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### Multinational Corporations, Private Codes, and Technology Transfer for Sustainable Development

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MLA 9th ed.

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OSCOLA 4th ed.

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# MULTINATIONAL CORPORATIONS, PRIVATE CODES, AND TECHNOLOGY TRANSFER FOR SUSTAINABLE DEVELOPMENT

BY  
MICHAEL S. BARAM\*

*Sustainable development requires the application of advanced technological expertise in the activities of multinational corporations. Private codes of environmental conduct are proliferating throughout the developed world, ensuring the application of the required technological expertise. However, multinational corporations generally do not follow these voluntary codes in developing nations. Several strategies are available to extend the effective application of private codes in the developing world. Reliance on private codes of environmental conduct enhanced by supportive strategies provides a pragmatic policy option for sustainable development.*

## I. INTRODUCTION: SUSTAINABLE DEVELOPMENT

The struggle to advance human well-being in developing nations is on a collision course with growing efforts to protect the global environment. To prevent foreseeable conflicts, the principle of sustainable development has been proposed and has become widely accepted.<sup>1</sup> Putting this principle into practice will require

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1. See WORLD COMM'N ON ENV'T AND DEV., *OUR COMMON FUTURE* 46 (1987) (commonly referred to as the "Brundtland Report") (defining sustainable development as "a process of change in which the exploitation of resources, the

policies that permit industrial, agricultural, and other developments, yet also protect natural resources and public health for the benefit of future generations.<sup>2</sup>

Technological expertise will play a vital role in sustainable development, fostering the design of new energy, transport, and water supply systems for minimal environmental impact, and enabling performance of hazardous mining and manufacturing activities in a manner that protects natural resources and public health. Technological expertise is crucial in preventing waste disposal problems, in developing biodegradable packaging, and in designing new products that are more compatible with the environment throughout their life cycles, such as substitutes for harmful chemical pesticides.<sup>3</sup>

Continuous advance in technological expertise is necessary for sustainable development because environmental parameters change over time. As developmental activities multiply, regional and global environments will experience greater stress no matter how carefully each activity may have been designed and conducted. As human well-being advances, citizens of developing nations are likely to place greater emphasis on the protection of natural resources and environmental amenities. As environmental sciences progress, new problems will be identified and demand mitigation. Thus, sustainable development policies must promote continuing technical advances and facilitate technology transfer for environmental protection.

Finally, policies for sustainable development must be brought to bear on the major proponents of developmental activities: private multinational firms and public agencies. Multinational corporations (MNCs) are aggressively seeking new resources, markets, joint ventures, and facility sites. Recent studies show that such global expansion is growing significantly because "it pays."<sup>4</sup> Pub-

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direction of investments, the orientation of technological development, and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations").

2. *See id.* at 43-46.

3. *See* GEORGE HEATON ET AL., WORLD RESOURCES INST., TRANSFORMING TECHNOLOGY: AN AGENDA FOR ENVIRONMENTALLY SUSTAINABLE GROWTH IN THE 21ST CENTURY ix (1991) (suggesting that technological change, "[p]roperly channelled, . . . could hold the key to environmental sustainability").

4. Earl Anderson, *Going Global Pays Off for U.S. Chemical Firms*, CHEM-

lic agencies in industrial countries are under increasing pressure to facilitate MNC activities in poorer nations, and counterpart agencies in those nations are pursuing development opportunities with MNCs. Thus, MNC activities are being "pushed and pulled" toward developing nations at an increasing rate, and policies for sustainable development must ensure that MNCs provide the requisite technical expertise.<sup>5</sup>

This Article addresses the role of MNCs in sustainable development. It evaluates one policy option for promoting the development and transfer of technological expertise: reliance on the private codes of environmental conduct that MNCs and their trade associations are developing. These private codes provide a voluntary "system" for ensuring that such firms provide the requisite technology for sustainable development.<sup>6</sup> Commentators have suggested other policy options for multinationals and technology, including international regulation of MNCs, government programs for transfer of MNC technology, international harmonization of standards or laws applicable to MNCs, and the extraterritorial application of laws enacted by the countries of origin of MNCs.<sup>7</sup>

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ICAL & ENGINEERING NEWS, Dec. 16, 1991, at 10 (discussing a 1991 Conference Board study which analyzed the performance of U.S.-based multinational firms in various industrial sectors and found superior sales growth and profits for multinationals).

5. See U.N. CENTRE ON TRANSNAT'L CORPS., WORLD INVESTMENT REPORT, 1991, at 74-77, U.N. Doc. ST/CTC/118, U.N. Sales No. E.91.II.A.12 (1991) (discussing transnational corporations and technology transfer).

6. The U.N. Centre on Transnational Corporations has set forth an agenda for voluntary action by multinationals. U.N. CENTRE ON TRANSNAT'L CORPS., CRITERIA FOR SUSTAINABLE DEVELOPMENT MANAGEMENT, U.N. Doc. E/C.10/1990/10 (1990) (on file with *Environmental Law*); U.N. CENTRE ON TRANSNAT'L CORPS., TRANSNATIONAL CORPORATIONS AND SUSTAINABLE DEVELOPMENT: RECOMMENDATIONS OF THE EXECUTIVE DIRECTOR, REPORT OF THE SECRETARY GENERAL, U.N. Doc. E/C.10/1992/2 (1991) [hereinafter UNCTC RECOMMENDATIONS].

As of March 1992, the functions and programs of the Centre have been transferred to the newly formed U.N. Department of Economic and Social Development. TRANSNATIONALS (U.N. Conference on Trade and Dev., Geneva, Switzerland), July 1993 (official announcement). See also Gerard Piel, *Globalopolies*, THE NATION, May 18, 1992, at 652.

7. See Maureen A. Bent, Note, *Exporting Hazardous Industries: Should American Standards Apply?*, 20 N.Y.U. J. INT'L L. & POL. 777 (1988) (advocating a set of international laws as the most effective solution, but also suggesting that U.S. regulation of U.S. MNCs doing business in developing nations is the most effective interim solution until international consensus has been reached); Jonathan I. Charney, *Technology and International Negotiations*, 76

However, as indicated in Table 1, these public sector initiatives will require substantial public sector efforts to overcome political and economic obstacles, and deserve consideration only to the extent that private voluntary codes prove inadequate.

Section II examines various types of MNC activities in developing nations. Section III surveys private codes of conduct adopted by corporations in the United States and other developed nations. Section III concludes that corporations generally do not apply these codes in developing nations and examines the effectiveness of three approaches currently used to remedy this situation. Section IV outlines several strategies that could enhance private codes of conduct as a viable policy option. The Article concludes that reliance on MNC codes of environmental conduct, coupled with supportive strategies, provides a pragmatic policy option for achieving sustainable development.<sup>8</sup>

## II. ACTIVITIES OF MULTINATIONAL CORPORATIONS

An assessment of reliance on private codes as a policy option must begin with a delineation of the types of MNC activities in developing nations, the parties involved, and the risks posed to sustainable development. This will illuminate where and when technological expertise is needed, and will highlight potential avenues of technology transfer for each type of activity. After such an initial assessment, the efficacy of private codes for promoting and directing the requisite technological expertise can be evaluated.

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AM. J. INT'L L. 78 (1982) (suggesting that procedural adjustments to international negotiations could facilitate the development of international legal rules required to address issues raised by the emergence of new technologies).

8. The subject of this Article is being addressed in other forums, e.g., U.N. CONFERENCE ON TRADE AND DEV., WORKSHOP ON TRANSFER AND DEVELOPMENT OF ENVIRONMENTALLY SOUND TECHNOLOGIES (1993) (report issued by UNCTAD in cooperation with the government of Norway); MAGNUS BLOMSTROM & ARI KOKKO, POLICIES TO ENCOURAGE THE INFLOWS OF TECHNOLOGY THROUGH FOREIGN MULTINATIONALS (National Bureau of Economic Research Working Paper No. 4289, 1993) (short economic—rather than environmental—analysis concluding that policies making use of market forces are preferable to conventional governmental technology transfer).

Table 1. Policy Options for Assuring that MNCs Provide Requisite Technical Expertise in Developing Nations: Some Preliminary Observations.

