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FROM TECHNICAL FIX TO REGULATORY MIX: JAPAN'S NEW ENVIRONMENTAL LAW

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Abstract: In post-industrial countries like Japan, modern environmental problems defy easy clean up solutions. Thus, effective clean up depends on diverse regulation. Historically, the Japanese government has relied on statutes that mandated technical “fixes” to clean up highly publicized pollution problems. Although such regulations have been successful in areas like air pollution, recent newspaper headlines highlight the extent to which environmental issues continue to affect densely populated Japan.

Beginning with the passage of the Environmental Impact Assessment Law in 1997, however, Japan has significantly diversified its environmental policy. Along with strict new regulatory standards, new national laws now allow public access to information held by the government and private companies and foster public participation through non-profit organizations and environmental impact assessment processes. By closely examining three issues of public concern—the disposal of waste, the control of dioxin, and the clean up of contaminated soils from industrial areas—this Comment suggests that Japan’s more diverse, open and transparent regulation will better address current and future environmental problems. While it may not provide another “pollution miracle,” Japan’s shift from a reactive regulatory system with limited review to a more open and proactive regulatory system is a step in the right direction.

I. INTRODUCTION

During the 1970s, Japan transformed itself from “the most polluted nation on earth”¹ to a “pacesetter of environmental policy”² by implementing strict technical regulations.³ While these laws significantly reduced pollutants like sulfur dioxide,⁴ this densely populated country⁵ still has a variety of environmental issues not readily solved through the application of technological controls.⁶ Rather than smokestack emissions, Japan is now

[†] The author would like to thank Professor Veronica Taylor for her comments and advice and Librarian Rob Britt for his research assistance. Any errors or omissions are the author’s own.

¹ MARGARET A. MCKEAN, ENVIRONMENTAL PROTEST AND CITIZEN POLITICS IN JAPAN 17 (1981).

² Helmut Weidner, *Japanese Environmental Policy in an International Perspective: Lessons for a Preventive Approach*, in ENVIRONMENTAL POLICY IN JAPAN 498 (Shigeto Tsuru & Helmut Weidner eds., 1989).

³ See discussion *infra* Part II.A.

⁴ BRENDAN F.D. BARRETT & RIKI THERIVEL, ENVIRONMENTAL POLICY AND IMPACT ASSESSMENT IN JAPAN 41-42 (1991) (noting that from 1970 to 1980, sulfur dioxide levels fell by eighty percent).

⁵ Only one-third of the 377,836 square kilometers that make up Japan’s archipelago are inhabitable; the rest of Japan is mountainous. Minco Kato & Emico Ray, *Japan*, in GOVERNANCE IN SUSTAINABLE DEVELOPMENT: FIVE OECD CASE STUDIES 156 (2002). With the seventh largest population in the world, the majority of Japan’s 126 million people live in the relatively limited plains and coastal areas. *Id.*

⁶ BARRETT & THERIVEL, *supra* note 4, at 27. See generally ORGANISATION FOR ECONOMIC COOPERATION & DEVELOPMENT, ENVIRONMENTAL PERFORMANCE REVIEWS: JAPAN (2002) [hereinafter OECD].

grappling with more difficult and dispersed kinds of pollution. Examples include “lifestyle” pollution resulting from too much garbage,⁷ dioxin as a byproduct of waste incineration,⁸ and contaminated soil found at industrial sites.⁹ Because these environmental problems are diffuse in both space and time—the contamination is widespread and the harm may linger into future generations¹⁰—technical solutions alone no longer suffice.¹¹

Japan’s environmental laws are important for a variety of reasons. First, Japan, the world’s second largest economy, imports the bulk of its raw materials.¹² As a result, any environmental policy change here is likely to ripple across the globe. In addition, Japan is one of the world’s largest providers of official development assistance (“ODA”).¹³ Because such ODA includes the export of environmental services and technology, modifications in Japan’s environmental norms may seriously impact developing nations.¹⁴ Finally, other countries viewed Japan’s pollution problems during the 1960s as a portent of issues likely to impact them.¹⁵ Similarly, Japan’s current national response to its on-going environmental issues may be informative to the rest of the world, especially given its long-term economic crisis.¹⁶

Japan’s new environmental laws, adopted between May 1997 and January 2003, comprise the most significant set of legal changes to its national¹⁷ environmental policy since the 1970s.¹⁸ Recent changes include

⁷ Lifestyle pollution also includes household sewage; automobile exhaust is another issue of concern. Koichiro Fukui, *Global Benefits from Private Sector Initiatives: Lessons on the Environment from Japan*, in WORLD BANK INSTITUTE & DEVELOPMENT BANK OF JAPAN, PROTECTING THE GLOBAL ENVIRONMENT: INITIATIVES BY JAPANESE BUSINESS 4 (Wilfrido Cruz et al. eds., 2002).

⁸ See, e.g., *Osaka Towns Face Long Haul to Solve Dioxin Problem*, JAPAN POL’Y & POL., Jan. 7, 2002, LEXIS, News Group File; *Record-High Concentrations of Dioxin Detected in Osaka*, JAPAN WKLY. MONITOR, Sept. 23, 2002, LEXIS, News Group File.

⁹ See, e.g., Chester Dawson, *A Messy Cleanup Plan*, BUS. WK., Mar. 25, 2002, LEXIS, News Group File.

¹⁰ See Barbara Adam & Joost Van Loon, *Introduction: Repositioning Risk; The Challenge for Social Theory*, in THE RISK SOCIETY AND BEYOND: CRITICAL ISSUES FOR SOCIAL THEORY 6 (Barbara Adam et al. eds., 2000).

¹¹ End-of-pipe technologies, like desulfurization of smokestack emissions, focus on cleaning up pollution after it is already produced but often fail to prevent problems. E.g., Fukui, *supra* note 7, at 8.

¹² See, e.g., FUMIKAZU YOSHIDA, THE ECONOMICS OF WASTE AND POLLUTION MANAGEMENT IN JAPAN 5-6 (2002).

¹³ See, e.g., PETER DAUVERGNE, THE RISE OF AN ENVIRONMENTAL SUPERPOWER? EVALUATING JAPANESE ENVIRONMENTAL AID TO SOUTHEAST ASIA, (Austl. Dep’t of Int’l Rel., Working Paper No. 1998/3, 1998). ODA is aid money sent to developing countries for various development projects. *Id.* at 2.

¹⁴ *Id.*

¹⁵ Paul R. Ehrlich, *Foreword* to NORIE HUDDLE & MICHAEL REICH, ISLAND OF DREAMS: ENVIRONMENTAL CRISIS IN JAPAN 9, 11 (1975).

¹⁶ Japan has been in an economic crisis since 1991. See, e.g., Benjamin Fulford, *The Panic Spreads*, FORBES.COM, Feb. 18, 2002, <http://www.forbes.com/global/2002/0218/022.html>.

¹⁷ This Comment explores national trends, not local changes. Under Japan’s unitary system, local governments may enact regulations stricter than the national standards as long as the national regulations

new statutes,¹⁹ new public access to information,²⁰ and new avenues for public participation.²¹ Because modern pollution problems are difficult to assess, contain, and clean up,²² these new laws are not likely to result in another "pollution miracle."²³ However, this Comment argues that these new laws will aid the environment over the long term through the new transparency and openness apparent in Japan today.

Part II of this Comment explores Japan's first statutory response to its post-World War II pollution problems, its subsequent domestic and international policy concerns, and its modern environmental issues. Part III generally examines the environmental statutory changes enacted by the Japanese legislature, the Diet, from 1997 to 2003. Part IV reviews the impact of these legislative changes in more detail by examining the issues of waste, dioxin, and industrial soil contamination. Part V develops the common themes presented by these legislative changes. Finally, this Comment concludes that these changes will positively impact Japan's environment, but that their effectiveness remains to be seen.

II. THE ENVIRONMENT IN JAPAN: PROBLEM AND RESPONSE

Since World War II, Japan's response to its environmental problems has had varying degrees of effect. Although considered the most polluted country in the world in the late 1960s,²⁴ Japan implemented sweeping environmental regulations to achieve a "pollution miracle" of dramatic environmental benefits with no apparent economic detriment by the end of

are set as a minimum, and not maximum, standard. HIROSHI ODA, *JAPANESE LAW* 59 (2d ed. Oxford Univ. Press 1999) (1992). As a result, laws like the local environmental impact assessment requirements were enacted long before they achieved legal permanence at the national level. *E.g.*, JEFFREY BROADBENT, *ENVIRONMENTAL POLITICS IN JAPAN, NETWORKS OF POWER AND PROTEST* 101-06 (1998).

¹⁸ This Comment addresses the period from 1997 to January 2003. Although the 1993 Basic Environment Law, discussed *infra* in Part II.C, is an important law, Japan's passage of the long-awaited Environmental Impact Assessment Law in 1997 signaled the most significant step towards implementing the policy changes envisioned by the 1993 Basic Environment Law. *See discussion infra* Part III.C.2.

¹⁹ *See discussion infra* Part III.A.

²⁰ Under Japan's Information Disclosure Law, the public may now access information held by governmental entities while the Pollution Release and Transfer Registry allows public access to privately held information about hazardous chemical releases. *See discussion infra* Part III.B.

²¹ Avenues for public participation include new legal recognition for non-profit organizations and public input through the Environmental Impact Assessment process. *See discussion infra* Part III.C.

²² *See Adam & Van Loon, supra* note 10, at 3, 6.

²³ BROADBENT, *supra* note 17, at 19.

²⁴ MCKEAN, *supra* note 1, at 17-19.

the 1970s.²⁵ While end-of-pipe regulations significantly reduced air and water pollution,²⁶ environmental problems at home and abroad still remain.²⁷

A. *Post-World War II Industrial Pollution, Legislative Mandates for Technical Fixes, and the Pollution Miracle of the 1970s*

The post-World War II emphasis on industrial development allowed Japan's economy to rebound quickly,²⁸ but at the high cost of pollution-related health problems. Although fishermen first reported symptoms of mercury poisoning in Minamata Bay in the early 1950s,²⁹ such "local" problems did not become national issues until the discovery of more pollution-related diseases during the 1960s.³⁰ In Fuchu, cadmium-tainted rice led to *Itai-Itai* Disease.³¹ In Yokkaichi, air pollution from a newly built industrial plant resulted in widespread asthma.³² In Niigata, mercury from a factory led to another outbreak of Minamata Disease.³³ In southwestern Japan, PCB-contaminated cooking oil inflicted thousands of people with incurable health problems.³⁴ Finally, in 1970, reports of lead poisoning and photochemical smog in Tokyo further inflamed a citizenry already concerned by publicity about the other pollution-related diseases.³⁵

Catalyzed by a growing awareness of pollution problems, citizen protest movements and lawsuits began to impact environmental policy. Three thousand local citizen protest movements forced companies to clean up existing problems and helped prevent future pollution problems.³⁶

²⁵ E.g., JULIAN GRESSER ET AL., ENVIRONMENTAL LAW IN JAPAN 384 (1981).

