

DEVELOPING A GLOBAL RIGHT TO KNOW

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I. INTRODUCTION

This paper reviews "right-to-know" acts and examines the policy and methods used to implement them. It introduces two of the better known right-to-know schemes, the United States Emergency Planning and Community Right-to-Know Act (EPCRA)¹ and the European Community's

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1. 42 U.S.C. § 11001 (Supp. 1993).

Seveso Directive.² It surveys other international and domestic right-to-know strategies and then discusses two major approaches to right-to-know legislation using EPCRA and the Seveso Directive as examples of documenting divergent approaches to risk communication. The paper, in closing, introduces Principle 10 of the Rio Declaration,³ which calls for the development and implementation of right-to-know legislation throughout the international community. It then discusses the importance of right-to-know legislation in the preservation of the global environment. After comparing the relative merits of both types of right-to-know programs, the paper concludes by recommending countries combine the elements of both American and European strategies in developing a strong and effective right-to-know program.

II. THE RIGHT-TO-KNOW

A. *The Rationale*

Right-to-know legislation is important to protect the health of people and the environment. At the most basic level, right-to-know access provides communities with information that is essential for effective disaster planning and emergency response activities. Right-to-know information, at a broader level, empowers citizens to oppose ongoing toxic exposures, demand compensation and remediation, and take other steps necessary to protect public health and the environment. It makes polluters accountable in the court of public opinion, and provides major incentives for responsible behavior.

Emergency planning and response is one of the fundamental objectives of right-to-know acts. Emergency response activities have traditionally been organized at the local level, typically by building on pre-existing firefighting or civil defense programs. Local officials or governments may not have sufficient information to respond appropriately unless the nature and magnitude of the threat has been previously identified, and appropriate emergency response plans have been previously coordinated and rehearsed.

The threat of a chemical disaster is always present. Once every hour and fifteen minutes, a toxic chemical accident is reported somewhere in the United States.⁴ From 1988 to 1992, more than 34,500 chemical

2. Council Directive 82/501, 1982 25 O.J. (L 230) 1 [hereinafter Seveso Directive].

3. *Rio Declaration on Environment and Development*, U.N. Conference on Environment and Development, Principle 10 U.N. Doc. A/CONF. 151/5/Rev. 1 (1992), reprinted in 31 I.L.M. 874 (1992) [hereinafter *Rio Declaration*].

4. NATIONAL ENVIRONMENTAL LAW CENTER REPORT, ACCIDENTS DO HAPPEN: A LOOK AT CHEMICAL MISHAPS 1 (1994) [hereinafter ACCIDENTS DO HAPPEN].

accidents were reported in the United States.⁵ Most of these accidents occurred in areas where there were large concentrations of industries that produced or used toxic chemicals. During this same interval, an estimated 680 million pounds of toxic chemicals were accidentally released into the environment.⁶ These mishaps added to toxic emissions at industrial and commercial centers where elevated background levels of toxins already existed from prior accidents or ongoing releases, causing further increases in risk to surrounding communities and ecosystems.⁷ Workers, local emergency response personnel, and residents of the community face a genuine risk of death or serious injury. In fact, between 1988 and 1992, sixteen percent of all reported accidents resulted in immediate injuries, deaths, or evacuations. Long-term effects are much more difficult to ascertain due to the long latency periods of some chemical exposure effects.

A 1990 study by the Environmental Protection Agency (EPA) identified fifteen chemical mishaps in the United States since 1980 that exceeded Bhopal in the volume and toxicity of chemicals released. Only wind conditions, emergency responses and containment measures, rapid evacuation, and facility location prevented a similar disastrous outcome.⁸ Workers, local emergency response personnel, and residents must be prepared to react appropriately to a chemical emergency to avoid large numbers of casualties. Additionally, emergency procedures depend on the physical and toxic characteristics of the chemicals released; therefore, community officials and residents must be informed of the substances that are manufactured, used, and stored at nearby facilities. Since industries have traditionally resisted efforts to reveal this information, nations have enacted right-to-know laws to provide communities with the information necessary for effective emergency planning and response.

Disaster planning and emergency response is only one use of hazardous materials information. Reporting of routine and ongoing releases, and their potential long-term health effects, may be a larger and more important component of an effective community right-to-know program. While accidental or emergency releases are unintended, routine

5. The author note that this estimate was based on data obtained from the federal Emergency Response Notification System (ERNS) database. There is a substantial underreporting of accidents in this database. The author cite an example of how between 1988 and 1990, the New York Attorney General's Office recorded 3496 accidents involving toxic chemicals, of which only 466 were reported to the ERNS during this same period. *Id.*

6. *Id.*

7. *Id.*

8. *Id.*

releases are, conversely, intended and predictable. Although the health effects of low level chemical exposures remain subject to vigorous debate, the local community is usually less tolerant of these ongoing intentional discharges. Knowledge of repeated accidents or routine discharges may spark community demands for increased chemical safety and hygiene.

B. Current Major Right-to-Know Laws

Right-to-know laws are typically written to protect three separate constituencies: workers, consumers, and the citizens of communities around facilities that may pose a risk to health or the environment.⁹ In the United States, workers are guaranteed a right-to-know about chemical hazards in the workplace under the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard.¹⁰ Consumers enjoy a similar right-to-know under labeling requirements imposed by the Consumer Product Safety Commission, the Food and Drug Administration, and other agencies. Citizens are guaranteed access to information about toxic releases from industrial facilities under the United States Emergency Planning and Community Right-to-Know Act,¹¹ which also provides for community and state-level emergency planning.

