at the federal level, with the EPA employing approximately 200 criminal investigators.¹³³ While a Japanese commentator has remarked that the police "are often criticized for their failure to enforce the laws effectively,"¹³⁴ the EPA does not have this type of reputation.¹³⁵ Since

¹²⁷ In 1986, the National Police Agency received 47,905 complaints of "pollution" by citizens. This figure is grossly misleading, however, because 96.4% of these complaints were for "noise" pollution. Such a statistic may reveal an inherent problem in the system; noise complaints are placed side-by-side with complaints about potentially toxic substances. ENVIRONMENT AGENCY (1987), *supra* note 26, at 292.

¹²⁸ ENVIRONMENT AGENCY (1976), *supra* note 42, at 220.

¹²⁹ ENVIRONMENT AGENCY (1980), *supra* note 21, at 292-93. In 1982, 30% of Japan's oil pollution cases involved pollution in the Seto Inland Sea. See Mitsuru Nakayama, *Japanese Environmental Laws and Environmental Rights: Case Study on the Seto Inland Sea*, 20 N. KY. L. REV. 113, 128 (1992). Nearly 40% of the industrial complexes in Japan are located in the Seto Inland Sea region. *Court Clears Accused in Sea Contamination Case: Mitsubishi Oil Co.*, Japan Econ. Newswire, Mar. 9, 1989, available in LEXIS, Asia/Pacific Rim Archive News [hereinafter *Court Clears Accused*].

¹³⁰ In September 1999, police raided an Osaka industrial waste disposal business and dozens of other locations after investigators suspected the company of illegally dumping at least 140 tons of industrial waste in mountainous areas of western Japan. *Osaka Police Raid Firm for Illegal Dumping*, MAINICHI DAILY NEWS, Sept. 23, 1999, at 14.

¹³¹ ENVIRONMENT AGENCY (1979), *supra* note 49, at 258.

¹³² ENVIRONMENT AGENCY (1980), *supra* note 21, at 293.

¹³³ Downs, *supra* note 65, at 202. In terms of state environmental crime prosecution, New Jersey, Pennsylvania, and Ohio all have well-established programs. New Jersey alone has 35 investigators devoted solely to environmental crimes. Cooney et al., *supra* note 119, at 10474. For an example of a state environmental crime law, see Gregory A. Zafiris, *Limiting Prosecutorial Discretion Under the Oregon Environmental Crimes Act: A New Solution to an Old Problem*, 24 ENVTL. L. 1673 (1994).

¹³⁴ Oda, *supra* note 11, at 189. Oda also notes, "people who suffer from pollution find it difficult to persuade officials to take necessary actions." *Id.*

environmental protection is the primary focus of the EPA, investigators are able to devote all of their attention to the prevention of environmental crimes and the apprehension of perpetrators. Enforcement officials in the EPA also do not have to decide where to best allocate resources (i.e., they do not have to decide between investigating a homicide and a pollution complaint).

Moreover, EPA regulatory administrators are able to refer cases directly to investigators within their own governmental agency. This contrasts with Japan, where administrators must refer them to the police and prosecutors.¹³⁶ Since criminal cases are investigated by the EPA, administrators are likely less reluctant than local administrators in Japan to refer a case for prosecution.¹³⁷ In addition, the United States has the added benefit of a close working relationship between EPA administrators and investigators. EPA administrators often assist investigators and provide valuable information on a given industry's personnel and administrative compliance history.¹³⁸ All of these factors help to explain why criminal prosecution is more common in the United States than in Japan.

b. Integration 'limits the development of specialized investigatory expertise that is necessary to gather sufficient evidence for successful prosecution

The second major consequence of Japan's decision to integrate environmental crime personnel into the traditional criminal justice system is that the ability of investigators to gather sufficient evidence for prosecution is undermined. While environmental crimes and traditional crimes often share common traits,¹³⁹ successful prosecution generally requires highly technical scientific expertise different from that required for more traditional crimes.¹⁴⁰

¹³⁵ Quite the opposite, the EPA's criminal enforcement efforts have been labeled "aggressive." Cooney et al., *supra* note 119, at 10465.

¹³⁶ Richard C. Tallman, How Criminal Investigations Are Conducted, in *Criminal Enforcement of Environmental Laws* (Nov. 19, 1991) (CLE International: Civil Penalties and Criminal Enforcement of Environmental Laws) (on file with the University of Washington Law School Library).

¹³⁷ GRESSER ET AL., *supra* note 16, at 261.

¹³⁸ Tallman, *supra* note 136.

¹³⁹ Brickey, *supra* note 90, at 507-08.

¹⁴⁰ As one commentator noted:

Successful prosecution of environmental crimes hinges on the sound training of investigators and the teamwork of special agents, attorneys, and technical staff. Investigators and prosecutors of environmental crimes require a sophisticated understanding of technical statutes [E]stablishing facts in environmental cases often requires sustained and complex technical analysis and the cooperation of scientists and regulatory experts over an extended period of time.

Japanese prosecutors do not like to prosecute pollution crimes because it is difficult for them to gather sufficient evidence to prove a criminal violation.¹⁴¹ Although the police have strengthened their ability to investigate pollution violations, police training and technical competence in the pollution field have been labeled "grossly deficient."¹⁴² In many cases such as those involving air pollution, investigators have had difficulty gathering sufficient concrete evidence for prosecutors to secure a conviction.¹⁴³ With such a diminished chance of conviction, prosecutors are less likely to pursue prosecution.

A 1974 case that involved the collapse of a crude oil container at a Mitsubishi facility on the shores of the Seto Inland Sea illustrates the difficulty Japanese investigators have had in gathering evidence for environmental crimes.¹⁴⁴ More than 43,000 kiloliters of oil were released in this accident, approximately twenty percent of which reached the Seto Inland Sea.¹⁴⁵ In 1989, eleven years after the case was first brought to trial, the Okayama District Court found the defendants not guilty.¹⁴⁶ The judge held that the cause of the tank's destruction was unclear and concluded there was no scientific causal relationship between the tank's construction and its subsequent explosion.¹⁴⁷ The judge criticized the investigation, noting that it failed to sufficiently show why the oil was allowed to flow into the Sea.¹⁴⁸

One of the factors in the success¹⁴⁹ of the American environmental crime program has been the specialized training and organization of its

Strock, *supra* note 90, at 927. Another noted, "Environmental law is highly complex. It is fraught with highly technical scientific, engineering, and economic jargon that, even to one schooled in the intricacies of environmental science and economics, can be truly mind-boggling." Brickey, *supra* note 90, at 501.

¹⁴¹ GRESSER ET AL., *supra* note 16, at 261.

¹⁴² *Id.*

¹⁴³ *Id.* at 469 n.212.

¹⁴⁴ *Id.*

¹⁴⁵ This was the largest accident of its kind in Japan at the time, and resulted in 16.8 billion yen in losses to regional fishing industries and 53.6 billion in cleanup costs. *Court Clears Accused*, *supra* note 129.

¹⁴⁶ *Id.* The Public Prosecutor's Office did not indict Mitsubishi because it assumed that the defendant could not foresee or prevent the accident (which occurred shortly after the completion of the tank) and because the company had neither dumped oil into a public sea nor violated statutory regulations. GRESSER ET AL., *supra* note 16, at 469 n.212. Only the contractors for the tank were indicted for negligence based on the theory that the contractors failed to strengthen the foundation, which caused subsidence of the ground and ultimately deformed and ruptured the tank. *Court Clears Accused*, *supra* note 129. In his decision, however, the judge did mention Mitsubishi's culpability, noting that the company failed to take efforts to prevent the oil from flowing into the water until the next morning. *Id.*

¹⁴⁷ *Id.*

¹⁴⁸ *Id.*; see also GRESSER ET AL., *supra* note 16, at 469 n.212.