²⁶ See *infra* note 50 and accompanying text.

²⁷ See, e.g., *id.* at 44-45; ANNY WONG, THE ROOTS OF JAPAN'S INTERNATIONAL ENVIRONMENTAL POLICIES 89-256 (2001) (analyzing the issues of whaling, deforestation in the Tropics, and acid deposition in Asia as important international environmental issues affecting Japan).

²⁸ See, e.g., NORIE HUDDLE & MICHAEL REICH, ISLAND OF DREAMS: ENVIRONMENTAL CRISIS IN JAPAN 81-84 (1975); FRANK UPHAM, LAW AND SOCIAL CHANGE IN POSTWAR JAPAN 28-29 (1987).

²⁹ HUDDLE & REICH, *supra* note 28, at 106-10.

³⁰ There is a wealth of information about these pollution-related diseases. See, e.g., TIMOTHY S. GEORGE, MINAMATA: POLLUTION AND THE STRUGGLE FOR DEMOCRACY IN POSTWAR JAPAN (2001); GRESSER ET AL., *supra* note 25, at 4-16, 29-132; Jun Ui, *Minamata Disease*, in INDUSTRIAL POLLUTION IN JAPAN 103-32, 154-72 (Jun Ui ed., 1992); UPHAM, *supra* note 28, at 28-53.

³¹ *Itai-Itai* literally means that "it hurts, it hurts." Such pain is caused by the decalcification of bones which then become brittle and break easily. HUDDLE & REICH, *supra* note 28, at 187.

³² *Id.* at 59-77 (discussing Yokkaichi's industrial development and the subsequent health problems).

³³ *Id.* at 122.

³⁴ *Id.* at 133-54. Polychlorinated biphenyls ("PCBs") are chlorinated hydrocarbons once used in industrial processes. *Id.* at 133-34. Non-degradable, PCBs continue to cause physical abnormalities, skin discoloration and disease, and other health problems for both the victim and any offspring. *Id.* at 150-51.

³⁵ GRESSER ET AL., *supra* note 25, at 25, 47-48.

³⁶ MCKEAN, *supra* note 1, at 19; Miranda A. Schreurs, *Domestic Institutions and International Environmental Agendas in Japan and Germany*, in THE INTERNATIONALIZATION OF ENVIRONMENTAL PROTECTION 138 (Miranda A. Schreurs & Elizabeth Economy eds., 1997). For more information on

Protesters in Numazu, for example, stopped the construction of an electrical power plant by convincing local officials to remove their support from an already approved industrial plan.³⁷ In addition to protests, lawsuits decided in favor of pollution victims also affected Japan's environmental policy.³⁸ These decisions liberalized the traditional negligence standard of proof for victims by shifting the burden to companies to prove they did not cause health problems, emphasizing a company's duty to use care in selecting an industrial site, mandating the use of the best feasible technology regardless of cost, and requiring polluters to suspend operations immediately whenever any doubt arose concerning the toxicity of their effluents.³⁹ Under the "highly charged atmosphere of crisis" created by the publicity, protest movements, and lawsuits,⁴⁰ the national government finally began to acknowledge the pollution problems.

Beginning in 1970, the Diet enacted multiple important national environmental laws.⁴¹ Unlike the 1967 Basic Law for the Environment,⁴² the fourteen laws passed by the 1970 "Pollution Diet" removed economics from consideration and mandated strict environmental clean up under the idea that "the polluter pays" for environmental degradation.⁴³ Accordingly, these laws required the installation of technological controls for smokestack emissions⁴⁴ and effluent releases,⁴⁵ regardless of cost. Subsequently, the

Japanese citizen protest movements, see BARRETT & THERIVEL, *supra* note 4, at 16-20; BROADBENT, *supra* note 17, at 99-112; Robert J. Mason, *Whither Japan's Environmental Movement? An Assessment of Problems and Perspectives at the National Level*, 72 PAC. AFF. 187 (1999).

³⁷ BARRETT & THERIVEL, *supra* note 4, at 38.

³⁸ The four primary cases are the Judgment of June 30, 1971, Tōyama District Court, 635 HANREI JIHŌ 17, *aff'd* by Judgment of August 9, 1972, Nagoya High Court, 674 HANREI JIHŌ 25 (Tōyama Itai-itai disease case); Judgment of September 29, 1971, Niigata District Court (Niigata Minamata disease case); Judgment of July 24, 1972, Tsu District Court (Yokkaichi Branch) 672 HANREI JIHŌ 30 (Yokkaichi asthma case); and Judgment of March 20, 1973, Kumamoto District Court, 696 HANREI JIHŌ 15 (Kumamoto Minamata disease case). These lawsuits, including the only translations of the decisions, are discussed at length in GRESSER ET AL., *supra* note 25, at 29-132.

³⁹ See GRESSER ET AL., *supra* note 25, at 41; UPHAM, *supra* note 28, at 43-44.

⁴⁰ MCKEAN, *supra* note 1, at 20.

⁴¹ For more information about these laws, see Shiro Kawashima, *A Survey of Environmental Law and Policy in Japan*, 20 N.C. J. INT'L L. & COM. REG. 231, 242-61 (1995); Thomas S. Mackey & Jim S. Hart, *A Comparison of U.S. and Japanese Environmental Laws Governing Emissions from Major Industrial Facilities*, 6 TRANSNAT'L LAW. 579 (1993); Mitsuru Nakayama, *Japanese Environmental Laws and Environmental Rights: Case Study on the Seto Inland Sea*, 20 N. KY. L. REV. 113 (1992).

⁴² Kōgai taisaku kihonhō [The Basic Law for Environmental Pollution Control], Law No. 132 of 1967, discussed in Weidner, *supra* note 2, at 484-85 (stating that the "harmony clause" required consideration of sound economic development along with any environmental clean up).

⁴³ Under the Polluter Pays Principle, those who cause pollution should pay for it. YOSHIDA, *supra* note 12, at 12-14.

⁴⁴ Taiki osen bōshihō [Air Pollution Control Law], Law No. 97 of 1968, <http://www.env.go.jp/en/lar/alaw/index.html> (last visited Feb. 26, 2003) [hereinafter Air Pollution Control Law].

Diet also adopted a much-lauded victim compensation law,⁴⁶ approved criminal sanctions for polluters,⁴⁷ and created the Environment Agency to coordinate government responses to pollution-related problems.⁴⁸ These measures, along with the energy conservation measures prompted by the 1970s oil crises,⁴⁹ reduced some kinds of air and water pollution by more than eighty percent in a decade.⁵⁰ By 1981, commentators were willing to note that “Japan has apparently succeeded in meeting some of the world’s most stringent environmental requirements without adversely affecting employment, economic growth, and energy supply. This will challenge those who argue that nations must choose between environmental protection and industrial development.”⁵¹

⁴⁵ Suishitsu odaku bōshihō [Water Pollution Control Act], Law No. 138 of 1970, <http://www.env.go.jp/en/lar/wlaw/index.html> (last visited Feb. 26, 2003).

⁴⁶ Kōgai kenkō higai no hoshō tō ni kansuru hōritsu [The Law for the Compensation of Pollution Related Health Injury], Law No. 111 of 1973, *discussed in* GRESSER ET AL., *supra* note 25, at 285-319. While lauded as an innovative law designed to pay victims’ compensation once they were “certified” as suffering from a qualifying disease, UPHAM, *supra* note 28, at 58-59, this system has its limitations. Out of Japan’s numerous pollution problems, only victims from the “Big Four” cases, *discussed supra* note 38 and accompanying text, ever qualified. UPHAM, *supra* note 28, at 59. In addition, many victims were never certified by the local boards or never received compensation because of delays from litigation. Kawashima, *supra* note 41, at 258-59. Finally, although the government certified a total of 99,000 victims by 1987, the Diet denied further certification of any air pollution victims in 1988. Weidner, *supra* note 2, at 490. *See also* Helmut Weidner, *An Administrative Compensation System for Pollution-Related Health Damages*, in ENVIRONMENTAL POLICY IN JAPAN 161-63 (Shigeto Tsuru & Helmut Weidner eds., 1989).

⁴⁷ 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], Law No. 142 of 1970, *discussed in* Robert G. Kondrat, *Punishing and Preventing Pollution in Japan: Is American-Style Criminal Enforcement the Solution?*, 9 PAC. RIM L. & POL’Y J. 379 (2000) (discussing the effectiveness of criminal liability under environmental statutes).

⁴⁸ Kankyōchō secchihō [The Environment Agency Law], Law No. 88 of 1971, *discussed in* WONG, *supra* note 27, at 53-54. Prior to the creation of the Environment Agency, eleven ministries and at least nine advisory councils met each new pollution crisis with often uncoordinated and unilateral decisions. GRESSER ET AL., *supra* note 25, at 26. In 1999, the Environment Agency Law was replaced by Kankyōshō setchihō [Environmental Ministry Law], Law No. 101 of 1999, *discussed infra* note 107.

⁴⁹ In 1973, oil constituted 73% of Japan’s energy, 99% of which was imported. BARRETT AND THERIVEL, *supra* note 4, at 40-41. Because of the 1973 and 1979 oil crises, Japan diversified its energy sources and implemented such strict energy conservation programs that further conservation would be difficult. *Id.*

⁵⁰ From 1970 to 1980, these regulations mandated installation of technology that reduced air pollutants like sulfur dioxide and carbon monoxide by 80% and 60%, respectively; during the same period, the percentage of water samples that did not meet human health standards fell by more than 98%. BARRETT & THERIVEL, *supra* note 4, at 41-42. *See also* BROADBENT, *supra* note 17, at 334 (measuring successful pollution reduction by the rapidity and thoroughness of Japan’s response).

⁵¹ GRESSER ET AL., *supra* note 25, at xv.