1. The United States Emergency Planning and Community Right-to-Know Act

World attention was focused on the disastrous potential of chemical accidents following the Bhopal incident in 1984. Over 2500 deaths occurred as the result of an accidental release of methyl isocyanate from a Union Carbide production facility in Bhopal, India.¹² In 1985, under increasing public pressure, the EPA issued a guidance document on chemical accidents recommending the development of a Chemical Emergency Preparedness Program (CEPP).¹³ The Chemical Manufacturers Association also instituted its voluntary Community Awareness and Emergency Response Program (CAER) which was embraced by large chemical producers.¹⁴ States and local communities, impatient for uniform

9. Michael Baram, *Risk Communication Law and Implementation Issues in the United States and the European Community*, 6 B.U. INT'L L.J. 21, 33 (1988).

10. Labor Rule, 29 C.F.R. § 1910.1200 (1992).

11. 42 U.S.C. §§ 11001, 11022, 11044.

12. *Union of India v. Union Carbide Corp.*, 809 F.2d 195, 197 (2d Cir. 1987).

13. Baram, *supra* note 9.

14. *Id.*

compliance, forged ahead by passing a number of citizen and worker right-to-know laws and ordinances.

In October 1986, Congress enacted a federal right-to-know law – the Emergency Planning and Community Right-to-Know Act. The Act was passed as a part of Title III of the Superfund Amendments and Reauthorization Act of 1986¹⁵ but was drafted as freestanding law.¹⁶ EPCRA has four major governing sections: (1) emergency planning; (2) emergency release notification; (3) chemical inventory reporting; and (4) routine release reporting.¹⁷ Section 301 requires states to appoint emergency response commissions and to designate emergency planning districts. Emergency planning committees are organized at the local level from representatives of local government, industry, and the community.¹⁸

Section 303 requires these committees to develop comprehensive emergency response plans for local communities.¹⁹ Local committees are then required to: identify all facilities posing a risk, identify procedures for emergency notification and response, inventory equipment and response capabilities, develop evacuation plans, and train local responders.²⁰ Facilities must cooperate by appointing a facility representative and by providing information about facility processes and then finally by developing a site specific response plan.²¹

Section 304 provides for emergency release notification.²² A facility must report releases of any substance requiring reporting under §§ 102(a) or 103(a) of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA),²³ or any substance classified as extremely hazardous under § 302(a) of EPCRA and above a designated threshold quantity.²⁴ The facility must immediately give notice to the local emergency coordinator and to the State Emergency Planning Commission describing the identity of the substance, an estimate of the time, duration, and quantity of release, its route and medium of exposure, and any anticipated health effects.²⁵

15. 42 U.S.C. § 11001.

16. 42 U.S.C. §§ 11001-11050.

17. 42 U.S.C. §§ 11001-11050.

18. 42 U.S.C. § 11001.

19. 42 U.S.C. § 11003.

20. 42 U.S.C. § 11001(c).

21. 42 U.S.C. § 11002.

22. 42 U.S.C. § 11004.

23. 42 U.S.C. §§ 9602(a), 9603(a) (1988).

24. 42 U.S.C. § 11002(a).

25. 42 U.S.C. § 11004(b).

Sections 311 and 312 mandate the development of chemical inventories for facilities handling or storing hazardous materials.²⁶ Facilities must disclose chemicals in their possession based on OSHA Material Safety Data Sheets and EPA reporting requirements.²⁷ This data is provided to the local emergency planning committee, the state emergency response commission, and the local fire department.²⁸ Members of the public may also obtain this information on request.²⁹

Section 313 requires annual reporting of toxic chemical releases above a threshold amount.³⁰ Facilities must complete a form indicating the substances manufactured, processed, or used, the maximum quantity present, the hazardous wastes generated and methods of treatment or disposal, and the quantity released into the environment.³¹ This information is available to the public through a computerized EPA database, the Toxic Release Inventory (TRI).³² The TRI allows individuals and organizations to track compliance with EPCRA and other environmental laws and to independently verify industry reports regarding toxic release reduction.³³ It also allows individuals and organizations to verify EPA enforcement activities and to guide state and local environmental priorities.

EPCRA includes a specific provision for trade secrets.³⁴ Section 322 allows a facility to withhold a specific chemical identity where disclosure would cause substantial competitive harm.³⁵ Facilities, however, still must send complete information to EPA and provide generic chemical class disclosure information to state and local officials.³⁶ If a public request for specific disclosure is received, the Administrator of EPA will review the trade secret designation to determine if the chemical identity is truly confidential.³⁷ Parties may seek judicial review of the EPA's determination. Section 323 provides an exception to the trade secret

26. 42 U.S.C. §§ 11021, 11022.

27. 42 U.S.C. § 11021(c)-(d).

28. 42 U.S.C. § 11022(a)(1).

29. 42 U.S.C. § 11022(e)(3).

30. 42 U.S.C. § 11023(a).

31. 42 U.S.C. §§ 11022, 11023.

32. 42 U.S.C. § 11023(j).

33. 42 U.S.C. § 11001.

34. 42 U.S.C. § 11042 (1994).

35. 42 U.S.C. § 11042(a)(1).

36. 42 U.S.C. § 11042(a)(1)(B).

