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I. Introduction

The hazardous waste disposal problem is increasingly a concern of industrialized nations. There are between 5000 and 50,000 inactive or abandoned hazardous waste sites in the United States, 1200 to 2000 of which are believed to pose "an immediate threat to the health of millions of Americans." 2 Approximately eighty billion pounds of hazardous wastes are generated each year—350 pounds per U.S. citizen—an amount that has been increasing by approximately ten percent per year. 3 Importantly, only ten percent of the hazardous wastes generated in the United States have been disposed of safely and properly. 4

Because the exact scope of the hazardous waste disposal problem is unknown, the environmental and health risks posed by disposal cannot be easily ascertained. Difficulties in linking specific hazardous wastes to specific health effects 5 and the long latency period of many diseases related to hazardous substances 6 further complicate the picture. Nonetheless, a number of incidents have served notice that improper hazardous waste disposal poses a serious and long-term threat to human health and the environment.

Hooker Chemical dumped millions of tons of chemical wastes into the Love Canal in New York, exposing local residents to a variety of harmful substances and resulting in legal claims exceeding two

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3 S. Epstein, L. Brown & C. Pope, Hazardous Waste in America 7 (1982) [hereinafter Epstein]; see also Shaw, Cihon, & Myers, supra note 2, at 491.
4 Epstein, supra note 3, at 7; Shaw, Cihon, & Myers, supra note 2, at 491-92: "Until recently, this waste was routinely disposed of in the cheapest way possible with little or no regard for the environment." Disposal methods used in the past frequently amounted to no more than dumping the waste into rivers, ponds, and streams, or burying them in empty fields. "[A]s one state official observed of the historic disposal practices, "[a]ll it took was a backhoe."" Houck, This Side of Heresy: Conditioning Louisiana's Ten-Year Industrial Tax Exemption Upon Compliance with Environmental Laws, 61 TUL. L. REV. 289, 327 (1986).
5 See infra notes 52-58 and accompanying text.
6 See infra note 53 and accompanying text.
billion dollars.7 The toxic carcinogenic pesticide kepone was dumped and carried into the James River, causing in excess of 500 million dollars in damages.8 Dumping of wastes in rural areas is “extensive and destructive,”9 and inadequate or improper storage of liquid wastes poses a serious threat to groundwater.10 Exposure to various hazardous substances has been linked to “cancer, genetic mutation, birth defects, miscarriages, and damage to the lungs, liver, kidneys, or nervous system.”11

Thus, although the health and environmental damages caused by hazardous wastes cannot be quantified with any degree of exactitude, the problem is clearly a significant one, and the need to respond, urgent. The U.S. political and judicial systems, however, have shown an alarming lack of alacrity in responding to the hazardous waste crisis, particularly in terms of providing persons injured by hazardous substances with an adequate forum and remedy.

Congress has adopted two major legislative schemes to deal with the hazardous waste problem. The Resource Conservation and Recovery Act of 1976 (RCRA)12 created a “cradle-to-grave” program for “tracking of hazardous wastes through the production cycle from creation to disposal.”13 RCRA failed, however, to address the issue of improper disposal of wastes that occurred prior to adoption of the statute. Thus, in 1980 Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA),14 which established a “superfund” to be used to finance cleanup of waste sites and “imposed cleanup liability on specified parties.”15 As part of a compromise to ensure passage of CERCLA, however, provisions of the Senate bill authorizing a federal cause of action for persons injured by hazardous substance disposal were deleted from the Act. Instead, a “study group” was created to examine the issue of victim compensation.16

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7 Epstein, supra note 3, at 8, 38, 92-101.
8 Id. at 8, 38.
9 Id. at 67.
11 Id. at 1462.
13 Developments, supra note 10, at 1471.
15 Developments, supra note 10, at 1464; Epstein, supra note 3, at 272-73.
Although the Superfund Study Group recommended sweeping changes in the tort system as applied to toxic injury cases and the establishment of an administrative compensation system for victims of toxic torts, the proposals have not been enacted. Plaintiffs in hazardous waste cases are thus left to struggle with the tort system, with little success.

The tort system has been a wholly inadequate forum for resolving disputes arising in the hazardous waste arena. "[J]ustice for victims has been inconsistent, inequitable, and slow. Insolvency has jeopardized compensation in many cases. A torrent of litigation has forced companies to file for bankruptcy..." Plaintiffs and defendants alike have found the tort system inefficient and unfair. The system has failed to adjust to a problem "unprecedented in its scientific and medical complexity and in its potential for major health and economic impact."

Although the United States has been unwilling to adapt its legal system to meet the challenge of this crisis, other countries have taken substantive steps towards establishing more just and effective compensation schemes. Japan, responding to an outbreak of environmental disasters, enacted an administrative plan for compensating pollution victims. New Zealand has embraced a no-fault administrative scheme that completely replaces the common law in cases of personal injury resulting from accidents.

This Comment will analyze the shortcomings of U.S. tort law in the hazardous waste injury area in light of the goals of the tort system. The administrative approaches of Japan and New Zealand will be examined, and the possible application of these approaches in the United States will be discussed. Finally, recommendations will be


17 See Compensation for Exposure to Hazardous Substances: Hearings Before the Subcomm. on Investigation and Oversight, House Comm. on Science and Technology, 97th Cong., 2d Sess. 151-52 (1982) (statement of Frank Grad, Reporter for Superfund Study Group) [hereinafter 1982 Hearings]. The compensation scheme recommended by the Study Group provided for no-fault compensation of toxic injuries using relaxed standards of causation. Victims would, under the second "tier" of the system, also be able to pursue suits at common law. The Study Group recommended that statutes of limitations and liability rules be "modernized" in order to make recovery at common law less difficult. Frost, supra note 16, at 297-98.


19 1982 Hearings, supra note 17, at 142.


made concerning the future course of action to be taken in the United States.

II. Tort Litigation in the United States

The tort law system utilized in the United States arguably attempts to reach four major goals. The first goal is to compensate the victims of wrongs committed by identifiable, culpable parties. The second goal is to achieve "justice" and operate "fairly" as between the parties involved. The tort system's third major goal is to attempt to reduce the incidence of wrongful conduct (i.e. to deter wrongdoers). Finally, tort law seeks to accomplish the preceding goals so as to further the broader interests of society. Serious questions exist, however, about whether the tort system is capable of achieving its objectives within the toxic injury context.

A. Compensation Goal

For a number of reasons, tort law has been unable to fully or adequately compensate the victims of hazardous substance-related injuries. The primary difficulties facing victims are barriers to entering the legal system and shortcomings in state common law, especially in terms of proving causation.