B. *The 1970s and Beyond: Japan's Environmental Problems Outlast National Attention and Technical Fixes*

Despite this optimism, Japan's industrial development continued to exact an environmental toll. While the technology-forcing laws of the 1970s continued to achieve "impressive successes" in controlling pollution that affected human health,⁵² the end-of-pipe solutions failed to protect the natural world or prevent future pollution by changing human behavior.⁵³ During the 1970s, for example, "lifestyle" problems associated with a consumer society increased⁵⁴ while citizens began protesting the impact that issues like noise pollution⁵⁵ and loss of sunlight had on their quality of life.⁵⁶

In the 1980s, attention largely turned away from environmental issues.⁵⁷ The government relied heavily on negotiated agreements with polluters⁵⁸ while more serious kinds of enforcement like criminal sanctions decreased.⁵⁹ Some viewed the Environment Agency as an ineffective body incapable of protecting the environment.⁶⁰ Citizen protest movements lost their momentum.⁶¹ Already-limited standing to sue became increasingly restricted;⁶² meanwhile, judicial decisions no longer favored environmental protection.⁶³ In 1988, the lauded victim compensation law was severely restricted.⁶⁴ At the same time, pollution victims who had won lower court victories still struggled to finalize the appeals on their cases nearly forty years later.⁶⁵ The overall environmental policy during this time has been characterized as reactive and driven by international arm-twisting.⁶⁶

⁵² WONG, *supra* note 27, at 47. In 1999, 99.2% of the national measurement points for surface water met health-related environmental quality standards. OECD, *supra* note 6, at 89.

⁵³ See BARRETT & THERIVEL, *supra* note 4, at 44-45.

⁵⁴ See, e.g., Fukui, *supra* note 7, at 4.

⁵⁵ In Osaka, citizens filed a lawsuit to prevent the physical and psychological impacts of noise from a new airport. UPHAM, *supra* note 28, at 63.

⁵⁶ GRESSER ET AL., *supra* note 25, at 145-46.

⁵⁷ See, e.g., Schreurs, *supra* note 36, at 147-49.

⁵⁸ See generally Susan Ridgley, *Environmental Protection Agreements in Japan and the United States*, 5 PAC. RIM L. & POL'Y J. 639 (1996).

⁵⁹ Kondrat, *supra* note 47, at 379 (noting that many of Japan's 1970s-era environmental laws include criminal sanctions for violations, but enforcement greatly decreased between 1978 and 1998).

⁶⁰ See, e.g., BROADBENT, *supra* note 17, at 293-95; WONG, *supra* note 27, at 53-57.

⁶¹ BROADBENT, *supra* note 17, at 254.

⁶² In Japan, standing to sue is usually limited to direct victims; few legal avenues exist for interested citizens to protect their concerns in the environment and/or sustainable development. Kato & Ray, *supra* note 5, at 185. See also Kawashima, *supra* note 41, at 263-64.

⁶³ UPHAM, *supra* note 28, at 62.

⁶⁴ Kawashima, *supra* note 41, at 259; SHIGETO TSURU, *THE POLITICAL ECONOMY OF THE ENVIRONMENT: THE CASE OF JAPAN 149-50* (1999).

⁶⁵ TSURU, *supra* note 64, at 92-95.

⁶⁶ See, e.g., Schreurs, *supra* note 36, at 147-48.

C. *Japan's Response to International Pressure During the 1990s*

Global environmental concerns have begun to impact Japan. Since the 1970s, Japan has been internationally criticized because some of its industries, rather than cease polluting, simply moved to other countries with less strict environmental laws.⁶⁷ Japan has also adversely affected the global environment through its import of raw materials,⁶⁸ the extent and impact of its fishing industry,⁶⁹ and its disposal of waste in other countries.⁷⁰ Nor is it immune to environmental problems that arise outside its borders: Japan is increasingly concerned about issues like global warming and acid rain.⁷¹ In addition, international pressure from the global marketplace has encouraged Japanese businesses to seek voluntary compliance with international environmental standards.⁷²

Such global environmental pressure helped set the stage for Japan's recent environmental policy changes. Although a participant in the 1972 Stockholm Conference on the Environment,⁷³ Japan adopted a prominent role in international environmental discussions only after substantial international criticism in the late 1980s.⁷⁴ In 1989, Japan substantiated its endeavor to gain such a leadership role by pledging ¥300 billion toward environmental official development assistance.⁷⁵ In addition to funding international environmental initiatives, Japan began changing its domestic policies. After the 1992 United Nations Conference on Environment and Development,⁷⁶ for example, Japan allowed public comment on a national

⁶⁷ See Jonathan Taylor, *Japan's Global Environmentalism: Rhetoric and Reality*, 18 POL. GEOGRAPHY 535, 547-49 (1999); Jun Ui, *Overview*, in INDUSTRIAL POLLUTION IN JAPAN, *supra* note 30, at 11; *Japan Firms Asked to End Exports of "Dirty" Technology*, BUS. WORLD, June 20, 2002, LEXIS, News Group File.

⁶⁸ See, e.g., WONG, *supra* note 27, at 65.

⁶⁹ See, e.g., R.R. CHURCHILL & A.V. LOWE, THE LAW OF THE SEA 299-300 (3d ed. 1999).

⁷⁰ YOSHIDA, *supra* note 12, at 49-51.

⁷¹ Elizabeth Economy & Miranda A. Schreurs, *Domestic and International Linkages in Environmental Politics*, in THE INTERNATIONALIZATION OF ENVIRONMENTAL PROTECTION, *supra* note 36, at 5-6.

⁷² Japanese businesses have focused on earning voluntary certification under the International Standards Organization's ("ISO") 14000-series environmental standards. JETRO, *The Changing Service Industries of Japan* 39, <http://www.jetro.go.jp/it/e/pub/changing2000/> (last visited Feb. 26, 2003). More information about the ISO standards is available at <http://www.iso.ch/iso/en/iso9000-14000/iso14000/iso14000index.html> (last visited Feb. 26, 2003).

⁷³ WONG, *supra* note 27, at 47.

⁷⁴ *Id.* at 47-50. See also Schreurs, *supra* note 36, at 150-51.

⁷⁵ WONG, *supra* note 27, at 48. See also Asako Murakami, *Japan Shares its Antipollution Expertise*, JAPAN TIMES ONLINE, Oct. 26, 2002, <http://www.japantimes.co.jp/cgi-bin/getarticle.pl5?nn20021026b5.htm>. Official development assistance ("ODA") is discussed *supra* note 13.

⁷⁶ The 1992 United Nations Conference on Environment and Development (UNCED) is also known as the Earth Summit, or the Rio Conference. See Kato & Ray, *supra* note 5, at 179.

environmental policy draft for the first time ever.⁷⁷ Soon after, Japan also adopted a new Basic Environment Law.⁷⁸

The Basic Environment Law is an important precursor to Japan's recent environmental policy changes. This 1993 law's broad provisions seek to secure "the enjoyment and future success of environmental blessings;"⁷⁹ create a society that "ensur[es] sustainable development with [a] reduced environmental load;"⁸⁰ and to actively promote conservation of the global environment through international cooperation.⁸¹ To implement these principles, the law outlines the responsibility of the state, local governments, corporations, and the people;⁸² however, it has been criticized for a lack of public participation.⁸³ While some viewed the law as too abstract to be successfully implemented,⁸⁴ its mandate for future government action⁸⁵ is being realized through legislation passed since 1997.

D. Japan's Environmental Problems Today

Despite an increasingly global focus on environmental problems, Japan still faces numerous domestic issues. Such concerns include issues like the disposal of excessive waste,⁸⁶ the widespread presence of dioxins,⁸⁷ potential nuclear contamination,⁸⁸ buried chemicals left from World War II,⁸⁹ buildings built with toxic compounds,⁹⁰ and polluted soil,⁹¹ water,⁹² and

⁷⁷ WONG, *supra* note 27, at 49.

⁷⁸ Kankyō kihonō [The Basic Environment Law], Law No. 91 of 1993, <http://www.env.go.jp/en/lar/blaw/ch1.html> (last visited Feb. 26, 2003). For more discussion of this law, see Kawashima, *supra* note 41, at 248-53.

⁷⁹ The Basic Environment Law, *supra* note 78, art. 3.

⁸⁰ *Id.* art. 4.

⁸¹ *Id.* art. 5.

⁸² *Id.* arts. 6-9.

⁸³ WONG, *supra* note 27, at 49.

⁸⁴ Kawashima, *supra* note 41, at 252.

⁸⁵ The Basic Environment Law, *supra* note 78, art. 11.

⁸⁶ Kazuhiro Ueda & Harumi Koizumi, *Reducing Household Waste: Japan Learns from Germany*, ENVIRONMENT, Nov. 1, 2001, LEXIS, News Group File. See also OECD, *supra* note 6, at 105-28.

⁸⁷ *Osaka Towns Face Long Haul to Solve Dioxin Problem*, *supra* note 8; *Record-High Concentrations of Dioxin Detected in Osaka*, *supra* note 8.

⁸⁸ YOSHIDA, *supra* note 12, at 28-29; *High Court Nullifies Approval of Monju Reactor Program*, JAPAN TIMES ONLINE, Jan. 28, 2003, at <http://www.japantimes.co.jp/cgi-bin/getarticle.pl5?nn20030128a1.htm>.

⁸⁹ Mari Yamaguchi, *War-time Toxins Lurk Underfoot*, JAPAN TIMES ONLINE, Jan. 28, 2003, at <http://www.japantimes.co.jp/cgi-bin/getarticle.pl5?nn20030128b6.htm>.

⁹⁰ Eriko Arita, *Sick Building Syndrome Hits Schools: Invisible Menace Threatens Kids' Health*, JAPAN TIMES ONLINE, Jan. 4, 2003, at <http://www.japantimes.co.jp/cgi-bin/getarticle.pl5?nn20030104b1.htm>.

⁹¹ Chester Dawson, *Pollution: Digging up Trouble in Japan*, BUS. WK., Jan. 8, 2001, LEXIS, News Group File.

air.⁹³ In addition, some problems thought solved, like rice tainted with cadmium, have reappeared.⁹⁴ Like many post-industrial countries, Japan is finding that such environmental problems are caused by a combination of political, economic, and social factors not readily solved through technical fixes.⁹⁵ These problems are exacerbated by their diffusion through both space and time: contamination is widespread and the harm may linger into the future.⁹⁶

III. FROM 1997 TO 2003: JAPAN'S NEW PHASE IN ENVIRONMENTAL POLICY

In 1989, one commentator suggested that only a severe environmental catastrophe could give the Japanese government the necessary incentive to enter a new phase of environmental policy.⁹⁷ However, Japan has recently made significant changes to its environmental policy without the catalyst of catastrophe. These changes have been prompted by both international and domestic concerns and opportunities.