37. 42 U.S.C. § 11042(d).

provision for health professionals who request disclosure for the purposes of injury or disease prevention, diagnosis, or treatment.³⁸

Finally, like many United States environmental laws, the Act contains a citizen suit provision³⁹ which allows civil actions against the facility or EPA for failure to perform duties required under the Act.⁴⁰ The Act grants civil penalties and costs, including reasonable attorney's and expert witness fees, to a prevailing or substantially prevailing party.⁴¹

2. The European Community's Seveso Directive

The European Community's Directive requiring public risk communication is called the Directive on Major Accident Hazards of Certain Industrial Activities, better known as the Seveso Directive.⁴² This Directive was enacted following a series of industrial accidents in Europe during a twenty-eight-month period from June 1974 through September 1976.⁴³ The Directive excludes nuclear facilities, military installations, explosives factories, mining operations, or hazardous waste disposal facilities which are covered by other Community regulations.⁴⁴

The Directive requires each member state to collect the same basic information regarding facilities and to then communicate that information in a specified way.⁴⁵ The Act creates a reporting network between industry, the member states, a central commission, a council of ministers,

38. 42 U.S.C. §§ 11042(e), 11043.

39. 42 U.S.C. § 11046(a)(1) (1994).

40. 42 U.S.C. § 11046(a)(i).

41. 42 U.S.C. § 11046.

42. Seveso Directive, *supra* note 2.

43. Harry Otway, *Risk Communication and Policy in the European Communities: Background, Status and Trends*, 6 B.U. L. REV. 5, 6 (1988). Two major accidents, and two lesser ones, primarily spurred the development of the Seveso Directive. A cyclohexane explosion at a plant in Flixborough, England in June 1974 killed twenty-eight workers and injured thirty-six. Over 2000 homes and businesses were damaged and hundreds of citizens suffered injuries. A subsequent investigation revealed that the facility was storing forty-three times the amount of flammable liquids it was licensed for, and cyclohexane was not one of the permitted substances. In November 1975 a pipe ruptured in Beek, Netherlands, resulting in an explosion that killed fourteen, and injured 104 workers. Three people outside the plant were also injured. The Directive was named, however, after the explosion at Seveso, Italy, in July 1976, which resulted in the exposure of over 200,000 people to potentially harmful levels of dioxin. Finally, an explosion at a fertilizer factory in Manfredonia, Italy, in September 1976, during the Seveso clean up, reinforced the need for emergency planning legislation. *Id.*

44. Seveso Directive, *supra* note 2; *see also* Otway, *supra* note 43.

45. Seveso Directive, *supra* note 2.

and the European Parliament.⁴⁶ In contrast to the United States system, the public has a limited role as a recipient of selected information.

The Act consists of twenty numbered articles that outline the obligations of the various participants in the information network.⁴⁷ Article 5 states that manufacturers must identify the facility and describe its operations, as well as the identity and quantity of hazardous materials present at the site.⁴⁸ Article 6 creates an ongoing obligation of manufacturers to notify authorities of any operational changes that would affect the information provided under Article 5.⁴⁹ Article 7 requires the member states to develop a competent authority to receive the information collected under Article 5 and to ensure the development of adequate emergency planning and safety inspections.⁵⁰

Article 8 addresses community notification and emergency preparedness.⁵¹ It requires that people likely to be affected are informed of safety measures and what actions to take in case of an emergency.⁵² Unlike its United States counterpart, EPCRA, the community need not be informed of the specific nature of the harm or of the hazardous materials involved, and manufacturers need not communicate directly with the public. Significantly, the Directive addresses only accidental releases; therefore, no requirement for routine release reporting exists. The accident reporting requirements of Article 8 extend to other potentially affected neighboring states so that they can inform their citizens of recommended emergency procedures.⁵³

Article 10 addresses notification of the national authorities in the event of an accident.⁵⁴ It also requires manufacturers to report accidents to the designated authority, to release the measures that are being instituted to minimize the impact of the accident, and to explain what precautions exist to prevent future recurrence.⁵⁵ Similarly, Article 11 requires the member states to inform the Commission of the occurrence of accidents within their borders, and Article 12 requires the Commission to keep a register of the

46. *Id.*

47. Otway, *supra* note 43, at 7.

48. *Id.*

49. *Id.*

50. *Id.*

51. *Id.* at 8.

52. Otway, *supra* note 43, at 8.

53. *Id.*

54. *Id.*

55. *Id.*

occurrences for planning and study purposes.⁵⁶ Article 13 is a confidentiality provision that protects industry and trade secrets.⁵⁷ It requires the Commission and state authorities to keep all information obtained under Articles 5, 6, 7, 9, 10, and 12 confidential and prohibits disclosure of specifics to third parties.⁵⁸ This provision essentially blocks access by environmental groups or other nongovernmental organizations (NGOs). Article 18 creates a forum for the exchange of information between the Commission and the member states regarding accident prevention and response programs and their effectiveness.⁵⁹ Finally, Article 20 requires states to inform the Commission of national laws adopted to carry out the Directive.⁶⁰

C. Other International or Domestic Right-to-Know Activities

1. United Kingdom

Her Majesty's Inspectorate of Pollution in the United Kingdom recently unveiled its chemical release inventory program.⁶¹ Although similar in principle to the United States TRI, it is much more limited in scope. Data is primarily in aggregate form and not designed for individual company analysis. Hence, there is no provision for direct public access.⁶² The Confederation of British Industry, however, has called for voluntary public reporting of environmental practices.⁶³ Two hundred and fifty members of the 3000 corporate member organization have formed an Environment Business Forum to promote the initiative.⁶⁴ The Confederation plans to issue environmental guidelines, including those addressing air and water emissions.⁶⁵ Corporations are encouraged to publicly set performance targets and then report on their progress.⁶⁶

56. *Id.*

57. Otway, *supra* note 43, at 8.

58. *Id.*

59. *Id.*

60. *Id.*

61. *United Kingdom Issues Proposals on Reducing Chemical Emissions*, 17 Int'l Envtl. Rep. (BNA) No. 6, at 293 (Mar. 23, 1994).