Policy Options	Examples	Issues/Prognosis
<b>1. Public Sector</b>		
International Regulation of MNCs to Ensure That They Provide Requisite Technical Expertise	Codex Alimentarius (WHO, FAO)	Politically problematic to create a regulatory body with authority to enact, monitor, and enforce rules that erode national sovereignty.
Government Programs for Technology Transfer from Industrial Nations to Developing Nations	U.S. EPA's International Environmental Technology Transfer Advisory Board (IETTAB) Program	Government serves as "broker" for technology transfer, but useful technology is often privately held, and not readily available for government use. Proven to be cumbersome and inefficient in actual practice.
Extraterritorial Application of MNC Home Country Rules to MNC Activities in Host (Developing) Nations	U.S. Pesticide Export Rules Requiring Prior Informed Consent of Host Nation	Feasible for application to product exports; less feasible for design and conduct of developmental activities abroad due to enforcement problems and conflicts between needs, values, and laws of home and host countries. Also, unless rules are harmonized for all home countries, little progress can be expected because of disparate economic implications for MNCs. Low political feasibility for such harmonization.
International Harmonization of Standards Governing MNC Technologies	OECD Chemical Test Rules, International Organization for Standardization (ISO)	Lengthy and conflict-laden process due to economic and legal implications of standards selected. Must deal with a veritable universe of standards, and therefore extremely complex and likely to be inadequate.
<b>2. Private Sector</b>		
Reliance on Private Codes of Environmental Conduct Developed by MNCs and Trade Associations to Ensure MNCs Provide Requisite Technical Expertise	Several codes discussed in this Article; for example, CMA's <i>Responsible Care</i> ® code	Many issues addressed in this Article, including code scope, stringency, enforcement, reliability, and influence of diverse corporate economic and legal concerns.

### A. Large Scale Development

One type of MNC activity is participation in joint ventures for the siting, design, and construction of large public projects intended to provide for human needs in developing nations. Examples include water supply and waste disposal systems, energy facilities, and communications and transportation systems. Usually, an MNC works on such projects under a long-term contract with several participants that may include other MNCs, host country firms, national agencies, and local governments. Technical expertise and equipment capable of minimizing a broad range of future environmental impacts is needed at the outset for the siting and design of such projects, and subsequently for the construction or realization stage. At a later stage, additional technological expertise and new equipment may be required for project modifications in response to new findings of environmental impacts, and for ongoing project management to meet increasingly stringent requirements for the conservation of resources. An MNC's responsibilities for providing this technological input will depend in part on its contractual obligations and its level and duration of involvement.<sup>9</sup>

For this type of activity, an effective private code must mandate MNC responsibilities for technological innovation and transfer when the MNC is working under a long-term contract with many other participants. Such contracts often provide for transfer of technological expertise by the MNC to the other parties. However, from a legal perspective, long-term contracts are problematic because they involve the transfer of incorporeal goods such as "know-how"<sup>10</sup> and frequently require secrecy to protect proprietary information. Further, long-term contracts are often

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9. MNCs engaged in such projects are usually subject to the terms of financing arrangements (e.g., with the World Bank), host country laws, and restrictions on their export of certain technologies by their countries of origin. See Robert E. Lutz, *The Export of Danger: A View from the Developed World*, 20 N.Y.U. J. INT'L L. & POL. 629 (1988).

10. "Information that enables one to accomplish a particular task or to operate a particular device or process. Know-how usually denotes a particular kind of technological information that enables the possessor of the information to accomplish a given task . . . . Sometimes, know-how might meet the qualifications for protection as a trade secret, and sometimes it might not." J. THOMAS MCCARTHY, MCCARTHY'S DESK ENCYCLOPEDIA OF INTELLECTUAL PROPERTY 180 (1991).



skeletal in that they avoid detailed requirements because of numerous contingencies and emphasize cooperative relationships instead. The parties anticipate controversies and usually provide for their resolution by including a contractual provision for arbitration or another form of dispute resolution.<sup>11</sup>

### B. Facility Operation

A second common type of MNC activity involves the ongoing operation of a manufacturing facility or a resource extraction activity in a developing nation. The MNC may be involved in several ways: as the parent of a wholly owned subsidiary which owns and operates the facility; as one of several private and public partners in a joint venture; or as the licensor of technology to an independent organization conducting the activity.<sup>12</sup> Such operations in developing nations increasingly involve the use of hazardous materials<sup>13</sup> and pose several risks to sustainable development. These risks include potential accidents with sudden or long-term impacts on the environment and public health (such as Bhopal<sup>14</sup> and Seveso<sup>15</sup>); routine release of toxic air and water pollutants; ongoing generation of hazardous wastes; and the depletion of natural resources (such as water supply).<sup>16</sup> Sustainable

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11. See generally DER KOMPLEXE LANGZEITVERTRAG—THE COMPLEX LONG-TERM CONTRACT (Fritz Nicklisch & Adolfo Alvarado Velloso eds., 1987) (discussing the structure of complex long-term contracts).

12. See generally FRANK C. SCHULLER, *VENTURING ABROAD: INNOVATION BY U.S. MULTINATIONALS* (1988) (discussing characteristics of U.S. multinational corporations that successfully innovate abroad, and advocating a more proactive strategy for innovating abroad).

13. See WORLD COMM'N ON ENV'T AND DEV., *supra* note 1, at 208; U.N. CENTRE ON TRANSNAT'L CORPS., *ENVIRONMENTAL ASPECTS OF THE ACTIVITIES OF TRANSNATIONAL CORPORATIONS: A SURVEY* at 45, U.N. Doc. ST/CTC/55, U.N. Sales No. E.85.II.A.II (1985); Anderson, *supra* note 4, at 10; HEATON ET AL., *supra* note 3, at 5-6.

14. For a description of the Bhopal incident, see Arthur Sharplin, *Union Carbide Limited and the Bhopal Gas Incident: Issues and Commentary*, in NATIONAL CONFERENCE ON BUSINESS ETHICS, THE CORPORATION, ETHICS, AND THE ENVIRONMENT 129-33 (W. Michael Hoffman et al. eds., 1990).

15. For a description of the Seveso accident, see THOMAS WHITESIDE, *THE PENDULUM AND THE TOXIC CLOUD: THE COURSE OF DIOXIN CONTAMINATION* (1979).

16. See U.N. CENTRE ON TRANSNAT'L CORPS., *TRANSNATIONAL CORPORATIONS AND INDUSTRIAL HAZARDS DISCLOSURE* at 21-30, U.N. Doc. ST/CTC/111, U.N. Sales No. E.91.II.A.18 (1991) (report prepared by Michael S. Baram and Gary

development will require technical expertise in the form of analytic and monitoring capabilities, "know-how," and sophisticated equipment and training programs designed to prevent accidents. It will further require technologies for waste recycling and source reduction, and methods for minimizing routine releases and fugitive emissions.<sup>17</sup>

As the state of the art in these areas of technical expertise advances (most likely at MNC facilities in the country of origin), the newly gained expertise should be transferred and applied to host country operations to maintain sustainable development. Thus, an effective private code must mandate MNC responsibilities for technology transfer under several arrangements—intrafirm arrangements, joint ventures, and licensing relationships.<sup>18</sup> However, two conditions prevent broad dissemination of this technical knowledge: First, such transfers will be confined to the firm's own subsidiary or others such as joint venture partners or licensees involved in the business venture with the MNC. Second, the MNC technology may be proprietary and shared only with its partners or licensees under trade secret restrictions. As a result, an important advance in accident prevention or waste recycling may be applied in the MNC operation, but kept from competitors which conduct similar operations in the developing nation.

### C. Sale of Products

A third type of MNC activity in developing nations involves the sale of the MNC's products—either domestic products made by its local facility or products manufactured elsewhere and

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Marchant).

17. See generally MICHAEL S. BARAM, PATRICIA S. DILLON & BETSY RUFFLE, *MANAGING CHEMICAL RISKS* (1992) (discussing the impact of the Emergency Planning and Community Right-To-Know Act of 1986 (EPCRA), 42 U.S.C. §§ 11001-11050 (1988), on company initiatives for accident prevention, emissions reduction, emergency response planning, risk communication, and public outreach).

18. See, e.g., Conseil Européen des Fédérations de l'Industrie Chimique, *Principles and Guidelines for the Safe Transfer of Technology* 3-4, 10 (Apr. 15, 1987) (position paper by the European Chemical Industries Foundation (CEFIC), on file with *Environmental Law*) (hereinafter CEFIC Principles); J.P. Visser, *Development of Safety Management in Shell Exploration and Production* 6-9 (May 1991) (paper presented at NetWork Symposium *In Search of Safety*, Bad Homburg, Germany, on file with *Environmental Law*).

exported to the developing nation. In either case, the MNC may sell the products to customers directly or through distributors or brokers. Some products, such as bulk commodity chemicals or agricultural pesticides, may be destined for industrial or large institutional customers; others, such as appliances, automobiles, or pesticides for home and family farm use, may be sold "over the counter" to individual consumers.