1. Entry Problems

   a. Litigation Costs/Access to the Judicial System

   The costs associated with pursuing a toxic tort case are extraordinarily high. Due to the complexity of the scientific and medical issues being litigated and the need for expensive expert testimony to establish causation, the cost of litigation is often "a very substantial barrier" to plaintiffs. Many plaintiffs simply cannot afford to pursue their cases because of the high costs of bringing a toxic tort suit, which often exceed $100,000 not including attorney fees. The

24 Roisman, supra note 22, at 78.
25 [T]ort law must both calculate accident costs and internalize those costs to individuals and entities that can control the magnitude of accident costs either by avoiding accidents altogether or by reducing their consequences. Theoretically, tort law forces internalization of all accident costs considered in the damage calculation process to individuals or entities who, by virtue of a judicial finding of "fault," are believed to be in a position to control accident costs.
27 See infra notes 51-58 and accompanying text.
availability of contingent fee arrangements is not likely to remove the cost barrier. Even where the attorney accepts a contingent fee and advances litigation costs to the plaintiff, the plaintiff must eventually repay the costs so advanced. Given that chances for success on the merits are small in most toxic torts cases, plaintiffs and attorneys alike will no doubt find such an arrangement unsatisfactory.

b. Premature/Unfair Settlements

One consequence of the enormous expense associated with hazardous waste litigation is the likelihood that plaintiffs will accept premature and insufficient settlements, again eliminating the prospect of full compensation. The immediate and overwhelming financial burdens facing potential plaintiffs—court costs, attorney fees, and medical expenses, among others—skew the “calculus of settlement” in toxic tort cases, encouraging victims to settle early for less than full compensation. Defendants, able to hire more “impressive” counsel and more familiar with the legal process, are often able to garner highly favorable settlements from victims unfamiliar with and terrified by the prospect of testifying at trial. Defendants also have greater access to information concerning the hazardous processes and substances involved. As a result, plaintiffs unaware of “potential chronic effects . . . may negotiate a settlement based [only] on the harm that has manifested itself to date.”

c. Unavailability of Class Actions

Plaintiffs might be able to avoid the problems of high cost and unequal bargaining power by initiating class action lawsuits. Unfortunately, class actions are almost always unavailable to toxic tort victims.

Rule 23 of the Federal Rules of Civil Procedure, which governs certification of class actions, has been adopted in substance by most states. Rule 23(a) requires, as prerequisites to a class action, that 1) the class be so large that “joinder of all members is impracticable,” 2) there are “questions of law or fact common to the class,” 3) the claims of the representative parties are typical of those of the class, and 4) the representative parties will adequately protect the


28 See infra notes 51-68 and accompanying text.


32 Trauberman, supra note 29, at 190-91.

33 Goldsmith, Pleadings and Discovery, in TOXIC TORTS, supra note 16, at 424 & n.45. Thirty-three states have adopted the substance of the federal rule. Id.
class' interests. Additionally, Rule 23(b) requires that one of the following conditions be met: 1) prosecution of individual actions by class members would create a risk of inconsistent or varying adjudications, or would be dispositive of or impair the rights or interests of class members not parties to the suit; or 2) the defendant has acted in a manner so as to justify final injunctive relief with respect to the class; or 3) common questions of law or fact "predominate over any questions affecting only individual members," and the class action is superior to other means of adjudicating the controversy. Moreover, best practicable notice of the class action must be made to absent members of the class.

Victims of toxic torts typically face several obstacles to class action certification. Generally, subsections (b)(1) and (b)(2) of Rule 23 are of limited use in toxic tort suits, leaving plaintiffs to attempt to gain certification under subsection (b)(3). Frequently, however, plaintiffs cannot meet the predominance and superiority requirements of (b)(3). Because victims may have been exposed to different wastes produced or disposed of by different companies over a long period of time, plaintiffs may rely on different theories of causation and fault, and there may be multiple defendants, "each defendant raising defenses possibly peculiar to it." Thus, courts have tended to disfavor 23(b)(3) certification of hazardous waste actions.

d. Lack of Federal Cause of Action

As noted above, a major obstacle to adequate compensation of victims of hazardous waste exposure is the lack of a federal statutory cause of action. Moreover, the Supreme Court has held that the major regulatory schemes in various environmental pollution areas have

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36 Id. 23(c)(2). Toxic tort victims are often unable to meet this notice requirement. Sobel, supra note 30, at 704.
37 Goldsmith, supra note 33, at 426-27.
38 Id. at 428.
39 See, e.g., Abed v. A.H. Robins Co., 693 F.2d 847 (9th Cir. 1982), cert. denied, 459 U.S. 1171 (1983)(reversing certification under 23(b)(3) of Dalkon Shield class action, on grounds that consolidated discovery and use of test cases superior to class action); Snyder v. Hooker Chems. & Plastics Corp., 104 Misc. 2d 735, 429 N.Y.S.2d 153 (N.Y. Sup. Ct. 1980)(denying class action certification of group of Love Canal victims, on grounds that reliance on different theories of liability rendered class suit unavailable); Ryan v. Eli Lilly & Co., 84 F.R.D. 290 (D.S.C. 1979)(denying certification of class action in DES suit, on grounds that length of exposure, reason for using drug, and state of art at time of consumption were different for different class members, thus removing predominance of questions of law and fact); see also Advisory Committee's Note to Proposed Amendments to Rules of Civil Procedure for the United States District Courts, 39 F.R.D. 69, 103 (1966)(stating that "mass accidents" are generally not certifiable under Rule 23(b)(3) due to "likelihood that significant questions, not only of damages but of liability and defenses to liability, would be present, affecting individuals in different ways.").
40 See supra note 16 and accompanying text.
"occupied the field," preempts traditional "federal common law" remedies for pollution-related injuries.\textsuperscript{41} Thus, plaintiffs must look to state common law theories for relief.

2. Problems with State Common Law

State law provides numerous potential causes of action for victims of toxic torts: negligence, nuisance, trespass, strict liability at common law,\textsuperscript{42} and statutory remedies for compensating victims in a few states.\textsuperscript{43} Although each of these causes of action has unique benefits and shortcomings, there are pervasive inadequacies in the tort system as a whole that "cut across doctrinal lines" and generally render the remedies ineffective.\textsuperscript{44}

\textit{a. Statutes of Limitations}

Statutes of limitations are the "most serious obstacle faced by toxic tort victims."\textsuperscript{45} Under traditional statutes, which start the judicial clock running at the time of the wrong or injury, toxic tort victims are often barred from bringing suit. "Because many diseases caused by toxic substances are characterized by lengthy latency periods in which the victim is unaware of any injury, those at risk from hazardous chemicals may not seek timely legal redress."\textsuperscript{46} Under the traditional rule, plaintiffs frequently find that the limitations period has run before they even discover that they have been injured.\textsuperscript{47}

In an attempt to ameliorate the harshness of the traditional rule, many states have adopted so-called "discovery rules" to be applied to limitations periods for injuries from hazardous waste exposure.\textsuperscript{48} Under these rules, the statute of limitations generally does not begin


\textsuperscript{43} See Johns & Seltzer, supra note 42, at 323-28. Alaska, California, Minnesota, Oregon, Pennsylvania, and South Carolina have all adopted such statutory programs. These plans, however, are "few in number and limited in scope." \textit{Id.} at 328.