¹⁴⁹ In 1991, there was a 99% likelihood that once criminal charges were filed, at least one defendant in a U.S. federal environmental case would be convicted, whether by plea or a guilty verdict. Strock, *supra* note 90, at 919.

investigators.¹⁵⁰ EPA investigators receive specialized training at the Federal Law Enforcement Training Center¹⁵¹ and are provided technical and litigation support from the National Enforcement Investigations Center ("NEIC").¹⁵² American investigators have the added benefit of extensive "on-the-job" training, which is obtained by working in the same offices as regulatory administrators at EPA regional offices.¹⁵³ Unlike Japanese police, who work in an organization in which environmental matters constitute only a small portion of the work, EPA investigators work in the same offices as regulators who are dedicated exclusively to the administration and enforcement of environmental law. These organizational differences help explain why environmental crime prosecution has been more prevalent in the United States than in Japan.

4. *American Prosecutors Have the Benefit of Favorable Environmental Crime Case Law, While in Japan There Have Been Few Environmental Crime Cases*

One final factor that may explain why criminal prosecution for environmental violations is less common in Japan is the role of the judicial system. Like prosecutors in the United States, Japanese prosecutors have broad discretion in deciding whether to prosecute an offender.¹⁵⁴ Prosecutors in both countries are undoubtedly influenced by the likelihood of obtaining a conviction, which in turn is influenced by legal precedent.¹⁵⁵

¹⁵⁰ Environmental crime investigators need "a knowledge of the law, public health and science." Craig W. Anderson, *Environmental Enforcement*, 9 UTAH B.J. 23, 25 (1996). Investigators at the National Enforcement Training Institute ("NETI") can receive training in general criminal investigation and more specialized skills such as using ultraviolet remote air pollution monitoring equipment, testing emissions from wastewater sources in the synthetic organic chemical industry, using proper sampling techniques, investigating refineries, and sampling solid hazardous wastes. See NETI, *NETI Course Catalog and Schedule* (visited May 2, 2000) <http://es.epa.gov/oeca/oceft/neti/catalog_2000/NETIcatalog2.html>.

¹⁵¹ Strock, *supra* note 90, at 927-28. State, federal, and local personnel are also trained at the NETI, which was established pursuant to the Pollution Prosecution Act of 1990. CARR ET AL., *supra* note 60, at 10.

¹⁵² *Id.* at 8. The National Enforcement Investigations Center is located in Denver, Colorado and is staffed by more than 60 trained environmental crime investigators. The exclusive mission of the NEIC is to "uncover, obtain, and present evidence of criminal environmental violations and related crimes." Anderson, *supra* note 150, at 25.

¹⁵³ *Id.*

¹⁵⁴ Oda, *supra* note 11, at 188.

¹⁵⁵ See Lynda J. Oswald, *Extended Voluntary Departure: Limiting the Attorney General's Discretion in Immigration Matters*, 85 MICH. L. REV. 152, 173 (1986) ("A number of other factors may influence the prosecutor's decision to charge, including . . . the perceived likelihood of conviction.") (citing *United States v. Saade*, 652 F.2d 1126, 1136 (1st Cir. 1981); *United States v. Catlett*, 584 F.2d 864, 868 (8th Cir. 1978); Norman Abrams, *Internal Policy: Guiding the Exercise of Prosecutorial Discretion*, 19 UCLA L. REV. 1, 11 (1971); *Pugach v. Klein*, 193 F. Supp. 630, 634-35 (S.D.N.Y. 1961).

American prosecutors have the benefit of relatively favorable legal precedent in the area of environmental crime, which helps explain why the prosecution of environmental crimes has been more common in the United States.¹⁵⁶ American courts have decided dozens of important environmental crime cases over the past thirty years and have been receptive to progressive criminal liability theories such as the "responsible corporate officer" doctrine.¹⁵⁷ Courts have also liberally construed statutes such as the Clean Water Act ("CWA") in a manner that does not require prosecutors to prove that violators actually knew that their actions violated the law.¹⁵⁸

In an important case decided last year, the Ninth Circuit Court of Appeals held that an individual can be held criminally liable for a violation of the CWA that is caused by "ordinary negligence" rather than by "criminal negligence," which is more difficult to prove.¹⁵⁹ Commentators have noted that this decision "will likely draw the attention of criminal prosecutors and may lead to more aggressive enforcement actions."¹⁶⁰ With the help of such favorable case law, the Department of Justice's Environmental Crimes Section has achieved an overall conviction rate as high as ninety-five percent.¹⁶¹ The high conviction rate in turn encourages prosecutors to prosecute future cases.

In contrast, there have only been two landmark environmental crime cases in Japan, both of which were decided by the Japanese Supreme Court in 1988 after nearly a decade of litigation. The first case involved the Chisso Corporation, a company that gained international notoriety for its discharge of methyl mercury-contaminated wastewater into Minimata Bay.¹⁶² The

¹⁵⁶ See Joshua D. Yount, *The Rule of Lenity and Environmental Crime*, 1997 U. CHI. LEGAL F. 607, 610 (1997).

¹⁵⁷ This doctrine allows the government to hold a corporate officer criminally liable for public welfare offenses, regardless of his or her participation, as long as he or she is in a position of power to prevent and correct the violation. See Gaynor et al., *supra* note 88, at 222-25.

¹⁵⁸ See Christine L. Wettach, *Mens Rea and the "Heightened Criminal Liability" Imposed on Violators of the Clean Water Act*, 15 STAN. ENVTL. L.J. 377, 384-87 (1996) (discussing *United States v. Weitzenhoff*, 1 F.3d 1523 (9th Cir.), *reh'g denied and amended*, 35 F.3d 1275 (9th Cir. 1993)).

¹⁵⁹ *United States v. Hanousek*, 176 F.3d 1116 (9th Cir. 1999). Hanousek sought a jury instruction that would require the jury to find criminal negligence, "a gross deviation from the standard of care that a reasonable person would observe in the situation." *Id.* at 1120 (quoting the American Law Institute's Model Penal Code § 2.02(2)(d) (1985)). The court, however, instructed the jury that the government was required to prove only that the defendant acted negligently, which it defined as failing "to use reasonable care." *Id.*

¹⁶⁰ Kurt Weissmuller, *9th Cir. Holds Project Manager Criminally Liable Under CWA*, 15 ENVTL. COMPLIANCE & LITIG. STRATEGY 4 (1999).

¹⁶¹ Marzulla & Kappel, *supra* note 70, at 201. Between October 1, 1987 and May 31, 1993, there was an overall conviction rate of 91.1%. Christopher Huber et al., *Environmental Crimes*, 33 AM. CRIM. L. REV. 607, 612 (1996).

