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## Where Do We Go from Here: Legal Controls and Future Strategies for Addressing the Transportation of Hazardous Wastes Across International Borders

Theodore Waugh\*

\*Chemical Producers and Distributors Association (CPDA)

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# WHERE DO WE GO FROM HERE: LEGAL CONTROLS AND FUTURE STRATEGIES FOR ADDRESSING THE TRANSPORTATION OF HAZARDOUS WASTES ACROSS INTERNATIONAL BORDERS

*Theodore Waugh\**

## INTRODUCTION

In the last few years, there have been an increasing number of domestic and international efforts aimed at restricting the transportation of hazardous wastes across international borders for disposal and recycling.<sup>1</sup> There are now many new international agreements that limit or even prohibit the transboundary movement of hazardous wastes; there are also ongoing domestic efforts to adopt similar restrictions.<sup>2</sup> If this trend contin-

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\* Director of Regulatory Affairs and Staff Attorney, Chemical Producers and Distributors Association (CPDA), Alexandria, VA. B.A., 1990, Wesleyan University; J.D., 1994, American University, Washington College of Law; LL.M., Environmental Law 1998, George Washington University. The views expressed in this Article are solely those of the author and do not represent legal or policy positions adopted by the CPDA.

1. See JONATHAN KRUEGAR, INTERNATIONAL TRADE AND THE BASEL CONVENTION 83 (1999) [hereinafter INTERNATIONAL TRADE] (identifying eight agreements affecting the transboundary movement of hazardous wastes).

2. See *infra* notes 93-172 and accompanying text (describing hazardous waste trading restrictions established by

ues the transboundary movement of hazardous wastes will become an increasingly limited or financially impractical trade practice.

The growth in restrictive efforts arises from the concern that waste may be improperly managed after exportation.<sup>3</sup> It is feared that the transportation, handling, and disposal of exported hazardous wastes may contribute to increased risks to human health and the environment.<sup>4</sup> In light of such concerns, some nations support a prohibition on the transboundary movement of hazardous waste.<sup>5</sup>

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the international agreements); see *infra* notes 90-91 and accompanying text (discussing efforts to reform domestic requirements applicable to hazardous wastes trading).

3. See INTERNATIONAL TRADE, *supra* note 1, at 10-11 (describing incidents when exported hazardous waste was improperly managed which resulted in significant risks to human health and the environment); David Eaton, *NAFTA and the Environment: A Proposal for Free Trade in Hazardous Waste Between the United States and Mexico*, 27 ST. MARY'S L.J. 715, 719-24 (1996) [hereinafter *NAFTA and the Environment*] (stating that exported U.S. wastes are often disposed of illegally in Mexico); LaRue Corbin et al., Comment, *The Environment, Free Trade, and Hazardous Waste: A Study of the U.S.-Mexico Border Environmental Problems in Light of Free Trade*, 1 TEX. WESLEYAN L. REV. 183, 184 (1994) (asserting that U.S. wastes exported to Mexico are neither properly recycled nor disposed of in ways that are consistent with environmental protection).

4. See, e.g., *Toxic Waste Convention Debates Ban Dumping in Developing Countries*, (Feb. 27, 1998) The Minnesota Daily Online, available at <[http://www.mndaily.com/daily/1998/02/27/world\\_nation/wn4.ap.html](http://www.mndaily.com/daily/1998/02/27/world_nation/wn4.ap.html)> (describing how the improper disposal of hazardous wastes may contribute to water contamination, disease, and increased air pollution).

5. See *infra* notes 155-172 and accompanying text (describing how receiving countries' concerns over the regulation of the transboundary movement of hazardous wastes have resulted in waste trading prohibitions and other restrictive measures).

While it is critical to ensure that exported wastes are properly managed, the benefits resulting from the transboundary movement of hazardous wastes cannot be ignored. The trade practice can facilitate the safe management and disposal of hazardous waste,<sup>6</sup> as well as provide receiving countries with jobs, income, capital investment, and access to important resources.<sup>7</sup> For such reasons, the imposition of hazardous waste trading restrictions must be carefully evaluated against potential benefits associated with the transboundary movement of hazardous waste.

As efforts to restrict hazardous waste trading increase, there are also compelling reasons for generators to export hazardous wastes across international borders. Due to the extensive regulatory burdens and environmental compliance costs affecting American business,<sup>8</sup>

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6. See *Administration Considering Bilaterals to Let Basel Parties Export Waste to United States*, INT'L ENV'T REP. (BNA), Vol. 19, No. 8, April 17, 1996 at 305 (stating that waste sent to the United States may be better managed at less expense than if the waste remained within the country of origin); CHEMICAL MANUFACTURERS ASSOCIATION, CMA NEWS, Vol. 27, No. 7, at 6 (Sept. 1999) (describing how companies may ship hazardous waste to the United States for safer disposal).

7. See, e.g., Dan Eggen, *In Charles County, Trash Talk Hits Home*, WASH. POST, Jan. 17, 1999, at C1, C7 (stating that the establishment of a waste disposal facility provided the community with tax revenue, employment opportunities, and money for schools); Donald Baker, *In Virginia, Support Grows for Landfill Restraints*, WASH. POST, Nov. 25, 1998, at B1 (noting that some localities want to import wastes in order to obtain the economic benefits resulting from importation). See also *infra* notes 186-187 and accompanying text (describing how developing countries may rely on imported hazardous wastes as a source for materials).

8. Environmental requirements in the United States are so extensive that one poll found over seventy percent of corporate general counsels believed that compliance with both Federal and State environmental laws was impossible. See Marianne Lavelle, *Environmental Vise: Law, Compliance*,

U.S. hazardous waste generators can decrease expenditures by shifting activities abroad.<sup>9</sup> While there is frequent opposition to the establishment of new treatment and disposal facilities in the United States,<sup>10</sup> both Mexico and Canada offer numerous waste facilities in close proximity to U.S. hazardous waste generators.<sup>11</sup> Fur-

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NAT'L L.J., Vol. 15, No. 52, Aug. 30, 1993, at S1-S2 (indicating that in a poll of over 200 corporate general counsels, over seventy percent of the respondents stated that full compliance with Federal and State environmental laws was impossible). Most of the general counsels also indicated that the regulatory system was too expensive, bureaucratic, and ineffective at pollution reduction. *See id.*

9. *See* Lavelle, *supra* note 8 (indicating that U.S. environmental compliance obligations were so extensive that some corporate officials considered siting future industrial facilities outside the United States to avoid such burdens); E. Donald Elliot, *Environmental Law at a Crossroad*, N. KY. L. REV. 1, 1 (1992) (stating that the cost of environmental compliance and cleanup is skyrocketing). The cost of complying with U.S. environmental regulations amounts to nearly 2.5 percent of the gross domestic product each year. *See id.* Expenditures allocated to comply with environmental regulations represent almost half of all expenditures allocated to regulatory compliance programs. *See id.* One outcome of these compliance costs is that hazardous waste disposal fees are much more expensive in the United States than in other countries. *See* Sean Murphy, *Prospective Liability for Transboundary Movements of Hazardous Wastes*, 88 AM. J. INT'L L. 24, 31 (1994).

10. *See, e.g.*, Dan Eggen, *In Charles County, Trash Talk Hits Home*, WASH. POST, Jan. 17, 1999, at C1 (describing community opposition to local landfills); Donald Baker, *In Virginia, Support Grows for Landfill Restraints*, WASH. POST, Nov. 25, 1998, at B1, B5 (describing how local opposition prompted politicians to restrict waste importation); Stephen C. Jones, *Inequities of Industrial Siting Addressed*, NAT'L L.J., Aug. 16, 1993, at 20 (noting community opposition to industrial facility siting practices). This opposition is often called the "not in my backyard" ("NIMBY") syndrome. *See id.*

thermore, because many domestic companies are expanding operations in developing countries, the transportation of hazardous wastes between company facilities is likely to increase.<sup>12</sup>

Several factors that are not specific to U.S. industries support the future growth of the hazardous waste trade. Hazardous waste largely originates from industries that are integral to the development and support of modern industrial societies.<sup>13</sup> As more nations become industri-

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11. See Louis R. Vera-Morales, *Dumping in the International Backyard: Exportation of Hazardous Wastes to Mexico*, 7 TUL. ENVTL. L.J. 353, 354-55 (1994) (noting that the scarcity of disposal sites in the United States has increased hazardous waste exports to Mexico). See also Julienne I. Adler, Comment, *United States' Waste Export Control Program: Burying Our Neighbors in Garbage*, 40 AM. U. L. REV. 885, 893 (1991) (indicating that Mexico's geographic proximity to the United States encourages American companies to transfer their wastes to Mexican disposal facilities).

12. See, e.g., CHEMICAL MANUFACTURERS ASSOCIATION, CMA NEWS, Vol. 27, No. 7, at 7 (Sept. 1999). For example, a chemical company may transfer hazardous wastes generated at a foreign facility to a domestic facility for reprocessing or disposal. See *id.* at 6.

13. See *Report of the First Meeting of the Conference of the Parties to the Basel Convention*, at 2, U.N. Doc. UNEP/CHW.1/24 (1992) (noting that industrialized countries generate ninety-five percent of the world's hazardous waste). Some of the industries that generate hazardous wastes include the production of iron, steel, nonferrous and precious metals, as well as the creation of industrial chemicals. See MOSTAFA K. TOLBA, *Preface to the TRANSBOUNDARY MOVEMENTS AND DISPOSAL OF HAZARDOUS WASTES IN INTERNATIONAL LAW*, BASIC DOCUMENTS XIII (Barbara Kwiatkowska & Alfred H. A. Soons, eds. 1993). Although materials defined as "hazardous waste" vary with each statute or international agreement, materials contaminated with dioxins and heavy metals, such as mercury, cadmium, lead, or organic wastes are generally considered hazardous. See INTERNATIONAL TRADE, *supra* note 1, at 7. Hazardous waste can take many forms including:

alized, the amount of hazardous waste and the difficulties associated with hazardous waste transportation and disposal will increase.<sup>14</sup> Finally, reduced global transportation costs and increasing efforts to facilitate international trading options have further promoted the development of hazardous waste trade.<sup>15</sup>

To reconcile environmental concerns with the views of parties interested in transporting hazardous wastes internationally, it will be necessary to improve existing hazardous waste transportation practices through a variety of regulatory mechanisms. To this end, this Article discusses the legal authorities controlling hazardous waste trading and suggests mechanisms to improve current practices. Part I of this Article identifies and analyzes domestic requirements affecting the exportation of hazardous wastes generated in the United States. Part II of this Article examines significant aspects of international agreements that may affect U.S. hazardous waste exportation practices. Part III reviews all of these legal approaches, addresses outstanding issues, and suggests how to remedy problems associated with the existing regulatory schemes. This Article concludes by indicating that unless exporting nations like the United States undertake new reforms, it will be increasingly difficult, if not financially impractical, for domestic generators to export hazardous wastes.

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liquid waste; sludge; used batteries; computer parts; or incinerator ash. *See id.*

14. *See* TOLBA, *supra* note 13, at XIII.

15. *See* INTERNATIONAL TRADE, *supra* note 1, at 21 (describing how the emergence of multilateral trading systems has facilitated the transboundary movement of hazardous wastes).

## I. DOMESTIC REQUIREMENTS AFFECTING THE TRANSBOUNDARY MOVEMENT OF HAZARDOUS WASTES

The two major legal regimes governing hazardous waste disposal in the United States are the Resource Conservation and Recovery Act ("RCRA")<sup>16</sup> and the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA").<sup>17</sup> In addition, though not focused on environmental issues, the Commerce Clause of the United States Constitution also significantly affects the disposal of hazardous wastes.<sup>18</sup>

### A. *The Resource Conservation and Recovery Act*

#### 1. Background and Overview of RCRA

Congress enacted RCRA in 1976 to address the increasing amounts of waste generated from the growth of domestic industrial operations.<sup>19</sup> The primary goals of RCRA include protecting human health and the environment, and reducing the generation and land disposal of hazardous waste.<sup>20</sup> To accomplish these goals, RCRA

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16. Resource Conservation and Recovery Act of 1976, 42 U.S.C. §§ 6901-6991 (1996) [hereinafter "RCRA"].

17. Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601-9675 (1996) [hereinafter "CERCLA"].

18. U.S. CONST. art. I, § 8, cl. 3. In addition, the U.S. Department of Transportation ("DOT") has established requirements indirectly affecting the disposal of hazardous wastes through packing, handling, labeling, and transportation regulations. For example, DOT mandates that transporters avoid carrying hazardous wastes through densely populated neighborhoods, tunnels, narrow streets, and locations where crowds have assembled. See, e.g., 49 C.F.R. § 397.9(a) (1996).

19. See RCRA § 1002(a), 42 U.S.C. § 6901(a) (1996).

20. See *id.* at § 1003(a), 42 U.S.C. § 6902(a) (1996). In order to minimize the generation and land disposal of haz-



establishes a comprehensive control system that regulates hazardous waste from generation until disposal.<sup>21</sup>

Under RCRA's regulatory scheme, hazardous waste is defined as a type of solid waste.<sup>22</sup> To be considered hazardous, a solid waste must exhibit a specific characteristic, or must appear on an EPA hazardous waste list.<sup>23</sup> It is important to note, however, that the term "hazardous" has separate meanings in different regulatory contexts. In other words, a substance may not be "hazardous" under RCRA, but may nevertheless be regulated as

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ardous waste, it is necessary to encourage the use of process substitution, materials recovery, recycling, reuse, and treatment practices. *See id.*

21. *See generally* RCRA §§ 6921-6939, 42 U.S.C. §§ 3001-3023 (1996) (establishing a comprehensive hazardous waste management system).

22. RCRA defines the term "solid waste" broadly to include garbage, refuse, sludge, and other discarded material. *See* RCRA § 1004(27); 42 U.S.C. § 6903(27) (1996). It is important to note that a waste can qualify as a solid waste even if the waste is not in a solid form. Solid wastes include liquids, semisolids, and gases. *See id.*

23. *See id.* at § 3001 (identifying the criteria for the identification and listing of hazardous wastes); 40 C.F.R. § 261.31-261.33 (1996). The four characteristics for determining the presence of a hazardous waste are ignitability, corrosivity, reactivity, and toxicity. *See id.* Wastes are also considered hazardous if they appear one of the EPA's four hazardous wastes lists. In general terms, these lists contain: spent solvents; wastes from specific sources such as wastewater treatment sludge; discarded commercial chemical products; off-specification container residues; and spill residues. *See id.* *See also id.* at § 1004(5) (defining "hazardous waste" as a solid waste which may: (1) cause or significantly contribute to an increase in mortality, or an increase in serious irreversible or incapacitating illness; or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, disposed of, or otherwise managed).

a "hazardous waste," "hazardous substance," or "hazardous material" under other legal authorities.<sup>24</sup>

Two of RCRA's main regulatory structures are its permitting and waste tracking systems. RCRA's permitting system forbids a hazardous waste disposal facility from operating without a permit issued by the United States Environmental Protection Agency ("EPA").<sup>25</sup> To obtain a permit, a facility must satisfy specific design and operational requirements.<sup>26</sup> The permitting system also restricts certain disposal practices.<sup>27</sup> RCRA's waste tracking system establishes recordkeeping, labeling, and packaging requirements for waste generators, transporters, and disposers.<sup>28</sup> The program operates through the use of a manifest system that establishes a chain of responsibility for all the waste.<sup>29</sup> Therefore, if the waste is

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24. See, e.g., *Eagle-Picher Indus. v. EPA*, 759 F.2d 922 (D.C. Cir. 1985) (noting that material outside RCRA's definition of "hazardous waste" may nevertheless be considered a "hazardous substance" under CERCLA). Moreover, the definition of "hazardous waste" under one statute may be different than the definition of "hazardous waste" provided in another statute. See, e.g., *infra* note 167 and accompanying text (defining "hazardous waste" differently than RCRA).