Along with the international criticism that encouraged more thorough cooperation on environmental issues,⁹⁸ international innovations have been adopted in Japan.⁹⁹ One example is the German Extended Producer Responsibility Law, which requires manufacturers to pay for all production and disposal costs associated with a product and its packaging.¹⁰⁰ Another example is the U.S. Toxic Release Inventory Law that requires firms to report information on the use, storage, and release of hazardous chemicals.¹⁰¹ After these laws were passed, the Organisation for Economic Cooperation and Development ("OECD"), an organization known for its

⁹² *Mitsubishi Firms Conceal Water Contamination at Osaka Projects*, KYODO NEWS SERV., Oct. 8, 2002, LEXIS, News Group File.

⁹³ *Hyogo Residents Seek Mediation in Air Pollution Row*, JAPAN ECON. NEWSWIRE, Oct. 15, 2002, LEXIS, News Group File (residents seeking to enforce vehicle emissions settlement). Part IV of this Comment explores three of these issues—excessive waste, regulation of dioxin, and industrially contaminated soils—in more detail.

⁹⁴ *Cadmium Fears Crop Up in Rice Fields*, NIKKEI WKLY., Mar. 26, 2001, LEXIS, News Group File.

⁹⁵ BARRETT & THERIVEL, *supra* note 4, at 27.

⁹⁶ See Adam & Van Loon, *supra* note 10, at 7.

⁹⁷ Weidner, *supra* note 2, at 498.

⁹⁸ Schreurs, *supra* note 36, at 150-51. See also *supra* note 74 and accompanying text.

⁹⁹ See, e.g., Paul R. Portney & Robert N. Stavins, *Introduction to PUBLIC POLICIES FOR ENVIRONMENTAL PROTECTION 2-3* (Paul R. Portney & Robert N. Stavins eds., 2000).

¹⁰⁰ For more discussion of this law, see James Salzman, *Symposium on Population Law: Sustainable Consumption and the Law*, 27 ENVTL. L. 1243, 1274-77 (1997).

¹⁰¹ Portney & Stavins, *supra* note 99, at 3.

emphasis on uniform regulations that affect trade,¹⁰² encouraged their adoption in other member countries.¹⁰³

On a national level, Japan's long-lasting economic downturn has shaken the government's historic stability¹⁰⁴ and led to general reform.¹⁰⁵ These reforms have re-emphasized concern for environmental issues.¹⁰⁶ This emphasis is exemplified by the transformation of the Environmental Agency into the Ministry of Environment in 2001,¹⁰⁷ a move that ostensibly placed environmental issues on an equal footing with economic concerns.¹⁰⁸ In addition, the marketing of "green" products and services is seen as an excellent economic opportunity.¹⁰⁹ Although smaller businesses are less interested in environmental issues,¹¹⁰ many large companies have recognized the importance of a pro-environmental image to better compete in the international marketplace.¹¹¹ Accordingly, more Japanese companies have sought certification of international environmental standards than companies from other countries.¹¹² Along with the persistent environmental problems

¹⁰² JOHN BRAITHWAITE & PETER DRAHOS, *GLOBAL BUSINESS REGULATION* 276 (2000).

¹⁰³ OECD, *supra* note 6; MINISTRY OF ECONOMY, TRADE AND INDUSTRY ("METI") & MINISTRY OF ENVIRONMENT ("MoE"), *MANUAL FOR POLLUTION RELEASE AND TRANSFER REGISTRY ("PRTR") RELEASE ESTIMATION METHODS* 197 (2001) <http://www.env.go.jp/en/topic/prtr/manual/index.html> (last visited Feb. 26, 2003) [hereinafter PRTR Manual]. See also *infra* note 139 and accompanying text.

¹⁰⁴ The Liberal Democratic Party lost power for the first time since World War II in 1993, but regained power in 1994 in a coalition government by promising reform. GERALD L. CURTIS, *THE LOGIC OF JAPANESE POLITICS: LEADERS, INSTITUTIONS, AND THE LIMITS OF CHANGE* 20-21 (1999). The subsequent coalition governments have continued to be reform-minded in many areas of law. *Id.* at 21.

¹⁰⁵ Under the adage of "share the pain," Prime Minister Koizumi finally instituted sweeping government reforms in 2001 to realign the government's role and establish a system with more effective political leadership. Cabinet Office of Japan, *The First Step in Changing Japan: Reform Work Schedule—A Road Map for Reform of the Japanese Economy*, <http://www5.cao.go.jp/shimon/2001/0926pamphlet-e.pdf> (last visited Feb. 26, 2003) [hereinafter Cabinet Report].

¹⁰⁶ *Id.*

¹⁰⁷ Kankyōshō setchihō [Environment Ministry Law], Law No. 101 of 1999 (effective 2001).

¹⁰⁸ See, e.g., Kato & Ray, *supra* note 5, at 158-60. See also discussion *supra* note 48.

¹⁰⁹ See, e.g., Cabinet Report, *supra* note 105.

¹¹⁰ WONG, *supra* note 27, at 65 ("These medium- and small-sized Japanese firms find little to be interested in the international market because they produce mainly for the domestic market where green consumption is still insignificant.")

¹¹¹ *Id.* at 68.

¹¹² The International Standards Organization's ("ISO") 14000-series standards, released in 1996, are the primary mechanisms for environmental certification. See, e.g., Kato & Ray, *supra* note 5, at 196. From 1996 to December 2000, 5222 enterprises acquired certification in Japan, as compared with 2400 in Germany and 1500 in Britain. *Id.* In order to be ISO-14000 certified, companies must review their practices and create an environmental management system that includes a comprehensive policy, review, and feedback system. MAKIKO YASHIRO & HARI SRINIVAS, *LEVELING THE PLAYING FIELD: ISO 14001 AND LOCAL GOVERNMENTS IN JAPAN* (U.N. Univ. Working Paper No. 5, 2000), available at <http://202.253.138.71/Scripts/dbml.exe?template=/ENV/publication1.dbm&type=1&ID=269> (last visited Feb. 26, 2003). Because a certified entity must simply strive for "continual improvement" in environmental management, some fear corporate "green washing": using the ISO label as an international sales tool without actual clean up of environmental problems. See, e.g., *ISO 14000: A Factsheet for NGOs*, ECOLOGIA (2002),

outlined above, these factors have given Japan the necessary incentive to enter a new phase in its environmental policy.

Beginning with the long-awaited adoption of the Environmental Impact Assessment Law in 1997,¹¹³ Japan's new environmental laws represent a shift away from sole reliance on command and control laws towards an emphasis on transparency and openness. New regulatory tools still rely on technical mandates, but now incorporate elements of public information and public participation. Instead of a presumption against public access to information, there are now statutes that protect the public's right to learn about environmental issues affecting them. Instead of the limited voice of local citizen protest movements, more national non-profit organizations are incorporating under now easier-to-meet legal standards. Instead of limited mechanisms for public input, public opinion is sought through environmental impact assessments. Combined, these legal changes represent a significant shift in Japan's environmental policy.

A. *Japan's New Environmental Statutes: Technical Fixes and a Regulatory Mix*

From May 1997 to January 2003, Japan amended or adopted nearly thirty new laws affecting environmental policy.¹¹⁴ The amended laws control traditional areas of environmental regulation like nitrogen dioxide emissions from cars¹¹⁵ and energy conservation.¹¹⁶ At the same time, the new laws address both emerging local and global concerns and range from a law governing sustainable agriculture¹¹⁷ to the world's first national global climate change law.¹¹⁸ Many of these new laws not only require technology-

available at <http://www.ecologia.org/ems/iso14000/resources/factsheets/iso14000.html> (last visited Feb. 26, 2003).

¹¹³ See discussion *infra* Part III.C.2.

¹¹⁴ For a listing of selected environmental legislation, see OECD, *supra* note 6, at 56-57, 277-85. Good information is available at the Ministry of Environment's web site, <http://www.env.go.jp/en> (last visited Feb. 26, 2003), and the United Nation's web site on Japan's efforts at sustainable development, <http://www.un.org/esa/agenda21/natinfo/countr/japan/natur.htm#agro> (last visited Feb. 26, 2003).

¹¹⁵ Jidōsha kara haishutsusareru chisso sankabutsu oyobi ryūshijō busshitsu no tokutei chiiki ni okeru sōryō no sakugen tō ni kansuru tokubetsu sochiō [Law Concerning Special Measures for Total Emission Reduction of Nitrogen Oxide from Automobiles in Specific Areas], Law No. 70 of 1992, *amended by* Law No. 77 of 2002, *discussed in* OECD, *supra* note 6, at 81-82.

¹¹⁶ Enerugī no shiyō no gōrika ni kansuru hōritsu [Law Concerning the Rationalization of Energy Use], Law No. 49 of 1979, *amended by* Law No. 145 of 2002, *discussed in* OECD, *supra* note 6, at 80.

¹¹⁷ Jizokusei no takai nōgyō seisaku hōshiki no dōnyū no sokushin ni kansuru hōritsu [Law Concerning the Promotion and Introduction of Sustainable Methods of Agricultural Production], Law No. 110 of 1999, *amended by* Law No. 51 of 2002, *discussed in* OECD, *supra* note 6 at 282.

¹¹⁸ Chikyū ondanka taisaku no sokushin ni kansuru hōritsu [Law Concerning the Promotion of Measures to Cope with Global Warming], Law No. 117 of 1998, *amended by* Law No. 61 of 2000, <http://www.env.go.jp/en/lar/warming/index.html> (tentative translation) (last visited Feb. 26, 2003).

based standards similar to those under the 1970s era laws, but also mandate public access to information. For example, the emission standards under the Dioxin Control Law¹¹⁹ work in conjunction with the Pollution Release and Transfer Registry Law's mandate for public access to information about a company's release of hazardous substances.¹²⁰ Another example is the Soil Contamination Law's mandate for the clean up of industrial soil contamination and public disclosure requirement.¹²¹ Other laws take a more proactive approach. For example, the new recycling laws seek to regulate behavior and prevent future problems with waste management.¹²² This effort is further bolstered by a legal mandate for the government to purchase "green products."¹²³ Although each individual law focuses narrowly on clean up or prevention of particular problems, the new laws collectively signify an important change in Japan's environmental policy. New requirements for public information and participation reinforce this change.

B. *Public Access to Information*

Historically, public access to information has been limited in Japan.¹²⁴ Key government decisions have not required formal hearings or preparation of a record.¹²⁵ At the same time, enforcement has primarily been through informal "administrative guidance"¹²⁶ and negotiated agreements.¹²⁷ While these tools have been credited with encouraging faster and less adversarial clean up of environmental problems,¹²⁸ they have also been criticized for a lack of institutional review, arbitrary or discriminatory application, vulnerability to political influence, potential conflicts with statutory objectives, and possible incompatibility with international commerce and

¹¹⁹ See discussion *infra* Part IV.B.