62. *Id.*

63. *Id.*

64. *Id.*

65. *Id.*

66. *Industry Group Urges Public Reporting on Environment*, 17 Int'l Envtl. Rep. (BNA) No. 6, at 329 (Apr. 6, 1994).

British companies have enjoyed strong privacy protection of environmental data. Information supplied to the British government, consistent with the Seveso Directive, is protected by the Official Secrets Act.⁶⁷ Disclosure without government permission is prohibited.⁶⁸ In contrast, similar information in the United States would probably be available under the United States Freedom of Information Act (FOIA).⁶⁹

2. Canada

Canada's federal government has instituted a National Pollution Release Inventory under the Canadian Environmental Assessment Act which requires companies to report emissions of 178 regulated pollutants.⁷⁰ The regulation places all Canadian companies with ten or more employees and using ten or more metric tons of a designated substance under a duty to disclose their environmental releases to the federal government.⁷¹

3. Other Countries

The German Bundestag's environmental committee recently considered a passage of a law that could have reduced Germany's strict policy of protecting corporate secrets.⁷² The law would have prevented government agencies from withholding environmental information from NGOs and concerned citizens.⁷³ The law was intended to enact national legislation consistent with EU Directive 90/313 on Access to Information on the Environment.⁷⁴

4. Multinational and Foreign Corporations

In the absence of laws mandating disclosure, many large foreign or multi-national corporations are beginning to issue voluntary environmental reports. They seek to capitalize on the goodwill that such reporting engenders, as well as hoping to avoid externally enforced reporting. Many

67. *Id.*

68. Melissa Padgett, *Environmental Health and Safety — International Standardization of Right-to-Know Legislation in Response to Refusal of United States Multinationals to Publish Toxic Emissions Data for Their United Kingdom Facilities*, 22 GA. J. INT'L & COMP. L. 701 (1992).

69. 5 U.S.C. § 552.

70. *Corporate Environmental Reporting: Embraced or Resisted*, 17 Int'l Env'tl. Rep. (BNA) No. 6, at 329 (Apr. 6, 1994).

71. *Id.*

72. *German Parliament Approves Measure Aimed at Fighting Environmental Crime*, 17 Int'l Env'tl. Rep. (BNA) No. 10, at 437 (May 18, 1994).

73. *Id.*

74. *Id.*

business groups and industry associations have developed voluntary codes of conduct favoring public disclosure in the wake of the United Nations Agenda 21.⁷⁵

Public disclosure is particularly favored in Europe, where European Union regulations and a strong green movement among the citizenry have favored greater disclosure. The International Chamber of Commerce's Business Charter for Sustainable Development is one example.⁷⁶ Other groups offering voluntary agreements or guidelines include the World Industry Council for the Environment, the Coalition for Environmentally Responsible Economies (CERES), the Global Environmental Management Initiative (GEMI), the Public Environmental Reporting Initiative (PERI), and the European Chemical Industry Council (CEFIC).⁷⁷

The United Nations Environment Program (UNEP) has also issued a voluntary guide for chemical manufacture and use called the Code of Ethics on the International Trade in Chemicals.⁷⁸ The Code was issued to further the objectives of UNEP's Governing Council Decision 16/35 on toxic chemical use, and Chapter 19 of Agenda 21 calling for environmentally sound management of toxic chemicals.⁷⁹

Outside Europe and especially in Asia, there has been less effort by companies in voluntary reporting. Japanese companies have been very reluctant to disclose environmental information and a similar situation exists in Singapore. Latin American countries have espoused a greater role for disclosure but actual efforts at compliance have been weak.⁸⁰ In Africa, of the top 165 South African companies, only nine issued environmental reports capable of independent audit, and only two companies had set objectives by which their performance could be evaluated.⁸¹

D. Analysis

Right-to-know is a generic term which has been applied to a variety of laws and policies addressing the disclosure of chemical hazard

75. *Id.*

76. *Id.*

77. *Industry Group Urges Public Reporting on Environment*, *supra* note 66.

78. *Voluntary Environmental Ethics Code for Private Sector Targets Chemical Trade*, 17 Int'l Env'tl. Rep. (BNA) No. 6, at 699 (Aug. 24, 1994).

79. *Id.*

80. *Industry Group Urges Public Reporting on Environment*, *supra* note 66.

81. *Only Nine of 165 Top Firms Disclosed Environmental Figures that Could be Audited*, 17 Int'l Env'tl. Rep. (BNA) No. 8, at 372 (Apr. 20, 1994).

information to populations at risk. These laws differ in their approach to hazard communication and reflect the objectives and biases of the relevant political and legal authorities. The right-to-know schemes can be roughly divided into those which release information to local authorities and surrounding populations on an "as needed" basis versus those which mandate broad dissemination of information on an "as wanted" basis. The first type reflects a decision to delegate the protection of public health and safety to authorities, without specifically recognizing the value of community involvement or approval. The right-to-know yields to a more pragmatic need-to-know where the ultimate goal of public protection is predominant. This concept will be referred to as the public policy approach.