25. RCRA § 3005(a), 42 U.S.C. § 6925(a) (1996). See also 40 C.F.R. § 270 (1996) (outlining the permitting process).

26. RCRA § 3004(o), 42 U.S.C. § 6924(o) (1996). These requirements include the use of groundwater monitoring, leachate collection systems, and double liners. See *id.*

27. See, e.g., RCRA § 3004(c)(1), 42 U.S.C. § 6924(c)(1) (1996) (prohibiting the disposal of liquid hazardous wastes in landfills).

28. See generally RCRA §§ 3002-3004, 42 U.S.C. §§ 6922-6924 (1996) (providing standards applicable to generators and transporters of hazardous wastes, as well as standards applicable to owners and operators of hazardous waste treatment, storage, and disposal facilities); 40 C.F.R. § 262-264 (1996) (same).

29. For example, after disposing of the wastes, the facility must send a copy of the waste manifest to the genera-

misplaced, it is possible to identify when the problem occurred as well as who is the responsible party. Most States are authorized to oversee their own hazardous waste programs subject to EPA's approval.<sup>30</sup>

## 2. RCRA Provisions Specifically Affecting the Exportation of Hazardous Wastes

### *a. Notice and Consent Requirements*

Section 3017 of RCRA establishes a series of requirements governing the export of hazardous wastes. Before waste leaves the United States, an exporter must provide EPA with detailed notice on the intended transfer.<sup>31</sup> This notice discloses: the types and quantity of wastes to be exported; the manner of transportation; the method of disposal to be used within the receiving country; and the name and address of the ultimate treatment, storage, or disposal facility.<sup>32</sup>

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tor. If the generator does not receive the disposal facility's manifest within thirty-five days after the generator conveyed the waste to the transporter, the generator must file an exemption report with the EPA. 40 C.F.R. § 262.42 (1996).

30. See RCRA § 3006(a)-(b), 42 U.S.C. § 6926(a)-(b) (1996) (authorizing the development of State hazardous waste programs). The State program must operate according to Federal guidelines and the EPA can revoke the authorization if the State program does not comply with Federal standards. See RCRA § 3006(e), 42 U.S.C. § 6926(e) (1996).

31. See RCRA § 3017(c), 42 U.S.C. § 6938(c) (1996) (describing export notification requirements); 40 C.F.R. § 262.50 - 262.58 (1996) (outlining requirements applicable to the exportation of hazardous wastes).

32. See RCRA § 3017(c), 42 U.S.C. § 6938(c) (1996). In describing the manner of transportation, the exporter must disclose the estimated frequency or rate at which the waste is to be exported, the ports of entry, and the times when the waste will be exported. See *id.*

After this information is supplied to the EPA, the U.S. Secretary of State must forward a copy of the exporter's notification to the receiving nation.<sup>33</sup> Before any export may occur, the receiving nation must provide the Secretary of State with a written consent to receive the waste.<sup>34</sup> Any waste shipment must conform to terms specified by the receiving country.<sup>35</sup> Ninety days after the waste shipment, the consignee at the final destination must send a written confirmation of the waste's receipt to the exporter.<sup>36</sup> If the confirmation is not received, the exporter must report its absence to EPA.<sup>37</sup>

Any alteration of the export plan requires another notification and consent of the receiving nation.<sup>38</sup> In addition, the exporter must file with the EPA an annual report that identifies the types, quantities, frequencies, and final destinations of all hazardous waste exported during the previous year.<sup>39</sup> However, even if the disposal would not protect human health or the environment of the receiving country, the EPA cannot prevent the waste's exportation.<sup>40</sup>

There are fewer requirements if the United States and the receiving country have entered into a specific agreement for the transportation and disposal of haz-

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33. See RCRA § 3017(d), 42 U.S.C. § 6938(d) (1996).

34. See *id.* Within thirty days of the Secretary of State's receipt of the receiving country's consent, objection, or other communication, a copy of the response is sent to the exporter. See RCRA § 3017(e), 42 U.S.C. § 6938(e) (1996).

35. See RCRA § 3017(a), 42 U.S.C. § 6938(a) (1996).

36. See 40 C.F.R. § 262.55(b) (1996).

37. See *id.*

38. See 40 C.F.R. § 262.53(c) (1996). Alterations that necessitate another notification and consent of the receiving country include variances in the means of transport or quantity of the waste shipments. See *id.*

39. See RCRA § 3017(g), 42 U.S.C. § 6938(g) (1996).

40. See RCRA § 3017, 42 U.S.C. § 6938 (1996) (failing to provide EPA with the authority to prevent an export once the notice and consent requirements have been satisfied).

ardous wastes. Where an agreement exists, an exporter need only file a report of the transfer to the EPA and ensure that the waste transfer complies with applicable requirements of the international agreement.<sup>41</sup> The United States has entered into such agreements with Canada and Mexico.<sup>42</sup>

*b. Enforcement Procedures*

RCRA provides the EPA with a variety of enforcement authorities applicable to the export of hazardous waste. Section 3008 authorizes the EPA to issue compliance orders for violations of RCRA requirements<sup>43</sup> as well as seek injunctions and criminal penalties against RCRA violators.<sup>44</sup> Any person who knowingly exports hazard-

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41. See RCRA § 3017(f), 42 U.S.C. § 6938(f) (1996). When such an agreement exists, the waste shipment must conform to the terms of that agreement, regardless of any conflicting RCRA provisions. See RCRA § 3017(a)(2), 42 U.S.C. § 6938(a)(2) (1996); RCRA § 3017(f), 42 U.S.C. § 6938(f) (1996).

42. See, e.g., Agreement Between the Government of the United States of America and the Government of Canada Concerning the Transboundary Movement of Hazardous Waste, Nov. 8, 1986, 39 Can T.S. 1986; Annex III to the Agreement on Cooperation for the Protection and Improvement of the Environment in the Border Area, Jan. 29, 1987 (U.S.-Mex.). See also Jason L. Gudofsky, *Transboundary Shipments of Hazardous Waste for Recycling and Recovery Operations*, 34 STAN. J. INT'L L. 219, 268-72 (1998) (providing detailed discussion of these two agreements).

43. See RCRA § 3008(a), 42 U.S.C. § 6928(a) (1996). These compliance orders can: (1) mandate compliance within specified timeframes; (2) assess financial penalties for past and current RCRA violations; and (3) suspend or revoke existing RCRA permits. See *id.*

44. See RCRA § 3008, 42 U.S.C. § 6928 (1996). In situations where the EPA has delegated RCRA authority to a State, the EPA must notify the State before issuing a compliance order or commencing a civil action. See RCRA § 3008(a), 42 U.S.C. § 6928(a) (2) (1996).

ous waste without the consent of a receiving country, or who exports hazardous waste in violation of an applicable international agreement, may be subject to fines and criminal imprisonment.<sup>45</sup>

In addition to the civil and criminal penalties available to the EPA, section 7002 of RCRA establishes a citizen suit provision that creates the right to commence a civil action against any person alleged to be in violation of the statute.<sup>46</sup> The citizen suit provision authorizes the recovery of attorneys' fees and other litigation costs.<sup>47</sup> However, there are restrictions that significantly limit the potential use of the citizen suit provision. Section 7002 does not apply to suits outside the United States,<sup>48</sup>

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45. See RCRA § 3008(d), 42 U.S.C. § 6928(d) (1996). Fines may amount to \$50,000 for each day of a violation, and imprisonment may last up to two years. See *id.* at (7)(B). Criminal penalties may also be brought against any person who knowingly omits material information or makes a false material statement or representation in any document used for purposes of compliance with RCRA. See RCRA § 3008(d)(3), 42 U.S.C. § 6928(d)(3) (1996). Any person who knowingly exports hazardous waste and knows at the time of export that the action places another person in imminent danger of death or serious bodily injury may be subject to fines as much as \$250,000 and imprisonment up to fifteen years. See RCRA § 3008(e), 42 U.S.C. § 6928(e) (1996). In determining whether a defendant possessed a "knowing" state of mind required by section 3008, it is necessary to examine whether the defendant: (1) was aware of the nature of the conduct; (2) believed that circumstances for the conduct existed; or (3) believed that the conduct was substantially certain to cause death or serious bodily injury. See *id.* at (f)(1).

46. See RCRA § 7002(a), 42 U.S.C. § 6972(a) (1996). The term "person" includes companies, corporations, partnerships, firms, and States. See RCRA § 1004(a)(15), 42 U.S.C. § 6903(a)(15) (1996).

47. See RCRA § 7002(e), 42 U.S.C. § 6972(e) (1996).

48. See Teresa Wallbaum, *America's Lethal Export: The Growing Trade in Hazardous Waste*, 1991 U. ILL. L. REV. 889,

and there are procedural restrictions limiting the availability of the provision.<sup>49</sup>

### 3. The Significance and Effect of RCRA on the Export of Hazardous Wastes

RCRA provides U.S. generators with several incentives to export hazardous wastes. The regulations governing waste disposal in the United States are lengthy, time-consuming, and burdensome.<sup>50</sup> RCRA also establishes a variety of enforcement mechanisms and citizen suit opportunities applicable to domestic disposal activities. All of these elements increase the costs and difficulties

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914 (1991) (discussing the fact that RCRA does not have international application). There is a presumption against the extraterritorial application of U.S. laws. In order for a law to be applied outside the United States, there must be clear evidence of Congress' intent to apply the law outside the United States. *See, e.g., Foley Bros. v. Filardo*, 336 U.S. 281 (1949).

49. *See, e.g., RCRA* § 7002(a), 42 U.S.C. § 6972(a) (1996) (specifying that citizen suits can only be brought for existing violations); *id.* at § 7002(b) (requiring plaintiffs to notify EPA, the State, and the alleged violator prior to legal action); *see id.* at § 7002(b), 42 U.S.C. § 6972 (b) (prohibiting citizen suits if EPA or the State has commenced or is diligently prosecuting against the alleged violation); *id.* at § 7002(g), 42 U.S.C. § 6972 (g) (establishing circumstances where a transporter shall not be deemed to have contributed to, or be contributing to, alleged violations that occurred after the waste left such transporter's possession).

50. *See American Mining Congress v. EPA*, 824 F.2d 1177, 1189 (D.C. Cir. 1987) (describing the analysis of RCRA as a "mind-numbing journey"). *See also United States Environmental Protection Agency, Reinventing Environmental Protection*, 1998 ANN. REP., at 63 (1999) (noting that despite efforts to reduce the time required to comply with environmental regulations (and RCRA requirements in particular), the annual burden associated with EPA's environmental requirements has remained unchanged over the last four years).

associated with waste disposal in the United States.<sup>51</sup> Many of these difficulties are avoided by exporting hazardous wastes. Because RCRA does not mandate treatment, storage, or disposal requirements for foreign receiving facilities, generators can export hazardous waste outside the United States with limited involvement and oversight from the EPA. In addition, because RCRA's citizen suit provision only applies to domestic actions, the likelihood of third-party involvement and litigation is limited by exportation.<sup>52</sup> Each of these factors reduces the costs and challenges associated with disposing hazardous wastes abroad.

## B. *The Comprehensive Environmental Response, Compensation, and Liability Act*

### 1. Background and Overview of CERCLA

The catalyst for the enactment of CERCLA arose during the 1970's as a result of environmental disasters such as Love Canal<sup>53</sup> and the Valley of the Drums.<sup>54</sup> In

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51. See, e.g., John W. Bagby et al., *How Greed Was My Balance Sheet?: Corporate Liability and Environmental Disclosure*, 14 VA. ENVTL. L.J. 225, 227-28 (1995) (discussing the substantial resources that U.S. businesses devote toward environmental compliance); Robert W. Hahn & John A. Hird, *The Costs and Benefits of Regulation: Review and Synthesis*, 8 YALE J. ON REG. 233, 272 (1991) (addressing the significant costs of environmental compliance in the United States).

52. See RCRA § 42 U.S.C. § 6972 (Citizen Suits).

53. See ROGER FINDLEY and DANIEL FARBER, ENVIRONMENTAL LAW, 493 (3rd ed. 1991) (describing how the Hooker Chemical and Plastics Corporation used a waterway as a depository for approximately 352 million pounds of industrial wastes). This contamination required the evacuation of 1,000 families and \$30 million in cleanup expenses. See *id.*



response to public alarm over such incidents, Congress enacted CERCLA on December 11, 1980 to address the release of hazardous substances.<sup>55</sup> The term "hazardous substance" specifically includes hazardous wastes as defined by RCRA.<sup>56</sup>

CERCLA provides funding for the cleanup of hazardous substances by allocating response costs among the parties responsible for contamination.<sup>57</sup> To accomplish this function, CERCLA imposes a severe liability scheme that greatly favors the recovery of costs incurred for response action.<sup>58</sup> CERCLA's liability scheme is composed

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54. See S. REP. No. 96-848 at 4 (1980), *reprinted in*, ENVIRONMENTAL AND NATURAL RESOURCES POLICY DIVISION, LIBRARY OF CONGRESS, 1 LEGISLATIVE HISTORY OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (Superfund) 311 (describing the discovery of 17,000 drums of waste on a seven acre site near Louisville, Kentucky). Approximately 6,000 of those drums were releasing toxic chemicals into the environment. *See id.*

55. See S. Rep. No. 96-84 at 2 (1980); *see also* 16 WEEKLY COMP. PRES. DOC., 50 (Dec. 15, 1980) (noting public concern over environmental and public health hazards posed by the improper disposal of hazardous substances).

56. See CERCLA § 101(14), 42 U.S.C. § 9601(14) (1996).

57. Federal agencies can conduct response actions themselves and seek to recover their costs from responsible parties, or may compel a responsible party to conduct the response action. CERCLA § 104, 42 U.S.C. § 9604 (1996); Exec. Order No. 12,580, 52 Fed. Reg. 2,923 (1987). In situations where no responsible party is available, the response action is paid for through the Hazardous Substance Superfund which is funded through chemical and oil related taxes. *See* CERCLA § 111(a), 42 U.S.C. § 9611(a) (1996).