Many of these products pose environmental risks during the use and disposal stages of their life cycles. This may be due to the products' toxicity or other intrinsic features posing hazards to humans and the ecosystem. Environmental risks may also arise because the products and their packaging, such as plastics, use up landfill capacity and ultimately become nonbiodegradable litter. To reduce such problems and achieve sustainable development, technical advances will be needed to accomplish product redesign, to establish safer methods and better instructions for product use and disposal, and to develop biodegradable or reusable packaging and safer substitute products.<sup>19</sup>

The advanced technological expertise must be transferred to manufacturing facilities (for product redesign and development of

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19. Life cycle analysis is now being used in many U.S. and European firms to identify problems and guide corrective actions in *Product Stewardship* programs (at chemical manufacturers such as Dow Chemical), and in *Design for Environment* programs (at communications equipment manufacturers such as IBM and AT&T). See Patricia S. Dillon & Michael S. Baram, *Forces Shaping the Development and Use of Product Stewardship in the Private Sector*, in ENVIRONMENTAL STRATEGIES FOR INDUSTRY 329-41 (Kurt Fischer & Johan Schot eds., 1993).

*Design for Environment* programs focus on product design: "At the front end of a product's life cycle, companies can design more environmentally compatible products and packaging through strategies such as materials selection, design for disassembly and recycling, and product life optimization (for example, increasing product durability and reparability)." *Id.* at 331.

*Product Stewardship* programs, on the other hand, address situations where design changes are not feasible, and strive to promote safe use of products. "At the back end, once the product enters commerce, companies can promote the safe use and disposal or recycling of their products through the provision of technical expertise and services to distributors and end use customers in the form of know-how and other technology transfers." *Id.* For example, "as part of its Product Stewardship Program (PSP), Dow Chemical makes its technical expertise on safe handling of chemicals available to its downstream industrial customers." *Id.* at 335.

substitute products), to suppliers (for development of new packaging), and to customers (for warnings and safe use instructions) for implementation. A continuum of advances and technology transfers is needed for many products because increases in product sales and use often lead to increased stress on the environment, most notably in the case of chemical products like pesticides, plastics, and solvents.

For this type of activity, a private code must promote technological advances by MNCs, and transfer of those advances to their subsidiaries, partners, or licensees who make or sell MNC products, and to downstream customers. In addition, it may be necessary to transfer new expertise to downstream distributors and waste disposers. The Chemical Manufacturers' Association (CMA) has recently developed a chemical industry code for products made and sold in the United States.<sup>20</sup> This code requires chemical manufacturers and their distributors to transfer expertise on safe use and disposal of products to customers; to actively seek information from customers, to monitor customers to determine their adoption of the transferred expertise, and to take necessary steps in cases where downstream performance remains inadequate.<sup>21</sup> Because customers are independent entities not subject to manufacturer dictates, the manufacturers are expected to apply additional measures to reduce product misuse downstream, including the termination of sales.<sup>22</sup> However, there is no evidence that the CMA codes are being applied when MNCs sell their products in developing nations.

In summary, MNCs engage in at least three types of activities that have major implications for sustainable development and require continuing technological advances and transfers between various parties. For each type of activity, several types of

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20. Chemical Mfrs. Ass'n, Responsible Care®: A Public Commitment, Product Stewardship Code of Management Practices (1992) (on file with *Environmental Law*). The code addresses management leadership and commitment, information and product risk characterization, and risk management. *Id.* at 2-3. "The purpose of the Product Stewardship Code of Management Practices is to make health, safety and environmental protection an integral part of designing, manufacturing, marketing, distributing, using, recycling and disposing of our products . . . . The scope of the code covers all stages of a product's life." *Id.* at 1.

21. *Id.* at 3.

22. *Id.*

contracts, environmental regulations, and various laws of generic applicability, such as tax code provisions applicable to the transfer of "know-how" and other forms of technology,<sup>23</sup> define the responsibilities and relationships of the parties. Some of these legal requirements may also obstruct technology transfer, as in the case of legal doctrines for the protection of proprietary information.<sup>24</sup> Policies restricting the export of technologies that have implications for national security may also impede technology transfer.<sup>25</sup> Table 2 provides an overview of MNC activities, the parties involved, and the required technical expertise.

Thus, a detailed understanding of MNC activities is needed if private codes are to be relied upon for directing technology transfer along appropriate avenues.

### III. PRIVATE CODES OF CONDUCT

Companies develop codes of conduct to guide organizational behavior and to publicly announce their voluntary commitment to certain principles in the conduct of their business. In many instances, companies have used codes to address those aspects of business where corporate managers have enjoyed considerable discretion in making decisions, and where the decision outcomes have harmed the firm's morale, reputation, productivity, or profitability, or have provoked regulatory intervention and litigation.<sup>26</sup> Thus, corporations have enacted many codes to clarify prevailing corporate philosophy and emphasize certain criteria for

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23. See, e.g., Ronald M. Roth, *Tax Consequences of Technology Transfers to Foreign Joint Ventures*, COMPUTER LAW., May 1987, at 1 (discussing U.S. income tax consequences of technology transfers by U.S. companies to foreign joint venture corporations).

24. Examples include trade secrets.

25. See generally LAW AND POLITICS OF WEST-EAST TECHNOLOGY TRANSFER (Hiroshi Oda ed., 1991) (discussing the multilateral Coordinating Committee (COCOM) and export controls exercised by the United States, Japan, and several European nations, where most MNCs are based).

26. See BARAM ET AL., *supra* note 17, at 9-13 (discussing external and internal developments shaping corporate risk management).

Table 2. MNC Activities, Parties Involved, and Types of Technical Expertise Needed.

Type of Activity	Parties and Relationships	Type of Technical Expertise Needed for Risk Reduction
Large-Scale Development	MNC working in joint venture with other MNCs, financing entity, host country companies, and units of government, under long-term contract and applicable rules of host country and financing entity.	Technical expertise needed for optimal siting and project design; for mitigation of construction impacts; for monitoring; and for redesign projects and other management responses to new environmental constraints over duration of project operation.
Facility Operation	MNC and subsidiary (intrafirm); or MNC and other private and public parties working in a joint venture under contract or in co-ownership arrangement; or MNC and licensees of its technology under licensing agreements. Host country laws also apply in each case.	Technical expertise needed for accident hazard analysis, prevention, and response; for monitoring and reduction of pollution releases and waste generation; for worker protection and training; and for waste disposal or recycling.
Sale of Products	MNC as exporter to host country, or MNC subsidiary as domestic producer and seller in host country, and others in the product's life cycle including downstream distributors, customers, and waste disposers. Host country laws and sales contract provisions apply. For exports, rules of country of MNC origin also apply.	Technical expertise needed for life cycle analysis, design of new products, redesign of existing products, safe use and disposal methods and instructions, ancillary equipment for safe use and disposal, packaging and containers, and ultimately for design of substitute products.

decisions in order to produce better outcomes.<sup>27</sup> Examples include codes expressing a firm's commitment to fairness in employee relations,<sup>28</sup> to honesty in product marketing,<sup>29</sup> to good citizenship in host communities,<sup>30</sup> to quality in products and services,<sup>31</sup> and to attentiveness to customer concerns.<sup>32</sup>

For similar reasons, trade associations also enact voluntary codes of conduct for their company members to follow. To avoid loss of members, associations usually require the unanimous support of their member companies for such codes. Given the diversity of membership of most associations in terms of size, resources, management culture, economic and regulatory concerns, and other matters, association codes usually evolve slowly, involving extensive negotiation to reach common ground.<sup>33</sup>

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27. See RONALD E. BERENBEIM, CORPORATE ETHICS PRACTICES 7-8, 13-14 (The Conference Bd. Report No. 986, 1992).

28. See, e.g., *Corporate Principles of United Technologies Corporation* ("We are committed to treating one another fairly . . . . We will respect each other's privacy and treat each other with dignity and respect . . . ."). *Id.* at 34.

29. See, e.g., *id.* ("We are committed to providing . . . fair prices and honest transactions . . . . We will emphasize fair competition . . . .").