¹⁶² For more on the facts and procedural history of this case, see Frank Upham, *Japan v. Kawamoto: Judicial Limits on the State's Power to Indict*, 13 LAW IN JAPAN 137 (1980).

mercury found its way into the food chain and concentrated in human brain tissue, causing the dreaded "Minimata disease."¹⁶³ A lower court found the president of the company and the factory manager guilty of negligently causing the deaths of seven people.¹⁶⁴ In 1988, the Japanese Supreme Court affirmed the lower court ruling.¹⁶⁵ Although this was the first time that the Supreme Court upheld the criminal conviction of a top corporate official in a pollution case, the case has limited value as precedent because it was prosecuted under the Criminal Code and not under an environmental crime law.¹⁶⁶

In 1988, the Supreme Court reviewed a second environmental crime case involving the Nippon Aerosol Company.¹⁶⁷ In 1974, an apprentice tank truck driver connected a pipe incorrectly, causing a discharge of chlorine gas into the air.¹⁶⁸ The discharge caused numerous health problems in the surrounding community.¹⁶⁹ The apprentice, his colleague, his supervisor, and the head of the production department were prosecuted for violations of the Environmental Pollution Crime Law¹⁷⁰ and, in 1979, a lower court found all four employees guilty.¹⁷¹ The head of the department and the supervisor were found negligent because they allowed an inexperienced apprentice to handle the pipe without adequate training.¹⁷² The court ordered the company

¹⁶³ *Id.* at 137; *Lower Court Rulings on "Minimata Disease" Case Upheld*, JIJI PRESS TICKER SERVICE, Mar. 1, 1988, available in LEXIS, Asia/Pacific Rim Archive News [hereinafter *Minimata Disease*]. This case was the only one of the "Big Four" pollution cases that resulted in criminal sanctions. Oda, *supra* note 11, at 187. Symptoms of Minimata disease included "concentric constriction of the visual field, poor motor coordination, disturbances in sensation, loss of speech or hearing, tremors, and convulsions in the limbs." MCKEAN, *supra* note 2, at 50. The disease can strike and kill in a matter of weeks and causes birth defects in children. *Id.* at 50-51. By 1979, it was estimated that there were 10,000 Minimata victims. *Id.* at 57.

¹⁶⁴ Oda, *supra* note 11, at 187. When the case was appealed, the appellate court upheld the judgment of the district court. *Id.*

¹⁶⁵ *Id.*

¹⁶⁶ *Id.* at 187.

¹⁶⁷ *Id.* at 188-89.

¹⁶⁸ Two employees accidentally opened the wrong valve after liquid chlorine in a reserve tank had accumulated, and the liquid chlorine turned to gas and flowed out. *Court Finds Chemical Firm Innocent, Employees Punished: Nippon Aerosol Co.*, Japan Econ. Newswire, Oct. 27, 1988, available in LEXIS, Asia/Pacific Rim Archive News [hereinafter *Nippon Aerosol Co.*].

¹⁶⁹ One hundred and twenty-six inhabitants experienced dermatitis, and 44 citizens living near the factory suffered from acute laryngitis. Oda, *supra* note 11, at 188-89. In Yokkaichi, the eyes and throats of more than 10,000 residents were affected. *Nippon Aerosol Co.*, *supra* note 168.

¹⁷⁰ *Id.* at 188. The prosecutor in the case, Katsuhiko "The Bear" Kamazuki, has recently gained celebrity status in Japan for his prosecution of corruption in Japan's Finance Ministry. See Kazuhiro Shimamura & David Williams, *Japan Scandal Bear*, AGENCE FRANCE PRESSE, Mar. 8, 1998, available in LEXIS, World News Database, Bus. Anal. & Country Info and Selected Legal Texts and Codes File.

¹⁷¹ Oda, *supra* note 11, at 188 (citing Judgment of the Tsu District Court, Mar. 7, 1979. Nagoya Appellate Court, Jan. 24, 1984 (Japan Aerosol Case)).

¹⁷² *Id.* at 188.

to pay a fine equivalent to \$10,000 and the employees were given four-month suspended sentences.¹⁷³ In 1988, however, the Supreme Court reviewed the case and reversed the conviction of the company, holding that the discharge was an accident and that there were limits on how far the law could be applied in accident cases.¹⁷⁴ While it is difficult to gauge the effect of these two cases on the enforcement of environmental laws in Japan, it is apparent that Japanese prosecutors do not have the benefit of favorable case law enjoyed by American prosecutors. This is another factor that may explain why prosecution is less common in Japan than in the United States.¹⁷⁵

In summary, there are a number of possible explanations for Japan's reluctance to prosecute polluters as frequently as the United States. These include the different chronologies of major pollution events in Japan and the United States and the different regulatory environments, organizational frameworks for enforcement personnel, and case law of the two countries. As Japan looks to its future, it must decide whether the current level of criminal enforcement provides sufficient deterrence for intentional and reckless acts of pollution.

IV. WHILE ADMINISTRATIVE GUIDANCE HAS REDUCED INDUSTRIAL POLLUTION, A STRONG CRIMINAL ENFORCEMENT PROGRAM IS NEEDED IN JAPAN TO DETER "MIDNIGHT DUMPING" AND OIL SPILLS

Japan's traditional reliance on non-criminal administrative guidance has been very successful in controlling pollution from large industrial facilities over the past several decades.¹⁷⁶ Many Japanese industries have

¹⁷³ GRESSER ET AL., *supra* note 16, 261 n.211.

¹⁷⁴ *Nippon Aerosol Co.*, *supra* note 168. The decision did include some favorable holdings. The court affirmed the lower court convictions of the four employees, four-months in prison and two years of probation. *Id.* The court also found that persons can be held liable under the law even if the discharge is the outflow of waste carried out as part of a factory's normal operations. *Id.* The court also held that supervisors can be held criminally liable for negligent acts of employees. *Id.*

¹⁷⁵ Commentators have noted that corporate managers in Japan are often acquitted in environmental crime trials. An example is the 1973 Morinaga Milk Case, which involved the contamination of dry milk by inorganic mercury and caused a number of infants to die or become sick. Oda, *supra* note 11, at 195. Ryuichi Hirano, Comment, *Penal Law Protection of the Natural Environment in Japan*, 13 *LAW IN JAPAN* 129, 132 (1980). While the head of the production section was found guilty of negligent homicide and negligent bodily injury, the manager of the plant was acquitted. *Id.* A similar result was reached in a case involving the death and injury of a number of people from polychlorinated biphenyl ("PCB") contamination of rice bran oil. *Id.* at 132-33. The plant manager was convicted, but the president of the company was merely discharged. *Id.*

¹⁷⁶ As Maurice Strong, former United Nations Under Secretary-General and Chair of the 1992 Rio Earth Summit, noted, "More than any other nation, Japan has reduced its levels of air and water pollution and the amount of energy and raw materials it uses to produce a unit of gross domestic product." Maurice

responded positively to the "carrot" of economic and regulatory incentives to reduce pollution, and have not had to face the "stick" of criminal enforcement.¹⁷⁷ Pollution, however, has many sources. There are at least two other types of pollution in Japan that administrative guidance has not prevented and for which strong criminal enforcement is needed. The first is illegal industrial waste disposal.¹⁷⁸ This problem stems from the presence of thousands of industrial facilities in Japan, many of which find it cheaper to dump waste illegally than to pay for the cost of proper disposal at designated facilities (often referred to as "midnight dumping").¹⁷⁹ The second type is oil spills, which are a particularly serious threat in Japan due to its island geography and heavy dependence on foreign petroleum.¹⁸⁰

A. *The Dumping of Industrial Waste*

The first type of pollution that Japan must aggressively prosecute is the illegal dumping of industrial waste. The dumping of industrial waste¹⁸¹ has been one of the areas of greatest noncompliance with Japanese environmental crime laws.¹⁸² Every year, Japanese factories generate

Strong, *Energy, the Environment, and Global Economic Growth*, 2 TULSA J. COMP. & INT'L L. 121, 123-24 (1994).