58. Responsible parties are liable for: all government costs of removal or remedial action consistent with the National Contingency Plan ("NCP") (as provided for in § 105 of CERCLA); any other necessary response costs incurred by any other person consistent with the NCP; damages for injury to, destruction of, or loss of natural resources; and the costs of specified health assessment or health effects studies. *See* CERCLA § 107(a)(4)(A), 42 U.S.C. § 9607(a)(4)(A) (1996).

of three major components. First, CERCLA establishes that a broad range of persons may be potentially responsible parties ("PRPs"). Section 107 of CERCLA provides that: current owners and operators of disposal sites; past owners and operators of disposal sites; persons who arranged for disposal; and transporters of hazardous substances are all potentially liable for the payment of response costs.<sup>59</sup>

Second, CERCLA establishes that responsible parties may be liable for all of the government's response costs even if that party acted without negligence or illegal intention.<sup>60</sup> It makes no difference that the party contributed only a small portion of the released hazardous substance.<sup>61</sup> The government can still recover all expenses associated with a response action, including direct costs, indirect costs, and interest.<sup>62</sup>

Third, CERCLA provides limited defenses to its liability scheme.<sup>63</sup> Liability can only be avoided when the release resulted from: an act of God; an act of war; an act or omission of a third party; or any combination of those defenses.<sup>64</sup> Moreover, some courts have eliminated proof

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59. See CERCLA § 107(a), 42 U.S.C. § 9607(a) (1996).

60. Because of the strict liability scheme, a responsible party may be liable even if that party complied with all applicable requirements at the time of disposal.

61. See CERCLA § 107(a), 42 U.S.C. § 9607(a) (1996). The responsible party may, however, seek financial contribution from other PRPs pursuant to CERCLA § 113(f), 42 U.S.C. § 9607(a). Section 113(f) provides that any person may seek contribution from any party potentially liable under CERCLA § 107(a), 42 U.S.C. § 9613(f). In resolving a claim for contribution, a court may allocate response costs using such equitable factors as the court determines are appropriate. See CERCLA § 113(f), 42 U.S.C. § 9613(f) (1996).

62. See *United States v. R.W. Meyer, Inc.*, 889 F.2d 1497, 1499 (6th Cir. 1989).

63. See CERCLA § 107(b), 42 U.S.C. § 9607(b) (1996).

64. See *id.*

of causation as a necessary element for establishing a generator's liability.<sup>65</sup>

## 2. Off-Site Transfers

Besides its liability scheme, CERCLA establishes an extensive array of mechanisms designed to ensure that each response activity is carried out in a safe and effective manner. Recognizing the futility of transferring remediated material to a facility where a future release could occur, legislators incorporated section 121 into CERCLA.<sup>66</sup>

Section 121 ensures that facilities receiving hazardous substances from CERCLA sites are properly maintained and are functionally capable of managing such materials. Section 121 establishes that persons conducting response actions can only transfer remediated waste

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65. The majority of courts do not require a plaintiff to establish a causal link between the defendant's waste and the incurrance of response costs. *See, e.g.*, *U.S. v. Wade*, 577 F. Supp. 1326, 1333-34 (E.D. Pa. 1983) (holding that a plaintiff must only establish that: (1) the generator shipped hazardous substances to the facility; (2) hazardous substances like those of the generator, are present at the facility; (3) there is a release, or threat of release of hazardous substances at the facility; and (4) response costs were incurred in response to the threat of contamination). *But see* *City of New York v. Exxon Corp.*, 633 F. Supp. 609 (S.D.N.Y. 1986) (requiring proof of a causal link between the defendant's waste and the incurrance of response costs in order to recover response expenditures).

66. *See* UNITED STATES DEPARTMENT OF ENERGY, OFFICE OF ENVIRONMENTAL GUIDANCE, RCRA/CERCLA DIVISION (EH-231), TRANSPORTING CERCLA WASTES OFF-SITE; FINAL OFF-SITE RULE 1 (December 1994) (discussing how § 121 of CERCLA aims to prevent remediated materials from contributing to environmental problems at off-site waste management facilities); Procedures for Implementing Off-Site Response Action, 58 Fed. Reg. 49201 (September 22, 1993); *see also* CERCLA § 121, 42 U.S.C. § 9621 (1996).

materials to off-site locations that comply with applicable operating standards and corrective action plans.<sup>67</sup> EPA's Off-Site Rule ("OSR")<sup>68</sup> provides regulations for section 121 and affects response actions conducted by Federal agencies, States, and private parties.<sup>69</sup> Under the OSR, a facility may receive wastes from off-site locations provided there are no relevant violations at the receiving unit.<sup>70</sup>

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67. In order to qualify as an approved off-site location: (1) the facility must comply with applicable RCRA permit requirements; (2) the unit to which the CERCLA waste is being transferred (the "receiving unit") may not be releasing any hazardous waste or hazardous waste constituent, into the groundwater, surface water, or soil; and (3) if there are any releases of hazardous wastes at the facility's nonreceiving units, those releases must be controlled by an approved corrective action program. See CERCLA. § 121(d)(3), 42 U.S.C. § 9621(d)(3) (1996).

68. See 58 Fed. Reg. 49200, 49200 (1993).

69. See 40 C.F.R. § 300.440(a)(1) (1996). Emergency removal actions may be exempt from complying with the requirements outlined in the OSR. See 40 C.F.R. § 300.440(a)(2). Such exceptions are generally limited to situations presenting an immediate and significant threat to human health and the environment. See *id.*

70. See 40 C.F.R. § 300.440(b) (1996). Relevant violations include significant deviations from requirements designed to prevent contamination or compel corrective action including: criminal indictments; violations of sections 3004 or 3005 of RCRA; violations of State environmental laws; or failure to comply with minimum technology requirements. See *id.* In evaluating the relevance of a violation, EPA considers factors such as whether the violation occurred at a receiving unit; the type of facility where the violation occurred; and the degree of threat to human health and the environment. See 58 Fed. Reg. 49200, 49208 (1993).

### 3. The Significance and Effect of CERCLA on the Export of Hazardous Wastes

CERCLA looms as a potential disaster for generators disposing hazardous waste in the United States. CERCLA's liability scheme is so draconian that a generator may seek to export hazardous wastes, in part, as a means of reducing litigation concerns.<sup>71</sup> After becoming subject to a CERCLA response action, the generator must then ensure that its cleanup activities comply with the OSR. Beyond the legal and regulatory challenges associated with this requirement, there may be public opposition to the receipt of wastes from outside locations.<sup>72</sup> This opposition can require additional time, resources, and also may generate unfavorable media coverage.<sup>73</sup>

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71. CERCLA liability has been described as "a black hole that indiscriminately devours all who come near it." *Long Beach Unified School Dist. v. Dorothy B. Godwin California Living Trust*, 32 F.3d 1364, 1366 (9th Cir. 1994), quoting, Jerry L. Anderson, *The Hazardous Waste Land*, 13 VA. ENVTL. L.J., 1, 6-7 (1993).

72. See, e.g., *Navy Tries Again to Dispose of Napalm*, CNN INTERACTIVE, U.S. NEWS, May 15, 1998, available at <<http://www.cnn.com/us/index/html>> (describing how a disposal facility, subject to the OSR, refused to honor a disposal contract because of public and political opposition to the intended disposal plan).

73. See *id.* (demonstrating that public opposition may force generators to spend several weeks searching for alternative disposal facilities); *State News, Louisiana*, PESTICIDE & TOXIC CHEM. NEWS, Vol. 27, No. 11, at 13 (Jan. 7, 1999) (illustrating the time and resources that companies may spend in response to community and environmental groups' opposition campaigns); Marianne Lavelle, *Environmental Vise: Law, Compliance*, NAT'L L.J., Vol. 15, No. 52, at S1-S2 (Aug. 30, 1993) (indicating that activists force companies to expend additional resources on public relations activities and legal defenses).

A generator can, however, avoid some of these difficulties by disposing hazardous waste outside the United States. Although CERCLA's liability scheme causes concern for domestic companies, CERCLA does not apply to releases in foreign countries even if the release resulted from a hazardous substance exported from the United States.<sup>74</sup> Moreover, a receiving country may be eager to accept waste from CERCLA sites, as opposed to U.S. communities, which may resist the intended transfer. In this respect, CERCLA and the OSR create potential pitfalls which generators can avoid, to some extent, through exportation.<sup>75</sup>

### *C. The Commerce Clause of the United States Constitution*

#### **1. The Effects on Hazardous Waste Transportation and Disposal**

In addition to RCRA and CERCLA, the Commerce Clause of the United States Constitution affects the transportation and disposal of hazardous wastes generated in the United States. Unlike RCRA and CERCLA, which restrict disposal options, the Commerce Clause broadens domestic waste management opportunities. By granting Congress the authority to regulate inter-

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74. Compare CERCLA § 101(8), 42 U.S.C. § 9601(8) (1996) with CERCLA § 101(22), 42 U.S.C. § 9601(22) (1996) (defining the terms "environment" and "release" in a manner that limits PRPs' liability to releases into the navigable waters or territories under the jurisdiction of the United States).

75. CERCLA § 108, 42 U.S.C. § 9608(c)(1996) (It should be noted, however, that a U.S. generator would remain subject to CERCLA's liability scheme for releases that occurred domestically).

state commerce, the Commerce Clause limits States' ability to restrict the importation of hazardous wastes.<sup>76</sup>

Citizens frequently object to the establishment of a disposal site within their communities, or to a local facility's receipt of wastes from other jurisdictions.<sup>77</sup> In response to such objections, legislators have employed various methods to restrict the importation of hazardous wastes into local hazardous waste facilities.<sup>78</sup> These methods include increasing disposal fees, banning waste importation, and adding permit requirements.<sup>79</sup> Generally, states and localities base their restrictions on efforts designed to protect health, safety, and the environment.<sup>80</sup> The authority to enact such laws exists pursuant to the police powers reserved to states.<sup>81</sup>

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76. See U.S. CONST. art. I, § 8, cl. 3 (providing Congress with the power to regulate commerce with foreign nations, Indian Tribes and the states).

77. See *supra* note 10 (describing community opposition to waste imports).

78. See, e.g., Donald Baker, *In Virginia, Support Grows for Landfill Restraints*, WASH. POST, Nov. 25, 1998, at B1 (describing efforts to restrict the importation of waste into the State of Virginia).

79. See *id.* (discussing restrictions such as capping the number of available permits for new landfills; curtailing waterway transportation of interstate trash; limiting the expansion of State landfill capacities; and imposing moratoriums on the construction, growth, or operation of new landfills); Kate Sinding, *The Transboundary Movement of Waste: A Critical Comparison of U.S. Interstate Policy and the Emerging International Regime*, 5 N.Y.U. ENVTL. L.J. 796, 814-17 (1996) (describing restrictions proposed by state and local governments).

80. See, e.g., *Fort Gratiot Sanitary Landfill, Inc. v. Michigan Department of Natural Resources*, 504 U.S. 353, 363 (1992) (arguing that proposed restrictions protected health and safety); *Chemical Waste Management v. Hunt*, 504 U.S. 334, 342 (1992) (asserting that proposed restrictions served a legitimate local purpose related to citizens' health and safety); *City of Philadelphia v. New Jersey*, 437

State and local laws limiting the interstate transportation of hazardous waste may be unconstitutional under the Commerce Clause if such laws place unreasonable restrictions on interstate commerce.<sup>82</sup> In *City of Philadelphia v. New Jersey*,<sup>83</sup> the U.S. Supreme Court determined that states can not unduly restrict the movement of interstate trade because waste constitutes

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U.S. 617, 618-19 (1978) (describing a New Jersey proposal to ban the importation of wastes originating from outside the State as a means of furthering the state's health, safety, and environmental objectives). States have frequently relied on the fact that the Supreme Court has carved out an exception to the Commerce Clause protection in situations where a state law is necessary to quarantine against out-of-state articles. See, e.g., *Maine v. Taylor*, 477 U.S. 131, 151 (1986) (upholding legislation which discriminated against out-of-state commerce involving articles that were highly dangerous); *National Solid Wastes Management Ass'n v. Alabama*, 910 F.2d 713, 720 (11th Cir. 1990).

81. See *Chemical Waste Management v. Hunt*, 504 U.S. 334, 347 (1992) (citing *Guy v. Baltimore*, 100 U.S. 434, 443 (1879) for the proposition that through the use of its police powers, a state may restrict activities which endanger the health and safety of its citizens).

82. See *C. & A. Carbone Inc. v. Town of Clarkstown*, 511 U.S. 383 (1994) (holding that a town's waste flow control ordinance violated the Commerce Clause); *Chemical Waste Management v. Hunt*, 504 U.S. 334, 342 (1992) (determining that a state's economic barrier against out-of-state wastes violated the Commerce Clause); *Fort Gratiot Sanitary Landfill, Inc. v. Michigan Dep't of Natural Resources*, 504 U.S. 353, 367 (1992) (finding "no health and safety reason for limiting the amount of waste that a landfill operator may accept from outside the state, but not the amount that the operator may accept from inside the state"); *City of Philadelphia v. New Jersey*, 437 U.S. 617, 629 (1978) (criticizing an attempt by the state to isolate itself from a common problem by erecting a barrier against the movement of interstate trade).

83. 437 U.S. 617 (1978).



an article of commerce.<sup>84</sup> This reasoning has served as precedent for several other decisions.<sup>85</sup>

## 2. Limitations on Commerce Clause Protection

Despite the legal protection afforded by the Commerce Clause, states and localities may still employ a variety of measures to restrict the import of hazardous waste. Each of these measures raises the costs and regulatory burdens associated with domestic movement and disposal of hazardous wastes, and provides further incentive for generators to export hazardous wastes outside the United States. States and localities may limit waste imports when the need for the limitation outweighs potential infringement on interstate commerce.<sup>86</sup> State and local governments may also impose additional restrictions on wastes originating from out-of-state sources, if the government is participating in the waste disposal market as a private party.<sup>87</sup> In other words,

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84. *See id.* at 621-23.

85. *See, e.g.,* *C. & A. Carbone Inc. v. Town of Clarkstown*, 511 U.S. 383, 393 (1994); *Fort Gratiot Landfill v. Michigan Dept. of Natural Resources*, 504 U.S. 353, 359 (1992); *National Solid Wastes Management Ass'n v. Alabama*, 910 F.2d 713, 718 (11th Cir. 1990).

86. *See* *Evergreen Waste Sys., Inc. v. Metro. Serv. Dist.*, 643 F. Supp. 127, 129 (D. Or. 1986), *aff'd*, 820 F.2d 1482 (9th Cir. 1987) (upholding a ban on waste importation as a means of extending the operational life of the landfill); *Glassboro v. Gloucester County Bd. of Chosen Freeholders*, 495 A.2d 49, 55 (N.J. 1985), *cert. denied*, 474 U.S. 1008 (1985) (barring importation of wastes to protect the health, safety, and welfare of citizens whose municipalities lack alternative means of disposing waste).

87. *See* *Waste Recycling v. S.E. Alabama Solid Waste Disposal*, 814 F. Supp. 1566, 1571 (M.D. Ala. 1993) (providing that if a state or local government acts as a market participant rather than a market regulator, the government's conduct is not subject to Commerce Clause scrutiny); *Chemical Waste Management v. Hunt*, 504 U.S. 334, 351

when a hazardous waste facility is owned or subsidized by the government, the Commerce Clause provides fewer protections against regulation than if the government were regulating a private facility.<sup>88</sup> States can also tax hazardous waste transportation in ways that inordinately impact out-of-state generators.<sup>89</sup>

In addition to these impositions, there have also been several legislative efforts to expand states' and localities' ability to impose regulations on wastes originating from other jurisdictions.<sup>90</sup> Supporters of increased restric-

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(1992) (Rehnquist, C.J., dissenting) (noting that a State may favor local industries when the state is acting as a market participant); *White v. Massachusetts Council of Constr. Employers*, 460 U.S. 204, 206-208 (1983); *Reeves, Inc. v. Stake*, 447 U.S. 429, 436-439 (1980).