The other approach is to make information freely accessible, thereby allowing citizens or communities to access the information on demand. This approach appears to recognize more explicitly some underlying or pre-existing need-to-know without inquiring into the need or purpose for disclosure, while implicitly recognizing the individual's and community's right to autonomy and self-determination. The ultimate effect of this expanded access to information transcends emergency planning and may act to marshal public support for toxic use reduction, pollution prevention, and environmental remediation. Due to the implicit support of local involvement and public access to information, this approach will be described as the public opinion approach. Not surprisingly, the choice of approaches is dependent on the historical and political traditions of the continents where they were adopted. The United States with its long tradition of emphasis on individual rights has adopted a public opinion approach,⁸² while Europe, with a stronger socialist and majoritarian tradition, has adopted the public policy approach⁸³.

1. Public Policy Approach (EC Seveso Doctrine)

While public access to environmental and health risk information in the United States is premised on a right-to-know, the European Community (EC) has adopted a more restrictive need-to-know basis for mandating public disclosure.⁸⁴ Rather than emphasizing the public's right-to-know and to participate in democratic environmental decision-making, this approach focuses on safety analysis and expert plans for emergency response.⁸⁵ The public is only provided with the information necessary for

82. 42 U.S.C. § 11001.

83. Seveso Directive, *supra* note 2.

84. Padgett, *supra* note 68.

85. *Id.*

effective participation in emergency response activities.⁸⁶ This approach places its main emphasis on public safety and strikes a balance which is in favor of corporate confidentiality over an informed public. Such favoritism could be viewed as a more paternalistic approach adopted in order to protect the public from toxic exposures.

The Seveso Directive has two major components. First, it attempts to reduce the likelihood of an accident by mandating safety audits of facilities. Second, it attempts to minimize the damage from accidents by requiring the development of detailed emergency plans.⁸⁷ Thorough safety audits are mandated which are then reviewed by representatives of the national government where the facility is sited.⁸⁸ These officials can then enforce national safety standards or regulations which the Seveso Directive specifically permits. New facilities must be evaluated and approved before beginning operations.⁸⁹

Additionally, the national authorities must assure that an adequate emergency response plan has been developed. The plan must be based on an off-site hazard analysis and calculated to protect public health and the environment.⁹⁰ This approach provides for uniform emergency planning, data collection, and analysis. Furthermore, it forces government and industry to cooperatively develop formal plans to deal with major industrial accidents. Due to the focus on national governments, it assures a more uniform and coordinated approach to risk management than the United States system, where local communities and county governments assume responsibility for planning and emergency response. The major objection to this approach is that it limits citizen and community access to information. This limitation is probably culturally acceptable in the European states, where there has traditionally been less emphasis on individual freedom and a higher level of deference to government protection of public health and safety.

Experience suggests, however, that an informed citizenry is an important component of effective environmental protection. Comparing the progress of environmental protection in the United States and abroad demonstrates the critical contribution of citizen activism. Concerned citizens, acting individually or collectively, have been the driving force behind the passage of many United States environmental protection laws and have also been responsible for guaranteeing their continued

86. *Id.*

87. Baram, *supra* note 9.

88. *Id.*

89. *Id.* at 29.

90. *Id.* at 74.

enforcement. When analyzing the parties to major United States environmental decisions over the past few decades, one can quickly appreciate the power of the citizen-plaintiff to curb corporate pollution or spur government enforcement of existing laws. A broad right-to-know scheme is necessary and effective because it provides the opportunity for third parties to collect and analyze environmental data. Faced with requirements to disclose their polluting activities, industry and government have a strong incentive to move forward with environmentally beneficial programs and technology.

The public policy approach, in contrast, vests authority in government bureaucracies without the same public accountability mechanisms. It limits access to information by citizens or nongovernmental organizations (NGO), eliminating an important watchdog function. NGO participation has a checks and balances effect in the industry-government-public triangle by preventing industry domination of the policy process. Industry associations have the resources for political lobbying, large campaign contributions, and legal maneuvering. NGO acts as a counterbalance, providing the public with a collective voice and the resources for effective advocacy with regard to public health and environmental issues. Imagine how different the environmental landscape of the United States would appear today without the legacy of the Sierra Club, Natural Resources Defense Council, Friends of the Earth, and others.

2. Public Opinion Approach

Although the United States approach appears to put an additional reporting burden on industry, its effect is ironically deregulatory. It relies on market mechanisms rather than command and control regulation of toxic emissions. The theory is that industry, motivated by a desire for community goodwill and fear of tort or environmental liability, will reduce its toxic emissions. Consistent with fundamental democratic principles, EPCRA empowers the community, and provides for local planning and public involvement.⁹¹ In theory, it encourages democratic decision-making and increases the public's appetite for information, especially where it has been traditionally denied.⁹²

In practice, however, much of this information does not reach the community unless there is some kind of media attention following an incident. The vast majority of Americans have probably never heard of EPCRA, and would probably be quite surprised to know that they have

91. Otway, *supra* note 43.

92. *Id.*

access to information regarding pollution by their corporate neighbors. Participation in local planning councils has typically been the domain of individuals with a background in firefighting, public safety, or emergency response activities.⁹³ Most citizens are probably unaware that such community councils even exist.

Although, in principle, public risk communication recognizes individual autonomy and community choice, most citizens remain uninformed because of several factors. First, many individuals are unaware of their right-to-know about these issues. Second, although some citizens would probably be interested, many do not know how to access the information. Third, others simply lack the background or education required to interpret the information in a meaningful way. Because most ordinary citizens have difficulty processing complex probability based risk assessments, the public opinion approach is, in essence, heavily dependent on community outrage. Community outrage is hardly an appropriate foundation on which to regulate important aspects of public health and safety.