\textsuperscript{44} Trauberman, \textit{supra} note 29, at 188-89.

\textsuperscript{45} Shaw, Cihon, \& Myers, \textit{supra} note 2, at 494.

\textsuperscript{46} Epstein, \textit{supra} note 3, at 279.


\textsuperscript{48} Thirty-nine states have adopted some form of "discovery rule." See Shaw, Cihon, \& Myers, \textit{supra} note 2, at 494-95 n.20.
to run until the plaintiff has "discovered" that he or she has been injured. These "discovery rules," however, have significantly divergent provisions regarding what constitutes "discovery" and when the statute of limitations begins to run. Some states begin to run the statute when the plaintiff actually discovers his or her injury, others when plaintiff should know of the injury or when the injury is "capable of ascertainment"; thirteen jurisdictions start the period of limitations running when plaintiff discovers or should have discovered the injury and its cause; only thirteen states adopt the most protective "discovery rule," that the limitations period begins to run when plaintiff discovers or should discover that he or she has an injury and has a cause of action.49

Even the emergence of the "discovery rule," therefore, may not be sufficient to save a plaintiff's cause of action. Plaintiffs will still be at the mercy of the formulation of the "discovery rule" adopted by the jurisdiction where they reside or where their injuries occurred, a fortuitous circumstance at best. Moreover, most of the so-called "liberal" limitations rules still bar plaintiffs who discover the fact of injury but are unable to pinpoint a specific cause for many years. "[E]ven if a plaintiff discovers her injury before it is time-barred, she may fail either to recognize the causal connection between her injury and past exposure to toxic waste or to identify a liable defendant before the time limitation has run."50

b. Proof/Causation Problems

Assuming that the toxic victim is able to identify the existence of an injury and its likely cause and bring suit before the operation of a time-bar, problems of proving the nature and cause of the injury and the culpability of the defendant will arise. Recovery in hazardous waste litigation depends on proving three things:

First, it is necessary to identify the particular hazardous waste that caused or threatened to cause the injury. Second, the responsible party... whose actions are an actual cause of the exposure to the harmful waste, must be identified. Third, the defendant's actions must be sufficiently connected with the injuries, so that the courts, as a policy matter, will hold the defendant liable.51

Proving each of these factors involves a number of difficulties.

i. Proving Injury from Hazardous Waste

Establishing that plaintiff's injury was caused by a particular hazardous substance involves extremely complex scientific and medical

49 See 1985 Hearings, supra note 47, at 426-28 for a list of which states have adopted which "discovery rule"; see also Developments, supra note 10, at 1607.

50 Developments, supra note 10, at 1605; see also Johns & Seltzer, supra note 43, at 331-32.

51 Epstein, supra note 3, at 275.
issues. In many cases, it is impossible to prove, to the degree required by most courts, the cause of plaintiff’s injuries. First, the origin of many chronic illnesses, and the link between hazardous wastes and these illnesses, is difficult to prove. The long latency periods of many toxic diseases further complicates the picture. As the time between exposure to the hazardous waste and manifestation of a related injury lengthens, causation becomes increasingly attenuated and uncertain.

Causation issues such as whether the claimant was in fact exposed to the toxic substance years before, what the circumstances of that exposure were, whether there were other exposures to the substance for which different persons bear responsibility, or whether there were exposures to other substances which contribute to the injury... arise, making proof of causation more burdensome.

As a result of these problems of proof, direct evidence of causation is often unavailable in toxic tort cases. Plaintiffs must instead rely on statistical evidence that establishes causation in correlative or probabilistic terms. One means of establishing this form of statistical proof is through the use of epidemiology, which is “the study of patterns of disease occurrence in populations and factors which influence those patterns.” Although the inapplicability of direct evidence in the toxic tort arena and the generally acknowledged accuracy of epidemiological studies has led some commentators to recommend that courts accept such indirect evidence, most courts have been unwilling to lower their standards of proof and allow statistical evidence to suffice as proof of causation.

Several developments, however, offer hope for toxic tort plain-

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52 Note, supra note 27, at 505. See Trauberman, supra note 29.

In cases involving chronic health effects... any of numerous factors may be the cause of the condition. Furthermore, because the relative contribution of genetic makeup and external environment to human health is difficult to determine, discerning the extent to which environmental contaminants contribute to any particular illness may be likewise difficult.

Id. at 181.


55 Trauberman, supra note 29, at 198.

56 McElveen & Eddy, supra note 54, at 38.


58 Trauberman, supra note 29, at 198; McElveen & Eddy, supra note 54, at 31.

While [epidemiologic]... evidence may also suggest causation in the individual case, statistical probability does not rise to the traditional “more-likely-than-not” standard of proof. Therefore, while it may be likely that a defendant in a toxic tort case caused an increased occurrence of injuries among a group of persons, the individual plaintiff may be unable to establish the element of causation necessary to recover.

Comment, supra note 57, at 234-35.
tiffs. First, several courts have demonstrated a willingness to accept and weigh statistical evidence on the issue of causation. Second, evidence from immune-system testing has recently been used successfully to establish causation in several toxic tort cases. It must be remembered, however, that the cost of obtaining epidemiological or immune-system evidence may still be prohibitive for most toxic tort victims, and whether widespread acceptance of relaxed standards of causation will occur remains to be seen.

ii. Identifying Responsible Defendants

Plaintiffs also face numerous hurdles in identifying the party or parties responsible for their injuries. "Lawsuits must name people, businesses, or other organizations as defendants. Even if victims can identify the chemical agent that caused their diseases, they still must show who was responsible for their exposure to that substance." This may be impossible:

A given dump site might contain several dozen kinds of hazardous waste, discarded over many years, from a hundred different generators. The site might have been under the control and management of several different owners or operators, who used levels of care ranging from recklessness to application of the best technology available. Moreover, many of the business entities responsible might have changed ownership or gone out of business. Finally, if one does determine that certain parties ought to be responsible, they may have insufficient assets to meet their obligations.