¹⁷⁷ Ridgley, *supra* note 3, at 655 ("The Japanese administrator, rather than using the 'stick' of enforcement, achieves most regulatory goals through social pressure and/or 'carrots' e.g., financial incentives which reward compliance."). See also GRESSER ET AL., *supra* note 16, at 261 ("For the Western observer, one of the most striking aspects of the Japanese administration's approach to enforcement surely must be the apparent reliance on negotiation and guidance . . . [p]erhaps even more striking is the absence of criminal prosecutions for violations of pollution laws.").

¹⁷⁸ See Frank Gibney Jr., *Taking on the Trash Concerns over a Planned Dump Site Have Energized Japan's Citizens to Lead a Rare Fight Against the System*, TIME, June 16, 1997, at 22 ("[T]he public outcry over waste disposal is building across Japan."). Some officials have even been paid bribes to permit industrial waste disposal. In May 1998, a prefectural official at the Wakayama Prefectural Health and Pollution Research Center was arrested on suspicion of taking at least 2.1 million yen in return for lobbying for approval to operate a waste incinerator. *Wakayama Official Nabbed for Bribery*, MAINICHI DAILY NEWS, May 16, 1998, available in 1998 WL 10974517. Local residents suffered from various ailments caused by air pollution generated by the incinerator, and high levels of dioxin were detected in the incinerator's ashes. *Id.* The facility closed in 1995, but waste and ashes were abandoned at the site. *Id.*

¹⁷⁹ See CARR ET AL., *supra* note 60, at 114; David R. Hodas, *Enforcement of Environmental Law in a Triangular Federal System: Can Three Not Be a Crowd When Enforcement Authority Is Shared by the United States, the States, and Their Citizens?*, 54 MD. L. REV. 1552, 1654 (1995).

¹⁸⁰ In 1973, 76% of Japan's primary energy came from oil and virtually 100% of it was imported. A. Radha Krishnan & Malcolm Tull, *Resource and Environmental Management in Japan, 1890-1990*, AUST. ECON. HIST. REV., Sept. 1994, at 3, 17 (1994).

¹⁸¹ Most illegally disposed industrial waste is construction waste (83.6%), followed by sludge (8.9%), and waste plastic (4.6%). ENVIRONMENT AGENCY (1995), *supra* note 21, at 709. Most waste is dumped in the mountains, forests, and wilderness (60.8%), followed by roads and vacant lots (9.9%), rice paddies and farms (1.4%), and landfills and land cleared for housing sites (1.3%). *Id.*

¹⁸² See *supra* note 53 and accompanying text. The most egregious case of illegal industrial waste dumping in Japan took place on the island of Teshima, where 500,000 tons of industrial waste containing

approximately 397 million tons of waste sludge and metal slag, which has been associated with water pollution with alarming levels of mercury, cadmium, and lead.¹⁸³ Approximately eighty percent of all illegal disposal violations are committed by the company that generates the waste,¹⁸⁴ with the remaining violations committed by companies that hire uncertified operators to transport and dispose of their waste.¹⁸⁵ Many of these uncertified operators charge lower fees than certified operators, a practice that is often linked to illegal dumping.¹⁸⁶ Illegal dumpers in Japan have been known to rent property with the promise of filling it with soil, when in fact they later fill it with industrial waste.¹⁸⁷ It is increasingly difficult for companies in Japan to find treatment sites that will accept industrial waste.¹⁸⁸ Officials at the Environment Agency predict that illegal dumping will continue to increase over the next few years.¹⁸⁹

While the cooperative nature of administrative guidance can help persuade a financially successful company to comply with its emission permit or install new pollution control technology, it has less utility in the industrial waste context. Many companies in Japan are only marginally profitable and are at risk of bankruptcy.¹⁹⁰ With high costs for proper waste disposal or treatment, these companies face an ever-present temptation to illegally dump their waste or pay others to do so.¹⁹¹ Japanese gangs called "yakuza"¹⁹² and sophisticated international organized crime syndicates have become increasingly involved in illegal waste disposal.¹⁹³ By responding to

toxic substances were dumped. Shiro Matsui & Satoshi Nogami, *Illegal Trash Finds New Home: Kagawa Township to Take on 500,000 Tons of Waste*, MAINICHI DAILY NEWS, Mar. 24, 2000, available in 2000 WL 6945576.

¹⁸³ Gibney, *supra* note 178.

¹⁸⁴ ENVIRONMENT AGENCY (1984), *supra* note 43, at 276.

¹⁸⁵ *Id.* The Waste Disposal Law punishes the illegal consignment of waste and the operation of a disposal business without a license. ENVIRONMENT AGENCY (1995), *supra* note 21, at 708.

¹⁸⁶ ENVIRONMENT AGENCY (1984), *supra* note 43, at 276.

¹⁸⁷ *Id.*

¹⁸⁸ ENVIRONMENT AGENCY (1995), *supra* note 21, at 672.

¹⁸⁹ *Tenfold Increase in Illegal Dumping Fines Planned for Waste Disposal Law Amendments*, 19 INT'L ENV'T REP. 569 (1996) [hereinafter *Tenfold Increase*].

¹⁹⁰ As one commentator noted, "Japan's industrial environment is one of the world's most competitive As a result . . . the bankruptcy rate in Japan is one of the world's highest." Jay Dratler, Jr., *Trade Secrets in the United States and Japan: A Comparison and Prognosis*, 14 YALE J. INT'L L. 68, 110. See also *id.* at 110 n.184 (noting that there are 18,000 business bankruptcies per year in Japan).

¹⁹¹ More than half of all Waste Disposal Law violations have been attributed to efforts to cut costs on treatment. ENVIRONMENT AGENCY (1984), *supra* note 43, at 276.

¹⁹² *Japan Aims to Clean up Gang-Ridden Garbage Business*, AGENCE FRANCE-PRESSE, Mar. 10, 2000, available in 2000 WL 2750062.

¹⁹³ *Dumpers to Be Charged*, *supra* note 5. News reports have noted that many waste management operators are predominantly run by yakuza, which illegally dispose of waste on behalf of corporations in exchange for large fees. *Amendments to Waste Disposal Law Foresees Higher Penalties, Stricter EIA Requirements*, 20 INT'L ENV'T REP. 383 (1997) [hereinafter *Amendments to Waste Disposal Law*]. In May

this growing pollution epidemic with criminal prosecution, Japan can provide the strong deterrence that is needed to prevent companies from succumbing to the temptation of illegally dumping their waste.

B. *Oil Spills*

A strong criminal enforcement program is also needed in Japan to help deter large oil spills. Although Japan has experienced a steady decrease in the number of oil spills,¹⁹⁴ it still experiences almost 400 oil spills annually.¹⁹⁵ More importantly, a significant proportion of Japan's oil spills are preventable. In 1994, for example, 121 incidents were the result of careless handling and seventy-nine were intentional.¹⁹⁶

The risk of oil spills is particularly high in Japan because many large oil tankers and other vessels pass through its waters.¹⁹⁷ In 1997, Japan experienced one of its worst oil spills ever.¹⁹⁸ The Russian oil tanker *Nakhodka* broke apart in stormy seas off the Oki Islands and spilled at least five million liters¹⁹⁹ of fuel oil into the sea.²⁰⁰ The spill polluted more than

1997, environmental leaders from the United States, Canada, Italy, France, Germany, Japan, Russia, the United Kingdom, and the European Union met to coordinate efforts to fight international environmental crime. Earl E. Devaney & Michael J. Penders, *Recent Developments in International Cooperation and the Environmental Leaders Summit*, 13 NAAG NAT'L ENVTL. ENFORCEMENT J. 3 (1997). EPA Administrator Carol Browner sought improved cooperation between enforcement agencies to facilitate successful investigation. In March 2000, the Japanese Health and Welfare Ministry drew up a bill in response to the growing yakuza involvement in industrial waste after the National Police Agency requested that it take a "tougher stance" on the problem. *Gov't to Dump on Waste Firm Gangs*, MAINICHI DAILY NEWS, Mar. 11, 2000, available in 2000 WL 6945349.