¹²⁰ The PRTR Law is discussed *infra* notes 139 to 144 and accompanying text.

¹²¹ See *infra* notes 249, 252 and accompanying text.

¹²² See discussion *infra* Part IV.A.

¹²³ Kuni tō ni yoru kankyō butsuhin no chōtatsu no suishin tō ni kansuru hōritsu [Law Concerning Promotion of the Procurement of Eco Friendly Goods & Services by the State and Other Entities], Law No. 100 of 2000, <http://www.env.go.jp/en/lar/green/index.html> (last visited Feb. 26, 2003) [hereinafter The Green Procurement Law].

¹²⁴ WONG, *supra* note 27, at 51.

¹²⁵ GRESSER ET AL., *supra* note 25, at 232.

¹²⁶ Michael K. Young, *Judicial Review of Administrative Guidance: Governmentally Encouraged Consensual Dispute Resolution in Japan*, 84 COLUM. L. REV. 923 (1984) ("administrative guidance occurs when administrators take action of no coercive legal effect that encourages regulated parties to act in a specific way in order to realize some administrative aim."); BARRETT & THERIVEL, *supra* note 4, at 16.

¹²⁷ Ridgley, *supra* note 58.

¹²⁸ Kazumasu Aoki & John W. Cioffi, *Poles Apart: Industrial Waste Management Regulation and Enforcement in the United States and Japan*, in ADVERSARIAL LEGALISM 44-46 (Robert A. Kagan & Lee Axelrand eds., 2000).

foreign relations.¹²⁹ The use of administrative guidance has allowed public officials to maintain an “almost overwhelming legal presumption” that has protected the “integrity of the system from public intrusion.”¹³⁰ Although the 1993 Administrative Process Act was meant to promote administrative clarity and fairness, some argue that it simply codified the status quo.¹³¹ However, new laws are shifting the custom towards public access to information held by both the government and private companies.

After more than twenty years of debate and adoption of similar laws by local governments,¹³² the Diet adopted a national information disclosure law in 1999.¹³³ Meant to “ensur[e] that the government is accountable to the people for its various operations,”¹³⁴ this law requires that government agencies release all information except that concerning individuals, corporations, administrative decisions, criminal investigations, public and national security, and “certain administrative operations.”¹³⁵ Public interest in this law was immediate: more than four thousand disclosure requests were filed in the first few weeks of operation.¹³⁶ While the release of information has been slow,¹³⁷ it has been asserted that “[t]he government is cleaning up its act by virtue of the fact that there’s scrutiny at all.”¹³⁸

Along with access to government-held information, information from individual companies is becoming more transparent. As of 1999, the Pollutant Release and Transfer Register (“PRTR”) requires companies to submit information about chemical releases that are hazardous to human

¹²⁹ GRESSER ET AL., *supra* note 25, at 234.

¹³⁰ *Id.* at 232.

¹³¹ Gyōsei tetsuzukihō [The Administrative Process Act], Law No. 88 of 1993, *discussed in* Kawashima, *supra* note 41, at 257-58. *See also* Tom Ginsberg, *System Change? A New Perspective on Japan’s Administrative Procedure Law*, THE MULTIPLE WORLDS OF JAPANESE LAW: DISJUNCTIONS AND CONJUNCTIONS 107-131 (Tom Ginsberg et al. eds., 2001).

¹³² *See* David Schultz, *Japan’s Information Disclosure Law: Why a Law Full of Loopholes is Better Than No Law at All*, 27 LAW IN JAPAN 128, 131-35 (2001); Lawrence Repeta, *Local Government Disclosure Systems in Japan 4* (The National Bureau of Asian Research, Seattle, 1999), http://www.nbr.org/publications/executive_insigth/no16/index.html (last visited Feb. 26, 2003).

¹³³ Gyōsei kikan no hoyūsuru jōhō no kōkai ni kansuru hōritsu [Law Concerning Disclosure of Information Held by Administrative Agencies], Law No. 42 of 1999 (effective Apr. 1, 2001), *translated in* 3 ASIAN-PAC. L. & POL’Y J. 7 (2002) [hereinafter Information Disclosure Law].

¹³⁴ Schultz, *supra* note 132, at 147.

¹³⁵ *Id.* at 153.

¹³⁶ Lawrence Repeta & David M. Shultz, *Japanese Government Information: New Rules for Access*, NAT’L SEC. ARCHIVE (May 23, 2002), <http://www.gwu.edu/~nsarchiv/nsa/foia/japanfoia.html> (last visited Feb. 26, 2003).

¹³⁷ *See, e.g.*, Mark Magnier, *The World Sunshine Law Sheds Little Light on Big Bureaucracy, Japan: Citizens Seeking Government Documents Under New Disclosure Measure are Disappointed that Officials are Stymieing Them*, L.A. TIMES, Apr. 15, 2002, 2002 WL 2468617.

¹³⁸ Valerie Reitman, *World Perspective Government Japan Opens to Scrutiny Under Freedom of Information Law*, L.A. TIMES, Apr. 15, 2001, 2001 WL 2478311.

health or the environment.¹³⁹ After the government publishes a compilation of the quantity of hazardous materials released, members of the public may request information about releases from individual companies.¹⁴⁰ With its provisions becoming effective over time, the PRTR will eventually include all major polluting industries like manufacturing, power production, and mining.¹⁴¹ In response to increased consumer access to such information, industry is expected to reduce its use and production of hazardous chemicals.¹⁴² After the United States passed a similar law in 1986, release of toxic chemicals dropped from 10.4 billion pounds in 1987 to 2.577 billion pounds in 1997.¹⁴³ A similar effect is expected in Japan.¹⁴⁴ Combined, the information disclosure and the PRTR laws provide public access to information to a degree previously unknown.

C. *Avenues of Public Input*

Except for the citizen protest movements of the 1970s, public input in policy decisions has also been limited.¹⁴⁵ Recent legislation, however, increased avenues for public participation and comment in two ways: first, by making it easier for non-profit organizations to incorporate, and second, by implementing a long-awaited environmental impact assessment process.

1. *The Re-creation of Japanese Non-Profit Organizations*

Despite the strength of the 1970s citizen protest movements, non-profit organizations ("NPOs") are only now becoming legally established in Japan.¹⁴⁶ Local citizen movements helped change Japan's environmental

¹³⁹ Tokutei kagaku busshitsu no kankyō e no haishutsuryō no haaku tō oyobi kanri no kaizen no sokushin ni kansuru hōritsu [Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances], Law No. 86 of 1999, amended by Law No. 173 of 2000, <http://www.env.go.jp/en/lar/law-prtr/index.html> (last visited Feb. 26, 2003) [hereinafter Pollution Release and Transfer Registry ("PRTR"), or PRTR Law]. See also METI & MoE, OUTLINE OF PRTR, <http://www.env.go.jp/en/topic/prtr/outline.pdf> (last visited Feb. 26, 2003); PRTR Manual, *supra* note 103.

¹⁴⁰ PRTR Manual, *supra* note 103, at 197-98.

¹⁴¹ *Id.* See also OECD, *supra* note 6, at 45. Categories of affected businesses and designated chemical substances are listed in the Cabinet Order for Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management, Cabinet Order No. 138 of 2000, <http://www.env.go.jp/chemi/prtr/e-co.html> (last visited Feb. 26, 2003).

¹⁴² See OECD, *supra* note 6, at 199.

¹⁴³ ROBERT V. PERCIVAL ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY 378 (3d ed. 2000).

¹⁴⁴ OECD, *supra* note 6, at 199.

¹⁴⁵ See, e.g., BARRETT & THERIVEL, *supra* note 4, at 75-76.

¹⁴⁶ Akio Doteuchi, *The Growing Role of Nonprofit Organizations as Society Matures: Issues and Possibilities in the Next Century*, NLI RES. INST. 21 (2000), <http://www.nli-research.co.jp/eng/resea/life/li0007a.html> (last visited Feb. 26, 2003).

policy during the 1970s,¹⁴⁷ but the apparent environmental success of that decade “stole the thunder of many local anti-pollution movements.”¹⁴⁸ Unlike the movements in Europe or the United States, Japanese movements never coalesced into effective non-profit organizations.¹⁴⁹ Those that did survive remained relatively limited in scope, number, and legal status.¹⁵⁰ By the late 1990s, such groups had faded so significantly that people felt that citizens’ movements could not affect environmental policy.¹⁵¹

Citizen input through non-profit organizations is likely to become easier since the passage of a new NPO law.¹⁵² Prior to 1998, the standards to become a non-profit corporation were prohibitive: a ¥300 million endowment (around US\$3 million), an annual budget of ¥30 million, an activity plan, a board of “publicly esteemed individuals,” the often reluctant approval of a national ministry, and a purpose of “promot[ing] the general interest.”¹⁵³ The 1998 standards removed many of these requirements and now allow local governments to legally recognize groups as NPOs.¹⁵⁴ Although tax exemption for NPOs remains under debate,¹⁵⁵ more than six thousand NPOs have incorporated since 1998.¹⁵⁶ While NPOs are expected to develop the political power and voice necessary to influence Japanese policy,¹⁵⁷ the extent of their impact remains unclear.¹⁵⁸

2. *Environmental Impact Assessment*

In addition to NPO organization, public comment on projects with an environmental impact is expected to change environmental policy.¹⁵⁹ Although other countries like the United States passed environmental impact

¹⁴⁷ See discussion *supra* Part II.A.

¹⁴⁸ BROADBENT, *supra* note 17, at 254. See also UPHAM, *supra* note 28, at 62.

¹⁴⁹ See, e.g., Mason, *supra* note 36, at 193-96; WONG, *supra* note 27, at 69-74.

¹⁵⁰ Although Japan had some four-thousand citizen groups, only twenty-eight were legally recognized as “non-profit public interest corporations” in 1994. WONG, *supra* note 27, at 70-71; BROADBENT, *supra* note 17, at 347.

¹⁵¹ BROADBENT, *supra* note 17, at 286.

¹⁵² Tokutei hieiri katsudō sokushinhō [Law to Promote Designated Nonprofit Activities], Law No. 7 of 1998, amended by Law No. 173 of 2000, http://www.jcie.or.jp/civilnet/civil_soc_monitor/npo_law.html (last visited Feb. 26, 2003) (unofficial translation).

¹⁵³ WONG, *supra* note 27, at 70-71; Doteuchi, *supra* note 146.

¹⁵⁴ Doteuchi, *supra* note 146, at 21.

¹⁵⁵ *Id.* at 19.