The problems are exacerbated in cases involving diseases with long latency periods.

iii. Proving Proximate Cause/Fault

Should plaintiff succeed in proving the causal connection between a particular defendant's hazardous agent and his or her injury, plaintiff must still establish that defendant caused the injury—that is, that defendant is culpable in some way.

Here again, traditional requirements can defeat recovery. A de-
fendant is held liable only if it is proven to be more likely than not that the defendant's action caused the plaintiff's injury. But a toxic tort plaintiff typically can show only a 'causal linkage' between the toxic substance to which he was exposed and his type of disease or affliction.65

Moreover, common law liability usually rests on a showing that defendant acted unreasonably in causing plaintiff's injury. This requirement is also very hard for plaintiffs to meet,66 because victims will rarely have access to evidence concerning defendants' actions, which may have occurred ten to twenty years earlier.67 Defendants may also be able to successfully escape liability by proving that their past actions conformed to the "state of the art" of waste handling and disposal at that time and were therefore not unreasonable.68

c. Recovering Damages

Even ultimate success on the merits does not guarantee that a plaintiff will be fully compensated under tort law.

Even after a victim has identified a substance and a potentially liable party, sometimes it is impossible to recover from that party. A company that once contaminated the environment may no longer exist; it may have declared bankruptcy or otherwise ceased to do business; or it may lack the financial resources to compensate victims fully.69

The success of a large number of plaintiffs may itself force the defendant into bankruptcy, "precluding full recovery on existing claims and any recovery on future ones."70

Overall, then, it appears that the tort system does not meet the goal of adequate compensation of victims of hazardous waste, nor will proposed modifications in the tort system remedy the shortcomings of that system.

B. Fairness Goal

1. Fairness to Plaintiffs

For the reasons discussed above, it can be argued that the tort system is "unfair" to plaintiffs who have been injured by wrongful conduct but cannot recover because of high standards of proof and causation and shortcomings in medical and scientific technology. Moreover, the lack of uniform handling of toxic waste cases by state courts is a further source of unfairness to plaintiffs. "One of the greatest inequities facing . . . victims is the great variability of state..."
law and procedure determining their chances of success . . . . Victims who happen to reside or be injured in Texas or New Jersey stand far greater chances of recovering . . . than someone with a substantially identical suit from South Dakota or Ohio.”

Further, damage awards tend to be “arbitrary and unfair to plaintiffs and defendants alike.”

2. Fairness to Defendants

The tort system also works inequities against defendants in toxic exposure cases. Operation of “discovery rules,” for example, may result in liability for use or disposal of a substance that was not known to be dangerous at the time. Where defendants have acted reasonably, based on information and technology available to them at the time of their action, imposition of liability may pose problems relating to equity:

Imposing liability on waste generators and disposers for past actions may be neither fair nor efficient, if doing so requires judges to hold defendants to today’s knowledge and standards rather than to the technological competence prevalent at the time of disposal. Where waste generators and disposers sincerely knew little about the dangerous nature of the waste they disposed or of the manner of disposal, it is hard to find them liable ex post.

Such a retroactive approach to liability “raises serious constitutional due process questions” and implicates “concepts of fairness and substantial justice.”

Importantly, many of the reforms proposed to ameliorate the problems associated with toxic tort litigation would, while making compensation of plaintiffs more likely, operate unfairly vis-a-vis defendants. Lowering standards of causation, shifting burdens of proof, and raising presumptions in favor of plaintiffs all suffer this disadvantage. “Little fairness results from shifting the losses from

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71 1985 Hearings, supra note 47, at 416. See supra note 49 and accompanying text for a discussion of the lack of uniformity in the area of state statutes of limitations.
72 Trauberman, supra note 29, at 201. See Luntz, supra note 31, at 745, for a discussion of the disparity of personal injury damage awards in Australia.
73 See supra notes 48-50 and accompanying text.
75 Note, supra note 63, at 583.

[R]etroactive laws are generally objectionable: We feel that a person is morally entitled to know in advance what legal character and consequences his acts have. A lawyer would emphasize that fairness, as for example partially embodied in notions like due process of law, typically requires that a person be apprised of the way in which the law will respond to his behavior. A philosopher might suggest that ‘ought’ implies ‘can’; it is morally unfair to tell a person that he ought to do something if he cannot (because, as it develops, he has already done it).

innocent plaintiffs to innocent defendants. Proof of causation is a well established element of tort law because it reflects the fundamental notion that it is not fair to hold a party responsible for harm he has not caused.” 77

Given the uncertainties concerning the causes of toxic-related injuries 78 and the identity of responsible parties, 79 revising the tort system so that it better achieves the compensation goal may detract strongly from the fairness objective.

C. Deterrence Goal

Tort law attempts to reduce the incidence of harmful conduct by allocating the costs of such conduct to the party deemed to be at fault in causing the harm. 80 The tort system attempts to force these parties to internalize the costs of harmful conduct so as to encourage “choice of the lesser of safety precaution costs and future liability costs.” 81 Theoretically, the potential of extensive tort liability will induce major hazardous waste producers to reduce improper disposal and improve safety so as to avoid liability costs. For a number of reasons, however, the tort system is an imperfect mechanism of cost internalization and therefore fails to meet its deterrent objectives in the hazardous substance field.

First, many costs are not internalized because many victims of hazardous waste either do not bring suit at all or go uncompensated or undercompensated. 82 Other costs are not internalized because “many victims . . . settle for compensation well below the actual costs of an accident.” 83 The problems of proving fault and establishing causation also distort the internalization process.

Indeed, causation problems have led to an almost complete breakdown in the tort system as a mechanism for internalizing accident costs . . . . 84

Second, many costs of hazardous waste injuries are re-externalized through pricing and insurance mechanisms. Companies can always pass on liability costs to consumers by simply raising prices. Typically, though, liability costs are re-externalized through liability insurance. Deterrence could still be effected, despite the existence of liability insurance, if insurance premiums adequately reflected the

77 Garrett, supra note 23, at 10,175.
78 See supra notes 52-53 and accompanying text.
79 See supra notes 62-64 and accompanying text.
80 See supra note 24.
82 Trauberman, supra note 29, at 211.
83 Pierce, supra note 24, at 1296. See supra notes 29-32 and accompanying text.
84 Id. at 1298.
risks of tort liability. "The problem in practice is that insurance costs reflect only crudely, if at all, variations in risks of accidents among firms and accidents." 85

The cost of premiums tends to be too high or too low. Accurate prediction of claims is made difficult by the nature of toxic torts:

[T]he amount of damage that current and past uses of toxic substances ultimately will cause cannot be predicted. Scientific uncertainty is one such reason; knowledge of the carcinogenic properties of toxic chemicals is in its infancy. The synergistic effects of chemicals that have been mixed together during storage in waste dumps are even less clear. In addition, since the latency period between exposure to chemicals and manifestation of disease is frequently long—twenty years is not unusual—it is very difficult to predict how risky a particular activity that uses toxic substances will turn out to be. 86

The complexity of liability rules, the uncertainty of litigation results, and the "paucity of claims and the slow pace of tort litigation" further retard the ability of insurance companies to properly peg premiums. 87 "As a result, the incentive for safety theoretically created by the tort system is all but eliminated." 88

Recently, the tendency of insurance companies has been to respond to the "sharp increase in environmental liability litigation" by withdrawing from the environmental liability market altogether, or writing policies that are "prohibitively costly." 89 Many firms have responded to this situation by emphasizing short-term consequences over long-term consequences, discounting "at an irrational level many safety risks whose consequences are not likely to be manifested" until many years in the future. 90 These firms have chosen to "go bare," operating without liability insurance and risking bankruptcy in the event of significant hazardous waste liability. 91 Thus, rather than responding to increased accident costs by attempting to reduce those costs, as tort theory anticipates, these firms have chosen to avoid all current costs of accidents and to expose themselves to potentially staggering future costs. 92

Third, tort liability deterrence fails to impact many problems that result in improper, illegal, and injurious use and disposal of hazardous wastes. The prospect of liability cannot, for instance, over-

85 Id.
86 Abraham, supra note 81, at 127.
87 Pierce, supra note 24, at 1299-1300.
88 Id. at 1299.
89 Developments, supra note 10, at 1575-76.
90 Pierce, supra note 24, at 1301.
91 Developments, supra note 10, at 1585; see also Abraham, supra note 81, at 128. The "going bare" phenomenon is "widespread among, and limited to, small and medium-sized firms." Pierce, supra note 24, at 1302-03. Given the fact that many of these firms fail each year anyway, it may be "perfectly rational" for such firms to ignore potential liability that will not arise for many years. Id.
92 Pierce, supra note 24, at 1301.
come problems of inadequate disposal technology. The lack of adequate disposal facilities, which often encourages illegal or "midnight" dumping of wastes,\textsuperscript{93} also cannot be cured by imposing liability on waste producers. Nor can tort liability deter unscrupulous "midnight" dumpers, "lured by the promise of quick profits,"\textsuperscript{94} from disposing wastes in the cheapest way possible. In fact, there is some evidence to indicate that attempts to impose greater liability on dumpers will encourage more illegal dumping in an attempt to circumvent the high costs of liability.\textsuperscript{95}

D. Societal Interests

The toxic tort liability system should further the broader goals established by society. In at least two major areas, however, the tort system as presently composed serves to impede these greater societal interests.

First, as more people are exposed to hazardous wastes, injured, and seek redress, the court system may become too overloaded to function efficiently, or to function at all.\textsuperscript{96} The problem of court clog will only worsen should courts relax standards of causation and embrace novel theories of liability. The resulting crush on the judicial system could prove disastrous: "[i]f we do not halt the current trend toward more and more litigation, and do not find better means for resolving these problems, the whole process will choke on itself, leaving our environment despoiled, those injured uncompensated, our courts hopelessly overburdened and our economy gravely threatened."\textsuperscript{97}

Second, an increase in successful litigation of toxic injury claims could seriously disadvantage the economy. Once causation relating to a particular disease or hazardous substance becomes established, defendants will face "extremely high damage awards."\textsuperscript{98} Actual or potential damage awards may force some companies to opt for bankruptcy.\textsuperscript{99} Large firms that keep detailed records may be desirable targets of plaintiffs seeking to reach deep pockets. Thus, especially should "market share" liability\textsuperscript{100} theories continue to gain adher-
ents, these firms could be subject to "double exposure" to suits and damages. Given the potentially devastating effect of hazardous wastes on human health and the environment, the concomitant impact of widespread liability on the U.S. economy could be equally disastrous.

In sum, the tort system falls short of achieving any of its identified goals. Importantly, many of the goals appear to be mutually exclusive. Lowering barriers to achieve victim compensation will produce results unfair to defendants, threaten the economy, and clog the courts. Failing to lower these barriers means continued inadequacy of compensation of victims. In light of these problems, examination of the solutions found in other countries is not only justified, but necessary.

III. Compensation Schemes in Japan and New Zealand

A. Japanese Compensation Law

In 1973, Japan enacted a comprehensive law designed to compensate the victims of pollution-related injuries. The law had its genesis in three significant factors: 1) a deepening environmental crisis in Japan; 2) judicial activism in fashioning redress for victims; and 3) the general societal abhorrence of litigation in Japan.

Beginning in the mid-1950s, a series of strange new diseases began to appear in Japan: Minimata disease (mercury poisoning), Itai-Itai disease (cadmium poisoning), and various pulmonary disorders. The source of the diseases was finally isolated, and pollution from Japanese factories identified as the cause. For many years, however, victims of the diseases were ostracized and ignored, as the companies responsible for the injuries acted with "callous indifference" and "cultivated arrogance" towards the injured. Eventually, though, literature depicting the plight of the victims developed, and the conduct of the polluters began to breed resentment and opposition in the public at large. First local and then national protests occurred, and as mediation efforts failed, "litigation became a

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101 Kircher, supra note 99, at 1133.
102 See supra notes 7-11 and accompanying text.
103 In one asbestos case, a three million dollar jury award was made against a relatively small company. Manville, facing two billion dollars in asbestos-injury claims, opted for bankruptcy. Trauberman, supra note 29, at 191 n.63.
104 Japanese Compensation Law, supra note 20.
105 Marcus, supra note 18, at 195.
107 Marcus, supra note 18, at 195; Environmental Law, supra note 106, at 31-33.
108 Environmental Law, supra note 106, at 33-34.

The victims expressed their grievances and grief in highly ritualistic and symbolic ways. Disappointed that the trial proceedings had not permitted them to confront Chisso [Manufacturing Company]'s executives, a group of Minimata victims decided to buy shares of the company's stock in order to
group effort of the victims’ movement.”