¹⁹⁴ The MSA's records indicate a steady decrease in the number of oil spill incidents from 1973 to 1994: 1973 (2,060 incidents), 1974 (1,985 incidents), 1975 (1,584 incidents), ENVIRONMENT AGENCY (1976), *supra* note 49, at 158; 1976 (1,501 incidents), 1977 (1,339 incidents), 1978 (1,079 incidents), ENVIRONMENT AGENCY (1979), *supra* note 49, at 166; 1987 (627 incidents), 1988 (593 incidents), 1989 (605 incidents), ENVIRONMENT AGENCY (1990), *supra* note 49, at 362; 1990 (583 incidents), 1991 (527 incidents), 1992 (473 incidents), 1993 (445 incidents), 1994 (373 incidents), ENVIRONMENT AGENCY (1995), *supra* note 21, at 358.

¹⁹⁵ In 1998, there were 389 oil spills and 285 spills of other substances. *Marine Pollution Incidents at Lowest Level Since 1973*, Japan Econ. Newswire, Jan. 13, 1999, available in 1999 WL 9626913.

¹⁹⁶ ENVIRONMENT AGENCY (1995), *supra* note 21, at 658. Intentional discharges are usually related to ballasting. After tankers discharge their cargo at a port, they ride high in the water, which causes stability problems. Jeff B. Curtis, Comment, *Vessel-Source Oil Pollution and MARPOL 73/78: An International Success Story?*, 15 ENVTL. L. 679, 682-83 (1985). In response, seawater is taken in as ballast, which mixes with oil residues and is released when the ballast is later discharged. *Id.*

¹⁹⁷ In total, 99.8% of all natural resources and foodstuffs imported by Japan enter the country by sea. Marcus Hand, *Do More for Straits Safety, Japan Urges User Nations*, BUS. TIMES (Singapore), Jan. 28, 1999, available in 1999 WL 8239680. See also *supra* note 180.

¹⁹⁸ *Swift Cleanup Action, Favorable Weather Control Supertanker's Spill in Tokyo Bay*, 20 INT'L ENV'T REP. 668.

¹⁹⁹ Five million liters is 1.3 million gallons.

²⁰⁰ *Japan/Science: Oil Spill Redress Stuck in Sludge*, ASAHI SHINBUN, Feb. 20, 1998, available in 1998 WL 7720260.

310 miles of coastline and affected fish stocks, shellfish farms, scenic areas, and bird sanctuaries.²⁰¹ The deaths of five volunteers involved in the spill clean-up intensified public outrage over the environmental damage.²⁰²

While the *Nakhodka* spill was extraordinary in size, it was not the last of Japan's encounters with highly publicized, preventable oil spills. Only six months after the spill, the supertanker *Diamond Grace* scraped the seabed in Tokyo Bay and spilled an estimated 400,000 gallons of crude oil.²⁰³ Maritime police decided to send the case up for prosecution after investigators discovered that the captain had falsely reported that he slowed the vessel through a shallow part of Tokyo Bay.²⁰⁴ In September 1998, a tanker collided with a fishing vessel and spilled 70,000 gallons of fuel oil off the Port of Esashi near Hokkaido Island.²⁰⁵ Japanese officials stated that they believed the accident was caused by the failure of crewmembers on both vessels to keep watch.²⁰⁶ The reoccurrence of preventable oil spills suggests that the current enforcement scheme does not serve as an adequate deterrent for negligent behavior on the part of oil shippers.²⁰⁷

While there is substantial support for the prosecution of intentional "midnight dumpers" of industrial waste,²⁰⁸ some critics feel that criminal

²⁰¹ Edwin Unsworth, *Japanese Oil Spill Claims Expected*, BUS. INS., Feb. 24, 1997, at 18, available in 1997 WL 8293916.

²⁰² *Kyodo News Summary*, Japanese Econ. Newswire, Feb. 4, 1997, at 2, available in LEXIS, World News Database, Bus. Anal. & Country Info and Selected Legal Texts and Codes File. Prime Minister Ryutaro Hashimoto's cabinet awarded one million yen to each volunteer posthumously. *Id.* One man died of a heart attack, and the others are presumed to have died of overwork, exposure to the cold, and the inhalation of toxic fumes from the oil. *Volunteer Becomes 5th to Die After Joining Oil Cleanup*, DAILY YOMIURI, Feb. 5, 1997, available in 1997 WL 7072859; Sonni Efron, *Japanese Effort to Clean Up Oil Spill Hits Rough Seas*, L.A. TIMES, Feb. 1, 1997, at A-1. The youngest victim was 53 and the oldest was 77. *Gov't Pays 1 Mil. Yen Damages for Oil Cleanup Deaths*, Japanese Econ. Newswire, Feb. 14, 1997, available in LEXIS, World News Database, Bus. Anal. & Country Info and Selected Legal Texts and Codes File.

²⁰³ *Oil Spill in Tokyo Bay Under Control*, Japanese Econ. Newswire, July 4, 1997, available in LEXIS, World News Database, Bus. Anal. & Country Info and Selected Legal Texts and Codes File; *MEPC Delays Decision on Quick Single-Hull Tanker Phase-Out*, OIL SPILL INTELLIGENCE REPORT, Sept. 25, 1997, at 1.

²⁰⁴ *Oil Spill in Tokyo Bay Under Control*, *supra* note 203.

²⁰⁵ *World Spill Briefs*, OIL POLLUTION BULL., Sept. 18, 1998, at 7.

²⁰⁶ *Id.*

²⁰⁷ Some people in Japan feel there is a lack of adequate deterrence, a fact supported by a Japanese news headline that proclaimed, "H.K. Skipper Gets Hand Slapped for Oil Spill." *H.K. Skipper Gets Hand Slapped for Oil Spill*, Japanese Econ. Newswire, Feb. 16, 1990, available in LEXIS, Asia/Pacific Rim Archive News. This case involved a Hong Kong skipper of a Liberian-flagged cargo ship that ran aground and spilled more than 500 tons of crude oil off the Tango Peninsula northwest of Kyoto. *Id.* The skipper was ordered to pay a 200,000 yen fine. *Id.* Prosecutors refused to charge the skipper under the Marine Contamination Prevention Law because they believed the crew did everything possible to seal off the ship's oil tanks to stop leakage before it abandoned the ship. *Id.* The Kyoto prefectural office estimated that fisheries suffered damages of 180 million yen. *Id.*

²⁰⁸ See Carr & Thomas, *supra* note 69, at 95.

prosecution is inappropriate for oils spills, which are often unintentional and characterized as "accidents."²⁰⁹ Other commentators²¹⁰ and courts²¹¹ have noted that criminal prosecution is equally valuable and justified²¹² in unintentional cases of pollution because it provides a powerful incentive to potential polluters to take preventative measures.²¹³ In light of the widespread and long-term environmental damage that can result from large spills, strong criminal enforcement must be in place in Japan to deter and prevent future spills.²¹⁴

C. *A Strengthened Criminal Enforcement Program Will Reduce Illegal Dumping and the Number of Oil Spills in Japan*

While the need for deterrence in Japan is clear,²¹⁵ there is still substantial debate as to whether criminal enforcement deters intentional and negligent acts of pollution. Nowhere has the issue of deterrence been debated more fiercely than in the United States, one of the world's leading nations in environmental crime prosecution.²¹⁶ One of the main criticisms of

²⁰⁹ See Sharon Hoffman, *Criminal Sanctions in Accidental Oil Spill Cases—Punishment Without a Crime*, 71 NEB. L. REV. 1033, 1038, 1040 (1992); Daniel R. Fischel & Alan O. Sykes, *Corporate Crime*, 25 J. LEGAL STUD. 319, 342-43 (1996).