88. See *Waste Recycling v. S.E. Alabama Solid Waste Disposal*, 814 F. Supp. 1566, 1572 (M.D. Ala. 1993) (noting the different levels of legal scrutiny that apply depending on whether the State is acting as a market participant or as a regulator); *Swin Resource Sys., Inc. v. Lycoming County*, 883 F.2d 245, 248-51 (3d Cir. 1989) (analyzing the market participant theory in the waste disposal context).

89. See *Chemical Waste Management v. Hunt*, 504 U.S. 334, 350-51 (1992) (Rehnquist, C.J., dissenting) (noting the variety of constitutionally-protected measures that a State can use against out-of-state transporters of hazardous waste). For example, a tax based on the amount of mileage traveled could be imposed on all vehicles which transport hazardous wastes within the State. See *id.* Such a tax structure would disproportionately impact out-of-state transporters who generally would need to travel greater distances to reach a particular disposal site.

90. See, e.g., STATE CONTROL OF MANAGEMENT OF MUNICIPAL SOLID WASTE, H.R. 2848, 103d Cong. (1993) (authorizing States to establish import restrictions, landfill tonnage limitations, and bans on the importation of wastes for disposal); S. 2877, 102d Cong. § 2 (1992) (authorizing bans on the importation of out-of-state wastes for disposal); *House Panel Circulates Draft Bill Supporting Local Control Laws*, NAT'L ENV'T DAILY (BNA), at D-5. (Feb 23, 1994); *Solid Waste: Efforts Underway to Push Interstate Flow Control Bills*

tions assert that because waste management is an activity protected by the principles of federalism, local governments should regulate their own waste disposal practices.<sup>91</sup> For all these reasons, although the Commerce Clause provides some protection against restrictions on the transportation and disposal of hazardous wastes in the United States, there are still several factors that lead U.S. generators to export their hazardous wastes to foreign countries.

## II. INTERNATIONAL AGREEMENTS AFFECTING THE TRANSBOUNDARY MOVEMENT OF HAZARDOUS WASTES

In addition to the domestic requirements influencing a generator's decision to export hazardous wastes, there are several international agreements that affect this trade practice. Since the United States is the world's leading generator and exporter of hazardous waste,<sup>92</sup> many generators have determined that compliance with the international agreements is more advantageous than compliance with domestic requirements. Part II identifies and analyzes the most significant international agreements affecting the export of hazardous wastes.

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*in Lame Duck Sessions*, NAT'L ENV'T DAILY (BNA), at D-5 (Oct. 28, 1994).

91. See Michael D. Diederich, Jr., *Does Garbage Have Standing: Democracy, Flow Control and a Principled Approach to Municipal Solid Waste Management*, 11 PACE ENVTL. L. REV. 157 (1993) (arguing that State and local governments should have greater discretion to restrict the importation of waste).

92. See INTERNATIONAL TRADE, *supra* note 1, at 13-14. It is estimated that during the late 1980's, all the countries within the Organization for Economic Cooperation and Development (OECD) generated 300 million tons of hazardous waste. See *id.* The United States accounted for almost eighty-six percent of that total. See *id.* See also *Ban Sought on Toxic Exports; Clinton Administration Seeks Congressional Legislation to Ban Toxic Waste Shipments* AMERICAN METAL MARKET (March 8, 1994) available in LEXIS (describing the amount of hazardous wastes exported by the United States).

A. *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal*

1. Background and Overview of the Basel Convention

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal ("Basel Convention")<sup>93</sup> is a multi-national agreement that regulates the transportation of hazardous wastes across international borders. The key objective of the Basel Convention is to protect human health and the environment by minimizing the generation and transboundary movement of hazardous wastes.<sup>94</sup> Hazardous wastes regulated by the Convention include wastes exhibiting hazardous characteristics, as well as specifically identified wastes.<sup>95</sup> The Basel Convention represents the most significant and influential international agreement impacting the hazardous waste trade.<sup>96</sup>

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93. *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal*, opened for signature Mar. 22, 1989, S. TREATY DOC. No. 5, 102d Cong., 28 I.L.M. 657 [hereinafter *Basel Convention*]. The Convention was sponsored by the United Nations Environmental Program (UNEP) and entered into force on May 5, 1992. *See id.*

94. *See id.* at art. 4.

95. *See id.* at art. 1, para. (1)(a). Wastes outside this definition may still be regulated under the Basel Convention if an exporting nation, importing nation, or transit nation considers the waste to be hazardous. *See id.* at art. 1, para. (1)(b). *See also* Jason L. Gudofsky, *Transboundary Shipments of Hazardous Waste for Recycling and Recovery Operations*, 34 STAN. J. INT'L L. 219, 234-36 (1998) (providing detailed discussion of hazardous wastes regulated under the Basel Convention).

96. *See* MOSTAFA K. TOLBA, *Preface to TRANSBOUNDARY MOVEMENTS AND DISPOSAL OF HAZARDOUS WASTES IN INTERNATIONAL LAW, BASIC DOCUMENTS XIII* (Barbara Kwiatkowska & Alfred H. A. Soons eds., 1993). On June 17, 1999,

The Basel Convention requires that exporters notify receiving countries of intended hazardous waste shipments.<sup>97</sup> The notification must identify all nations through which the waste will travel.<sup>98</sup> The receiving nation may consent to the request, reject the offer, solicit additional information, or accept the request with stipulated conditions.<sup>99</sup> All waste shipments are prohibited until the exporter obtains both a proper consent and a disposal contract that provides for "environmentally sound management" of the wastes.<sup>100</sup> No party may engage in the importation or exportation of wastes with nonparty States unless a separate disposal agreement that satisfies the environmentally sound management standard has been established.<sup>101</sup> Any violation of these

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there were 123 parties to the Basel Convention. See Request for Information Concerning Transfrontier Movement of Wastes Destined for Recovery Operations Within the OECD Area, 64 Fed. Reg. 44,722 (1999). Countries that have adopted the Basel Convention include: Canada, France, Germany, Italy, Mexico, Spain, Sweden, Switzerland, India, Argentina, the United Kingdom and China. See Secretariat of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, *Basel Convention: Status of Ratifications* (visited April 19, 2000) <<http://www.basel.int/ratif.html>> (offering a complete list of the parties to the Basel Convention as of March 2, 2000).

97. See *Basel Convention*, *supra* note 93, at art. 6(1).

98. See *id.*; see also *id.* at Annex V(A), para. 7.

99. See *id.* at art. 6(2).

100. See *id.* at art. 6(3). "Environmentally sound management" means taking all practicable steps to ensure that the wastes are managed in a manner protective of human health and the environment. See *id.* at art. 2(8). Commentators have criticized the standard for being vague and subjective. See, e.g., David J. Abrams, *Regulating the International Hazardous Waste Trade: A Proposed Global Solution*, 28 COLUM. J. TRANSNAT'L L. 827-31 (1990).

101. See *Basel Convention*, *supra* note 93, at art. 4(5). See also *id.* at art. 11(1) (discussing the establishment of separate disposal agreements). The United States has en-

prohibitions requires the exporting State to recover its wastes from the receiving country.<sup>102</sup>

In addition to the requirements included within the original Basel Convention, the parties have proposed an amendment ("Decision III/1") prohibiting countries within the Organization for Economic Cooperation and Development ("OECD")<sup>103</sup> from exporting hazardous wastes to non-OECD countries.<sup>104</sup> The purpose of the amendment is to increase safe disposal practices and reduce the generation of hazardous wastes by forcing OECD countries to retain their own waste materials.<sup>105</sup>

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tered into such a separate agreement with Malaysia, and there are ongoing efforts to adopt similar agreements with Brazil, the Philippines, and Singapore. *See, e.g., Administration Considering Bilaterals to Let Basel Parties Export Waste to U.S.*, INT'L ENV'T REP. (BNA), Vol. 19, No. 8, at 305 (April 17, 1996). Supporters of such agreements assert that the exportation of hazardous wastes provides for safer and less expensive disposal practices. *See, e.g., id.* Environmental groups have raised concerns, however, that these agreements may be used to circumvent any ban on waste shipments. *See Basel Convention Parties to Discuss Possible Exceptions to Waste Trade Ban*, INT'L ENV'T REP. (BNA), Vol. 21, No. 3, at 87 (Feb. 4, 1998).

102. *See Basel Convention, supra* note 93, at art. 8.

103. The OECD is an intergovernmental organization consisting of twenty-nine industrialized countries from Europe, North America, Asia, and the Pacific. Member countries include: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Mexico, the Netherlands, Norway, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. *See Hazardous Wastes: EPA Seeks No Comment on Rule Codifying OECD Decision on Hazardous Waste Trade*, INT'L ENV'T REP. (BNA), Vol. 19, No. 8, at 311, 312 (April 17, 1996).

104. *See Decisions Adopted by the Third Meeting of the Conference of the Parties to the Basel Convention*, at 1, U.N. Doc. UNEP/CHW.3/35 (1995) [hereinafter *Decision III/1*].

105. *See id.* Cf. *United Nations Officials See Basel Treaty as "Limping" Into Effect With Limited Support*, INT'L

Despite being proposed in 1994, the ban is not yet binding because of insufficient acceptance among Basel Convention members.<sup>106</sup> However, recent modifications to the proposal have increased support for the amendment.<sup>107</sup>

## 2. United States' Position on the Basel Convention

Despite signing the Basel Convention in 1990, the United States has yet to ratify the international agreement.<sup>108</sup> Accordingly, the requirements of the Basel Convention do not currently apply to the United States. Part of the reason for the delay is that the United States lacks the regulatory infrastructure necessary to imple-

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ENV'T REP. (BNA), at 275 (May 6, 1992). *See Report of the First Meeting of the Conference of the Parties to the Basel Convention*, at 2, U.N. Doc. UNEP/CHW.1/24 (1992) (indicating that this amendment would require approximately 95 percent of the 300-400 million metric tons of hazardous waste generated worldwide be disposed of within OECD countries).

106. *See Parties to Basel Convention Adopt Two-List System for OECD Waste Exports*, INT'L ENV'T REP. (BNA), Vol. 21, No. 5, at 185 (Mar. 4, 1998).

107. *See Industry Groups Say They Would Support Basel Legislation Under Certain Conditions*, INT'L ENV'T REP. (BNA), Vol. 21, No. 12, at 567 (June 10, 1998). Under the revised system, waste materials identified on List A (Annex VIII) would be subject to the ban on exportation from OECD to non-OECD countries, and wastes on List B (Annex IX) could be exported from OECD to non-OECD countries unless the waste exhibited hazardous characteristics. *See id.* Materials on List A include arsenic, asbestos, lead, and mercury; while materials on List B include scrap iron, steel, copper, and used paper. *See Parties to Basel Convention Adopt Two-List System for OECD Waste Exports*, INT'L ENV'T REP. (BNA), Vol. 21, No. 5, at 185 (Mar. 4, 1998).

108. *See EPA Faulted for Grabbing Too Much Power Under Draft Basel Convention Legislation*, CHEM. REG. REP. (BNA), Vol. 23, No. 1, at 24 (April 22, 1999).

ment the Basel Convention.<sup>109</sup> There are, however, ongoing efforts to facilitate ratification of the agreement.<sup>110</sup> The Executive Branch recently released a proposal for inter-agency comment that would provide EPA with the authority to fulfill U.S. responsibilities under the Basel Convention.<sup>111</sup> In particular, the legislation would authorize EPA to prevent any waste exportation that was incompatible with the environmentally sound management standard.<sup>112</sup> Although the draft has not been publicly circulated, critics have already objected to the amount of discretionary authority provided to EPA.<sup>113</sup> Moreover, previous efforts to revise hazardous waste exportation requirements have failed.<sup>114</sup>

Beyond these obstacles, it is especially difficult to ratify the Basel Convention because of the recently proposed amendment that prohibits OECD countries from exporting hazardous waste to non-OECD countries. Opponents claim the prohibition violates principles of free trade,<sup>115</sup> and would increase the use of virgin re-

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109. *See id.*

110. *See id.*

111. *See id.* It is expected that the legislation will be submitted to Congress during 1999.

112. *See id.*

113. *See id.* (asserting that the draft does not provide for judicial review of EPA decisions on waste exportation and places too many constraints on imported waste destined for recycling).

114. *See, e.g.,* Louis Freedberg, *U.S. Plans Ban on Exports of Hazardous Waste*, S.F. CHRON., Feb. 26, 1994, at A4 (reporting that in 1994, the Clinton Administration proposed to immediately prohibit all hazardous waste exports to developing nations, and phase out the exportation of hazardous waste to OECD nations over a five-year period). The proposal would have also established the regulatory infrastructure that must exist before the United States can ratify the Convention.

115. *See* Morgan E. Goodwin, *Chamber Reverses Basel Position; U.S. Chamber of Commerce No Longer Endorses*



sources.<sup>116</sup> Opponents also assert that because Decision III/1 is an amendment to the Basel Convention, a separate ratification from the U.S. Senate is required.<sup>117</sup> In contrast, proponents favoring the adoption of the Basel Convention and Decision III/1 claim that failure to ratify the Convention prevents U.S. facilities from trading with treaty members<sup>118</sup> and compromises U.S. efforts to influence the substance of the Basel Convention.<sup>119</sup> In light of these controversies, it is difficult to propose legislation that fulfills requirements necessary for implementation of the Basel Convention and Decision III/1, yet it does not encounter enough opposition to impede passage of the proposal.<sup>120</sup>

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*Basel Convention on Hazardous Waste Transportation and Disposal*, AM. METAL MARKET, June 1, 1994 at 9.

116. See, e.g., *Hazardous Waste: Basel Convention Ban on OECD Exports Hinges on Definition of Recycled Waste*, INT'L DAILY (BNA), at D-3 (Sept. 20, 1995).

117. See, e.g., *Hazardous Waste: Attempts to Implement Basel Treaty Delayed by Administration Conflicts*, INT'L ENV'T REP. (BNA), Vol. 21, No. 13, at 621-622 (June 24, 1998).

118. See, e.g., Amy Porter, *Hazardous Waste: Administration Commits to Begin Process of Implementing Basel Early Next Year*, INTERNATIONAL ENV'T. REP. (BNA), Vol. 21, No. 18, at 849 (Sep. 2, 1998) (describing how Barbara Larkin, Assistant Secretary for Legislative Affairs at the U.S. State Department, indicated that failure to sign the treaty hinders U.S. commercial efforts). *But see Basel Convention*, *supra* note 93, at art. 11 (authorizing the establishment of separate trading agreements). In this respect, even with the ratification of Decision III/1, it may be possible that parties could negotiate bilateral agreements to circumvent the export restrictions.

119. See, e.g., *Official Says U.S. Should Ratify Treaty on Hazardous Waste Movement Despite Flaws*, INT'L ENV'T REP. (BNA), Vol. 19, No. 6, at 211 (Mar. 20, 1996).