This litigation effort, begun in 1968, culminated in a series of four decisions—the “Big Four Pollution Cases.” The first case involved victims of Itai-Itai (“it hurts! it hurts!”) disease. Because the defendant was strictly liable under the Mining Law for the release of cadmium, lead, and zinc compounds that contaminated local soil, fish, and water supplies, the issue addressed by the court was whether causation existed. The Toyama District Court, aware of the “practical difficulties the plaintiffs would face if the more stringent standard of causation were employed,” accepted as sufficient proof of causality the epidemiological, clinical, and animal tests introduced by the plaintiffs. On appeal, the High Court affirmed that “epidemiological evidence could be used in establishing legal proof,” and required that plaintiffs demonstrate that “(1) pollution occurred before the outbreak of a disease; (2) increased exposure could lead to an increase in the disease; (3) clinical and experimental evidence did not contradict statistical inference of causality; and (4) in areas of low pollution, incidences of the disease were diminished.” Based on plaintiffs’ evidence, the Court awarded ten million yen for “mental suffering” to the survivors of each deceased victim and eight million yen to each living patient.

The next two cases involved Minimata disease or mercury poisoning. In the Niigata case, the district court further eased the plaintiffs’ burden, asserting that “to require point-by-point scientific verification in order to establish causality would be a barrier to civil relief” and ruling instead that “if characteristic symptoms of the disease in question and the route by which pathogenic substances were

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Marcus, supra note 18, at 197.

For an excellent in-depth discussion of these cases, see Upham, Litigation and Moral Consciousness in Japan: An Interpretive Analysis of Four Japanese Pollution Suits, 10 LAW & SOC’Y 579 (1976); see also ENVIRONMENTAL LAW, supra note 106, at 5-124 (includes translations of major portions of the “Big Four” decisions).

Komatsu v. Mitsui Kinzoku Kōgyō K.K., HANJI (No. 635) 17 (Toyama D.C. 1971), aff’d on Kāso appeal, HANJI (No. 674) 25 (1972).

Taniguchi, A Commentary on the Legal Theory of the Four Major Pollution Cases, 9 LAW IN JAPAN 35, 36-37 (1976).

Upham, supra note 110, at 608.

Taniguchi, supra note 112, at 37.

Marcus, supra note 18, at 196.

Taniguchi, supra note 112, at 37.

transmitted to the victims could be explained by an accumulation of circumstantial evidence . . . which traced the source of pollution to the ‘doorstep of the enterprise,’ then proof of legal causality” would be established absent a showing by defendant that its plant could not have been the source of the pollution.118

The *Kumamoto* case was significant because the court placed a strict burden on defendant companies to exercise extraordinary care in dealing with hazardous substances.119 In each of these cases, large damages were awarded to the plaintiffs.120

Finally, the Japanese courts examined an air pollution-related injury case.121 Unlike the other “Big Four” cases, this one involved the activities of multiple defendants. The court again employed epidemiological studies and used a broad concept of joint liability:

If the injured parties could prove that there was an interrelation among the injuring parties and that the effect was brought about by their joint activities, it could be inferred that there was a causal relation between the activities of each of the injuring parties and the effect produced. Unless the injuring parties could disprove such causality, they would not be excused from liability.122

The *Yokkaichi* decision was the first environmental suit to “recognize the joint liability of industrial firms for atmospheric pollution.”123

The environmental crisis and the “Big Four” decisions were the motivating factors behind Japan’s adoption of an administrative compensation program.124 Fearful that a flood of litigation might overwhelm Japanese industry, business encouraged the government to adopt the new system.125 Moreover, the administrative system was more compatible with the Japanese philosophy and culture, which emphasize harmony and non-confrontational dispute resolution.126

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119 Marcus, *supra* note 18, at 196.
120 *Environmental Law, supra* note 106, at 42-43.
123 *Id.* at 40.
124 Marcus, *supra* note 18, at 197; *Environmental Law, supra* note 106, at 44.

Whether it is due to the Japanese belief that judicial methods are not conducive to harmony, the feudal attitude that one does not trouble one’s lord with private matters, the fact that the Japanese are not assertive of their rights, the fact that litigation is too expensive in time and money, the shortage of judges and lawyers, or, what is more likely, a combination of these reasons, it is apparent that most disputes do not reach the courts.
Japan, a country with a dearth of lawyers and high court costs, abhors litigation.\textsuperscript{127} Having experienced the trauma of the "Big Four" cases, the Japanese apparently were ready to seek a more harmonious solution.

The basic design of the compensation law is simple. "Pollution victims of designated diseases arising in officially identified pollution areas" are certified by a council of medical and legal experts. Once certified, victims are eligible to recover medical expenses and lost earnings from the compensation fund.\textsuperscript{128}

Diseases are categorized as Class I—illnesses caused by ambient air pollution—or Class II—diseases caused by specific toxic substances. Funds for Class I disease compensation are derived primarily from a levy on sulfur emissions, whereas Class II funding is obtained from a "special levy" against the sources of the substances associated with the victims’ diseases.\textsuperscript{129}

The proof of causation required to qualify for compensation also varies according to the class of injury. In Class I cases, victims need only demonstrate that they suffer "symptoms relating to the designated diseases"\textsuperscript{130} and that they have resided in or commuted to the designated pollution area for a minimum time.\textsuperscript{131} In Class II cases, however, the assumption is made that "ascertaining causal links between a specific substance and an individual's illness is indeed possible."\textsuperscript{132} Thus, certification will turn on a more traditional finding of causation by the government.\textsuperscript{133}

\section*{B. New Zealand's Accident Compensation Act}

Like Japan, New Zealand has attempted to resolve the problems of compensating victims through an administrative plan. Unlike the Japanese law, though, the New Zealand statute does not deal specifically or solely with environmental injuries. Instead, the Accident Compensation Act (ACA)\textsuperscript{134} applies to all cases of personal injury resulting from "accidents."\textsuperscript{135} The ACA would, thus, probably cover injuries resulting from identifiable, unexpected releases of hazardous substances—"accidents"—but would not cover long-term ex-

\textsuperscript{127} See supra note 126.

\textsuperscript{128} ENVIRONMENTAL LAW, supra note 106, at 290.


\textsuperscript{130} Note, supra note 27, at 527.

\textsuperscript{131} Aronson, supra note 129, at 162.

\textsuperscript{132} Id. at 163.

\textsuperscript{133} Id.; see also Note, supra note 27, "The system in Class II is causation-based and firm-specific because the government is required to establish the relationship between the disease and the pollution." Id. at 527.

\textsuperscript{134} See supra note 21.