30. See, e.g., *id.* ("We are committed to being a responsible corporate citizen of the worldwide communities in which we reside.").

31. See, e.g., *id.* ("We are committed to providing high quality and value . . . .").

32. See, e.g., *id.* ("Our primary responsibility is to those who use our products and services . . . . We will deal both lawfully and ethically with all our customers."). For further examples of such codes, see WALTER W. MANLEY II, THE EXECUTIVE'S HANDBOOK OF MODEL BUSINESS CONDUCT CODES (1991); BERENBEIM, *supra* note 27, at 32-33, 35, 38, 39.

Private codes of conduct are one form of private sector self-regulation. Other forms include quantitative standards based on industrial and professional consensus, such as those set by private technical associations like American Society for Testing and Materials (ASTM), American National Standards Institute (ANSI), American Society of Mechanical Engineers (ASME), and National Fire Protection Association (NFPA); and licensure boards and other forms of professional self-certification, such as state boards of licensure for engineers, architects, and doctors. See MICHAEL S. BARAM, ALTERNATIVES TO REGULATION 53-76 (1982) (discussing private, voluntary self-regulation). See generally BERENBEIM, *supra* note 27 (supplementing a 1987 Conference Board study discussing corporate ethics statements and trends in company-sponsored ethics training programs).

33. For a discussion of trade association code development, see David Powell, *The Development and Implementation of Industry-Wide Environmental Codes of Practice*, in NATIONAL CONFERENCE ON BUSINESS ETHICS, THE CORPORATION, ETHICS, AND THE ENVIRONMENT 163-71 (W. Michael Hoffman et al. eds.,

Both individual company codes and association codes have usually been aspirational, consisting of general statements of principle and broad promises to practice in accordance with the principles, and have notably lacked detailed guidance for implementation and prescriptive language for forcing effect on management.<sup>34</sup> For these and other reasons, critics have dismissed such codes as meaningless generalities, unreliable guidances, unenforceable promises, and inadequate substitutes for regulation.<sup>35</sup>

### A. United States

In recent years, many U.S. firms that produce or use hazardous chemicals have enacted new private codes of environmental conduct that significantly depart from prior code practice.<sup>36</sup> These firms have acted voluntarily for many reasons vital to their economic health.<sup>37</sup> For instance, the Bhopal tragedy and other widely publicized facility accidents precipitated a dramatic erosion of public and community confidence in plant safety;<sup>38</sup> and extensive media coverage of injuries to workers and consumers, caused by chemical products, has stimulated a parallel erosion of

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1990); Butler D. Shaffer, *In Restraint of Trade: Trade Associations and the Emergence of "Self Regulation,"* 20 Sw. U. L. REV. 289, 289 (1991).

34. BERENBEIM, *supra* note 27, at 12-14.

35. See, e.g., Harvey L. Pitt & Karl A. Groskaufmanis, *Minimizing Corporate Civil and Criminal Liability: A Second Look at Corporate Codes of Conduct*, 78 GEO. L.J. 1559 (1990). "Most see the in-house ethics efforts of corporations being adopted more for public relations than for the good of the public. The truth is, corporations are no more capable of acting ethically than they are of acting lovingly." *Id.* at 1560 n.6 (quoting G. SPENCE, WITH JUSTICE FOR NONE 277 (1988)). See also *id.* at 1630-33 (reporting criticisms of corporate codes).

36. Examples include Dow Chemical and CMA codes. See *supra* notes 20-22 and accompanying text; *infra* notes 43-55 and accompanying text.

37. See Michael S. Baram, *Report for Recommendation 90-3: Risk Communication as a Regulatory Alternative for Protecting Health, Safety and Environment*, in ADMINISTRATIVE CONFERENCE OF THE U.S., RECOMMENDATIONS AND REPORTS 1990, at 207, 214-17 (1990); *Recommendation 90-3: Use of Risk Communication by Regulatory Agencies in Protecting Health, Safety and the Environment*, in ADMINISTRATIVE CONFERENCE OF THE U.S., RECOMMENDATIONS AND REPORTS 1990, at 12, 13 (1990) (adopted June 7, 1990).

38. See Baram, *supra* note 37, at 217, 240-41.



customer confidence in product safety.<sup>39</sup> These developments, often followed by litigation, liability, and more intrusive and stringent regulation, have damaged corporate credibility and competitiveness and impaired the company relationships with insurers, lenders, and investors.<sup>40</sup>

Another fundamental reason for the new codes is the firms' need to cope with their transparency: public knowledge of the hazardous materials they produce, store, use, spill, discharge, and dispose of. Corporate transparency has come about as a result of recent federal, state, and local right-to-know laws requiring disclosure of such matters.<sup>41</sup> Thus, companies are also motivated to enact the new codes to reduce public anxieties and to provide assurance that improved environmental management is forthcoming and will prevent corporate misconduct.<sup>42</sup>

The most advanced new codes of environmental conduct include those enacted by Dow Chemical<sup>43</sup> and CMA.<sup>44</sup> Dow codes address plant safety, product stewardship, public communications, regulatory compliance, and waste reduction in considerable detail and prescriptive language.<sup>45</sup> The written codes are supplemented by surveys, in-house training programs, and various materials such as manuals and videotapes for use by Dow's plant managers, marketing staff, and other personnel.<sup>46</sup> The company also provides its customers with training materials, seminars, and expert services for reducing chemical risks at customer facilities.<sup>47</sup> The CMA codes, enacted under its *Responsible Care*®

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39. See *id.* at 217; BARAM ET AL., *supra* note 17, at 10-11.

40. See Baram, *supra* note 37, at 214; *Recommendation 90-3*, *supra* note 37, at 12-13; BARAM ET AL., *supra* note 17, at 10-11. For a sampling and brief description of environmental codes, see OFFICE OF POLLUTION PREVENTION, U.S. EPA, POLLUTION PREVENTION 1991, at 37-66 (1991).

41. See Emergency Planning and Community Right-To-Know Act of 1986 (EPCRA), 42 U.S.C. §§ 11001-11050 (1988); Michael S. Baram, *Chemical Industry Accidents, Liability, and Community Right to Know*, 76 AM. J. PUB. HEALTH 568 (1986).

42. See Baram, *supra* note 37, at 214-17, 304-05 (1990).

43. Dow codes may be obtained from Dow Chemical Co., Midland, Michigan. For extensive discussion of Dow codes and practices, including technology transfer, see BARAM ET AL., *supra* note 17, at 123-45.

44. See *supra* notes 20-22 and accompanying text; *infra* notes 48-55 and accompanying text.

45. See BARAM ET AL., *supra* note 17, at 130-45.

46. See *id.* at 140; Dillon & Baram, *supra* note 19, at 335.

47. See BARAM ET AL., *supra* note 17, at 140; Dillon & Baram, *supra* note

program,<sup>48</sup> apply to the association's 180 member firms, and currently address *Community Awareness and Emergency Response*,<sup>49</sup> *Pollution Prevention*,<sup>50</sup> *Process Safety*,<sup>51</sup> *Distribution*,<sup>52</sup> and *Employee Health and Safety*.<sup>53</sup> In addition, a sixth code for *Product Stewardship* has been adopted recently and is

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19, at 335.

48. Chemical Mfrs. Ass'n, Responsible Care®: A Public Commitment, Guiding Principles (1991) (on file with *Environmental Law*); Chemical Mfrs. Ass'n, Responsible Care®: A Public Commitment, Summary Description (1991) (on file with *Environmental Law*) [hereinafter CMA Summary Description]. See also David Hunter, *Turning the Touchstone to Gold*, CHEMICAL WK., Dec. 11, 1991, at 4.

The *Responsible Care*® program consists of several elements: *Guiding Principles* ("Each member company has pledged to operate according to the Guiding Principles and has signed to that effect. This signed statement is considered an obligation of membership in the Chemical Manufacturers' Association . . . ." CMA Summary Description, *supra*.); *Codes of Management Practices* ("Codes address community awareness and emergency response, distribution, pollution prevention, process safety, employee health and safety, and product stewardship. The Codes of Management Practices identify expected management practices as objectives rather than prescribing absolute or quantitative standards." *Id.*); a *Public Advisory Panel* ("composed of a group of environmental, health and safety thought leaders," and serving "to assist the industry in identifying and developing programs and actions that are responsive, and are viewed as responsive, to public concerns," *id.*); a *Self-Evaluation Form* ("Member companies will conduct self-evaluations for each code annually." *Id.*); and *Executive Leadership Groups* ("regional groups of ten to twenty executive contacts will meet at least once a year" to "discuss progress and share experiences with implementing elements of Responsible Care." *Id.*). "Endorsement of the Responsible Care initiative is an Obligation of Membership in the association." *Id.*

49. Chemical Mfrs. Ass'n, Responsible Care®: A Public Commitment, Community Awareness and Emergency Response (CAER) Code of Management Practices (1989) (on file with *Environmental Law*).