²¹⁰ Humphreys, *supra* note 76, at 352-53. For a legal and economic analysis on the prevention of oil spills, see Kevin E. Lunday & Stephen J. Darmody, *Using Financial Markets to Protect the Environment: U.S. Coast Guard Leads Modern Approach*, 10 U.S.F. MAR. L.J. 173 (1998).

²¹¹ For example, in reviewing the criminal prosecution of Joseph Hazelwood, captain of the *Exxon Valdez*, the Supreme Court of Alaska noted the following:

[T]he threat of punishment for objective fault will deter people from conducting themselves in such a way as to create risk to others . . . [I]t cannot be disputed that the threat of punishment necessarily deters. Even when an offender does not of his own accord realize that his conduct is wrongful, he can in many cases be made to take care.

State v. Hazelwood, 946 P.2d 875, 883-84 (Alaska 1997).

²¹² See Leslie Yalof Garfield, *A More Principled Approach to Criminalizing Negligence: A Prescription for the Legislature*, 65 TENN. L. REV. 875, 910 (1998).

²¹³ See Michelle Cuttler, *Incentives for Reducing Oil Pollution from Ships: The Case for Enhanced Port State Control*, 8 GEO. INT'L ENVTL. L. REV. 175, 175 n.4 (1995) (citing SAFER SHIPS, CLEANER SEAS, THE REPORT OF LORD DONALDSON'S INQUIRY INTO THE PREVENTION OF POLLUTION FROM MERCHANT SHIPPING, PRESENTED TO PARLIAMENT BY THE SECRETARY OF STATE FOR TRANSPORT 141 (1994)).

²¹⁴ See Mark T. Peterson, Comment, *State Incentive Based Oil Tanker Regulation: An Alternative to Traditional Command-and-Control Regulation*, 4 OCEAN & COASTAL L.J. 271, 308 (1999) ("Preventing oil from being discharged into the marine environment is undoubtedly the best oil spill strategy.")

²¹⁵ While deterrence has been called "the primary goal of environmental law," some commentators have noted that environmental crime prosecution serves other purposes such as moral retribution. Novak & Steese, *supra* note 66, at 573 n.18; Humphreys, *supra* note 76, at 354.

²¹⁶ Richard J. Lazarus, *Assimilating Environmental Protection into Legal Rules and the Problem with Environmental Crime*, 27 LOY. L.A. L. REV. 867, 883 (1994) (discussing some of the debate); Carr & Thomas, *supra* note 69, at 93 ("The criminalization of environmental law is primarily an American phenomena.")

environmental crime prosecution is that civil liability provides a sufficient deterrence and criminal laws “overdeter.”²¹⁷ Violators are sometimes punished with criminal fines that are imposed in addition to harsh civil penalties. Critics claim that double sanctions simply invite expensive and duplicative litigation costs without necessarily enhancing environmental protection.²¹⁸ Others argue that the overuse of criminal prosecution devalues its public stigma deterrent effect²¹⁹ and suggest that it should only be used sparingly.²²⁰ Still others note that criminal prosecution does not lead to optimal deterrence because prosecutors are often accused of choosing cases arbitrarily²²¹ based largely on political motivations.²²²

It is difficult to assess the merit of these arguments or to gauge precisely the effectiveness of criminal enforcement since it is only one part of an environmental regulatory regime.²²³ However, many commentators, as well as the EPA and the U.S. Congress, believe that criminal enforcement has played a very important role in deterring pollution.²²⁴ There is anecdotal evidence that criminal enforcement in the United States has had a deterrent

²¹⁷ See Christopher H. Schroeder, *Cool Analysis Versus Moral Outrage in the Development of Federal Environmental Criminal Law*, 35 WM. & MARY L. REV. 251 (1993); Hoffman, *supra* note 209, at 1039 (“Criminal prosecutions of environmental accidents serve neither the purpose of deterrence nor the purpose of removing dangerous elements from society. Severe deterrence already is built into the extensive civil regulatory scheme that governs environmental abuses.”).

²¹⁸ Hoffman, *supra* note 209, at 1039.

²¹⁹ See Stuart P. Green, *Why It's a Crime to Tear the Tag Off a Mattress: Overcriminalization and the Moral Content of Regulatory Offenses*, 46 EMORY L.J. 1533, 1536 n.4 (1997) (“[Criminal law] should only be used to prohibit conduct to which the moral opprobrium of the community attaches. . . . The use of the criminal law in . . . borderline areas serves to devalue its significance in relation to the traditional ‘crimes.’”) (quoting GENEVRA RICHARDSON ET AL., *POLICING POLLUTION: A STUDY OF REGULATION AND ENFORCEMENT* 14-15 (1982)); John C. Coffee, Jr., *Does “Unlawful” Mean “Criminal”? Reflections on the Disappearing Tort/Crime Distinction in American Law*, 71 B.U. L. REV. 193, 200-01 (1991).

²²⁰ See Lazarus, *supra* note 216, at 883. Steve Herman, the EPA’s Assistant Administrator for Enforcement and Compliance, has insisted that the EPA is “targeting actions carefully,” and concentrating its efforts on “the most serious pollutants and the greatest risks.” Downs, *supra* note 65, at 201.

²²¹ See Lazarus, *supra* note 89, at 2454 (quoting WILLIAM J. CORCORAN ET AL., U.S. DEP’T OF JUSTICE ENVIRONMENTAL CRIMES PROGRAM 83, 128 (1994)).

²²² Hoffman, *supra* note 209, at 1047.

²²³ For an excellent attempt at empirical analysis of the deterrent value of environmental crime enforcement, see Mark A. Cohen, *Environmental Crime and Punishment: Legal/Economic Theory and Empirical Evidence on Enforcement of Federal Environmental Statutes*, 82 J. CRIM. L. & CRIMINOLOGY 1054 (1992). See also Mark A. Cohen, *Empirical Research on the Deterrent Effect of Environmental Monitoring and Enforcement*, 30 ENVTL. L. REP. 1245 (2000).