One of the major shortcomings of the public opinion approach, therefore, is that it does not mandate uniform, official assurance of facility safety, but instead relies on community activism. This dependence on local activism makes enforcement unequal and diminishes the role of expert health and safety decision-makers. In fact, communities are often needlessly alarmed by insignificant risks yet are apathetic to serious risks until death or serious injury occurs. Local activism reflects the political, social, economic, and educational climate of the area. For example, some economically depressed areas may be willing to trade health and safety or local ecosystems for jobs and an expanded tax base. Local authorities or members of planning councils may have close ties to local industry, although no mechanism is provided for independent public audit of facility accident prevention and response plans.

Although EPCRA provides for public risk communication and improved emergency planning, it does not require a direct effort to alter facility or process design to prevent accidents. The most effective way to protect the public and reduce the danger of a chemical mishap is to make the handling process as safe as technically feasible thereby placing less dependence on the need for disaster planning and response. This approach to accident prevention seeks to alter the underlying industrial process rather than simply adding additional safety systems to a dangerous process, or attempting to mitigate the health and environmental effects after an accident has occurred. Components of this approach may include: (1)

93. *Id.*

redesigning a facility or process to reduce the risk of an accident; (2) substituting less hazardous materials in a process; (3) reducing the duration and volume of storage of hazardous materials at facilities; (4) designing processes to require lower pressures and temperatures or other process alterations that lower the risk of failure or accident; and (5) reducing the size, complexity, or scope of production.⁹⁴

By emphasizing prevention rather than early warning and response, nations can avoid the human and environmental tragedies of Bhopal and Seveso. This primary preventive approach seeks to avoid, rather than simply minimize, human disease and suffering. History and common wisdom have shown the desirability of prevention over cure. Having conquered many of the plagues and diseases of pre-industrial society, public and environmental health policy makers must now focus their efforts on the public health threats of the Industrial Revolution.

Although the production and use of toxic chemicals is greatest in the developed world, there has been a definite trend towards the export of dangerous chemicals and processes to the developing world. Bhopal is a cogent example.⁹⁵ Identifying chemical releases and preventing accidents in the West is only part of the solution. Proliferation of chemical use in the developing world and the widespread environmental degradation of the former Soviet Union cries out for a global approach to toxic pollutant regulation. A global right-to-know effort is an essential component of an overall strategy for global environmental protection and sustainable development.

3. Agenda 21

In 1992, the United Nations convened its decennial Conference on Environment and Development in Rio de Janeiro, Brazil. During preparatory meetings for the Rio Conference, the participants chose "to promote open and timely exchange of information on national environmental policies, situations, and accidents" as one of the Conference objectives.⁹⁶ Preparatory discussions leading to the Rio Conference resulted in Decision 1/22 on Environmentally Sound Management of Wastes, Particularly Hazardous Wastes, Environmentally Sound Management of Toxic Chemicals and Prevention of Illegal Traffic in Toxic

94. ACCIDENTS DO HAPPEN, *supra* note 4.

95. *Union of India*, 809 F.2d at 195.

96. G.A. Res. 44/228, U.N. GAOR, 44th Sess., Supp. No. 49, U.N. Doc. A/44/49 (1989) (UNECD), *reprinted in* TRANSBOUNDARY MOVEMENTS AND DISPOSAL OF HAZARDOUS WASTES IN INTERNATIONAL LAW: BASIC DOCUMENTS 233 (Barbara Kwiatkowska & Alfred Soons eds., 1993) [hereinafter BASIC DOCUMENTS].

and Dangerous Products and Wastes,⁹⁷ calling for “measures to promote public awareness and education on chemical risks and management, including action by non-governmental organizations.”⁹⁸

This finding was scaled back slightly, however, in the subsequent Decision 2/17 addressing Environmentally Sound Management of Wastes, Particularly Hazardous Wastes, and of Toxic Chemicals, as well as Prevention of Illegal International Traffic in Toxic and Dangerous Products and Wastes: Environmentally Sound Management of Toxic Chemicals.⁹⁹ Relevant provisions of the Decision Memorandum included a diffident Section 2.t, calling for the “need to consider chemical risk communication guidelines at the national level to promote information exchange with the public,” and section 2.u, addressing the “need to strengthen procedures, particularly at the local level, for monitoring, assessment, preparedness, prevention, mitigation and emergency response to address chemical accidents.”¹⁰⁰

Fortunately, parallel provisions were also being discussed by the developed nations in the context of guidelines for increased public participation in environmental decision making. The guidelines were initially articulated in the 1988 OECD Decision-Recommendation of the Council Concerning Provision of Information to the Public and Public Participation in Decision-Making Processes Related to the Prevention of, and Response to, Accidents Involving Hazardous Substances.¹⁰¹ These principles were then repeated in a condensed form in the Report of the Meeting on the Protection of the Environment of the Conference on Security and Cooperation in Europe.¹⁰²

In May 1990, the United Nations Economic Commission for Europe, consisting of the United States, Canada, and the European countries, held a special preparatory meeting for the Rio Conference in

97. *Report of the Preparatory Committee for the United Nations Conference on Environment and Development*, U.N. GAOR, 45th Sess., Supp. No. 46, U.N. Doc. A/45/46 (1990).

98. *Id.* § (2)(5)(i).

99. *Report of the Preparatory Committee for the United Nations Conference on Environment and Development*, U.N. GAOR, 46th Sess., Supp. No. 48, U.N. Doc. A/46/48 (1991).