50. Chemical Mfrs. Ass'n, Responsible Care®: A Public Commitment, Pollution Prevention Code of Management Practices (1991) (on file with *Environmental Law*).

51. Chemical Mfrs. Ass'n, Responsible Care®: A Public Commitment, Process Safety Code of Management Practices (1990) (on file with *Environmental Law*).

52. Chemical Mfrs. Ass'n, Responsible Care®: A Public Commitment, Distribution Code of Management Practices (1991) (on file with *Environmental Law*).

53. Chemical Mfrs. Ass'n, Responsible Care®: A Public Commitment, Employee Health and Safety Code of Management Practices (1992) (on file with *Environmental Law*).

the broadest in scope.<sup>54</sup> These codes allocate specific functions to various company personnel, and are supplemented by training programs and detailed CMA guidances. The association has also established procedures for annual evaluation of member performance, and has promised public review and private enforcement.<sup>55</sup>

Federal incentive policies are stimulating further development of environmental codes. For example, the U.S. Environmental Protection Agency (EPA) is offering regulatory deferrals as an incentive for firms that voluntarily reduce their use of seventeen designated toxic chemicals.<sup>56</sup> The Justice Department has announced that several "mitigating factors"<sup>57</sup> will influence its criminal prosecution of corporate violators of environmental laws. These factors include corporate adoption of a "strong institutional policy to comply with all environmental requirements,"<sup>58</sup> use of "safeguards beyond those required by existing law,"<sup>59</sup> implementation of "regular procedures including . . . audits,"<sup>60</sup> and company use of "environmental compliance [as] a standard by which employee and corporate departmental performance [are] judged."<sup>61</sup>

The Clean Air Act Amendments of 1990 require firms to evaluate potential hazards at facilities producing or using designated toxic chemicals, to develop and implement risk management plans (RMPs), and to provide summaries of the plans to local officials for review and public access.<sup>62</sup> This set of requirements, now

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54. Chemical Mfrs. Ass'n, *supra* note 20.

55. CMA Summary Description, *supra* note 48.

56. See Pollution Prevention Strategy, 56 Fed. Reg. 7849, 7861-64 (1991) (outlining the EPA's Industrial Toxics Project, also referred to as the 33/50 Program); U.S. EPA, THE INDUSTRIAL TOXICS PROJECT; THE 33/50 PROJECT, DOC. NO. 560-1-91-003 (March 1991). According to EPA, this program has produced better results than regulation would have achieved. *Two Voluntary Pollution Control Programs Said to Yield Better Results Than Regulation*, [1992] 15 Int'l Env't Rep. (BNA) 169 (Mar. 25, 1992).

57. U.S. Dep't of Justice, *Factors in Decisions on Criminal Prosecutions for Environmental Violations in the Context of Significant Voluntary Compliance or Disclosure Efforts by the Violator 1* (1991) (on file with *Environmental Law*).

58. *Id.* at 4.

59. *Id.*

60. *Id.*

61. *Id.* at 5. See also Karen Heller, *Clamping Down on Environmental Crime*, CHEMICAL WK., Apr. 1, 1992, at 22.

62. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, 104 Stat. 2570

being administered by EPA<sup>63</sup> and OSHA,<sup>64</sup> essentially mandates that many firms develop and follow new codes of environmental practice for ensuring process safety.<sup>65</sup> Although mandated by law, the details of RMP design and implementation are largely left to corporate judgment because of the unique risk factors at each facility.<sup>66</sup> This will result in a proliferation of new codes.

Firms are also developing codes to address other environmental problems and to encourage their managers to follow proactive approaches in order to enhance corporate competitiveness in markets with mounting environmental constraints. Automotive manufacturers and firms producing communications and data-processing equipment are enacting *Design for Environment* policies which stress the need to reduce the use of toxic materials, to make products that can be readily disassembled for recycling, and to use supplies and materials that are more environmentally compatible (such as recyclable, biodegradable, or more easily disposable materials).<sup>67</sup>

Finally, several business and investor associations, such as the International Chamber of Commerce (ICC), have developed generic codes of environmental conduct and have offered them to companies in various industrial sectors for adoption. Although these generic codes consist mainly of broad and indisputable

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(codified at 42 U.S.C. § 7412(r)(7) (Supp. III 1991)).

63. The EPA has proposed a risk management plan rule. Risk Management Programs for Chemical Accidental Release Prevention, 58 Fed. Reg. 54,190 (1993) (to be codified at 40 C.F.R. pt. 68) (proposed Oct. 20, 1993). "Under the Clean Air Act, as amended, the U.S. Environmental Protection Agency (EPA) is proposing regulations that would require development and implementation of risk management programs at facilities that manufacture, process, use, store, or otherwise handle regulated substances in quantities that exceed specified thresholds." *Id.*

64. Process Safety Management of Highly Hazardous Chemicals; Explosives and Blasting Agents, 57 Fed. Reg. 6356 (1992) (codified at 29 C.F.R. § 1910.119 (1993)). "This final rule . . . establishes procedures for process safety management that will protect employees by preventing or minimizing the consequences of chemical accidents involving highly hazardous chemicals." *Id.* This OSHA rule has been enacted.

65. 42 U.S.C. § 7412(r)(7).

66. See 42 U.S.C. § 7412(r)(7)(B)(ii); see also OFFICE OF AIR AND RADIATION, U.S. EPA, IMPLEMENTATION STRATEGY FOR THE CLEAN AIR ACT AMENDMENTS OF 1990 (1991).

67. See Dillon & Baram, *supra* note 19, at 330, 334, 337, 341 n.3.

principles, they raise public expectations and thereby create pressures on firms to adopt the principles and amplify them with detailed guidances for implementation.<sup>68</sup>

This brief review indicates that many U.S. firms have recognized the need to adopt environmental codes in order to develop management practices that will improve their environmental performance, lessen their vulnerability to environmental liability and enforcement, increase public and customer confidence, and enhance their competitiveness in markets where environmental constraints and values are becoming even more significant than product price. The new codes are being designed to meet criticisms of prior codes.<sup>69</sup> Thus, a number of new codes allocate specific tasks to designated personnel, provide detailed guidance in prescriptive language, establish supplemental training to bring about changes in management decision-making processes, and provide for performance evaluation and accountability.<sup>70</sup> United States regulatory policy is being redesigned to stimulate voluntary corporate initiatives, and to reward or punish companies on the basis of their policies and management practices.<sup>71</sup>

### B. Other Developed Nations

Firms based in other developed nations are also adopting environmental codes.<sup>72</sup> Large chemical and automobile manufacturers in Western Europe, facing problems like those confronting

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68. See, e.g., the Valdez Principles developed by the Coalition for Environmentally Responsible Economies (CERES) (listed in B.W. Karrh, *Du Pont and Corporate Environmentalism*, in NATIONAL CONFERENCE ON BUSINESS ETHICS, THE CORPORATION, ETHICS, AND THE ENVIRONMENT 69 app. at 74-76 (W. Michael Hoffman et al. eds., 1990); INTERNATIONAL CHAMBER OF COMMERCE, THE BUSINESS CHARTER FOR SUSTAINABLE DEVELOPMENT, Pub. No. 210/356 A (1991) (on file with *Environmental Law*) [hereinafter ICC CHARTER]; INTERNATIONAL CHAMBER OF COMMERCE, ENVIRONMENTAL GUIDELINES FOR WORLD INDUSTRY, Pub. No. 435 (1986). Chemical Industry officials claim that CMA's *Responsible Care* codes establish their compliance with the ICC Charter and Guidelines. Interview with Michael Walls, Attorney, CMA, in Washington, D.C. (Mar./Apr. 1992); interview with John Plaut, Director, Environmental Compliance, Allied Signal Co., in Washington, D.C. (Mar./Apr. 1992).