120. In addition to objections associated with measures necessary to implement the Basel Convention, critics have also raised concerns that the legislation may be used as a vehicle to address other environmental issues such as reme-

### B. *La Paz Agreement*

On February 16, 1984, the Agreement on Cooperation for the Protection and the Improvement of the Environment in the Border Area ("La Paz Agreement") went into effect between the United States and Mexico.<sup>121</sup> In part, the Agreement aims to reduce risks to public health, property, and the environment associated with hazardous wastes.<sup>122</sup> Annex III of the La Paz Agreement establishes notification procedures for the transboundary movement of hazardous wastes.<sup>123</sup> The procedures require that before any hazardous waste crosses the border between the United States and Mexico, the receiving country must consent to the import.<sup>124</sup> The exporting country must notify the receiving country at least forty-five days prior to the intended shipment.<sup>125</sup> This notification must identify the exporter, the type and quantity of waste, the exportation schedule and the point of entry.<sup>126</sup> Moreover, the exporting country must accept any hazardous waste returned by the importing country.<sup>127</sup> Annex III also requires each country to ensure that its domestic environmental laws and regulations are fully

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diation or interstate waste problems. See, e.g., Amy Porter, *United States Commits to Begin Process of Implementing Basel Early Next Year*, INT'L ENV'T REP. (BNA), Vol. 21, No. 18, at 848, 849 (1998).

121. See Agreement on Cooperation for the Protection and Improvement of the Environment in the Border Area, Aug. 14, 1983, U.S.-Mex., T.I.A.S. No. 10,827, 22 I.L.M. 1025 - 26 [hereinafter *La Paz Agreement*].

122. See *id.* at Annex III, Preamble. Article I broadly defines "hazardous wastes" as any waste which may result in damage to health or the environment, and which is identified pursuant to the policies, laws, or regulations of each national authority. See *id.* at art. I, para. 1.

123. See *id.* at art. III.

124. See *id.*

125. See *id.*

126. See *id.*

127. See *La Paz Agreement*, *supra* note 121 at art. IV.

enforced.<sup>128</sup> To substantiate this mandate, the Agreement requires the parties exchange monitoring and enforcement-related information associated with transboundary waste shipments.<sup>129</sup>

### C. *The North American Free Trade Agreement*

The North American Free Trade Agreement ("NAFTA")<sup>130</sup> aims to promote free trade, investment, and the movement of goods and services between Canada, Mexico, and the United States.<sup>131</sup> During the development of NAFTA, critics speculated that countries might seek to attract investment by relaxing environmental standards.<sup>132</sup> To address this concern, negotiators added a variety of environmental protection measures that impact the transboundary movement of hazardous wastes.<sup>133</sup>

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128. *See id.* at art. II.

129. *See id.* at art. XII, paras. 2-3. The La Paz Agreement promotes the enforcement of hazardous waste import and export requirements through information exchanges, the provision of documents, and on-site visits to treatment, storage, and disposal facilities.

130. North American Free Trade Agreement, *drafted* Aug. 12, 1992, *revised* Sept. 6, 1993, U.S.-Mex.-Can., 32 I.L.M. 289 (pts. 1-3) & 32 I.L.M. 605 (pts. 4-8 & annexes) (entered into force Jan. 1, 1994) [hereinafter NAFTA].

131. *See id.* at art. 102 (stating that NAFTA's objectives include eliminating trade barriers; facilitating the cross-border movement of goods and services; promoting fair competition in the free trade area; and increasing investment opportunities).

132. *See* Tim Golden, *A History of Pollution in Mexico Casts Clouds Over Trade Accord*, N.Y. TIMES, Aug. 16, 1993, at A1, A7 (describing concerns that Mexico might become a "pollution haven" for foreign investors).

133. The adequacy of NAFTA's environmental protection mechanisms remains a controversy, especially in light of the increased industrial activity resulting from NAFTA's enactment. *See, e.g., NAFTA and the Environment*, *supra* note 3, at

NAFTA's Preamble requires each nation to pursue trade objectives in a manner consistent with environmental protection and conservation.<sup>134</sup> In keeping with this requirement, Article 1114 prohibits the relaxation or waiver of environmental standards in order to attract foreign investment.<sup>135</sup> Moreover, the text establishes procedures to address perceived violations of this prohibition.<sup>136</sup> Article 1114 is relevant to the transboundary movement of hazardous wastes because the trade practice is heavily influenced by regulatory burdens and compliance costs.<sup>137</sup>

Article 104 of NAFTA incorporates the requirements of two other international agreements. Article 104 states that where NAFTA conflicts with either the La Paz Agreement or the Basel Convention, the provisions of the La Paz Agreement or the Basel Convention shall

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762 (asserting that because authorities will be unable to address the increased generation of hazardous wastes resulting from NAFTA's implementation, the southwestern border region exists on "the cusp of an environmental disaster"); James A. Duffy, *The Environmental Implications of a North American Free Trade Agreement*, 10 HOFSTRA LAB. L.J. 561, 562 (1993) (asserting that NAFTA's enactment will allow the United States to take advantage of Mexico's less stringent environmental regulations). *But see* Steve Charnovitz, *The NAFTA Environmental Side Agreement: Implications for Environmental Cooperation, Trade Policy, and American Treaty-making*, 8 TEMP. INT'L & COMP. L.J. 257, 289 (1994) (characterizing NAFTA as the first trade agreement to address environmental standards in a serious fashion).

134. NAFTA, *supra* note 130, at preamble.

135. *See id.* at art. 1114(2) (prohibiting parties from encouraging investment by relaxing domestic health, safety, or environmental measures).

136. *See id.* (establishing a consultation process to address situations where a party may have waived environmental standards in an effort to attract investment).

137. *See supra* note 9 and accompanying text (describing how regulatory burdens and disposal costs affect the transboundary movement of hazardous wastes).

govern.<sup>138</sup> When there is a choice between complying with the La Paz Agreement and the Basel Convention, countries shall comply with the choice that is most consistent with the provisions of NAFTA.<sup>139</sup>

NAFTA resulted in the establishment of a supplementary accord called the North American Agreement on Environmental Cooperation ("Side Agreement")<sup>140</sup> which aims to improve environmentally related compliance and enforcement efforts.<sup>141</sup> As part of the Side Agreement, the parties agreed to enforce environmental requirements through such measures as the adoption of reporting and compliance programs; publicizing noncompliance data; communicating enforcement efforts; and penalizing violations of environmental requirements.<sup>142</sup> The Side Agreement also established a Commission on Environmental Cooperation ("CEC") which serves as a forum on environmental issues.<sup>143</sup> Any person or organization of a member nation may petition the CEC to review an alleged violation of NAFTA's environmental

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138. *NAFTA*, *supra* note 130, at art. 104(l).

139. *See id.*

140. North American Agreement on Environmental Cooperation, *opened for signature* Sept. 9, 1993, U.S.-Can.-Mex., 32 I.L.M. 1480 (entered into force Jan. 1, 1994).

141. The objectives of the Side Agreement include: (1) promoting sustainable development through mutually supportive environmental policies; (2) increasing cooperation among signatory nations to conserve, protect, and enhance the environment; (3) supporting the environmental goals and objectives of NAFTA; (4) strengthening cooperation on the development and improvement of environmental laws, regulations, and policies; (5) enhancing compliance with, and the enforcement of, environmental laws and regulations; and (6) promoting pollution prevention. *See id.* at art. 1(b)-(j).

142. *See id.* at art. 5(1). In determining the penalties for environmental violations, the parties must consider the nature and gravity of the violation, the cleanup costs involved, and the economic benefit obtained by the violator. *See id.* at art. 5(3).

143. *See id.* at art. 8(1).

obligations.<sup>144</sup> In October 1998, the CEC received its first request to review an enforcement matter involving hazardous waste disposal.<sup>145</sup> The petitioners hoped that the petition would serve as an example for addressing other environmental issues covered under the Side Agreement.<sup>146</sup>

D. *Convention on the Protection of the Environment  
Through Criminal Law*

On November 16, 1998, the Council of Europe ("CoE") announced the signing of the Convention on the Protection of the Environment Through Criminal Law ("CoE Convention").<sup>147</sup> Once entered into force, the Convention will establish a severe penalty system for environmental transgressions associated with the transboundary movement of hazardous wastes. Articles 2 and 3 of the Convention criminalize the unlawful transportation of hazardous waste that is likely to cause serious human

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144. See *id.* at art. 14(1)(f). In order for the CEC to process the petition, the submission must: provide sufficient documentation to support any claim; identify the person or organization submitting the petition; and serve a purpose other than harassment. See *id.*

145. See Carolyn Whetzel, *Groups Seek NAFTA Body Assistance in Cleaning Up Abandoned Plant in Mexico*, CHEM. REG. REP. (BNA), Vol. 22, No. 30, at 1205 (Oct. 30, 1998). The request petitioned the CEC to review Mexico's lack of enforcement against an abandoned recycling plant. See *id.* at 1204.

146. See, e.g., *id.* at 1205.

147. Convention on the Protection of the Environment Through Criminal Law, Council of Europe (Nov. 1998) No. 172 [hereinafter "CoE Convention"]. The treaty will enter into force once three more nations ratify the agreement. See also *Seven Nations Sign Council of Europe Treaty Criminalizing Acts Harmful to Environment*, INT'L ENV. (BNA), Vol. 21, No. 24, at 1156 (Nov. 25, 1998). The seven countries that have already signed the agreement are Denmark, Finland, France, Germany, Greece, Iceland, and Sweden. See *id.*

injury or environmental damage.<sup>148</sup> The Convention requires that signatories be able to impose imprisonment and financial sanctions for the most serious environmental offenses.<sup>149</sup> This Convention also requires that the signatories cooperate in criminal investigations and judicial proceedings.<sup>150</sup> The Convention allows for both corporate and individual liability.<sup>151</sup> By reason of its criminal penalties, this Convention represents one of the most stringent international agreements on environmental issues.<sup>152</sup>

The jurisdictional reach of the CoE Convention applies beyond each signatory's national territory. Article 5 provides that offenses committed on a ship or aircraft are subject to the Convention's requirements, even if the offense occurred outside a signatory's territorial juris-

148. See CoE Convention, *supra* note 147, at art. 2(1)(c). Article 2 specifically provides that each party shall criminalize, "the unlawful disposal, treatment, storage, transport or import of hazardous waste which causes or is likely to cause death or serious injury to any person or substantial damage to the quality of air, soil, water, animals or plants...when committed intentionally." *Id.* Article 3 establishes that the offenses identified in Article 2 are also criminal offenses even when committed with negligence, but there are available reservations on this requirement. See *id.* at art. 3.

149. See *id.* at art. 6. Criminal sanctions may also include reinstatement of the environment. See *id.*

150. See *id.* at art. 12. Article 12 provides that the parties shall afford each other "the widest measure of cooperation in investigations and judicial proceedings relating to criminal offenses. . . ." *Id.*

151. See *id.* at art. 9.

152. See *Seven Nations Sign Council of Europe Treaty Criminalizing Acts Harmful to Environment*, 21 INT'L ENV. (BNA), Vol. 21, No. 24, at 1155 (Nov. 25, 1998) (describing how the CoE Convention imposes significant new penalties that criminalize actions likely to cause environmental damage).

diction.<sup>153</sup> The CoE Convention also permits signatory nations to adopt more stringent regulations through the ratification of additional agreements.<sup>154</sup>

#### E. *Regional Agreements of Developing Countries*

There are also two leading regional agreements that address perceived shortcomings of international hazardous waste trading oversight. In March of 1990, African, Caribbean, and Pacific ("ACP") States<sup>155</sup> established the "Lome Convention"<sup>156</sup> out of concern that the existing international requirements regulating the transboundary movement of hazardous wastes inadequately protected the interests of developing countries.<sup>157</sup> To address these concerns, the Lome Convention establishes several areas of cooperation between ACP States

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153. See CoE Convention, *supra* note 147, at art. 5. A signatory state can, however, enter a reservation on this provision. See *id.*

154. See *id.* at art. 16.

155. ACP States include sixty-nine former European colonies located in Africa, the Caribbean, and the Pacific. See The Fourth African, Caribbean, and Pacific States-European Economic Community Convention of Lome, *opened for signature*, March 22, 1990, 29 I.L.M. 783 (1990) at 26.1 (listing countries that ratified the Lome Convention) [hereinafter *Lome Convention*].

156. See *id.*

157. See Resolutions of the ACP-EEC Joint Assembly, Resolution on the Banning of Exports of Toxic Wastes From Community Member States to the ACP, C 186/47, at 27.3 F (January 27, 1989) (stating that the Basel Convention inadequately responds to the demands of the ACP States for controlling the transboundary movements of hazardous wastes and prohibiting the dumping of hazardous wastes within ACP States); see also Kurt M. Rozelsky, *European Economic Communities-Environmental Policy-Legal Basis and International Implications of Council Regulation on the Supervision and Control of Shipments of Hazardous Waste*, 23 GA. J. INT'L & COMP. L. 111, 129 (1993).



and nations within the European Economic Community ("EEC") regarding the transboundary movement of hazardous wastes. Article 39 of the Lome Convention prohibits ACP States from importing hazardous wastes from any country, and imposes an affirmative obligation on EEC countries to prohibit all exports of hazardous waste to ACP States.<sup>158</sup> Article 39 requires signatory nations to expedite the enactment of internal legislation and administrative regulations to complete these mandates.<sup>159</sup> The Lome Convention also created a consultation process to address noncompliant activities<sup>160</sup> and supports the ratification of the Basel Convention.<sup>161</sup>

Another international agreement initiated by developing countries is the Bamako Convention.<sup>162</sup> Like the Lome Convention, the Bamako Convention takes a strict approach toward limiting the transboundary movement of hazardous wastes. The Bamako Convention establishes a notification process to provide for accountability and informed consent during waste transfers.<sup>163</sup> Each signatory must prevent the exportation of hazardous waste for disposal unless the intended transport and

158. See *Lome Convention*, *supra* note 155, at art. 39(1)-(3).

159. See *id.*

160. See *id.* at art. 39(1)-(2) (establishing that each party may initiate consultations to address delays in implementation or noncompliance with the requirements of the Lome Convention). The potential outcomes of the consultation process are quite broad, allowing members to take "appropriate steps in light of the situation." *Id.* at art. 39(1).

161. See *id.* at Annex IX.

162. Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes Within Africa, *opened for signature* January 29, 1991, 30 I.L.M. 773 (1991) [hereinafter *Bamako Convention*].

163. See *id.* at art. 6. Article 6 also requires members to limit the points of entry that may be used in the transboundary movement of hazardous wastes. See *id.*

disposal methods would be performed in an environmentally sound manner.<sup>164</sup> The convention criminalizes the importation of hazardous waste into Africa,<sup>165</sup> and severely restricts the movement of hazardous wastes already located within Africa.<sup>166</sup> The Bamako Convention also establishes a wide scope of applicability by broadly defining the hazardous wastes subject to its requirements.<sup>167</sup> Hazardous wastes within this regulatory scheme should be disposed of within the country of generation.<sup>168</sup> The Bamako Convention adopts the view that

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164. See *id.* at art. 4(3)(h)-(k). This "environmentally sound management" standard is the same standard used within the Basel Convention. Compare *id.* at art. 1(10) with *Basel Convention*, *supra* note 93, at art. 2(8).