100. *Id.*

101. Jeffery D. Kovar, *A Short Guide to the Rio Declaration*, 4 COLO. J. INT'L ENVTL. L. & POL'Y 119, 130 (1993) (citing OECD Decision-Recommendation of the Council Concerning Provision of Information to the Public and Public Participation in Decision-Making Processes Related to the Prevention of, and Response to, Accidents Involving Hazardous Substances, 687 Sess. C(88)85 (July 8, 1988)).

102. Kovar, *supra* note 101 (citing U.S. Commission on Security and Cooperation in Europe (Sofia, Bulg., Nov. 3, 1989)).

Bergen, Norway.¹⁰³ The Commission adopted and expanded the CSCE principles at an ad hoc meeting in The Hague, Netherlands in July 1991.¹⁰⁴ This expansion placed the development of the right of public participation, a basic democratic principle rarely enshrined in UN declarations, as one of the objectives of the Commission at UNCED.

The Commission successfully achieved this objective because provisions for democratic environmental decision making, information disclosure on health and environmental risks, and access to due process were all included in Principle 10 of the Rio Declaration:

Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.¹⁰⁵

Principle 10 appears to embrace a public opinion model by suggesting that information should be made "widely available" and that citizens are provided with an avenue for "redress and remedy."¹⁰⁶ The compendium document of the Rio Conference, an action plan called Agenda 21, unambiguously calls for individual member states to develop domestic right-to-know laws that provide for information disclosure and citizen involvement in environmental decision making.

Domestic laws compelling disclosure are necessary because many companies refuse to release data voluntarily. For example, a 1992 report by Friends of the Earth surveyed forty-three multinational corporations headquartered or operating in the United Kingdom where no right-to-know

103. *Id.* (citing *Bergen Ministerial Decision on Sustainable Development in the ECE Region*, Report of the Economic Commission for Europe on the Bergen Conference, Annex I, U.N. Doc. A/CONF. 151/PC/10 (1991)).

104. *Id.* (citing United Nations, General Assembly, Economic and Social Council, Ad Hoc Meeting on Environmental Rights and Obligations; Report of the Ad Hoc Commission, Economic Commission for Europe, U.N. Doc. ENVWA/AC.7/2 (the Hague, July 10, 1991)).

105. *Rio Declaration*, *supra* note 3.

106. *Environmental Ethics*, *supra* note 78.

legislation similar to EPCRA exists.¹⁰⁷ Of the forty-three corporations surveyed, only eleven agreed to provide the requested information, fifteen flatly refused, and five did not respond.¹⁰⁸

A similar report by the Public Data Project ("PDP"), issued on the same day, revealed the same problems with voluntary disclosure.¹⁰⁹ PDP surveyed forty multinational companies requesting emissions information on eighteen commonly used industrial chemicals, only six companies provided all the information requested.¹¹⁰ Disclosure regarding the production, storage, and disposal of hazardous compounds is necessary for appropriate emergency response. One of the major factors in passing EPCRA in the United States was the increasing hazard firefighters faced while battling industrial fires. Firefighting techniques, equipment, and personal protection are heavily dependent on the nature of the materials involved. Emergency containment and clean up activities are based on the chemical and physical properties of the hazardous materials present. Decisions whether to evacuate nearby citizens or "shelter in place"¹¹¹ are similarly dependent on the nature of the chemical threat.

Simply put, protection of public and environmental health is critically dependent on timely and accurate information about the hazards posed by the accident. In a chemical accident, time is of the essence. Public safety officials cannot wait for the corporate office of the affected facility to hold a press conference. Subsequent analysis of the Seveso incident showed that information transfer was a major problem in responding to the incident.¹¹² This problem in information transfer led to the adoption of the Seveso Directive requiring advance notice to public officials and advance preparation of the citizenry.¹¹³ EPCRA also provides for advance notice to local planning commissions and state emergency response boards.¹¹⁴ Training local emergency responders is essential to

107. *Id.*

108. *Id.*

109. *Id.*

110. *Id.* A PDP report showed marked disparity in water discharges between United States and European plants. Three European plants, individually, discharge more benzene, methyl ethyl ketone, and xylenes than all United States plants together. Bayer reported that its European plants have a total wastewater discharge of 17.6 pounds of lead per day, compared to six pounds a year by its United States facilities.

111. *Environmental Ethics, supra note 78.*

112. Otway, *supra note 43*, at 11.

113. *Id.* at 13.

114. 42 U.S.C. § 11002(c).

protect their health and the health and welfare of the surrounding communities that they serve.

Industrial accidents clearly pose a growing threat to health and to the environment. The Bhopal tragedy is a grim reminder of the potential for chemical disaster. Mass casualty incidents from acute exposures like Bhopal¹¹⁵ are dramatic, and long term effects from exposures like Seveso¹¹⁶ are still unknown. As previously noted, the United States has only narrowly avoided chemical disasters in excess of the effects in Bhopal by appropriate facility siting, emergency response and evacuation plans, and luck.¹¹⁷ Right-to-know laws may lead to the same kind of site selection, emergency planning, and process safety standards in other nations when an informed populace demands them.

Effective enforcement by environmental protection organizations requires the collection of data on polluting activities. This information is also required to develop scientific research on the effects of chemical releases on human health and the environment. Once such information is collected, the ethical doctrines of autonomy and informed consent suggest that affected communities and nations have a right to it, particularly where the risk is involuntarily imposed.

Information documenting emergency and routine chemical releases is critical for the protection of the global environment. This data can be used for local, national, and international environmental research programs and for writing effective environmental protection laws and regulations. Accurate data can be used in negotiating trade agreements and allocating economic and technical development assistance. Global environmental watchdog organizations and public advocacy groups depend on such information to establish priorities, educate communities, and develop action agendas.