²²⁴ See Ethan H. Jessup, *Environmental Crimes and Corporate Liability: The Evolution of the Prosecution of “Green” Crimes by Corporate Entities*, 33 NEW ENG. L. REV. 721, 725 (1999). The EPA has noted that criminal enforcement is “perhaps our most powerful environmental enforcement sanction and creates the strongest deterrence.” David L. Markell, *The Role of Deterrence-Based Enforcement in a “Reinvented” State/Federal Relationship: The Divide Between Theory and Reality*, 24 HARV. ENVTL. L. REV. 1, 9 n.29 (2000) (citing U.S. EPA, *CRIMINAL ENFORCEMENT ADDENDUM TO THE POLICY FRAMEWORK FOR STATE/EPA ENFORCEMENT AGREEMENTS I* (1993)); Helen M. Maher, *Attempting to Legislate Attempted Environmental Crimes*, 15 PACE ENVTL. L. REV. 735, 767 & n.259 (1998).

effect on polluters. For example, since the passage of the Oil Pollution Act of 1990, which contains criminal enforcement provisions, the total volume of oil spilled in the United States has declined sharply.²²⁵ While there are a number of possible explanations for this trend, commentators and government officials insist that criminal prosecution has played a critical role.²²⁶

By increasing the frequency with which environmental crime is prosecuted, Japan can improve the deterrence of intentional dumping and pollution caused by negligence. Criminal prosecution provides an obvious deterrent in the threat of incarceration.²²⁷ Prison sentences for environmental crimes have been imposed much less frequently in Japan than in the United States.²²⁸ Imprisonment may not be necessary in all environmental crime prosecutions in Japan because of the strong deterrent role of the public stigma that is associated with criminal prosecution ("public stigma deterrence").²²⁹ However, public stigma deterrence has been largely

²²⁵ *API Reports Sharp Increase in U.S. Spillage During 1996*, OIL POLLUTION BULL., June 5, 1998, at 2. The annual average quantity of oil spilled from freighters, barges, and tankers in U.S. waters between 1987 and 1991 was 5.94 million gallons of oil, compared to an annual average of 1.14 gallons between 1992 and 1996, a decrease of 81%. *Id.* Tanker spills declined even more dramatically, from an annual average of 4 million gallons between 1987 and 1991, to an average of 160,000 gallons between 1992 and 1996, a 96% decrease. *Id.*

²²⁶ While the Coast Guard has stated that criminal sanctions are "only a small part" of the agency's enforcement program (only 10 cases out of 8,357 were under investigation as potential criminal cases), officials insist they are essential because "anecdotal evidence suggests that, for some violators, this is the only effective deterrent." *House Subcommittee Urged to Ease Criminal Liability for U.S. Spills*, OIL POLLUTION BULL., June 5, 1998, at 1, 5. See also Stroock, *supra* note 90, at 916.

²²⁷ See Jonathon P. Guy, *The Criminalization of Environmental Law in the United States: Is There Any Better Way to Alienate the Regulated Community?*, in STRATEGIES FOR ENVIRONMENTAL ENFORCEMENT 113, 143 (1995) ("[T]he threat of imprisonment has undoubtedly deterred corporate officials from violating environmental laws . . ."). Criminal prosecution has also been praised for its ability to achieve resolution more rapidly than civil litigation. Pappas, *supra* note 78, at 186 (noting that civil cases can take years to file and complete, while criminal convictions can be acquired within a one year period).

²²⁸ In 1974, 233 persons were convicted of violating the Air Pollution Control Law. *Id.* Only five were punished by imprisonment. *Id.* In 1973, 113 were convicted of violating the Water Pollution Control Law, but only one person was sentenced to prison. Hirano, *supra* note 175, at 135. In contrast, approximately 55% of those convicted of environmental crimes in the United States in 1990 were sentenced to prison. Pappas, *supra* note 78, at 187. Americans tend to favor prison sentences as punishment for polluters. In 1990, a telephone survey of 1,004 U.S. households asked callers if they would favor or oppose changing environmental crime laws so that when companies are found guilty of deliberately violating pollution laws, the officials responsible could be sentenced to jail terms. *Id.* at 185 n.17 (citing Susan Hedman, *Expressive Functions of Criminal Sanctions in Environmental Law*, 59 GEO. WASH. L. REV. 889, 889 n.1 (1991)). Seventy-two percent of those polled favored such changes. *Id.*

²²⁹ See Judith Ianelli, *Lessening the Mens Rea Requirement for Hazardous Waste Violations*, 16 VT. L. REV. 419, 426 (1991) ("[T]he social stigma attached to a criminal proceeding . . . can in itself be an effective deterrent."). Japan's criminal justice system has also utilized public apology as an effective deterrent. See John O. Haley, *Apology and Pardon: Learning from Japan*, in CIVIC REPENTANCE 97, 105

underutilized in Japan for environmental crimes because there have been very few public trials.²³⁰

Public stigma deterrence has especially strong potential to prevent environmental crimes committed by corporations.²³¹ American commentators have concluded that "the notoriety gained by a corporation subject to criminal charges can cause irreparable damage," particularly for corporations that are prominent in the public eye.²³² A report by the Organization for Economic Cooperation and Development once declared, "In Japan, more than elsewhere, the business community wants to be loved and to be considered a praiseworthy part of the national community."²³³ These particular aspects of Japanese society suggest that an enhanced criminal enforcement program would strengthen deterrence of preventable acts of pollution such as dumping and spills.

D. Japan Should Raise Maximum Criminal Fines for Environmental Crimes to Strengthen Deterrence

In addition to public stigma deterrence, environmental crime laws in the United States and Japan often provide economic deterrence through criminal fines.²³⁴ Criminal fines²³⁵ deter intentional polluters by removing

(Amitai Etzioni ed., 1999) ("Apology can also be an end in itself, and as such it serves as an important informal sanction.").

²³⁰ In 98.6% of cases in 1986, the person was tried in a summary procedure for the imposition of fines, and only 49 persons were actually sent to trial. Oda, *supra* note 11, at 188. In 1994, of the 1994 persons prosecuted, 88 were required to stand trial as compared to 62 the previous year. ENVIRONMENT AGENCY (1995), *supra* note 21, at 710. A summary trial was recommended for 96.6% of the persons prosecuted. *Id.*

²³¹ See Grover C. Wrenn, *The Role of Environmental Consultants in Criminal Enforcement Matters*, C496 ALI-ABA 181, 186-87 (1990), available in WESTLAW, Texts & Periodicals-All Law Reviews, Texts & Bar Journals; Opher Shweiki, *Environmental Audit Privilege and Voluntary Disclosure Rule: The Importance of Federal Enactment*, 33 AM. CRIM. L. REV. 1219, 1233 (1996).

²³² Hoffman, *supra* note 209, at 1046. See also Lazarus, *supra* note 216, at 880; Pappas, *supra* note 78, at 186.

²³³ Hirano, *supra* note 175, at 135.

²³⁴ For more on the criminal fine provisions in major U.S. environmental laws, see CARR ET AL., *supra* note 60, at 123-24, 126, 159, 196, 201-03, 277, 290. For recent translations of Japanese environmental crime laws and the fines prescribed by them, see ENVIRONMENTAL LAWS (1996), *supra* note 11, at YA-YG.