165. See *Bamako Convention*, *supra* note 162, at art. 4(1).

166. See *id.* at art. 4(3) (requiring each signatory to: (1) submit annual hazardous waste reports for auditing; (2) prevent the export of hazardous wastes to countries which have prohibited such imports; (3) ban the exportation of hazardous wastes to countries which lack facilities necessary to ensure that the waste is disposed of in an environmentally sound manner; and (4) adopt the precautionary approach to pollution problems). The precautionary principle entails "preventing the release into the environment of substances which may cause harm to humans or the environment without waiting for scientific proof regarding such harm." *Id.* at art. 4(3)(f).

167. See *id.* at art. 2 (defining "hazardous wastes" to include: wastes specifically listed within Annex I of the convention; wastes possessing the characteristics of being hazardous (i.e., explosive, flammable, corrosive, toxic, etc.); and wastes which are specifically identified as hazardous by the domestic legislation of a State of export, import, or transit). See also *id.* at Annex II (describing the criteria for identifying a hazardous waste). See also Jason L. Gudofsky, *Transboundary Shipments of Hazardous Waste for Recycling and Recovery Operations*, 34 *STAN. J. INT'L L.* 219, 247-250, 272 (1998) (providing a detailed discussion of hazardous wastes regulated under the Bamako Convention).

restricting the transportation of hazardous wastes helps minimize the generation of such material.<sup>169</sup> The Bamako Convention imposes strict, joint and several liability on hazardous waste generators,<sup>170</sup> and the term "generator" is liberally construed.<sup>171</sup> Finally, the Bamako Convention requires each signatory to designate a national body to coordinate and oversee issues related to international waste trading.<sup>172</sup>

#### F. *Implications of the International Agreements*

Analysis of the international agreements governing the transboundary movement of hazardous wastes reveals several trends. First, there is a growing interest in regulating the transport of hazardous wastes across international borders. Moreover, both industrialized and developing nations have initiated or supported new restrictions.<sup>173</sup> These facts reveal that there is a globally diverse perception that the oversight of hazardous waste trading practices must be amended. Second, the requirements established within these agreements are in-

168. See *Bamako Convention*, *supra* note 162, at preamble, para. 8.

169. See *id.* at para. 9.

170. See *id.* at art. 4(3)(b) (imposing unlimited strict, joint and several liability on hazardous waste generators for wastes generated in Africa). The Bamako Convention also provides broad latitude to impose damages on generators, including the imposition of damages to punish and deter illegal waste trafficking. See *id.* at art. 9(2).

171. The term "generator" means any person whose activity produces hazardous wastes, or if that person is not known, the person who is in possession and/or control of those wastes. See *id.* at art. 1(20).

172. See *id.* at art. 5(4) (requiring each member state to appoint a national body to coordinate governmental and non-governmental bodies).

173. See, e.g., *supra* notes 93-172 and accompanying text (describing international agreements initiated or supported by industrialized and developing countries).

creasingly restrictive toward the transboundary movement of hazardous wastes. The restrictions apply to a greater variety of wastes,<sup>174</sup> and the jurisdictional reach of these agreements has expanded.<sup>175</sup> Third, not only is there a perceived need to increase the oversight of hazardous waste trading, but there is also a perception held by some parties that the transboundary movement of hazardous wastes should be discouraged or completely prohibited.<sup>176</sup> Fourth, the penalties for violations are becoming more severe. There are substantial criminal penalties for parties who violate hazardous waste trading requirements,<sup>177</sup> and waste generators may be subject to strict, joint and several liability.<sup>178</sup> Notwithstanding the United States' lack of participation in most of these international agreements, the mere existence of these agreements is significant to U.S. interests because the international community is taking a more aggressive

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174. See, e.g., *Bamako Convention*, *supra* note 162, at arts. 2-3 (using a definition of "hazardous waste" that may include wastes intended for recycling). This definition closes a regulatory loophole that has been used to circumvent hazardous waste importation restrictions. See Russell H. Shearer, *Comparative Analysis of the Basel and Bamako Conventions on Hazardous Waste*, 23 ENV'T'L L. 141, 155 (1993).

175. See, e.g., *CoE Convention*, *supra* note 147 and accompanying text (describing how the jurisdiction of the CoE Convention applies beyond a signatory's territorial borders).

176. See, e.g., *supra* note 158 and accompanying text (describing how the Lome Convention bans the importation of hazardous waste into Africa); *Basel Convention*, *supra* note 93, at preamble (supporting a prohibition on the transboundary movement of hazardous wastes, and the disposal of hazardous wastes in developing nations).

177. See *CoE Convention*, *supra* note 147, at art. 2 (describing criminal penalties for environmental offenses); *Bamako Convention* *supra* note 162, at art. 4(1) (criminalizing the importation of hazardous waste into Africa).

178. See *Bamako Convention*, *supra* note 162, at art. 4(3)(b) (describing how generators are subject to strict, joint and several liability for wastes imported into Africa).

stance toward restricting hazardous waste trading. In this respect, if these trends continue, it will be increasingly difficult for U.S. stakeholders to export hazardous wastes abroad or to import hazardous wastes from foreign generators.

### III. RECOMMENDATIONS TO IMPROVE THE TRANSBOUNDARY MOVEMENT OF HAZARDOUS WASTES

#### A. *Different Regulatory Approaches*

The regulatory framework governing international hazardous waste transportation and disposal has contributed to a perception that existing systems of oversight may inadequately protect the interests of receiving countries.<sup>179</sup> To address these problems, several efforts have aimed at reducing potential risks associated with the transportation of hazardous wastes across international borders. Recent efforts to restrict hazardous waste trading have focused on two methods of control: the "ban approach" and the prior informed consent ("PIC") approach.<sup>180</sup> Both methods present advantages and disadvantages in areas of public policy, environmental protection, and regulatory effectiveness.

The most restrictive agreements have established general prohibitions on the transboundary movement of

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179. See INTERNATIONAL TRADE, *supra* note 1, at 10-11 (discussing how several incidents of improper transportation and disposal raised international concern over the transboundary movement of hazardous waste); See also BILL MOYERS, GLOBAL DUMPING GROUND: THE INTERNATIONAL TRAFFIC IN HAZARDOUS WASTE (1992) (describing incidents in which exported hazardous waste was improperly managed and resulted in significant risks to human health and the environment).

180. See INTERNATIONAL TRADE, *supra* note 1, at 22-26 (describing the methods of control implemented by both the OCED and the EC).

hazardous wastes. Generally, this type of approach prohibits the exportation of hazardous waste to countries within specific geographic areas or to countries outside specific trading organizations.<sup>181</sup> The chief benefit of the "ban approach" is that it decreases the possibility that generators will pass their environmental responsibilities onto foreign facilities which lack the environmental technology, regulatory infrastructure, or training and experience necessary to ensure that the waste management adequately protects human health and the environment.<sup>182</sup> In this respect, the ban approach reduces fears that receiving countries will dismiss potential risks in order to obtain the income, technological benefits, and employment opportunities associated with waste importation. For these reasons, proponents of the ban approach assert that a total prohibition of hazardous waste trading is the only regulatory mechanism that adequately protects human health and the environment.<sup>183</sup> It can also be argued that the ban

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181. See, e.g., *supra* notes 103-107 and accompanying text (describing how Decision III/1 of the Basel Convention prohibits OECD countries from exporting wastes to non-OECD countries); *Bamako Convention*, *supra* note 162, at art. 4(3) (prohibiting the importation of hazardous waste into Africa).

182. For example, even some industrialized countries may be incapable of adequate hazardous waste oversight. See *NAFTA and the Environment*, *supra* note 3, at 723 (indicating that Mexico's hazardous waste programs may be functioning at levels twenty-five years behind their American counterparts). Although Mexico is one of the main recipients of hazardous wastes exported from the United States, approximately 1.5 billion dollars of capital investment may be required to properly dispose of the hazardous wastes currently existing within Mexico. See *id.* at 726.

183. See generally, INTERNATIONAL TRADE, *supra* note 1, at 49-52 (describing how certain countries and environmental organizations have sought a complete prohibition on hazardous waste trading out of concerns related to the inadequate disposal of imported hazardous wastes).

approach helps achieve goals of reducing the generation of hazardous wastes.<sup>184</sup> Without the ability to export waste to less expensive disposal sites in foreign countries, generators of hazardous waste have an increased incentive to reduce their output.<sup>185</sup>

Despite these arguments, successfully establishing general prohibitions on hazardous waste trading raises several potential challenges. First, receiving nations may rely on imported hazardous waste as a source for valuable resources. For example, several developing countries, such as the Philippines and India, rely on imported lead-acid batteries as a source for lead.<sup>186</sup> If lead-acid batteries are banned from exportation, not only would such countries lose their source for lead, but also there would be less reclamation of these hazardous wastes.<sup>187</sup>

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184. See, e.g., *Bamako Convention*, *supra* note 162, at preamble, para. 9 (indicating that the limitation of export opportunities helps reduce hazardous waste generation); *Decision III/1*, *supra* note 104, at 1.

185. The argument assumes that generators lack sufficient incentives to reduce their output of hazardous wastes. It should be noted, however, that because waste disposal in any country requires significant resource expenditures, generators already have financial incentives to reduce waste production. In this respect, it may be argued that companies already have considerable motivation to keep waste generation at minimum levels. Thus, further restricting the transboundary movement of hazardous wastes will only reduce opportunities, not reduce waste generation.

186. See INTERNATIONAL TRADE, *supra* note 1, at 58 (stating that in India and the Philippines, imported battery scrap accounts for nearly seventy percent of the countries' lead requirements). See also Chemical Manufacturers Association, CMA NEWS, Vol. 27, No. 7, at 6 (Mar. 20, 1996) (indicating that the transboundary movement of hazardous waste can facilitate recycling, reclamation, and recovery efforts).

187. Moreover, as developing nations become more reliant on cars, computer equipment, and telecommunications materials, there will be increased demand for the resources

Second, while a ban ensures that hazardous wastes remain within the country of origin, this fact may actually hinder safe disposal practices. Some countries that generate hazardous wastes may be incapable of disposing of their wastes in an environmentally sound manner.<sup>188</sup> Hazardous wastes may be more safely and efficiently managed if the wastes are exported from the country of origin.<sup>189</sup> In addition, generators that lack the legal opportunity to export hazardous wastes may resort to illegal exportation or disposal.<sup>190</sup>

Third, bans may hinder the development of new treatment and disposal facilities within developing

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derived from such imported hazardous wastes. See INTERNATIONAL TRADE, *supra* note 1, at 58. Note that the Basel Convention offers a general exception to waste trading restrictions where the wastes are required as raw material for recycling or recovery. See *Basel Convention*, *supra* note 93, at art. 4(9). Although Article 4(9) could be used to avoid trading restrictions established under the Basel Convention, other international agreements may not provide similar exceptions.

188. See Teresa Wallbaum, *America's Lethal Export: The Growing Trade in Hazardous Waste*, 1991 U. ILL. L. REV. 889, 917 (1991) (noting concerns that bans create situations where countries which are unequipped to manage their own wastes, whether through a lack of technology or insufficient disposal sites, are faced with insurmountable waste problems).

189. See, e.g., *Administration Considering Bilaterals to Let Basel Parties Export Waste to United States*, INT'L ENV'T REP. (BNA), Vol. 19, No. 8, at 305 (April 17, 1996) (stating that waste sent to the United States may be better managed at less expense than if the waste remained within the country of origin).

190. See INTERNATIONAL TRADE, *supra* note 1, at 90 citing Katharina Kimmer, *Transboundary Movements of Hazardous Wastes at the Interface of Environment and Trade* (UNEP: Environment and Trade series No. 7, 1994), pp. 58-59 (asserting that bans on hazardous waste trading may contribute to secret and illegal hazardous waste trafficking).



countries. There are fewer incentives to build an advanced waste facility if that facility cannot receive wastes and the associated financial revenues from foreign generators. Local generators, by themselves, may not provide sufficient income to offset a new facility's startup and operational expenses.

The second method of control is the prior informed consent ("PIC") approach. This method requires the disclosure of specific information to the receiving country so that the receiving country may make an informed decision on whether the intended hazardous waste shipment is permissible or not. The benefit to this approach is that it enables waste trading to continue subject to the control of the receiving country. Nevertheless, critics have raised several concerns with the PIC approach.

Opponents have argued that by facilitating the transboundary movement of hazardous wastes, the PIC approach creates opportunity for the improper disposal of hazardous wastes within receiving countries.<sup>191</sup> Although the Basel Convention has sought to address this issue by prohibiting hazardous waste exports that are not managed in an environmentally sound manner, there are concerns that the clarity of this standard is inadequate.<sup>192</sup> Critics have also asserted that information submitted by exporters might be inaccurate or in-

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191. See INTERNATIONAL TRADE, *supra* note 1, at 87 (expressing concern about how the operation of a hazardous waste trading system may be used to facilitate illegal waste trading activities).

192. See, e.g., David J. Abrams, *Regulating the International Hazardous Waste Trade: A Proposed Global Solution*, 28 COLUM. J. TRANSNAT'L L. 801, 827-31 (1990) (asserting that the environmentally sound management standard is unclear); Christoph Hilz and Mark Radka, *Environmental Negotiation and Policy: The Basel Convention on Transboundary Movement of Hazardous Wastes and Their Disposal*, 1 INT'L J. OF ENV'T AND POLLUTION 55-72 (1991).

complete resulting in receiving countries being misled into improper decision-making.<sup>193</sup>

It is clear that there are potential challenges to both methods of addressing risks associated with the transboundary movement of hazardous waste. Despite a general recognition of the need to reform hazardous waste trading requirements, the extent, scope, and aggressiveness of those reforms has not been universally accepted. Many of the reforms and trading prohibitions initiated by developing countries are so restrictive that other stakeholders have been reluctant to support the new initiatives. This result has left both sides and has rekindled efforts to either ban or drastically reduce the transboundary movement of hazardous wastes.<sup>194</sup> If this trend continues, the transboundary movement of hazardous wastes will become an increasingly limited or impractical trade practice. Should this outcome occur, all stakeholders would be deprived of the many potential economic and environmental benefits resulting from the transportation of hazardous wastes across international borders.

To prevent this outcome, it is necessary to reform the PIC approach by identifying system improvements that safeguard against risks to receiving countries, yet remain acceptable to the interests of industrialized exporting nations. While it may be impossible to find a compromise that is universally appealing to all interested stakeholders, the following subsections discuss several critical issues to suggest a regulatory system

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193. See INTERNATIONAL TRADE, *supra* note 1, at 87 (describing how receiving countries may be misled into importing hazardous wastes destined for improper disposal or treatment).

194. See *supra* note 157 and accompanying text (describing how ACP States established the Lome Convention in response to perceived inadequacies of other legal approaches that regulate the transboundary movement of hazardous wastes).

that operates in an efficient, safe, and fiscally pragmatic manner. The following proposals may alleviate concerns raised by receiving countries and simultaneously serve as a means of avoiding a complete ban on waste exportation, as several commentators, countries, and regional agreements are now advocating.