\textsuperscript{135} ACA, supra note 21, art. 5(1).
posure to hazardous wastes resulting from negligent handling and
disposal practices. Furthermore, although the Japanese Compensation
Law does not bar a victim from suing in court,\textsuperscript{136} the ACA com-
pletely supplants the common law system of remedies in the
personal injury field.\textsuperscript{137}

The New Zealand act was not born in any climate of crisis similar
to the Japanese experience. The ACA was adopted on the heels of
the Woodhouse Report,\textsuperscript{138} the product of a commission appointed
to study the need for tort law reform and chaired by New Zealand
Supreme Court Justice Woodhouse.\textsuperscript{139} The Woodhouse Report
found the common law deficient on two grounds. First, using an "in-
tuitive . . . standard of equity and adequacy," the Report concluded
that the "essential needs of accident victims" were met in only a
"small fraction of cases."\textsuperscript{140} Second, the Report found that only a
few accident victims recovered "adequate" compensation.\textsuperscript{141} The
recommendations of the Report, that an administrative compensa-
tion system be established in substitution of common law rights,
were incorporated into the bill that became the ACA.\textsuperscript{142}

The forces that swept the ACA into being are hard to identify.
The Woodhouse Report featured a "remarkable . . . lack of empirical
data," and there was "never at any time great public dissatisfaction
with existing arrangements."\textsuperscript{143}

In some ways an elitist analysis of events is the most satisfying.
The scheme was the brainchild of two eminent judges—Mr. Justice
Woodhouse and, to a lesser extent, the Chief Justice. Mr. Justice
Woodhouse led the Royal Commissioners to recommend the desira-
bility of radical change; a powerful Minister of the Crown came to
share that view; and on studying the matter, top echelons of the pub-
lic service came to the same conclusions. That was enough. Some
of the politicians may not have liked the scheme, and it was bent
somewhat in deference to the wishes of some of the pressure
groups. But the blueprint came from the guardians on high and was
for that reason very difficult to modify.\textsuperscript{144}

The "blueprint" that became the ACA called for establishment

\textsuperscript{136} See Miyamoto, supra note 125, at 221.

\textsuperscript{137} Klar, New Zealand's Accident Compensation Scheme: A Tort Lawyer's Perspective, 33 U.

\textsuperscript{138} ROYAL COMMISSION OF INQUIRY, COMPENSATION FOR PERSONAL INJURY IN NEW ZEALAND

\textsuperscript{139} Marks, A First in National No-Fault: The Accident Compensation Act 1972 of New Zealand,

\textsuperscript{140} Gaskins, Tort Reform in the Welfare State: The New Zealand Accident Compensation Act, 18

\textsuperscript{141} Id.

\textsuperscript{142} Marks, supra note 139, at 516.

\textsuperscript{143} Palmer & Lemons, Toward the Disappearance of Tort Law: New Zealand's New Compensation

\textsuperscript{144} Id. See Palmer, Compensation for Personal Injury: A Requiem for the Common Law in New
Zealand, 21 AM. J. COMP. L. 1, 31-39 (1973) for a thorough discussion of the processes
involved in the formulation and adoption of the ACA.
of a compensation commission to operate the compensation program. Basically, all wage earners suffering personal injury by accident are eligible for compensation. Medical benefits, lost earnings, and other pecuniary losses are compensable. In sum, the ACA serves as a no-fault means of government insurance for most personal injuries; victims need only establish that they are "wage earners" and that their injuries were caused by "accidents" within the meaning of the act.

Given the existence of these administrative compensation schemes in Japan and New Zealand, it is not unreasonable to question whether a similar approach might prove advantageous in the United States. The best method of analyzing that question is to determine whether an administrative system could better meet the identified goals of the tort system: compensation, fairness, deterrence, and general societal well-being.

IV. Analysis: Administrative Compensation as an Alternative to Tort Law

A. Compensation and Fairness Goals

The compensation programs in Japan and New Zealand are generally recognized as successful in providing compensation in a fast and fair manner. The Japanese law has "introduced a regularity and dispatch" into compensation that was not present under the old system of civil litigation. The compensation law is a "less burdensome, quicker mediator between the polluter and the victim," resulting in lower transaction costs than the court system. The New Zealand ACA is similarly effective in extending "substantial rights" to persons who would be excluded from recovery under the tort system.

Each statutory plan, however, is subject to criticism. The Japanese approach is criticized because many victims are either over- or under-compensated by the law's benefit provisions. The law's classification system has also been troublesome. Although the Act provides for certification of new diseases, "the Japanese government has been reluctant to recognize them"; cancer, for instance, is not a compensable disease under the Act. Thus, many possible victims are precluded from recovery. Further, the Class II system, by tying recovery payments to "specific firms and to specific diseases and symptoms" also limits the ability of the system to reach victims of

145 Palmer, supra note 144, at 17-19.
147 Note, supra note 27, at 527-28.
148 Marks, supra note 139, at 521.
149 ENVIRONMENTAL LAW, supra note 106, at 307.
150 Marcus, supra note 18, at 201.
The New Zealand ACA has also been hampered by difficulties. First, financial problems have plagued the compensation system, leaving the payment fund with a shortfall on several occasions. Charges that the benefits payable under the ACA are inadequate have also been levied. Because the ACA prohibits all civil actions for damages arising out of personal injury by accident, "persons who have some cover under the act will be unable to claim damages for losses which they have suffered but which are not compensable under the scheme." Second, the definition of what constitutes an "accident" covered by the ACA has been elusive. In some cases, parties have been barred from proceeding civilly against wrongdoers who have committed intentional or reckless acts because these acts have been classified as "accidents" covered by the ACA. Moreover, injury by disease has been excluded from ACA coverage, thus making the scheme of limited application to environmental injuries.

As a general proposition, then, the Japanese and New Zealand programs have met with mixed success. Any attempt to adopt a similar approach in the United States would necessarily have to reflect modifications in these schemes designed to overcome their shortcomings. The problems of proving causation, left open in Japan's Class II system and in New Zealand's no-fault plan, would have to be corrected. Adoption of an administrative plan that incorporates the reforms proposed for tort law—favorable presumptions for victims, use of epidemiological and other statistical forms of evidence, relaxed burdens of proof—would help make the administrative scheme a fairer, more reliable, and more accessible compensation tool. Such a plan could have many benefits in terms of adequate and fair compensation:

Eligibility requirements and standards for determining the size of damage awards could be set uniformly by a centralized agency overseen by Congress, rather than being haphazardly determined through the process of litigation. From society's standpoint, administrative compensation would allow a more informed choice con-

151 Note, supra note 27, at 527-28.
152 Murphy, Letters to the Editor: National Compensation Scheme, 55 LAW INST. J. 807 (1981).
153 Id.
154 Klar, supra note 137, at 86.
155 In all cases, even where there is cover and a claim, the level of compensation available under the scheme will very likely differ from what would have been available by proceeding civilly. In other words, there has been a very uneven replacement of common law rights by accident compensation rights.
156 See Trauberman, supra note 29, at 207-08.
cerning the amount of compensation provided to toxic tort victims. From the standpoint of individual victims, the uncertainties and delays of litigation would be replaced with a more certain, albeit less generous, administrative award.\footnote{159}