69. See *supra* notes 34-35 and accompanying text.

70. See *supra* notes 43-55 and accompanying text.

71. See *supra* note 56 and accompanying text.

72. See BERENBEIM, *supra* note 27, at 11-12.

their U.S. counterparts, have independently developed similar environmental codes.<sup>73</sup> In addition, European subsidiaries of U.S. companies increasingly follow parental codes in order to prevent inconsistencies in environmental practice.<sup>74</sup>

Trade associations such as CONCAWE<sup>75</sup> and the European Chemical Industries Foundation (CEFIC),<sup>76</sup> European counterparts of the American Petroleum Institute (API) and CMA, have developed codes and policies substantially similar to those of API and CMA.<sup>77</sup> These codes promote relatively consistent corporate practices throughout the developed world. Chemical trade associations in Canada (1985), the United States (1988-1992), Britain and Australia (1989), France, Japan, the Netherlands, and New Zealand (1990), as well as CEFIC (1991) have now adopted *Responsible Care* codes.<sup>78</sup>

International organizations such as the ICC and the Organisation for Economic Co-operation and Development (OECD) are also promoting common environmental practices for companies and have facilitated the adoption of many private codes in the developed world.<sup>79</sup> The Food and Agriculture

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73. Examples include Volkswagen, Volvo, Bayer, and Norsk Hydro. See U.N. CENTRE ON TRANSNAT'L CORPS., *supra* note 16, at 55-56 (Norsk Hydro); Michael Roberts, *Outside Pressure Leads to Action in Germany*, CHEMICAL WK., Dec. 11, 1991, at 68 (Bayer); STEPHAN SCHMIDHEINY, THE BUSINESS COUNCIL FOR SUSTAINABLE DEV., CHANGING COURSE 103 (Volvo), 197-201 (Norsk Hydro), 305-08 (Volkswagen) (1992).

74. Examples include Manville Corp., Allied Signal Co., and Digital. See U.N. CENTRE ON TRANSNAT'L CORPS., *supra* note 16, at 54-55. Interview with John Plaut, *supra* note 68; interview with Foster Wright, Associate General Counsel, Digital, in Washington, D.C. (Mar./Apr. 1992).

75. The oil companies' European organization for environmental and health protection, established in 1963.

76. Conseil Européen des Fédérations de l'Industrie Chimique.

77. See *The Responsible Care Programme*, CEFIC NOTES (CEFIC, Brussels), No.1, 1991, at 5-6 (on file with *Environmental Law*).

78. See International Council of Chem. Ass'ns, *Responsible Care: A Chemical Industry Commitment to Improve Performance in Health, Safety and the Environment 2* (May 1992) (listing countries whose chemical trade associations have adopted *Responsible Care* codes); CHEMICAL WK., July 7-14, 1993 (special issue on *Responsible Care*, discussing recent developments in a number of countries); Roberts, *supra* note 73; Emma Chynoweth, *Japan Hones Its Implementation*, CHEMICAL WK., Dec. 11, 1991, at 74; *The Responsible Care Programme*, *supra* note 77, at 6.

79. See, e.g., *Recommendation of the Council Concerning Information*

Organization (FAO) and national associations of pesticide manufacturers have collaborated to produce *The International Code of Conduct on the Distribution and Use of Pesticides*,<sup>80</sup> and are developing a *Safer Pesticides* program for the protection of workers and the environment. These joint efforts are of considerable importance because they address issues that transcend national regulatory authority and international law.

The adoption of such codes by companies in industrial nations also stimulates the development of compatible codes in related business sectors. For example, the *Responsible Care* codes of chemical manufacturers address the manufacturers' relationships with chemical distributors and transporters. As a result, distributor and transporter associations are developing their own codes for environmental protection which are tailored to fit the new manufacturer practices.<sup>81</sup>

Finally, association codes tend to stimulate government response consistent with the codes because they represent consensus on the state of the art for environmental protection within an industrial sector. The response may be the enactment of a law or regulation incorporating the code, or a decision to defer government action because the private voluntary practice is found to be a sufficient substitute for government regulation. European oil and chemical firms and their trade associations, for example, have voluntarily decided to provide workers with safety data sheets similar to those required by regulation in the United States.<sup>82</sup> As a result, the European Community has recognized and ratified this important practice by enacting a directive requiring safety data

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*Exchange Related to Export of Banned or Severely Restricted Chemicals*, 24 OECD—ACTS OF THE ORGANISATION 131 (Apr. 4, 1984) (on file with *Environmental Law*); ICC CHARTER, *supra* note 68.

80. FOOD AND AGRIC. ORG. OF THE UNITED NATIONS, *THE INTERNATIONAL CODE OF CONDUCT ON THE DISTRIBUTION AND USE OF PESTICIDES* (1986).

81. In the United States, the National Association of Chemical Distributors has developed a *Responsible Distribution Process Code*. National Ass'n of Chem. Distribs., *Responsible Distribution Process Code* (1991) (on file with *Environmental Law*). Chemical transporters and distributors have collaborated with CMA to develop a joint policy for transport safety. TRANSCAER, *Transportation Community Awareness and Emergency Response* (1991) (on file with *Environmental Law*).

82. See OSHA Hazard Communication Standard, 29 C.F.R. § 1910.1200 (1992).

sheets.<sup>83</sup> A similar process is now taking place with regard to corporate disclosure of toxic release inventory information on an annual basis.<sup>84</sup>

Thus, private codes are proliferating throughout the developed world, creating a universe of voluntary commitments to better environmental practices by MNCs. Although harmonization of these developments is unsupervised by any international organization, various forces are at work in the private sector to bring about harmonization. One of these forces consists of MNC interests in establishing voluntary standards of corporate behavior that are consistent throughout the developed world. Code consistency minimizes costly differences in areas such as disclosure practices, product design, and process safety requisites, and reduces the ethical dilemmas and legal complexities posed by differential standards.<sup>85</sup> Another force for code harmonization is the growing demand by citizens of each developed nation that an MNC's environmental performance in their nation be equivalent to its highest or most progressive practice elsewhere in the developed world.

### C. *Developing Nations*

Do environmental codes that shape the practices and technologies used by MNCs in their countries of origin and other

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83. Supplemental Commission Directive 91/155 on Safety Data Sheets, art. 3, 1991 O.J. (L 76) 35, 36. See U.N. CENTRE ON TRANSNAT'L CORPS., *supra* note 16, at 27-28 (discussing private practices).

84. Seven firms in the United Kingdom, including subsidiaries of U.S. firms such as Dow and Monsanto, have recently agreed to provide such information voluntarily; whereas in the United States, it is an annual practice required by law. The British Chemical Industries Association has adopted this voluntary practice, and this may, in turn, lead to CEFIC adoption and a European Community directive. *Chemical Industry Signals Willingness to Publish Data on Emissions of Toxics*, [1992] 14 Int'l Env't Rep. (BNA) 199 (Apr. 10, 1992).

85. The International Organization for Standardization (ISO) in Geneva is in the process of developing a consensus document designed to harmonize environmental management practices. See CHEMICAL WK., Nov. 10, 1993 (special issue entitled *ISO 9000 and the Greening of International Standards*, addressing harmonization of international standards); *A Global Green Standard*, *id.* at 39; Rick Mullin et al., *Giving Order to Chaos*, *id.*; Rick Mullin, *Viewpoint*, *id.* at 4; Emma Chynoweth, *The Birth of a Fast-Paced Technical Committee*, *id.* at 40 (reporting on ISO's recently formed Technical Committee 207 (TC 207) in charge of developing a new ISO standard governing environmental management practices).



developed nations have similar influence over MNC activities in developing nations? The short answer is they do not. Most codes do not address this issue. Even when pressed on the matter, most MNCs have refrained from promising that their codes will shape their practices in developing nations.<sup>86</sup>

According to a recent Conference Board study of 200 MNCs based in the United States and Europe, it would be inappropriate for codes to require that uniform practices and technologies be used on a global scale because companies "want to determine their . . . 'core' values while simultaneously showing respect for local customs and practices. Striking a balance between these competing requirements is not always easy."<sup>87</sup>

A recent Tufts University study of ninety-eight MNCs provides another explanation:

If, on the one hand, each company's home country standard applies in every one of its facilities, host countries are confronted with an impossibly complex regulatory scenario. On the other hand, if . . . each facility binds itself to comply with the standards of the host country, and standards vary from host country to host country, the multinational company finds itself enforcing different standards all over the world, depending on host country expectations . . . . The most effective way to operate at present is not clear, and requires a judgment on the part of the multinational.<sup>88</sup>

The Tufts research team found that many corporate officials felt "they should be working toward a situation in which there are comparable procedures and protective technologies in place in all

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86. MNCs usually promise to be good corporate citizens and comply with applicable laws of host nations. As codes increasingly define corporate identity and commitments in terms of international activities, general language is often used to accommodate the anticipated diverse values and requirements of host nations, producing ambiguous and uncertain mandates for managers outside MNC countries of origin. See JOHN M. KLINE, *INTERNATIONAL CODES AND MULTINATIONAL BUSINESS* 89-162 (1985).