For example, the United States TRI created under EPCRA, is available to identify corporate polluters and expose the volume of waste they generate.¹¹⁸ The TRI contains information regarding routine as well as accidental releases; private citizens and organizations can query the database on-line via modem.¹¹⁹ The database is compiled by EPA from the annual reports submitted by manufacturers as mandated by section 313 of EPCRA. EPA uses the TRI database in its own pollution prevention

115. *Union of India*, 809 F.2d at 197.

116. Otway, *supra* note 43, at 5.

117. ACCIDENTS DO HAPPEN, *supra* note 4.

118. 42 U.S.C. § 11023 (1994).

119. 42 U.S.C. § 11023(j).

projects.¹²⁰ Unfortunately, the United States TRI program has no equivalent counterpart in the world.

A global TRI would be extremely valuable in fulfilling Agenda 21's goal of toxic use reduction and responsible management of toxins. One must recognize, however, that data collection and verification, as in many other international environmental programs, would be problematic, particularly in developing countries. The direct regulation and monitoring of multinational corporations by a multilateral commission and the development of a global clearinghouse for environmental information would be one method of overcoming this problem. Alternatively, developed nations could require direct reporting by domestic corporations and their subsidiaries of their international environmental activities. Right-to-know reporting to a central clearinghouse may have been valuable in avoiding the ravages of pollution in Eastern Europe and the former USSR. Reports may have averted surprise and the high level of environmental harm. Reports could have generated domestic and international pressure to prevent the harm caused by pollution.

International right-to-know coordination is important because of the effect of national pollution on global efforts towards a sustainable existence. Uniform right-to-know requirements on an international scope level the field for international trade by placing similar regulatory burdens on all market participants. The imposition of uniform requirements lowers the incentive for the transfer of dangerous or polluting technology to countries with less stringent environmental reporting laws. Nations have already made attempts to harmonize other aspects of chemical regulation, such as labeling and hazard classification among the developed states. Uniform requirements could also eliminate any potential conflicts under the General Agreement on Tariffs and Trade (GATT) treaty.¹²¹

In addition to right-to-know laws, government requirements for facilities to examine safer technologies and justify their choices of more hazardous alternatives, might advance the adoption of primary safety approaches. Accident prevention and preparation activities could be imposed on dangerous facilities through command and control or performance based standards.¹²² For example, this kind of regulation is effectively coupled with limited "right-to-know" requirements in the approach outlined in the Seveso Directive. Combining the expanded right-to-know component of EPCRA with the accident prevention and

120. 42 U.S.C. § 11023.

121. General Agreement on Tariffs and Trade (Uruguay Round) Dec. 15, 1993, KAV 3778, *reprinted in* 33 I.L.M. 1125, 1128.

122. ACCIDENTS DO HAPPEN, *supra* note 4.

preparation activities of the Seveso directive would blend the best elements of both the public opinion and public policy models. The approaches are not mutually exclusive; in fact, they are complementary. A combination of both is likely to result in maximum protection of the community.

One cannot disregard the value of an increased flow of public information regarding risks, accidents, and prevention and response plans in encouraging industry to adopt the inherent safety approach. When information is accessible to citizens, workers, and environmental groups, companies can and will be held accountable to adopt safer practices in order to avoid contamination of the environment through accidental or routine discharges.¹²³ Additionally, right-to-know laws may cause companies to change processes and operations simply to avoid reporting requirements. Reporting can be expensive, time consuming, and may breed community ill-will. Facing mandatory disclosure requirements, companies will carefully evaluate the benefits of hazardous substance use, storage, and disposal.

It is unlikely, however, that an information transfer program dependent solely on public opinion will be successful in the developing world because the citizenry will probably not have the legal or political clout to take effective action. Nevertheless, the availability of the information is important because international NGO's could effectively use this information to place global pressure on polluters who have exported dangerous or inefficient processes to economically and ecologically vulnerable developing nations.

Whatever successes right-to-know programs may have on accident prevention or emergency planning, they are clearly not the sole solution to environmental woes. Despite having the world's most comprehensive right-to-know legislation, the United States population continues to experience a significant risk from toxic and carcinogenic emissions.¹²⁴

Although right-to-know is only part of a comprehensive chemical management plan, it is a valuable component for the reasons described above. Countries should embrace Principle 10 of the Rio Declaration by developing their own domestic right-to-know laws as well as working toward an international right to know structure. Because of the devastating and potentially long term effects of chemical accidents on human health and the environment, the public and its officials should use all the tools at

123. *Id.*

124. *Industry Group Urges Public Reporting on Environment*, *supra* note 66. According to the World Resources, 1994-95 report, the top ten countries for carcinogenic risk, in order, are: the United States, Japan, France, Italy, the United Kingdom, China, Canada, Spain, and India. *Id.*

their disposal to prevent these mishaps. Right-to-know is a powerful tool when properly utilized. It can be adapted to local political and cultural needs, as the comparison between the United States and EC mechanisms demonstrates. Market mechanisms can be a powerful incentive in nations with a consumer-based economy, and international supervision by multilateral organizations or NGOs is available where political, cultural, or economic factors make effective citizen participation unlikely.

Countries drafting right-to-know legislation would do well to study the approaches of both the American public opinion and European public policy models and adopt the major components of both schemes. Welding a strong component of free information transfer to stimulate local, national, and international accountability to a strong component of sound policy management based on primary process safety would act synergistically to reduce the risk of potentially disastrous accidents and provide industry with additional motivation to minimize toxic releases and adopt safer processes.