²³⁵ The distinction between civil fines and criminal fines has been described as "hazy." *Developments in the Law—Corporate Crime: Regulating Corporate Behavior Through Criminal Sanction*, 92 HARV. L. REV. 1300, 1301 (1979). One commentator noted, "Aside from the label attached, there is often no meaningful distinction between criminal and civil fines imposed on corporate defendants, and the deterrent effect of each may be essentially the same." *Id.* at 1301. Besides the stigma attached to criminal fines, there are differences in the degree of procedural protection afforded to the defendant. *Id.* In the United States, these include the prohibition against double jeopardy, the requirement of proof beyond a reasonable doubt, and the right to a jury trial. *Id.* at 1302.

some of the economic incentive to pollute.²³⁶ They also deter negligent acts that result in pollution by giving potential polluters a strong incentive to use care when handling environmentally harmful substances.²³⁷

Recently, Japan has taken steps to increase the fines that can be levied for environmental crimes,²³⁸ but these fines still lag far behind those that can be levied in the United States.²³⁹ Commentators have argued that the illegal dumping of industrial waste in Japan is tied in part to insufficient economic penalties for such dumping.²⁴⁰ As recently as 1996, the maximum criminal fine for illegal waste dumping in Japan was one million yen, or about \$8,000.²⁴¹ The inadequacy of this sanction was illustrated in a recent case in which a waste disposal operator in Kagawa Prefecture was ordered to pay a fine of 500,000 yen and was sentenced to a ten-month prison term with a five-year stay of execution.²⁴² The defendant could hardly have been deterred by such a fine, since he earned as much as 470 million yen from his illegal actions.²⁴³

The maximum criminal fine for an oil spill in Japan²⁴⁴ is significantly smaller than the fine that can be imposed in the United States. With the passage of the Criminal Fine Improvement Act of 1987 ("CFIA"), federal

²³⁶ For example, one commentator noted that the 1990 amendments to the Clean Air Act "attempted to remove all economic incentive for violation by setting fines ranging up to twice the gross pecuniary loss caused to a third party or twice the gross pecuniary gain to the defendant, whichever is greater." CARR ET AL., *supra* note 60, at 3. See also *supra* note 213.

²³⁷ See *supra* notes 210-212.

²³⁸ In 1996, the Ministry of Health and Welfare, which is in charge of waste disposal administration, began to draft amendments to the Waste Disposal Law in response to the rising number of illegal waste dumping incidents. *Tenfold Increase*, *supra* note 189. Originally, government officials discussed raising the maximum fine on illegal dumping to 10 million yen (at that time \$93,400). *Id.* In fact, when Prime Minister Ryutaro Hashimoto submitted a bill to the Diet in 1997, the revision called for increasing the maximum penalty to 100 million yen, which would have made it one of the toughest legal penalties in Japan. *Amendments to Waste Disposal Law*, *supra* note 193. An official at Japan's Sanitation Bureau announced that the purpose of the amendment was to "make it unprofitable to conduct illegal waste dumping." *Tenfold Increase*, *supra* note 189. In March 2000, the Cabinet approved a different bill that would increase the maximum sentence for illegal dumping to five years and the maximum fine to 10 million yen for individuals and up to 100 million yen for corporations. *Cabinet Approves Bill to Revise Waste Law; Industry Must Ensure Proper Disposal*, DAILY YOMIURI, Mar. 22, 2000, available in 2000 WL 4644960.

²³⁹ For example, RCRA provides for fines of \$50,000 for each day that a hazardous waste violation takes place. 42 U.S.C. § 6928(d). CARR ET AL., *supra* note 60, at 183.

²⁴⁰ Kozo Nakada, *Japan: Toxic Waste Management Market*, AMERICAN EMBASSY REPORT pt. 2, May 29, 1997, available in 1997 WL 9850540.

²⁴¹ *Id.* At an exchange rate of 125 yen to the dollar, this would be approximately \$8,000. *Id.*

²⁴² *Tenfold Increase*, *supra* note 189.

²⁴³ *Id.* As the chairman of the National Federation of Industrial Waste Management Associations stated, "There are plenty of openings for boryokudan [gangsters] in [the industrial waste] business. Even if they have to pay \$10,000 in fines, they make \$1 million in profits." Gibney, *supra* note 178.

²⁴⁴ The largest fine available under the Marine Pollution Law is 10,000,000 yen. Marine Pollution Law, *supra* note 23, art. 55.

prosecutors are now able to seek fines that are calculated based on the pecuniary loss or gain caused by the defendant's criminal act.²⁴⁵ Between 1997 and 1998, federal prosecutors obtained multi-million dollar criminal fines for oil pollution by Royal Caribbean Cruise Lines,²⁴⁶ the operator of a Holland America Cruise Line ship,²⁴⁷ and three companies responsible for the *North Cape* oil spill.²⁴⁸ Commentators have noted that Exxon may have been coerced into paying its \$125 million fine for the *Exxon Valdez* spill because it faced the threat of facing an even larger CFIA-enhanced criminal fine.²⁴⁹ By adopting similar legislation and continuing to raise the maximum fines for environmental crimes, Japan could improve its deterrence of pollution without any additional funding or significant change in its enforcement structure.²⁵⁰

V. CONCLUSION

Japan is faced with important decisions about the enforcement of its environmental laws. In the 1970s and early 1980s, Japan relied on criminal prosecution to deter certain types of pollution. Since the early 1980s, however, Japan has used criminal enforcement mechanisms less frequently, while the United States has rapidly expanded its environmental crime program. A variety of factors have contributed to this divergence in enforcement strategy, including the timing of major pollution incidents,

²⁴⁵ Pub. L. No. 100-185, 101 Stat. 1279 (1987) (codified at 18 U.S.C. § 3571 (1994)). See generally Raucher, *supra* note 83, at 177-78. The statute reads:

If any person derives pecuniary gain from the offense, or if the offense results in pecuniary loss to a person other than the defendant, the defendant may be fined not more than the greater of twice the gross gain or twice the gross loss, unless the imposition of a fine under this subsection would unduly complicate or prolong the sentencing process.

18 U.S.C. § 3571(d).

²⁴⁶ The company was fined nine million dollars for illegally discharging oil and lying about it to government investigators. Downs, *supra* note 65, at 211.

²⁴⁷ HAL Beheer BV was ordered to pay a one million dollar fine and one million dollars in restitution for illegally discharging oily bilge into Alaska's Inside Passage. *Id.*

²⁴⁸ Three companies, Eklof Marine Corporation, Thor Towing Corporation, and Odin Marine Corporation, were fined a total of seven million dollars for releasing 825,000 gallons of oil into Block Island and Rhode Island Sounds. Jane F. Barrett, *U.S. Environmental Criminal Laws and the Maritime Industry*, BIMCO BULL., Apr. 1998, at 49.

²⁴⁹ See Larry Howell, *Environmental Crimes: The Boom in "Busting" Corporations and Their Responsible Officers*, 16 AM. J. TRIAL ADVOC. 417, 429 (1992); Raucher, *supra* note 83, at 177-78.

²⁵⁰ The U.S. federal criminal enforcement program pays for itself by bringing in two dollars in fines for every dollar spent on enforcement. *Criminal Enforcement: 1990 Record Year for Criminal Enforcement of Environmental Violators*, Justice Announces, 21 ENV'T REP. 1397 (1990).

different organizational structures for enforcement personnel, and different regulatory strategies and case law.

In recent years, Japan has been plagued by large oil spills and illegal industrial waste dumping. Many of these incidents were caused by intentional or negligent conduct and were thus preventable. Japan can deter these sources of pollution by aggressively enforcing its environmental crime laws. Criminal prosecutions resulting in large fines, public stigma, and incarceration can have a strong deterrent effect on potential polluters. As discussed in Part III, the United States has had a very successful federal environmental crime program. This program could serve as a valuable model for future improvements to the Japanese system, particularly in the areas of investigator training and placement. Japan should continue to raise the maximum fines for environmental crimes. By returning to its criminal enforcement "roots," Japan can continue to protect its people and its environment from oil spills and illegal waste disposal.