¹⁵⁶ See, e.g., Japan NPO Center, *NPO Answers*, at <http://www.jnpoc.ne.jp/English/answers/answers.html> (last visited Feb. 26, 2003).

¹⁵⁷ *Id.*

¹⁵⁸ Information about NPOs in Japan is available at websites like the Japan NGO Center for International Cooperation, <http://www.janic.org>; the Japan NPO Center, <http://www.jnpoc.ne.jp>; and the Japan Center for International Exchange, <http://www.jcie.or.jp>.

¹⁵⁹ OECD, *supra* note 6, at 52.

assessment laws more than thirty years ago, Japan's attempts to pass similar national legislation failed.¹⁶⁰ While the government held hearings on contentious issues like the placement of nuclear facilities, no one really expected citizens to participate in making the decision.¹⁶¹ Rather, such events have been described as "explanatory hearings."¹⁶² Although local prefectures adopted environmental impact assessment requirements and the national government developed general guidelines,¹⁶³ the Diet did not formalize any legal parameters until 1997.¹⁶⁴

The 1997 Environmental Impact Assessment ("EIA") Law provides a significant avenue for public input into national environmental policy.¹⁶⁵ Enacted after more than thirty years of debate,¹⁶⁶ an EIA is now required for large projects like the construction of roads, power plants, railways, dams, airports, industrial complexes, and waste disposal sites.¹⁶⁷ For such projects, environmental impacts must be assessed through surveying, predicting and assessing the likely impact of the project, studying possible environmental protection measures, and assessing the impact of those measures.¹⁶⁸ Important for fostering public participation, a project proponent must release documents for public review in the affected area,¹⁶⁹ accept and review public comments,¹⁷⁰ and wait until after a public announcement to implement a project.¹⁷¹ The EIA law also strengthens the role of the Ministry of the Environment by requiring consideration of the Minister's opinion.¹⁷²

Although this law has already been applied to ninety-seven projects,¹⁷³ its effectiveness remains uncertain. Because it applies only prospectively,¹⁷⁴ controversial projects commenced before the enactment

¹⁶⁰ See, e.g., UPHAM, *supra* note 28, at 60.

¹⁶¹ *Id.* at 66.

¹⁶² *Id.* at 61.

¹⁶³ BARRETT & THERIVEL, *supra* note 4, at 101-07.

¹⁶⁴ OECD, *supra* note 6, at 52.

¹⁶⁵ Kankyō eikyō hyōkahō [Environmental Impact Assessment Law], Law No. 81 of 1997, <http://www.env.go.jp/en/lar/assess/index.html> (last visited Feb. 26, 2003) [hereinafter EIA Law].

¹⁶⁶ See, e.g., BARRETT & THERIVEL, *supra* note 4, at 93-148 (reviewing the efforts in Japan to pass a national environmental assessment law); TSURU, *supra* note 64, at 150-57.

¹⁶⁷ EIA Law, *supra* note 165, art. 2, ¶2(1)-(2).

¹⁶⁸ *Id.* art. 2, ¶(1)(a)-(c).

¹⁶⁹ A project proponent must release the scoping document, any draft environmental impact statements ("EIS"), and the final EIS. *Id.* arts. 7, 16, 27. A scoping document must include information about the project's proponent; the location, purpose, content, and general conditions of the project; the items to be considered through the EIA; and the methods to be used in making determinations. *Id.* art. 5.

¹⁷⁰ *Id.* arts. 8, 14(1)(1).

¹⁷¹ *Id.* art. 31(1).

¹⁷² *Id.* art. 24.

¹⁷³ OECD, *supra* note 6, at 52.

¹⁷⁴ EIA Law, *supra* note 165, art. 54.

date are not covered.¹⁷⁵ Further, NPOs have suggested that overall evaluation has been difficult because larger projects are often split into smaller pieces¹⁷⁶ that do not require assessments of environmental plans or programs.¹⁷⁷ Regardless, like the NPO Law, the EIA process may become a powerful tool to implement change in environmental policy.¹⁷⁸

IV. LEGISLATIVE IMPACTS EXAMINED: WASTE DISPOSAL, DIOXIN CONTROL, AND INDUSTRIAL SOIL CONTAMINATION

The recent changes in Japan's environmental law could be illustrated by exploring various topics.¹⁷⁹ However, three issues of recent concern—waste disposal, dioxin control and industrial soil contamination—have been highlighted by the press, the national government, and the OECD. Although much has been written about Japan's waste and dioxin problems,¹⁸⁰ the extent and impact of industrial soil contamination is only just beginning to be understood.¹⁸¹ Despite the varying levels of knowledge, the recent legislative changes impact all three of these areas of concern.

A. *Excessive Waste*

Despite the costly fact that it imports more than ninety percent of its resources,¹⁸² Japan still produces a prodigious amount of garbage.¹⁸³ Each year, Japan produces an average of 51 million tons of municipal waste,¹⁸⁴ 22% of which ends up in landfills.¹⁸⁵ Four hundred million tons of non-municipal waste is also generated, including sewage sludge, slag, livestock excrement, and construction debris.¹⁸⁶ Although municipal waste is 18%

¹⁷⁵ OECD, *supra* note 6, at 180.

¹⁷⁶ *Id.* at 180.

¹⁷⁷ *Id.* at 180.

¹⁷⁸ *Id.* at 52.

¹⁷⁹ Other issues of concern include water pollution, particularly from sewage; air pollution, particularly emissions from cars and particulate matter; and preservation of biodiversity and natural resources. *Id.* at 84, 59, 130.

¹⁸⁰ See, e.g., YOSHIDA, *supra* note 12; OECD, *supra* note 6, at 105-28.

¹⁸¹ Dawson, *supra* note 91.

¹⁸² See YOSHIDA, *supra* note 12, at 5 (outlining the quantity of material used in Japan and from where it comes).

¹⁸³ TSURU, *supra* note 64, at 57; Yoshiro Hoshino, *Japan's Post Second World War Environmental Problems*, in *INDUSTRIAL POLLUTION IN JAPAN* 64, 65-66 (Jun Ui ed., 1992). Ironically, Japan was extremely efficient with its natural resources up until the twentieth century. SUSAN B. HANLEY, *EVERYDAY THINGS IN PREMODERN JAPAN* 51-73, 104-128 (1997) (describing innovations in the use of scarce natural resources like wood and the disposal of potential problems like human sewage).

¹⁸⁴ OECD, *supra* note 6, at 108.

¹⁸⁵ *Id.* at 106.

¹⁸⁶ *Id.* at 110.

below the average per capita for OECD countries,¹⁸⁷ Japan suffers from extremely limited disposal space.¹⁸⁸ Meanwhile, citizen protests have blocked the construction of new landfills¹⁸⁹ and rising disposal costs have substantially increased problems with illegal dumping.¹⁹⁰

In order to reduce this waste problem, Japan is endeavoring to create a "recycling based society."¹⁹¹ While the 1970 Waste Management and Public Cleansing Law¹⁹² and the 1991 Law for Promotion of Utilization of Recyclable Resources¹⁹³ provided standards and incentives for recycling, Japan has only recently extended its focus from conventional waste to addressing all materials generated by human activities.¹⁹⁴ Accordingly, the government now mandates waste recovery from food,¹⁹⁵ household appliances,¹⁹⁶ containers and packaging,¹⁹⁷ construction and demolition materials,¹⁹⁸ and computers.¹⁹⁹ A bill for recycling automobiles is also under

¹⁸⁷ *Id.* at 108.

¹⁸⁸ According to the OECD, Tokyo has only the equivalent of 0.8 year left in its municipal landfill. *Id.* at 126.

¹⁸⁹ Ueda & Koizumi, *supra* note 86.

¹⁹⁰ Illegal dumping resulted in more than 460,000 square meters of PCB, lead, and dioxin contaminated waste on Teshima Island in Japan's Seto Inland Sea. YOSHIDA, *supra* note 12, at 32-33.

¹⁹¹ Junkangata shakai keisei suishin kihonohō [The Basic Law for Establishing the Recycling-Based Society], Law No. 110 of 2000, *discussed in OECD, supra* note 6, at 124 [hereinafter The Basic Recycling Law].

¹⁹² Haikimono no shori oyobi seishō ni kansu hōritsu [Waste Management and Public Cleansing Law], Law No. 137 of 1970, *amended by* Law No. 45 of 2002 (latest amendment), *translated at* <http://www.env.go.jp/en/lar/wastelaw/01.pdf> (last checked Feb. 26, 2003). Amendments in 1991, 1997, 2000, and 2002 tightened requirements for operation of waste management facilities and imposed financial obligations for landfill maintenance after site closure. OECD, *supra* note 6, at 113, 124.

¹⁹³ Shigen no yūkōna riyō no sokushin ni kansuru hōritsu [Law for Promotion of Utilization of Recyclable Resources], Law No. 48 of 1991, *amended by* Law No. 1 of 2002, *discussed in OECD, supra* note 6, at 106.

¹⁹⁴ See OECD, *supra* note 6, at 106, citing The Basic Recycling Law, *supra* note 191.

¹⁹⁵ Shokuhin junkan shigen no saisei riyō tō no sokushin ni kansuru hōritsu [Food Recycling Law], Law No. 176 of 2001, *discussed in OECD, supra* note 6, at 106.

¹⁹⁶ Tokutei kateiyō kiki sai-shōhinkahō [The Law Requiring the Recycling of Home Appliances], Law No. 97 of 1998, *discussed in OECD, supra* note 6, at 106, 118.

¹⁹⁷ Yōki hōsō ni kakaru bunbetsu shūshū oyobi sai-shōhinka no sokushin tō ni kansuru hōritsu [The Law for the Promotion of Sorted Collection and Recycling of Containers and Packages], Law No. 112 of 1995, *discussed in OECD, supra* note 6, at 113. This law is similar to Germany's Extended Producer Responsibility Law, *discussed supra* note 100 and accompanying text.

¹⁹⁸ Kensetu kōji ni kakaru shizai no sai-shigenka tō ni kansuru hōritsu [Construction Material Recycling Law], Law No. 104 of 2000, *amended by* Law No. 45 of 2002, *discussed in OECD, supra* note 6, at 106.