### B. *Liability and Compensation Issues*

In order to curtail efforts aimed at prohibiting or severely restricting the transboundary movement of hazardous wastes, it is necessary to address some countries' desire for more comprehensive and stringent controls on the hazardous waste trade. One possible solution is the establishment of a global liability scheme for damages resulting from the transboundary movement of hazardous wastes. Commentators have suggested that generators should be strictly liable for any damage caused by their hazardous wastes, even if the damage occurred within the receiving country.<sup>195</sup>

Establishment of a liability scheme would help alleviate some nations' concerns about damages potentially caused by the transboundary movement of hazardous wastes. Without question, imposing strict or joint and several liability on generators and transporters would assist plaintiffs' financial recovery efforts. Currently, when seeking compensation from U.S. generators, for-

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195. See Jeffrey D. Williams, Comment, *Trashing Developing Nations: The Global Hazardous Waste Trade*, 39 BUFF. L. REV. 275, 293 (1991) (stating that CERCLA's liability scheme should apply to multinational companies that export hazardous wastes to developing countries for disposal); Teresa Wallbaum, *America's Lethal Export: The Growing Trade in Hazardous Waste*, 1991 U. ILL. L. REV. 889, 921 (1991). See also *Bamako Convention*, *supra* note 162, at art. 4(3)(b) (imposing strict, joint and several liability on hazardous waste generators); *Basel Convention*, *supra* note 93, at art. 12 (encouraging the development of a liability and compensation protocol).

eign plaintiffs may need to rely on common law mechanisms that are frequently dismissed under U.S. law pursuant to the doctrine of *forum non conveniens*.<sup>196</sup> However, there are several problems associated with the establishment of a stringent liability scheme that operates on a global scale.

Subjecting generators and transporters to strict or joint and several liability for any waste-related damages could impose liability on innocent parties rather than the actor at fault. For example, under such a liability scheme, even if a disposal facility's negligence caused an unintended release, the generator could be liable for all damages despite having complied with every applicable regulatory requirement. Imposing liability on multiple defendants could also reduce a disposal facility's financial incentive to ensure that imported waste is properly handled and disposed. Furthermore, such a liability scheme would force exporters to scrutinize receiving facilities' activities, but it would be difficult at best for a generator to monitor the safe handling and disposal of wastes after exportation. The receiving country's government is better able to supervise the safe operation of a domestic facility than a generator which may be thousands of miles away from the disposal site.<sup>197</sup>

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196. See Williams, *supra* note 195, at 302 (1991). See also Julianne Adler, Comment, *United States' Waste Export Control Program: Burying Our Neighbors in Garbage*, 40 AM. U. L. REV. 885, 903-05 (1991) (discussing difficulties associated with the use of the United States tort system for environmental damage that occurred outside the United States).

197. Not only is the government of the receiving facility more able to oversee the safe handling and disposal of the hazardous wastes because of the government's geographic proximity to the facility, but this government would also have experience with the operating, licensing, and waste management standards applicable to the disposal facility. In this respect, there is an economy of resources by preventing situations where exporters have to "double check" the fulfillment of a government's regulatory responsibilities.

Finally, from a practical point of view, there would be significant U.S. opposition to the imposition of such liability on generators and transporters. In recent years, one of the most contentious topics surrounding CERCLA's reauthorization has been the issue of the statute's strict, joint and several liability scheme.<sup>198</sup> Many legislators have attempted to reform CERCLA's liability scheme out of concern that the statute punishes innocent parties and wastes resources.<sup>199</sup> The fact that CERCLA's liability scheme has been such a focus of political dispute indicates how difficult it would be to apply a similar liability scheme onto all generators and transporters. Moreover, if parties to the Basel Convention adopted such a liability scheme, this issue could prevent or further delay ratification of the Basel Convention by the United States.

While the establishment of a strict, joint and several liability scheme poses significant, if not insurmountable challenges, it may be less controversial to establish an international trust fund to provide financial assistance for the cleanup of contamination caused by the transboundary movement of hazardous wastes.<sup>200</sup> Similar to

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198. See Lindsay Newland Bowker, *Beyond Polarization: Superfund Reform in Perspective*, REAL ESTATE/ENVTL. LIABILITY NEWS, Vol. 8, No. 6 (Jan. 24, 1997) (describing the opposing positions on CERCLA reauthorization taken by the Clinton Administration and the business community); *Superfund: House Democrats' Letter to GOP Continues to Fault Oxley's Bill, Negotiations*, ENV'T REP. (BNA) (June 24, 1996) available in LEXIS, 1996 DEN 121 d13 (describing legislative efforts to reform CERCLA's liability scheme); *Superfund Talks Break Down*, SUPERFUND WEEK, Vol. 11, No. 31 (Aug. 8, 1997) (same).

199. See Carney Bradley Smith & Spellman, *Update on Superfund Reform*, WASH. ENVTL. COMPLIANCE UPDATE, Vol. 3, No. 5 (Nov. 1996) (describing political disagreements over the reformation of CERCLA's liability scheme).

200. See Daniel Pruzin, *Compromise Text Completed by Basel Parties on Liability, Compensation Protocol for Spills*,

CERCLA's Superfund, a tax could be imposed on stakeholders to provide financial resources to pay for unattended cleanup costs.<sup>201</sup> Not only would this approach reduce concerns about risks associated with transported hazardous wastes, but the approach would reduce these concerns without subjecting potentially innocent parties to the financial costs and legal burdens associated with strict, joint and several liability.

### C. *Environmentally Sound Management Standards*

If domestic legislation is enacted to meet the requirements of the Basel Convention, the United States must prohibit any hazardous waste export that will not be managed in an environmentally sound manner. While the Basel Convention sets a worthwhile goal, there are several problems associated with the implementation of this requirement. In particular, the Basel Convention provides no definitive rules to determine whether this requirement has been satisfied.<sup>202</sup>

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CHEM. REG. REP. (BNA), Vol. 23, No. 14, at 571 (July 2, 1999) (discussing potential creation and use of a compensation protocol for waste spills).

201. See CERCLA § 111, 42 U.S.C. § 9611 (1996) (describing the use of Superfund). Before adopting such a trust fund for exported wastes, it would be necessary to determine circumstances regarding the use of such funding, which parties would provide financial contributions to the fund, the amount each party would contribute, and how an organization could be developed to oversee the use of the funds. Because the cleanup of unaddressed release sites containing exported hazardous wastes obviously benefits public welfare and the environment, it would be logical that government appropriations would also provide financial contributions to the fund.

202. See *Basel Convention*, *supra* note 93, at art. 2(8). Although the Basel Convention gives no specific guidance on this subject, there have been ongoing, but yet unsuccessful, efforts to clarify the standard. See INTERNATIONAL TRADE, *supra* note 1, at 39 (indicating that a Basel Convention working

Because of this lack of clarification, it is necessary to establish standards to specify technical and functional criteria that each receiving facility must satisfy in order to manage hazardous waste in an environmentally sound manner. Without a uniform set of standards, there will be inconsistent or even conflicting decisions between countries over what management practices are environmentally sound. For instance, it is possible that the EPA would impose RCRA standards on other countries as a means of ensuring that waste would be managed in an environmentally sound manner. While the EPA may forbid an export of hazardous waste to a particular receiving facility, other exporting countries may allow similar exports. In this respect, U.S. generators could be held to standards that other exporting countries do not require.<sup>203</sup> Another potential problem is that a receiving country would oppose the management standards that the EPA seeks to require.<sup>204</sup>

In developing technical and functional standards, it is important to recognize that there is no single regulatory regime or set of numerical criteria for safeguarding hu-

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group has yet to complete technical guidelines to supplement the standard).

203. See, e.g., Adler, *supra* note 196, at 893 (indicating that foreign receiving nations may not require the use of source reduction methods or other environmental compliance mandates).

204. It is important to note that the Basel Convention does not clarify whether the exporting country, the receiving country, or both countries determine whether the waste will be managed in an environmentally sound manner. Because the receiving country has greater interest and control over the ultimate management and disposal of hazardous wastes, it would be logical that the exporting country should rely on the receiving country's certification that the environmentally sound management standard has been satisfied, absent sufficient evidence to the contrary. At the very least, any decision to prevent an exportation of hazardous waste should be subject to judicial review.

man health and the environment. Each country should maintain the independence to tailor its hazardous waste requirements to meet the needs and policy choices of its citizens. For this reason, it would be logical to adopt standards for environmentally sound management that reflect operational practices common to most disposal facilities. Accordingly, it would be important to ensure that each disposal facility: (1) operated with authorization from its government; (2) utilized technology and pollution control devices which satisfied all the requirements of the jurisdiction where the facility is located; (3) regularly monitored for pollution releases and reported the results to the appropriate authorities; (4) provided regular and appropriate training to its employees; (5) handled wastes in a manner that did not create significant hazards to human health or the environment; and (6) had an updated and practiced emergency response plan. Other criteria could be added, as necessary, to reflect the specific operations of the waste facility. It would also be important to ensure that the government of the receiving facility maintained a regulatory infrastructure capable of verifying the facility's compliance with these standards.<sup>205</sup> The goal of these standards would be to provide an operational baseline that provides for the safe management and disposal of hazard-

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205. For example, the receiving country's government would need to demonstrate that its regulators conduct periodic auditing and facility inspections, take enforcement action against violators, maintain adequate numbers of trained personnel, etc. To minimize potential disputes between countries, absent evidence to the contrary, the receiving country's affirmation that such requirements were satisfied would be sufficient to demonstrate the existence of its adequate oversight capabilities. It would be important, however, to establish an international panel to hear and resolve disputes over issues related to these requirements. See, e.g., *supra* notes 143-146 and accompanying text (describing an international panel which oversees signatory nations' compliance with NAFTA's environmental requirements).



ous wastes without precluding a receiving country from adapting its disposal requirements to reflect domestic objectives.

One advantage to using baseline standards is that the system would enable waste transfers to be based on each facility's ability to manage hazardous wastes in an environmentally sound manner. In contrast to the suggested approach, the Basel Convention proposes trading prohibitions based on the geographic, economic, and political associations of the country in which the facility is located.<sup>206</sup> Moreover, the Basel Convention does not clarify how a country can amend its status to participate in the hazardous waste trade.<sup>207</sup> Consequently, the approach proposed within the Basel Convention may result in several problems. For example, the Basel Convention's export restrictions may violate international trading rights established under the General Agreement on Tariffs and Trade ("GATT").<sup>208</sup> These prohibitions may also prevent the use of facilities that can manage hazardous wastes in an environmentally sound manner and deter countries from developing or improving their own hazardous waste facilities. Moreover, these problems may increase political opposition to ratification of the

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206. See *Decision III/1*, *supra* note 104, at 1 (prohibiting the exportation of hazardous waste from OECD countries to non-OECD countries); Cheryl Hogue and Joe Kirwin, *Basel Convention Parties to Discuss Possible Exceptions to Waste Trade Ban*, *INT'L ENV'T REP. (BNA)*, Vol. 21, No. 3, at 87-88 (Feb. 4, 1999) (noting how the Basel Convention would determine that the country of Monaco may receive hazardous waste because Monaco was surrounded by OECD countries, while Israel was unable to receive hazardous wastes due to Israel's geographic location).

207. See *id.*

208. See *id.* See also *INTERNATIONAL TRADE*, *supra* note 1, at 64-65, 79-80 (discussing potential legal conflicts between the Basel Convention's hazardous waste trading prohibitions and anti-discrimination measures established by GATT).

Basel Convention. Therefore, the establishment of baseline standards that focus on a facility's particular operational practices would offer significant benefits especially compared to other possible approaches.

#### D. *Increasing Compliance With Existing Requirements*

In order to address concerns that the PIC approach inadequately protects against the submission of incomplete or deceptive information reports, it is first necessary to distinguish the two types of exporters who violate PIC related requirements. The most concerning violators are exporters who intentionally disregard applicable mandates. The second type of violator includes exporters who attempt to comply with export requirements, but make mistakes. The different intents underlying these types of violations should be reflected in any effort to improve compliance.

The intentional violation of hazardous waste transportation and disposal requirements represents a significant problem requiring immediate attention. Not only is the illegal management of hazardous wastes a large and profitable practice,<sup>209</sup> but the amount of smuggling is expected to increase.<sup>210</sup> In addition to the

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209. See *Impact of Illegal Trade in Ozone Depleters, Wastes Rivals Drug Trade, Says Report*, INT'L ENV'T REP. (BNA), Vol. 21, No. 18, at 854 (Sept. 28, 1998) (discussing the profitability, magnitude, and impacts associated with the illegal trade in hazardous wastes); *G-8 Environmental Ministers Vow Crackdown on Illegal Trade in ODS, Hazardous Wastes*, INT'L ENV'T REP. (BNA), Vol. 21, No. 8 at 357 (April 15, 1998). Environmental crime represents a \$33.2 billion dollar annual industry. See *id.* Crime organizations involved in illicit drug and weapons sales have also become active in the illegal movement and disposal of hazardous wastes. See *id.*

210. See *Illegal Traffic Should Be Higher Priority*, INT'L ENV'T REP. (BNA), Vol. 20, No. 14, at 702 (July 9, 1997). There are several reasons for increased waste trafficking in-

risks to human health and the environment, the proliferation of hazardous waste smuggling undermines the credibility of existing hazardous waste requirements; thus, penalizing companies that operate within the regulatory parameters.<sup>211</sup>

In addition, many government agencies lack sufficient resources to implement thorough monitoring and enforcement programs.<sup>212</sup> The complex scientific and regulatory determinations involved in waste inspection also make it difficult to identify illegal waste shipments.<sup>213</sup> These difficulties are especially problem-

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cluding: (1) rising costs of waste disposal; (2) significant difference in disposal costs between countries; (3) large profits generated from the illegal trade in hazardous waste; (4) difficulties in proving the criminal nature of violations; (5) liberalization and growth of international trade; (6) inconsistent definitions of hazardous waste; (7) a lack of coordinated enforcement mechanisms; and (8) the complex nature of the legal instruments governing the transboundary movement of hazardous wastes. See WTO/CTE, *Communication from the Secretariate of the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes*, WT/CTE/W90, July 20, 1998.

211. See, e.g., INTERNATIONAL TRADE, *supra* note 1, at 126 (noting that recyclers who do not comply with environmental requirements can obtain competitive advantages over recyclers who comply with regulatory mandates).

212. See *Impact of Illegal Trade in Ozone Depleters, Wastes Rivals Drug Trade, Says Report*, INT'L ENV'T REP. (BNA), Vol. 21, No. 18 at 855 (Sept. 28, 1998) (reporting that government departments have insufficient resources for monitoring the hazardous waste trade); *Report Calls for More Inspections, Sampling to Detect Illegal Hazardous Waste Movement*, INT'L ENV'T REP. (BNA), VOL. 20, NO. 21, at 976, (Oct. 15, 1997) (stating that between 1995-1996, the government of Canada conducted only twenty-one border visits and took only twelve samples of hazardous waste imports out of more than 14,000 truckloads of hazardous waste imports).