87. BERENBEIM, *supra* note 27, at 9.

88. Ann Rappaport & Margaret Flaherty, *Multinational Corporations and the Environment: Context and Challenges*, [1991] 14 Int'l Env't Rep. (BNA) 261, 263 (May 8, 1991) (footnote omitted) (based on authors' study for the Tufts University Center for Environmental Management, *Multinational Corporations and the Environment: A Survey of Global Practices*).

of their operations worldwide,<sup>89</sup> particularly because “[i]f something bad happened,” their firms might be blamed for doing things differently in home and host nations.<sup>90</sup> Despite these concerns, none of the ninety-eight MNCs had developed codes that promised uniform practices and technologies in both developed and developing nations.<sup>91</sup> Some firms, however, reported that they were striving for “functional equivalence.”<sup>92</sup> Using this principle, they used practices and technologies that varied according to local conditions and laws, but tried to achieve equivalent environmental protection in each of their activities.<sup>93</sup>

Thus, it is not surprising to find that CMA’s *Responsible Care*® codes are silent regarding whether member companies must apply them outside the United States, deliberately leaving this issue for resolution by each member. Since member subsidiaries in other developed nations belong to counterpart chemical trade associations and are subject to comparable codes, relatively uniform practices and technologies are promoted throughout the developed world. But subsidiaries operating in developing nations that lack comparable associations and codes have more discretion to use diverse practices and technologies.<sup>94</sup>

Recent developments indicate that MNC codes, adopted in response to intense pressures in developed nations for advanced technologies and improvements in risk management, are beginning to influence MNC policies and practices in developing nations.<sup>95</sup> A growing number of MNCs have pledged to achieve equivalent environmental protection in their home and host countries, applying the “functional equivalence” or “equivalent risk” doctrine noted

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89. *Id.*

90. *Id.*

91. *Id.*

92. *Id.*

93. *Id.* at 263-64. For further discussion of this approach and of the evolution of intergovernmental policy, see Harris Gleckman, *Proposed Requirements for Transnational Corporations to Disclose Information on Product and Process Hazards*, in CORPORATE DISCLOSURE OF ENVIRONMENTAL RISKS: U.S. AND EUROPEAN LAW 181 (Michael S. Baram & Daniel G. Partan eds., 1990).

94. Interview with Michael Walls, *supra* note 68.

95. See generally SCHMIDHEINY, *supra* note 73 (discussing sustainable development as a challenge for business, with 38 case studies outlining innovative corporate solutions).

above.<sup>96</sup> Others have pledged to use consistent "environmental criteria" in managing their activities at home and abroad.<sup>97</sup>

The new ICC Charter, for example, calls on member firms to "apply the same environmental criteria internationally."<sup>98</sup> CMA and CEFIC, the major chemical company associations in the developed world, have drafted generic policies to guide the transfer of risk-reducing technologies by their member firms to developing nations.<sup>99</sup> According to the CEFIC policy, the transfer of technology by member firms should have the objective of aiming for "a level of safety and health protection equivalent to that achieved in the home facilities . . ."<sup>100</sup> Individual firms have made similar pledges to functional equivalence, equivalent risk outcomes, or equivalent decision criteria. One example is ALCOA, whose subsidiaries follow the parental code "to operate worldwide in accordance with global concepts of environmental protection."<sup>101</sup>

Firms making such pledges nevertheless reserve great discretion to decide which production practices and environmentally protective technologies to use in developing nations. Pledges to achieve equivalent risk outcomes or to follow equivalent environmental criteria are worthy, but may be insufficient to ensure that the most effective technologies and practices used by an MNC in its home country will also be transferred to host countries and applied in timely fashion. Cost constraints, productivity goals, and

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96. See *supra* notes 92-93 and accompanying text.

97. "Functional equivalence," "equivalent risk," and "consistent environmental criteria" are different terms referring to the same doctrine. For a discussion of this doctrine, see Gleckman, *supra* note 93.

98. ICC CHARTER, *supra* note 68. See also KLINE, *supra* note 86, at 90 (discussing prior ICC codes for advertising, marketing, and investment).

99. Chemical Mfrs. Ass'n, Basic Guides as to Health, Safety and Environmental Aspects of the Transfer and Receipt of Technology (1991) (on file with *Environmental Law*); CEFIC Principles, *supra* note 18, at 3-10.

100. CEFIC Principles, *supra* note 18, at 3. "In a transfer of technology, questions of safety, health and protection of the environment are an important issue." *Id.* at 1. "The present Guidelines aim at ensuring that the degree of safety of new installations employing the transferred technology are of an internationally accepted level and equivalent to that achieved in the country of origin." *Id.*

101. Marcelo D. Baretto-Vianna, Environmental Management Tools - Experience of the Aluminum Industry in Brazil 3 (Apr. 1991) (paper presented at World Industry Conference on Environmental Management, Rotterdam, on file with *Environmental Law*).

competitive pressures, which commonly obstruct company advances in environmental protection, are likely to arise and undermine such principles in many instances.

Codes pledging uniform practices and environmental technologies could mitigate this problem, but would create new conflicts and problems. MNCs would be likely to object to this solution, claiming that it unduly limits management discretion and that it would promote "unnecessarily expensive" methods of environmental protection. Host countries that have independently determined their requirements for environmental protection would also object to this solution. Therefore, other strategies are needed to ensure that the new crop of "progressive" MNC codes pledging equivalent risk or equivalent criteria can be relied on to transfer home country technologies and practices to host countries.

Three strategic options currently used deserve careful evaluation. One involves close collaboration between a public international organization and MNCs in each of several industrial sectors to produce consensus codes setting forth uniform practices and technology transfer obligations for all MNCs involved, irrespective of their home and host countries. The *International Code of Conduct on the Distribution and Use of Pesticides*, jointly formulated by FAO and agrochemical MNCs, currently provides the best example.<sup>102</sup>

A second strategic option involves establishing private trade associations in host countries whose membership would include MNC subsidiaries, and their adoption of codes comparable to those developed by counterpart associations in developed nations.

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102. FOOD AND AGRIC. ORG. OF THE UNITED NATIONS, *supra* note 80. Other examples include codes on marketing and advertising practices developed by the World Health Organization in collaboration with pharmaceutical and food industry MNCs. See KLINE, *supra* note 86, at 90-95. Note that this report does not cover OECD and International Labour Organisation (ILO) activities and various free trade agreements, which have involved government officials, labor unions, and others in the development of "intergovernmental codes" to be applied to industry. For a discussion of intergovernmental codes, see *id.* at 53-88; George B. McCullough, *International Codes of Conduct and Corporate Behavior*, in EMPLOYEE RELATIONS AND REGULATIONS IN THE '80's 125 (Herbert R. Northrop & Richard Rowan eds., 1982). The OECD Guidelines for Multinational Enterprises serve as an example of intergovernmental codes. ORGANISATION FOR ECONOMIC CO-OPERATION AND DEV., THE OECD GUIDELINES FOR MULTINATIONAL ENTERPRISES (1986).

This would help to ensure equivalent practices and technologies in home and host countries. The recent adoption of *Responsible Care* codes by chemical industry associations in Brazil and Mexico serves as a good example.<sup>103</sup>

The third strategic option arises from the moral pressure felt by MNCs to reduce differences in safety practices and technologies between their code-driven operations at home and their discretionary operations in host nations.<sup>104</sup> According to several MNC officials, this moral pressure is particularly strong with regard to the disclosure of risk information about their operations and technologies to workers and public officials in developing nations. At present, regulatory requirements and voluntary corporate initiatives for making detailed disclosures are strong in the United States and Europe, but weak elsewhere.<sup>105</sup> This dichotomy regarding corporate obligations to disclose and warn of risks poses a continuing ethical problem for MNC managers unless they adopt uniform disclosure practices in all nations, an initiative which would also promote use of equivalent technologies.