¹⁹⁹ Pāsonaru konpyūta no seizō tō no jigyō o okonau mono no shiyōzai pāsonaru konpyūta no jinushi kaishū oyobi sai-shigenka ni kansuru handan no kijun to narubeki jiko o sadameru shōrei. [Manufacturer's Standard for Conservation and Private Owner Reuse of Personal Computers], METI & MoE, Ministerial Ordinance No. 1 of 2001.

discussion.²⁰⁰ These laws establish recycling quotas, taxes, and assessment fees on garbage producers,²⁰¹ increase enforcement,²⁰² encourage investment in recycling technology,²⁰³ and require the government to buy products made with recycled material.²⁰⁴

The effects of Japan's waste reduction efforts are already noticeable. Between 1990 and 1998, overall municipal waste production stabilized, recycling ratios increased from 5% to 12%, and the amount of waste put in landfills was reduced by 32%.²⁰⁵ Overall, the recovery rate for non-municipal waste has also increased from 38% in 1990 to 42% in 1998.²⁰⁶ Some of the recycling laws had an immediate effect. For example, under the requirements of Appliances Recycling Law, thirty-eight new facilities recovered 2.7 million appliances in the first four months.²⁰⁷ The need for recycling facilities is encouraging redevelopment; for example, NKK Japan turned an under-utilized steel factory into a recycling plant for used household appliances.²⁰⁸ However, Japan is still generating waste products; for example, plastic waste production nearly doubled between 1990 and 1998.²⁰⁹ Also problematic is that waste producers, like consumers, do not yet pay the true cost of disposal.²¹⁰ While the effort to build a "recycling based society" is helping Japan reduce its waste, deeply ingrained patterns of societal consumption change slowly.²¹¹

²⁰⁰ See *Japanese Officials Question Car Recycling Bill*, ENVTL. INFO. NETWORKS, INC., Apr. 8, 2002, LEXIS, Newsletter Database; Hiroaki Sugimoto, *Automobile Recycling Law Needs a Lot of Work*, ASAHI SHIMBUN, May 21, 2002, LEXIS, News Group File.

²⁰¹ JETRO, *Facts and Current Issues in the Japanese Environment-Related Industry and Market 3*, Nov. 18, 2001, http://www.jetro.org.au/reports/other/enviro_cover.pdf (last visited Feb. 26, 2003).

²⁰² The Prime Minister's Office promulgated enforcement regulations for the Waste Management and Public Cleansing Law, *supra* note 192, in 1976. See Prime Minister's Office, Order Nos. 5-6 of 1976. The Welfare Ministry updated these regulations under the Welfare Ministry Ordinance No. 68 of 1997, *discussed in* OECD, *supra* note 6, at 106.

²⁰³ *Waste Not, Want Not: New Alchemy*, ASAHI SHIMBUN, Aug. 24, 2002, www.asahi.com/english/business/K2002082400224.html.

²⁰⁴ The Green Procurement Law, *supra* note 123, *discussed in* OECD, *supra* note 6, at 107.

²⁰⁵ OECD, *supra* note 6, at 106, 108-12.

²⁰⁶ *Id.* at 117.

²⁰⁷ *Id.* at 113.

²⁰⁸ *Waste Not, Want Not: New Alchemy*, *supra* note 203. See also *New Technologies Provide Hope for Nation's Garbage Woes*, JAPAN TIMES ONLINE, June 27, 2001, <http://www.japantimes.co.jp/cgi-bin/getarticle.pl5?nn20010727b4.htm> (discussing new technologies to reduce waste by incinerating it with a gasification melting system or recycling plastics into polyester); *City in Saitama Cements Plan for "Ultimate" Trash Disposal*, ASAHI SHIMBUN, Nov. 29, 2002, 2002 WL 20831680 (discussing the City of Hidaka's plans to use an incineration process that turns household garbage into cement).

²⁰⁹ OECD *supra* note 6, at 117. At the same time, recovery rates also increased from 26% to 46% of the generated plastic waste. *Id.*

²¹⁰ OECD, *supra* note 6, at 106.

²¹¹ See, e.g., BARRETT & THERIVEL, *supra* note 4, at 141.

B. Japan's Dioxin Problem

Dioxin is another pervasive problem in Japan.²¹² A compound that causes cancer and birth defects,²¹³ dioxin has been found in places as diverse as Osaka's ground-water²¹⁴ or Tokorozawa's vegetables.²¹⁵ Known sources of dioxin include many older or smaller incinerators, but even recently built facilities are not immune to dioxin problems.²¹⁶ For example, the Nose Incinerator, built in 1988, was shut down in 1997 for heavily polluting Osaka and its environs with dioxin.²¹⁷ After widespread negative publicity associated with this problem, the government disclosed the full extent of the dioxin problem:²¹⁸ reminiscent of its pollution problems of the 1960s, Japan is currently more polluted with dioxin than any other country in the world.²¹⁹

In response to growing public concern, Japan has adopted increasingly strict standards governing dioxin releases.²²⁰ In 1990, the Environment Agency initially set guidelines for the reduction of dioxin emissions.²²¹ The 1997 amendments to the Air Pollution Control Law and the Waste Management and Public Cleansing Law included stricter regulations.²²² However, these regulations lacked any penalty for exceeding emission standards.²²³ Even so, between 1997 and 1999, four thousand small waste incinerators that could not comply with the standards shut down²²⁴ and dioxin emissions decreased by more than sixty percent.²²⁵ Finally, after continued public outcry, the Diet passed the world's strictest dioxin standards in 1999.²²⁶

²¹² See also YOSHIDA, *supra* note 12, at 46-49. Dioxin is a generic name for a group of chlorinated chemical compounds known to cause health problems if present in sufficient quantities. *Id.*

²¹³ OECD, *supra* note 6, at 201.

²¹⁴ See, e.g., Yukio Ochi, *Dioxin Legacy Lingers in Incinerator's Wake*, JAPAN TIMES ONLINE, Jan. 26, 2002, <http://www.japantimes.co.jp/cgi-bin/getarticle.pl5?nn20020126b2.htm>.

²¹⁵ See, e.g., Xuemei Bai, *Industrial Relocation in Asia: A Sound Environmental Strategy?*, ENVIRONMENT, June 1, 2002, LEXIS, News Group File.

²¹⁶ Ochi, *supra* note 214.

²¹⁷ *Id.*

²¹⁸ See YOSHIDA, *supra* note 12, at 48.

²¹⁹ *Id.* at 46.

²²⁰ OECD, *supra* note 6, at 73, 201.

²²¹ *Id.* at 201.

²²² *Id.*

²²³ *Id.*

²²⁴ *Id.* at 65.

²²⁵ *Id.* at 73.

²²⁶ Daiokishin-rui taisaku tokubetsu sochihō [The Law Concerning Special Measures Against Dioxins], Law No.105 of 1999, <http://www.env.go.jp/en/lar/dioxin/law.pdf> (provisional translation) (last visited Jan. 31, 2003) [hereinafter Dioxin Control Law].

The new dioxin law epitomizes Japan's new regulatory mix. Technical emission standards²²⁷ combine with a requirement for citizen cooperation.²²⁸ New regulations, reducing releases to one-eightieth the amount previously allowed,²²⁹ now provide for strict enforcement mechanisms that include fines and possible imprisonment.²³⁰ Government guidelines also emphasize the need for accurate public information disclosure.²³¹ Even without government-mandated disclosure, however, citizens may now use the PRTR law to determine how much dioxin their local incinerator produces, and then act accordingly.²³² Although the long-term impact of these laws is not yet known, the decreasing dioxin levels are encouraging.²³³

C. *Soil Contamination and the Clean Up of Industrial Sites*

While pollution of agricultural lands has long been a concern,²³⁴ industrial soil contamination is now becoming a critical issue.²³⁵ Due to the drop in land prices during the economic recession, industrial land is being redeveloped into non-industrial uses.²³⁶ In addition, potential investors, particularly those familiar with the U.S. "Superfund" liability law, have become increasingly wary of buying property without a detailed soil analysis.²³⁷ To the frustration of the public, such redevelopment and analyses have turned up widespread soil contamination.²³⁸ In Osaka, for example, residents accused Mitsubishi of a breach of trust by not disclosing arsenic and selenium discovered below a recently built apartment and hotel

²²⁷ *Id.* arts. 8-11.

²²⁸ *Id.* art. 5.

²²⁹ *Id.* arts. 8-11. Regulations clarifying these standards are effective December 1, 2002. *Reducing Dioxin is Target: New Rules Give Incinerator Law Added Bite*, JAPAN TIMES ONLINE, Dec. 1, 2002, <http://www.japantimes.co.jp/cgi-bin/getarticle.pl5?nn20021201a2.htm>.

²³⁰ Dioxin Control Law, *supra* note 226, arts. 44-45.

²³¹ *Basic Guidelines of Japan for the Promotion of Measures Against Dioxins*, Sec. 1.IV.7 (1999), <http://www.env.go.jp/en/pol/dioxin/basic.pdf> (last visited Feb. 26, 2003).

²³² See discussion about the PRTR Law, *supra* Part III.B.

²³³ *Reducing Dioxin is Target: New Rules Give Incinerator Law Added Bite*, *supra* note 229.

²³⁴ In the 1890s, the Watarase River, contaminated with the Ashio copper mine's tailings, flooded and deposited a toxic mix of chemicals onto nearby rice fields. GRESSER ET AL., *supra* note 25, at 4-7. The Diet addressed this kind of pollution under Nōyōchi no dojō no osen bōshi tō ni kansuru hōritsu [Agricultural Land Soil Pollution Prevention Law], Law No. 139 of 1970, available at <http://www.env.go.jp/en/lar/aglaw/law.pdf> (last visited Feb. 26, 2003).

²³⁵ See, e.g., Dawson, *supra* notes 9, 91; *Soil Pollution Cases on the Increase*, JAPAN TIMES, Feb. 27, 2002, LEXIS, News Group File; *Soil-Cleaning Costs to be Reflected in Value of Real Estate*, KYODO NEWS SERV., Aug. 28, 2002, WL Japan News File.

²³⁶ Dawson, *supra* notes 9, 91.

²³⁷ See, e.g., Charles Smith, *JAIC Moves from Venture Capital to Distressed Investing*, DAILY DEAL, Aug. 31, 2002, LEXIS, News Group File.