213. See, e.g., Marcia E. Williams & Jonathon Z. Cannon, *Rethinking the Resource Conservation and Recovery Act for the 1990's*, 21 ENVTL. L. REP. 10,063, 10,064 (1991) avail-

atic with regard to the hazardous waste trade. Effective oversight requires adequate performance and coordination between several parties on an international level.<sup>214</sup> Therefore, it is unlikely that a significant percentage of hazardous waste smugglers will be apprehended.<sup>215</sup> In order to improve this situation, it is important to focus on reform measures that can be widely implemented without excessive resource expenditures. To improve surveillance capabilities, there must be a greater coordination and exchange of information between environmental and customs agents.<sup>216</sup> Furthermore, it would be

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*able in LEXIS, Environmental Law Reporter File (calling RCRA's regulations "the most complex environmental regulations ever written"); Louis R. Vera-Morales, Dumping in the International Backyard: Exportation of Hazardous Wastes to Mexico, 7 TUL. ENVTL. L.J. 353, 359 (1994) (stating that it is almost impossible to prevent illegal waste exportation without detailed on-the-spot chemical analysis).*

214. *See Report Calls for More Inspections, Sampling to Detect Illegal Hazardous Waste Movement, INT'L ENV'T REP. (BNA), Vol. 20, No. 21, at 977 (Oct. 15, 1997) (stating that in attempting to control the transboundary movements of hazardous waste, "the chain is only as strong as the weakest link").*

215. *See Impact of Illegal Trade in Ozone Depleters, Wastes Rivals Drug Trade, Says Report, INT'L ENV'T REP. (BNA), Vol. 21, No. 18, at 854 (Sept. 28, 1998).*

216. For instance, in 1996, EPA and the U.S. Customs Service signed a memorandum of understanding ("MOU") intended to help prevent the illegal importation and exportation of hazardous waste. *See Environmental Protection Agency, Customs Service Cracking Down on Smuggling of CFCs, Hazardous Waste, INT'L ENV'T REP. (BNA), Vol. 19, No. 6, at 219 (Mar. 20, 1996).* As part of the agreement, EPA agreed to provide Customs Service inspectors with training and notice on the identification and monitoring of hazardous waste. *See id.* at 220. The Customs Service agreed to provide EPA with hazardous waste manifests for imports of hazardous waste. *See id.* Similar efforts could be adopted in other countries or between different countries.

beneficial to further coordinate international oversight and enforcement operations between exporting and receiving nations.<sup>217</sup> Such efforts would make enforcement efforts more successful, efficient, and cost effective.

Moreover, there must be increased emphasis on securing criminal convictions against intentional violators of hazardous waste transportation requirements. Many hazardous waste agreements authorize strong penalties for severe environmental violations; however, there have been very few convictions.<sup>218</sup> If potential violators be-

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217. See *G-8 Environment Ministers Vow Crackdown On Illegal Trade in ODS, Hazardous Wastes*, INT'L ENV'T REP. (BNA), Vol. 21, No. 8, at 357 (April 15, 1998) (suggesting that governments could stem illegal trading in hazardous wastes by: (1) training environmental enforcement officials at an international level; (2) improving transboundary information exchanges between police, customs officers, and other enforcement agencies; and (3) providing assistance for developing countries to comply with environmental agreements). Some existing programs and coordinated efforts could also be more widely applied or adopted in other countries. See, e.g., *La Paz Agreement*, *supra* note 121, at art. II (instituting the exchange of monitoring and enforcement-related information between the United States and Mexico); *Environmental Officials Meet on Border Transport of Hazardous Waste*, INT'L ENV'T REP. (BNA), Vol. 19, No. 6, at 221 (Mar. 20, 1996) (describing a meeting attended by government officials of Mexico and the United States to coordinate information exchanges on the transboundary movement of hazardous wastes).

218. See *Report Calls for More Inspections, Sampling to Detect Illegal Hazardous Waste Movement*, INT'L ENV'T REP. (BNA), Vol. 20, No. 21, at 977 (Oct. 15, 1997) (reporting that between 1988 and 1996, there was only one trial conviction and three guilty pleas out of seventeen cases prosecuted under Canada's hazardous waste export and import regulations); *Two Plead Guilty in Conspiracy to Ship Wastes*, INT'L ENV'T REP. (BNA), Vol. 19, No. 15, at 682 (July 24, 1996) available in LEXIS, International Environment Reporter File (stating that the first successful U.S. government operation

lieve there is little risk of conviction, these parties are less likely to comply with applicable requirements. This result endangers health and the environment and penalizes generators that devote the necessary time and expense to comply with regulations. As such, the threat of conviction is a crucial component for compliance assurance and fair competition within the industry.

While the intentional violation of hazardous waste requirements represent the most pressing concern, it is also necessary to minimize the occurrence of unintentional violations. To improve compliance among unintentional violators, the focus should be on assistance rather than on enforcement and the imposition of penalties. The EPA has already developed compliance assistance programs in other regulatory areas, and similar approaches could be further implemented to address the transboundary movement of hazardous wastes.<sup>219</sup> Since requirements governing the transboundary movement of hazardous waste are so complex, the availability of such assistance would be useful.

To encourage the use of such aid, regulated entities must be able to request governmental assistance without subjecting themselves to an increased risk of penalties.<sup>220</sup> Regulatory agencies could agree to waive civil penalties. Moreover, these agencies could recommend

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to catch illegal hazardous waste shipments occurred as recently as July 1996).

219. See Judith Jacobs, *Changes in EPA Regulatory Culture Sought by Industry at Task Force Meeting*, CHEM. REG. REP. (BNA), Vol. 23, No. 4, at 145, 168-169 (April 23, 1999) (describing activities and efforts taken by EPA's Reinvention Action Council). As part of the EPA's efforts to improve environmental compliance generally, the Agency has noted the need to provide the regulated community with assistance centers, training opportunities, compliance guides, and various pilot programs. See *id.*

220. See *id.* (noting that the EPA should not approach compliance issues with assumptions of industry's wrongdoing, instead the EPA should aim to assist regulated entities).

against criminal prosecution for violations discovered during, or as the result of, the provision of regulatory assistance.<sup>221</sup> A benefit to a waiver policy is that by helping regulated entities to comply with environmental requirements, there will be fewer environmental violations. Therefore, government regulators may focus on enforcement resources against intentional violators.

### E. *Broadening Global Participation*

Over the last several years, it has become increasingly clear that policies and regulations involving environmental protection and pollution standards represent global issues that can not be solved without considering the effect and ramifications on international interests.<sup>222</sup> This fact is especially relevant with regard to the transboundary movement of hazardous wastes because there are many nations involved. Wastes are transported through international territories, and the effects of improper handling and disposal of hazardous wastes can transcend national boundaries.<sup>223</sup> For these reasons, for

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221. There could be specific criteria that must be satisfied in order to qualify for such a waiver (e.g., the violation was a first time offense; the violation did not result in imminent and substantial endangerment, or serious actual harm; the facility expeditiously corrected any violations, etc.).

222. See, e.g., INTERNATIONAL TRADE, *supra* note 1, at 2 (describing several international disputes over environmental issues).

223. Examples of environmental contamination that transcend national boundaries include acid rain, groundwater and surface water contamination, the killing of migratory species, etc. In addition, U.S. exported hazardous waste has been returned to the United States through the importation of foreign commodities. See Jeffery D. Williams, Comment, *Trashing Developing Nations: The Global Hazardous Waste Trade*, 39 *BUFF. L. REV.* 275, 290 (1991) (stating that U.S. industrial sludge contaminated with heavy metals may be exported, sold as fertilizer, and used on produce later marketed in the United States).

a successful approach to the transboundary movement of hazardous wastes, it is necessary to obtain the input and support of as many countries as possible.

Since the participation of developing nations is an essential component in the effective regulation of hazardous waste trading, any regulatory system must adequately address the concerns of less-developed countries. If developing nations continue to believe that waste control methods are inadequate, there will be further efforts to prohibit or drastically restrict the hazardous waste trade. Because there is a wide disparity in the amount of regulatory infrastructure, oversight capability, and resources available for hazardous waste programs between countries,<sup>224</sup> it may be necessary for developed nations to assume additional responsibilities in order to ensure that developing nations participate and support hazardous waste programs. Developed nations may need to provide financial assistance to lower income nations, or take greater efforts to ensure that exports meet applicable environmental requirements.<sup>225</sup> Such measures will help obtain the broad participation necessary to effectuate a functional regulatory regime.

It is also important that receiving nations, especially developing nations that receive hazardous waste, accept appropriate responsibility for problems that may result from the transboundary movement of hazardous wastes. Receiving countries that consent to receive hazardous

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224. See, e.g., *Maquiladora Industry, Mexican Authorities Reach Agreement on Hazardous Waste*, INT'L ENV'T REP. (BNA), Vol. 21, No. 6, at 271 (Mar. 18, 1998) (indicating that due to a lack of regulatory infrastructure, as of 1999, Mexico could not assess the amount of hazardous waste generated by its own industrial sectors). It has been estimated that only fifteen percent of the toxic industrial waste generated in Mexico is disposed of properly. *NAFTA and the Environment*, *supra* note 3, at 724.

225. See *Basel Convention*, *supra* note 93, at art. 10 (providing that signatories should account for the needs of developing countries).



wastes must accept responsibility for wastes that are not managed in an environmentally sound manner.<sup>226</sup> If improper waste disposal occurs, a receiving country must rectify the weaknesses in its domestic environmental programs. The provision of financial assistance to developing nations would facilitate these reforms. If necessary reformations are unrealized, the receiving country must reject the proposed waste import. By contrast, an exporting nation must ensure that the receiving nation has provided informed consent before any exportation occurs. Recognizing these roles will focus the responsibilities of both exporting and receiving countries.

#### F. *Reducing the Generation of Hazardous Wastes*

Several statutes and environmental agreements governing the transboundary movement of hazardous waste also seek to reduce generation of hazardous waste.<sup>227</sup> The rationale is that by reducing the amount of hazardous wastes, there will be fewer risks associated with the movement and disposal of such materials. Unfortunately, in their attempts to reduce hazardous waste generation, most statutes and agreements focus efforts on restricting the transboundary movement of hazardous wastes, rather than improving production and

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226. In contrast, a few commentators have blamed exporters of hazardous waste for the disposal-related problems occurring in the receiving countries. See Hugh Marbury, *Hazardous Waste Exportation: The Global Manifestation of Environmental Racism*, 28 VAND. J. TRANSNAT'L L. 251, 291-92 (1995) (accusing the United States government of being guilty of "environmental racism"); Williams, *supra* note 195 at 289 (accusing the United States of "economic imperialism").

227. See, e.g., RCRA § 1003(a), 42 U.S.C. § 6902(a) (1996); Bamako Convention, *supra* note 162 at Preamble, para. 9.

manufacturing techniques to reduce waste generation.<sup>228</sup> The underlying assumption is that by making the transboundary movement of hazardous wastes burdensome and expensive, generators will be encouraged to produce less hazardous waste.<sup>229</sup>

However, this approach may result in several problems. Any approach that imposes high costs and regulatory burdens on all types of hazardous waste generators is over-broad. It is unproductive to impose obligations on segments of industry that have already reduced the generation of hazardous wastes to minimum levels. Furthermore, raising the costs associated with the transboundary movement of hazardous wastes may increase pressures to find less expensive disposal facilities that are less likely to operate with the safest environmental control technology. Moreover, high disposal costs increase the use of illegal disposal operations.<sup>230</sup>

As an alternative, a proposed approach would provide increased financial incentives to reduce the amount and toxicity of generated hazardous waste.<sup>231</sup> If additional

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228. See, e.g., INTERNATIONAL TRADE, *supra* note 1, at 112 (stating that the Basel Convention's approach to reducing hazardous waste generation is "limited").

229. See OECD, *Trade Measures in the Basel Convention and the Control of Transboundary Movements of Hazardous Wastes and Their Disposal*, at 8 (stating that the Basel Convention is designed to raise the costs of disposal and reduce disposal alternatives in order to give facilities economic incentives to reduce the generation of hazardous wastes).

230. See WTO/CTE, *Communication from the Secretariate of the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes*, WT/CTE/W90, July 20 1998 (noting the relationship between illegal waste disposal activities and the cost of disposal); *Illegal Traffic Should Be Higher Priority*, INT'L ENV'T REP. (BNA), Vol. 20, No. 14, at 702 (July 9, 1997) (indicating that high costs of disposal have contributed to an increase in hazardous waste trafficking).

231. For example, companies could receive tax incentives or low interest loans to support the development and growth of reduced risk technology.

requirements were necessary to minimize waste generation, it would be more practical to focus requirements on segments of industry with the greatest potential to reduce hazardous waste generation. Such measures would achieve the same goal of minimizing risks associated with hazardous wastes without encumbering generators.

#### CONCLUSION

Both generators and receiving countries have significant incentives to engage in the transboundary movement of hazardous wastes. The transboundary movement of hazardous wastes can reduce disposal costs, decrease risks associated with hazardous waste management and disposal, and supply resources for receiving countries. Nevertheless, over the last several years there has been an increase in the legal restrictions, penalties, and costs associated with the transboundary movement of hazardous wastes. U.S. laws provide domestic generators with several financial and legal incentives to export their wastes. Those laws, however, lack important mechanisms to ensure that exported hazardous wastes do not result in risks to human health and the environment. Out of concern that existing oversight measures were inadequate, several receiving countries, exporting nations, and domestic interest groups have sought to significantly restrict, or even ban, hazardous waste trading. If the current initiatives continue, it will be increasingly difficult or financially impractical for all generators to export hazardous wastes.

In order to avoid this outcome, it is necessary to address the variety of concerns associated with the transportation of hazardous wastes across international borders. Although significant changes may be required, it would be possible to respond to these concerns and still retain the PIC approach to waste exportation. These

initiatives would include: (1) providing resources to pay for unaddressed cleanup costs resulting from the transboundary movement of hazardous wastes; (2) establishing definitive baseline technical and operational standards for hazardous waste receiving facilities; (3) improving oversight mechanisms by revising enforcement approaches and expanding compliance assistance opportunities; (4) providing financial assistance to developing countries; and (5) reconsidering the current approach to minimizing the generation of hazardous waste.

The proposed approach offers several important benefits to hazardous waste stakeholders. First, and foremost, these measures may be necessary to ensure the broad continuation and availability of hazardous waste trading opportunities. Unless receiving countries are assured that they are protected against potential risks to human health and the environment associated with waste importation, the countries will continue to enact prohibitive trading measures such as waste import bans. Second, the proposed approach would ensure that all exporters and receiving facilities are subject to similar managing and disposal standards. This result would help prevent inconsistent or conflicting export decision-making between nations. Third, the proposal would establish that strict, joint and several liabilities are not imposed on innocent parties, but remain focused on the parties that bear the most responsibility for the unintended releases. Finally, the proposal clarifies and distinguishes the duties and responsibilities that receiving and exporting nations must recognize when participating in hazardous waste trading.

While some stakeholders may resist significant changes to the existing structures, it must be recognized that in order to preserve the ability to export and import hazardous wastes on a broad scale, it may be necessary to undertake some reforms and accept some level of increased regulation in order to avoid more re-

strictive consequences. In this respect, the proposed approach represents both a necessary challenge and an important opportunity.