\subsection*{B. Deterrence}

One major argument made against administrative compensation is that abandonment of tort liability would remove the incentive to minimize unsafe and harmful practices, thereby increasing the costs of hazardous waste injuries.\footnote{160} The Japanese Compensation Law attempts to resolve this problem by forcing Class II polluters to pay for the injuries they cause, and by collecting compensation funds for Class I injuries on the basis of pollution emissions.\footnote{161} The extent to which this system has succeeded in reducing emissions and injuries is not clear; although sulfur oxide emissions have been reduced since passage of the Act, other factors are probably responsible.\footnote{162} The case of New Zealand is more instructive. Although the ACA completely abandoned the concept of “deterrence” as a goal of the compensation system,\footnote{163} there has been no significant increase in automobile accidents since the law was enacted.\footnote{164}

Given the fact that tort liability does not usually deter wrongful or dangerous conduct to any great extent,\footnote{165} “deterrence should play a minor role in determining whether to abolish or modify tort law and replace it with a no-fault compensation scheme.”\footnote{166} Attempts to deter often interfere with the more important goal of compensation of victims anyway.\footnote{167} Thus, “the main purpose of toxic tort compensation funds should be exactly what their name implies:

\begin{footnotes}
\item\footnote{159}{Developments, supra note 10, at 1659.}
\item\footnote{160}{Trauberman, supra note 29, at 207. Absent a firm-specific remedy, compensation through an administrative scheme would serve as no more a deterrent than tort liability does now. Note, supra note 27, at 515.}
\item\footnote{161}{Note, supra note 27, at 516, 527. See supra note 129 and accompanying text.}
\item\footnote{162}{Aronson, supra note 129, at 156-59. Industry has complained that, despite the lower levels of pollution, victim certification has continued to grow and the pollution levy has “skyrocketed.” Morishima & Smith, Accident Compensation Schemes in Japan: A Window on the Operation of Law in a Society, 20 U. BRIT. COL. L. REV. 491, 514-15 (1986).}
\item\footnote{163}{Klar, supra note 137, at 81.}
\item\footnote{164}{Brown, Deterrence in Tort and No-Fault: The New Zealand Experience, 73 CALIF. L. REV. 976, 1001-02 (1985).}
\item\footnote{165}{See supra notes 82-95 and accompanying text. Moreover, suggested reforms in the tort system, such as shifting burdens of proof, are not likely to improve the deterrent success of the common law: “No technical adjustment of the legal rules in personal injury suits will encourage manufacturers of toxic substances to investigate, analyze, and reduce the level of risk entailed by the manufacture of toxic substances.” Soble, supra note 30, at 767. “Minor palliatives cannot touch the endemic inadequacies in the tort system.” Pierce, supra note 24, at 1300-01.}
\item\footnote{166}{Brown, supra note 164, at 979.}
\item\footnote{167}{Note, supra note 27, at 516. A system “stressing both compensation and deterrence would be limited to injuries where a hazardous substance and a firm responsible for that substance could be identified. In such a system, victims of injuries where substances and firms were not identified would be denied compensation.” Id.}
\end{footnotes}
to compensate victims.' 168 Deterrence should be left to direct governmental regulation and criminal sanctions. 169 Abandonment of the deterrence goal will ease the design and implementation problems related to a successful compensation scheme. 170

C. Societal Interests

One clear benefit of an administrative program is the reduced threat of bankruptcies and economic disruption found under the present tort law system. 171 By spreading the costs of the compensation fund widely enough, payment for the system could be achieved without severe damage to any industry or collection of firms. A combination of miniscule, across-the-board tax increases and budget cuts, coupled with a broad-based tax on all industries that use or manufacture hazardous substances would probably meet this criterion. Such socialization of the costs of hazardous waste injuries is logical if the assumption is made that "industrialization will always jeopardize some people's health, while everyone . . . benefits from economic growth." 172

Unfortunately, such a system of socialized benefits for toxic victims is unlikely to gain much support in the United States, given the general antipathy towards government regulation now prevalent among politicians. The panic atmosphere surrounding the budget deficit will also preclude adoption of such a proposal. Moreover, unlike in Japan, because the courts in the United States have failed to take bold steps to correct the deficiencies in the tort system in the toxic injury area, no impetus for adopting a compensation program can be found. 173

The problem of court overload may also be alleviated by adopting an administrative compensation scheme. 174 In Japan, the compensation law has been able to "stem the tide of litigation," although appeals of administrative decisions still find their way into Japanese courts. 175 Surprisingly, however, New Zealand, whose ACA totally replaces available common law remedies, has not seen a resultant reduction in lawsuits. Instead, there has been "an almost one-for-one replacement of personal injury cases by two other categories of lawsuits: 'administrative appeals' and 'contract and other tort' actions." 176 Whether there would have been more suits overall had

168 Abraham, supra note 81, at 148.
169 Id.; Brown, supra note 164, at 979.
170 Pierce, supra note 24, at 1289, 1307.
171 See supra notes 98-103 and accompanying text.
172 ENVIRONMENTAL LAW, supra note 106, at 321.
173 See Marcus, supra note 18, at 200.
175 Marcus, supra note 18, at 200.
not the ACA been enacted cannot, however, be determined. In any event, an administrative program may, nevertheless, be worthwhile even if the overall court load is not significantly reduced, on the grounds that courts have not demonstrated the technical competence or ingenuity to adequately handle toxic tort cases.

For this reason, any administrative plan should, like the ACA, be the exclusive remedy for hazardous substance victims. Providing an exclusive remedy would prevent double recoveries and redundant use of judicial resources. Although some commentators argue that the common law remedies should be retained to take advantage of the common law's "flexibility" and ability to develop innovative legal doctrines, the past record of U.S. courts does not justify this faith in the tort system in the context of toxic torts. U.S. courts have failed to adapt themselves to the problems posed by toxic torts; their "innovations" have been inadequate.

V. Conclusion

The need for action in the hazardous waste injury area is paramount. The tort system has failed to fairly and adequately compensate victims of toxic torts or to deter manufacturers of hazardous substances from using illegal, improper, and unsafe methods of disposal. The judicial system has failed to respond to the need for change, and Congress has "studied" the issue of victim compensation for half a dozen years without taking concrete action. In contrast, Japan and New Zealand have developed administrative programs that, although undoubtedly imperfect, at least attempt to grapple with the shortcomings of litigation in the modern era. The failure of the United States to act boldly in this area of grave concern is inexcusable and indeed shameful.

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177 Garrett, supra note 23, at 10,177; Morishima & Smith, supra note 162, at 526.
178 Marcus, supra note 18, at 205; Klar, supra note 137, at 105.