#### IV. SUPPORTIVE STRATEGIES

Despite shortcomings, private codes have the potential to serve as valuable adjuncts to intergovernmental programs and other public sector initiatives for the transfer of advanced environmental technologies and management practices to developing nations. Trade associations in particular are capable of weaving a global system of private codes that could be superior in many respects to public sector efforts, which have proven to be cumbersome and inefficient. Precedents exist. Consider, for example, that "[i]nternational sports competition is governed by the

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103. See International Council of Chem. Ass'ns, *supra* note 78, at 2; Leslie Layton, *Mexico's Responsabilidad Integral: A High-Stake Move*, *CHEMICAL WK.*, Dec. 11, 1991, at 60; Andrew Wood, *Responsabilidad Integral: Ready for Implementation*, *CHEMICAL WK.*, July 7-14, 1993, at 120 (describing the status of the Responsabilidad Integral program).

104. Interview with Michael Walls, *supra* note 68; Ronald Begley, *Product Stewardship: Exploring the "How-To,"* *CHEMICAL WK.*, Dec. 11, 1991, at 13 (quoting Glenn Weckerlin, chairman of the CMA Product Stewardship code effort).

105. See U.N. CENTRE ON TRANSNAT'L CORPS., *supra* note 16, at 54-55 (discussing the Manville Corporation's adoption of a uniform disclosure policy).

International Olympic Committee (IOC), international sports federations, national sports bodies, . . . regional organizations, and national and local governments.<sup>106</sup>

Whether MNC codes of environmental conduct provide viable policy options for sustainable development is a question that cannot be answered fully until more experience is gained. However, since enough information is available to identify some of the foreseeable strengths and weaknesses of private codes as an option for sustainable development, it is possible to outline several strategies that would enhance the potential of MNC codes in a world increasingly committed to private development initiatives and free trade.<sup>107</sup>

From a public policy perspective, these strategies should serve at least three major purposes:

- (a) They should ensure that the codes are effective and reliable as internal management tools for improving MNC performance in developing nations;
- (b) they should ensure that the codes are externally credible and acceptable to regulators and the public; and
- (c) they should ensure that economic, political, or legal considerations do not obstruct implementation of the codes.

To serve each of these purposes, the strategies will have to address several issues:

- (a) Code effectiveness and reliability as management tools:
  - Do the codes apply to the major types of MNC activities and relationships in developing nations?
  - Are the codes sufficiently prescriptive to bring about promised actions?
  - Are the codes sufficiently detailed in describing and allocating functions for MNC personnel?

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106. JAMES A.R. NAFZIGER, *INTERNATIONAL SPORTS LAW* 25 (1988).

107. For an example of other strategies aimed at MNCs, see UNCTC RECOMMENDATIONS, *supra* note 6; for proposed criteria, see *New Criteria for Corporate Environmental Management*, TRANSNATIONALS (U.N. Centre on Transnat'l Corps., New York, N.Y.), Oct. 1990, at 1-2, 7.

- Are the codes enforceable by means of internal measures, such as company or trade association sanctions, or external measures, such as regulations and other enforceable legal doctrines?
- Are the codes reinforced by other internal initiatives, including training, incentives, information systems, financial commitments, and harmonization with other corporate policies?

(b) External credibility and acceptability to regulators and the public:

- Do the codes perform at a level that is superior to what could be accomplished by government regulation?
- Is such code performance as reliable and cost-effective as regulatory alternatives?
- Are the codes sufficiently responsive to changing public values and new environmental concerns?
- Are the codes capable of withstanding foreseeable changes in the economic conditions of the MNC?
- Do the codes provide for public input or participation in their design, and public oversight in their implementation?
- Do the codes facilitate government programs for sustainable development?
- Do the codes achieve progressive results, exceeding the lowest common denominator of MNC practice?
- Do the codes overcome public policies that could obstruct their implementation, such as trade secret doctrines?
- Do the codes promote public official expertise in host countries—for instance, by means of information disclosures and improved working relationships?

(c) Economic, political, and legal obstacles:

- Do national regulatory requirements need to be modified to provide appropriate incentives for MNC code

performance, as in the case of the United States discussed above?<sup>108</sup>

- Do other national laws need to be harmonized to prevent MNCs in home or host nations with weak laws regarding code performance from gaining competitive advantage over MNCs in other nations with strong laws?
- Can efficiencies in code performance by MNCs be achieved by means of intergovernmental or trade association initiatives for pooling information and expertise, or by other useful collaborations?

Given these goals and issues, several strategies promise to enhance reliance on MNC codes as a policy option.

*A. The Soft Path of Education and Awareness Campaigns*

This approach would involve an education and awareness program conducted by a public international organization. The program should encourage

- *major industrial sectors*, consisting of trade associations and individual MNCs, to adopt and implement appropriate codes;
- *MNC countries of origin* (developed nations) to promote MNC codes by offering various incentives including regulatory policies;
- *development banks and investors* to require codes as a condition of eligibility for obtaining financing for MNC activities in developing nations;
- *host countries* to require that MNCs have suitable codes; and
- *insurers* to base decisions about insurance coverage and pricing for MNC activities in developing nations on code adoption and practice.

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108. See *supra* note 56 and accompanying text.



The program could furnish appropriate model codes along with guidances for implementation, and provide international awards or other forms of recognition to responsive organizations.

*B. The Integrated Private Sector Approach*

This approach relies totally on industry and would involve a collaborative effort by major MNCs and trade associations in developed nations to integrate their codes into a private, international system of self-regulation. It would require private organizations at national and international levels, funded and staffed by private firms.<sup>109</sup> For example, an "international code office," as well as a "national code office" in each MNC home country, could be established. Elements of this private system would include:

- *registration of codes* by MNCs with their national code office and the international code office;
- *periodic reports on code implementation* by MNCs, to be filed with their national code office, in accordance with a standard format that requires MNCs to discuss progress and obstacles;
- *periodic evaluations of code implementation* by national code offices, following a standard format for summarizing progress and problems;
- *access to registered codes, implementation reports, and summary evaluations* afforded to actual and potential host countries, companies, interest groups, regulators, and the general public on a "right-to-know" basis to enhance the credibility of this private system; and
- *harmonization of codes* to be studied and promoted by the international code office to improve performance across industrial sectors and prevent competitive disadvantage for more progressive MNCs.

This system resembles the more limited ICC Charter and International Organization for Standardization (ISO)<sup>110</sup> models,

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109. The structure of such organizations could be similar to the organizational structure of the ISO. See *supra* note 85.

110. See *supra* note 85.

but is more ambitious in several respects. Code enforcement and accountability would be left to each MNC in this model, but national code offices would have the opportunity to identify deficiencies and promote remedial actions (for instance, by threatening to publicly deregister an MNC for failure to implement its code). The "right-to-know" feature of this model also ensures governmental and public oversight, a condition which has been shown to have a significant forcing effect on companies in the United States and Europe.<sup>111</sup>

*C. The Intergovernmental, Semiregulatory System Approach*

This strategy would involve a collaborative effort between MNCs, trade associations, and international agencies to integrate and harmonize codes into an international quasi-regulatory system. It would have essentially the same features as the private sector approach discussed above, including registration, progress reports, evaluations, public access, and harmonization, but would differ in that one or more intergovernmental organizations or international agencies such as OECD or the United Nations Environment Programme (UNEP) would administer and enforce the system. Thus, MNC codes and progress reports would be filed with such international organizations for public access, and these organizations would evaluate progress, promote harmonization, and apply sanctions to punish MNCs that fail to make adequate progress. Sanctions could include deregistration and other means of publicizing nonperformance. Based on the FAO/agrochemical firms model discussed earlier,<sup>112</sup> this strategy would encompass major sectors of international business and devise a single, comprehensive code for each sector.

Combinations of these strategies could be used, as well as variations focused on:

- specific clusters of MNCs, such as petrochemical firms;
- specific environmental problems (e.g., ozone depletion or deforestation);

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111. See *supra* notes 36-85 and accompanying text.

112. See *supra* note 102 and accompanying text.

- necessary technological advances, such as preventing facility accidents or finding substitutes for chlorofluorocarbons (CFCs); or
- threatened regions or ecosystems, such as Eastern Europe and South American or South East Asian rainforests.

#### V. CONCLUSION

The policy option of reliance on MNC codes to achieve sustainable development requires supportive strategies. This Article has briefly outlined several such strategies. Each strategy is capable of amplifying self-regulation by MNCs to produce global environmental benefits, consistent with the realities of free trade and the growing role of MNCs as agents of development.