²³⁸ *Id.*

complex.²³⁹ Such incidents are not isolated. In contrast to the estimated 43,000 listed “hazardous” sites in the United States,²⁴⁰ Japan hosts at least 574 confirmed sites and as many as 93,000 potentially polluted sites in an area smaller than California.²⁴¹ Although local governments had previously enacted some soil pollution laws,²⁴² national management of soil contamination at former industrial sites was “rather weak” until recently.²⁴³

In May 2002, the Diet passed the Soil Contamination Law.²⁴⁴ Effective in January 2003, this law provides for measures to detect and clean up industrial soil contamination in order to protect the public health.²⁴⁵ First, local officials may appoint an accredited entity to assess sites where hazardous material was formerly used²⁴⁶ and designate contaminated areas.²⁴⁷ If this assessment reveals soil contamination, the current landowner may be ordered to clean it up.²⁴⁸ The local government may also require landowners to assess and clean up any contamination on their land prior to redevelopment or sale.²⁴⁹ Although the responsibility for clean up costs usually belongs to the current landowner, an innocent owner—one who did not contribute to the existing pollution—may demand clean up and removal costs from a polluting party.²⁵⁰ If an innocent landowner is a victim of “midnight dumping” and the perpetrator cannot be found, a local government may use a national fund to pay for clean up costs.²⁵¹ In general, landowners must disseminate public information about contaminated land.²⁵²

Although this law may help clean up soil contamination, the liability for current landowners comes at a time when the value of Japanese real estate is uncertain. At peak valuation during the late 1980s, real estate

²³⁹ *Mitsubishi Firms Conceal Water Contamination at Osaka Projects*, *supra* note 92.

²⁴⁰ Mark Reisch, *Superfund and Brownfields in the 107th Congress*, IB 10078 Cong. Res. Serv. CRS-4 (Aug. 5, 2002).

²⁴¹ See, e.g., Dawson, *supra* notes 9, 91.

²⁴² *Residential, Factory Sites Yield 117 Soil Pollution Cases*, JAPAN TIMES ONLINE, Apr. 19, 2001, at <http://www.japantimes.co.jp/cgi-bin/getarticle.pl5?nn20010419c4.htm>.

²⁴³ OECD, *supra* note 6, at 45. The OECD suggested the first step to addressing this was the creation of clear liability rules and a legal framework to systematically detect and remediate contaminated sites. *Id.*

²⁴⁴ *Dojō osen taisakuho* [Soil Contamination Law], Law No. 53 of 2002 (effective Jan. 2003) (provisional translation by Grant Smith on file with author) [hereinafter *Soil Contamination Law*].

²⁴⁵ *Id.* art. 1.

²⁴⁶ *Id.* art. 2. Article 6 sets out the requirements for an accredited entity. *Id.* art. 6.

²⁴⁷ *Id.* art. 3.

²⁴⁸ *Id.* art. 4.

²⁴⁹ *Id.* art. 4.

²⁵⁰ *Soil Contamination Law*, *supra* note 244, art. 4(8).

²⁵¹ *Fees from Owners of Polluted Land, Businesses Set*, JAPAN ECON. NEWSWIRE, Nov. 7, 2002, LEXIS, News Group File. The Ministry of Environment and Keidanren (the Federation of Economic Organizations) agreed this fund would be created from a ¥700 per truckload fee paid by owners or operators on whose land contaminated soil has been dumped.

²⁵² *Soil Contamination Law*, *supra* note 244, art. 7(35).

values were four times greater than those of the United States.²⁵³ Even prior to the discovery of soil contamination, however, land prices had steadily declined every year since 1991.²⁵⁴ As these dropping land prices and the economic downturn made investment in Japan more affordable, foreign direct investment increased from less than one percent in 1991²⁵⁵ to record highs by the year 2000.²⁵⁶ As a result, “bargain hunting foreigners” have been “snapping up cheap loan portfolios” backed by real estate without appreciating the potential liability from contaminated soil.²⁵⁷ Such surprise is likely exacerbated by the difficulty in conducting due diligence²⁵⁸ because records of previous owners and land uses have historically not been kept.²⁵⁹ Because current owners face such significant liability for polluted soils—an estimated one hundred billion dollars in potential clean up costs²⁶⁰—property is no longer as prized an asset.²⁶¹

V. THE CHANGES AND IMPACTS OF JAPAN’S NEW REGULATORY MIX

Since the 1997 passage of the Environmental Impact Assessment Law, Japan’s environmental policy has significantly shifted. Japan is now seeking to prevent environmental problems, rather than to just clean them up. For example, the “recycling based society” promotes recycling of numerous kinds of material in order to prevent the need for waste disposal.²⁶² Ideally, an environmental impact assessment will also help identify and prevent environmental problems before they occur.²⁶³

Laws that would have been once solely technical now include elements of public awareness and participation. The Dioxin Control Law, for example, mandates strict emission controls similar to those required by the 1970 Air Pollution Law.²⁶⁴ Although enforcement of these standards

²⁵³ CURTIS, *supra* note 104, at 20–21.

²⁵⁴ *Land Prices Continue to Fall*, JAPAN TIMES ONLINE, Jan. 10, 2003, at <http://www.japantimes.co.jp/cgi-bin/getarticle.pl5?nb20030110a8.htm>.

²⁵⁵ MANUEL CASTELLS, *THE RISE OF THE NETWORK SOCIETY* 99 (1996).

²⁵⁶ In the year 2000, foreign direct investment in Japan reached \$28.28 billion. Japan External Trade Organization, *Summary, JETRO White Paper on Foreign Direct Investment: Growth in Global Foreign Direct Investment Slows* 22 (2002), <http://www.jetro.org.au/sydney/depts/research/wpfdi2002.pdf> (last visited Feb. 26, 2003).

²⁵⁷ Dawson, *supra* notes 9, 91.

²⁵⁸ Due diligence is a prospective buyer’s or broker’s investigation and analysis of a target company, a piece of property, or a newly issued security. BLACK’S LAW DICTIONARY 468 (7th ed. 1999)

²⁵⁹ Dawson, *supra* notes 9, 91.

²⁶⁰ *Id.*

²⁶¹ *Id.* See also *Soil-Cleaning Costs to be Reflected in Value of Real Estate*, *supra* note 235.

²⁶² The Basic Recycling Law, *supra* note 191.

²⁶³ EIA Law, *supra* note 165, art. 1.

²⁶⁴ Air Pollution Control Law, *supra* note 44.

still requires government action,²⁶⁵ the public must now be provided with accurate information under both the dioxin law and through the Pollution Release and Transfer Registry system.²⁶⁶ Likewise, the Soil Contamination Law not only mandates clean up according to the standards set by the Ministry of the Environment, but also requires public disclosure of contaminated areas.²⁶⁷ Because of the requirements for both technical "fixes" and public disclosure of information, these new environmental laws may better promote long-term environmental protection.

General laws governing the public's access to information and right to participate in decision making should also help Japan deal with its environmental issues. Information held by the government, once inaccessible to the public, is now available through the Information Disclosure Law.²⁶⁸ Information held by private companies is now also accessible.²⁶⁹ Access to public information will allow more individual and collective scrutiny and input into environmental processes, especially through the increasing numbers of non-profit organizations.²⁷⁰ Instead of an ad hoc system that presumes no public participation, the Environmental Impact Assessment process mandates public involvement with large projects.²⁷¹ Although citizen standing to sue remains limited,²⁷² public outrage and protest have been effective in changing policy decisions affecting Japan's environment before and can do so again.²⁷³

The resurgence of Japan's environmental legislation has also created a market for environmental goods and services.²⁷⁴ Government agencies are now required to buy goods made from recycled materials.²⁷⁵ Companies have changed their facilities to accommodate environmental mandates; for example, manufacturers required to take back used appliances have reinvested in underutilized facilities.²⁷⁶ Environmental services are also extremely important. For example, the ¥1.623 billion pollution abatement equipment industry was already one of Japan's largest manufacturing sectors

²⁶⁵ Dioxin Control Law, *supra* note 226, arts. 44-45.

²⁶⁶ See PRTR Law, *supra* note 139; PRTR Manual, *supra* note 103.

²⁶⁷ Soil Contamination Law, *supra* note 244, art. 7(35).

²⁶⁸ See discussion *supra* Part III.B.

²⁶⁹ See discussion *supra* Part III.B.

²⁷⁰ See discussion *supra* Part III.C.1.

²⁷¹ See discussion *supra* Part III.C.2.

²⁷² See *supra* note 62 and accompanying text.

²⁷³ See discussion *supra* Part II.A.

²⁷⁴ See, e.g., Cabinet Report, *supra* note 105.

²⁷⁵ The Green Procurement Law, *supra* note 123.

²⁷⁶ *Waste Not, Want Not: New Alchemy*, *supra* note 203.

by 1995.²⁷⁷ Although the Soil Pollution Law impacts the value of property, it is predicted to further increase the need for environmental services.²⁷⁸ More than two hundred general contractors have already entered the soil remediation field²⁷⁹ while Japanese trade organizations continue to broadcast the possibility of a lucrative market to foreign investors.²⁸⁰

VI. CONCLUSION

The environmental policy changes that have occurred from 1997 to 2003 reflect the general trend towards transparency and openness in Japan.²⁸¹ Where Japanese environmental policy once emphasized a technical regulatory framework to clean up existing pollution, it now also focuses on prevention. A historical lack of available public information has evolved into a more transparent system, where the public may access both government records and some kinds of privately held information. Instead of a policy process closed to public input except through protest, the new environmental laws require a degree of openness and public participation heretofore unseen in Japan. These changes are bolstered by the new ease for interested groups to become legally recognized NPOs, international pressure for environmental action, and Japan's desire to resurrect its economy. Because of the difficulty in cleaning up modern environmental problems, Japan's new laws are not comprehensive solutions. Over the long run, however, the new laws should allow Japan to more readily deal with its modern environmental problems.

²⁷⁷ Ryo Fujikura, *Integration of Environment into Sectoral Politics*, in *URBAN AND INDUSTRIAL MANAGEMENT IN DEVELOPING COUNTRIES: LESSONS FROM JAPANESE EXPERIENCE* 13 (Wilfrido Cruz et al. eds., 1998).

²⁷⁸ *Id.* See also Masaharu Asaba, *New Market for Soil, Water Decontamination*, DAILY YOMIURI, Dec. 23, 2001, LEXIS, News Group File.

²⁷⁹ Estimates range from ¥2.3 to ¥60 trillion to survey and clean up polluted sites. See *Soil-Cleaning Costs to be Reflected in Value of Real Estate*, *supra* note 235; Asaba, *supra* note 278.

²⁸⁰ See, e.g., JETRO, *supra* note 201.

²⁸¹ See, e.g., Jennifer Amyx, *The Ministry of Finance and the Bank of Japan at the Crossroads*, in *JAPANESE GOVERNANCE: BEYOND JAPAN, INC.* (Jennifer Amyx & Peter Drusdale eds., 2003) (discussing finance reform); Matthew Senechal, *Reforming the Japanese Commercial Code: A Step Towards An American-Style Executive Officer System In Japan?*, 12 PAC. RIM L. & POL'Y J. 535 (2003) (discussing recent corporate governance reforms in the Japanese Commercial Code).