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Can International Law Prevent Another Bhopal Tragedy

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I. INTRODUCTION

"Bhopal reminds us that our lifestyles will determine other peoples chances."[1] What we find unwelcome about Bhopal is that it challenges our way of life. While the catastrophe in Bhopal was certainly not the first technologically related disaster,[2] it can be counted as being among the worst industrial accidents in history. Accordingly, it has generated a great deal of attention in the international legal community.[3]

The attention generated in the Bhopal tragedy has, for the most part, elicited three categories of responses from various international entities. They are:

1. To take a Guiness Book of World Records approach, by citing mainly to the number of dead and injured.[4] It is important to realize that in early December 1984 deadly gas escaped from Union Carbide's pesticide plant in Bhopal resulting officially in over 2,000 deaths and 200,000 injured.[5] For the sheer magnitude, it is equally important to note that those figures are debated, that the death toll could be much higher,[6] and that the long-term effects are uncertain;

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1. L.K. CALDWELL, INTERNATIONAL ENVIRONMENTAL POLICY: EMERGENCE AND DIMENSIONS (1984).

2. Other names such as Seveso, Mexico City, Flixborough, and now Chernobyl also connote non-natural disaster. *See* Hawke, *The Law and Control of Major Industrial Hazards*, 1986 J. PLANNING AND ENV'TL. L. 324. *See also* Schmemann, *Soviet said to Try Encasing Reactor in Concrete Coat*, N.Y.Times, May 10, 1986, at A1, col. 6.

3. *Accident is Among Worst*, N.Y. Times, Dec. 4, 1984, at A8, col. 1.

4. This approach is criticized as being impersonal and thus resulting in the ability to rationalize the disaster away. *See* Visvanathan, *Bhopal: The Imagination of a Disaster*, 11 ALTERNATIVES 147, 149 (1986).

5. Diamond, *The Bhopal Disaster: How It Happened*, N.Y. Times, Jan. 28, 1985, at A1, col. 1.

6. Some reports state the death count could be between 5,000-10,000 dead. *See* Varma, *Bhopal: The Unfolding of a Tragedy*, 11 ALTERNATIVES 133, 134 (1986).

2. To state how dangerous non-conventional pollutants can be, and to juxtapose those risks against jobs and economic well-being.[7] The negative health effects of Bhopal,[8] and pollutants in general are well documented.[9] The relationship to cancer,[10] and the need for improved regulation is always mentioned.[11] The "hard reality" of mainstream economic "science" points to the well accepted "fact" that there is a contradiction between economic well-being and environmental protection.[12] This results in the attitude that pollution and non-natural disasters are bound to happen,[13] and that the best we can hope for is to fine tune an acceptable risk formula;[14]

3. To focus on the compensation suits as a means to "right the wrong." This is especially true for the legal community, whose responses are traditionally tied to reaction as opposed to action.[15] The sheer size of the suit, the amount of compensation sought and statements of the adversaries has resulted in a good deal of media attention.[16] Exactly what will happen to the victims compensation suits given the U.S. District Court's decision and subsequent appeal, is a matter of conjecture. (*In re Union Carbide Corp. Gas Plant Disaster at Bhopal, India in Dec. 1984*, 634 F.

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7. *Id.* at 133.

8. A good example of this are the two stories that appear on the front page of the N.Y. Times on its second day of its Bhopal tragedy coverage. *See* Diamond, *Jobs and Risks are Linked at Sister Plant in the U.S.*, N.Y. Times, Dec. 5, 1984, at A1, col. 4. *See also Gas Deaths in India Exceed 1,000, with Thousands Hurt; Gandhi Seeks Compensation*, N.Y. Times, Dec. 5, 1984, at A1, col. 6.

9. The survivors are currently showing signs of cyanide-poisoning, and medical experts indicate the exposure to methyl isocyanate could lead to temporary blindness, paralysis, and damage to the respiratory system as well as damage to the Kidney and Liver. The effects of the leak were so severe because contact with methyl isocyanate in liquid form causes tissue to die. The leak's ability to effect human health in the future is uncertain, little information is available on how long the poison will remain in the environment lingering in pockets in concentrations high enough to cause damage. *See* Sullivan, *Chemical, Widely Used, Is Very Toxic*, N.Y. Times, Dec. 4, 1984, at A8, col. 1.

10. For an outline of the seriousness of health impacts caused by toxics, *see*, Sugerman, *Controlling Toxics on the Great Lakes: United States-Canada Toxic Problems and Control Program*, 12 SYR. J. INT'L L. & COM. 299 (1985). It is also known that it is not only toxics which endanger human health, but simply the exceeding of the earth's natural ability to to absorb pollution. *See* NASCIMENTO, *Pending Problems on International Law of the Environment*, in THE FUTURE OF THE INTERNATIONAL LAW OF THE ENVIRONMENT 217 (R. Dupuy, ed. 1984).

11. Van den Heuvel, *Health Risk Assessment of Chemicals*, 6 TOXIC SUB. J. 119 (1984).

12. Kamlet, *Industrial Pollution Control in the Aftermath of Bhopal*, 6 TOXIC SUB. J. 13 (1984).

13. *See generally* E. MILLS, THE ECONOMICS OF ENVIRONMENTAL QUALITY (1978).

14. Weinstein, *Preliminary Reflections on the Law's Reaction to Disasters*, 11 COLUM. J. ENV'TL. L. 1 (1986).

15. Dominguez, *Approaches to Risk Assessment/Management*, 6 TOXIC SUB. J. 97 (1984).

16. Thus far almost everything appearing in law journals on Bhopal focuses on the compensation suit, and its assorted issues (e.g. standing, *forum nonconviens*). For good example of this, *see* Symposium, *The Bhopal Tragedy: Social and Legal Issues*, 20 TEX. INT'L L. J. 267 (1985).

Supp. 842 (S.D.N.Y. 1986).)

The intent of this article is to provide a "fourth alternative," or a non-traditional response to the Bhopal tragedy. This will be accomplished by examining how international law could be used to prevent other Bhopals. Therefore, the focus of this article will be directed at the relationship between environmental problems and other aspects of society, and how it is crucial that any legal change be reflected in a societal change for the law to be effective in this area.

II. THE NEED FOR INTEGRATION OF INTERNATIONAL LEGAL STRUCTURES

Although the Bhopal tragedy occurred entirely within the boundaries of India, and did not have any important transboundary consequences, three relevant bodies of international law may be applied to a situation involving such a catastrophe: international environmental law, international trade law (technological transfer), and the law of the New International Economic Order (NIEO). This section of the article will attempt to illustrate three points which relate to the applicability of international law to this situation: how these bodies of international law relate to the tragedy; the inadequacies of these bodies of law; and a discussion of the need for an alternative.

While the specific focus of international environmental law is on transboundary pollution,[17] there is, however, a general trend in the international legal community towards the development of policy for the protection of the biosphere.[18] This development indicates a growing understanding in the world community of the earth as a self-sustaining, interdependent, biological system, which does not recognize political boundaries.[19] This trend also indicates an emerging appreciation for the dangers presented by industrial "advancement."[20]

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17. *See, U.S. Executive Sees a High Indian Aide*, N.Y. Times, Dec. 9, 1984, at A22, col. 1. Union Carbide and the Indian government are treating the tragedy like a tort claim. Union Carbide's president Warren Anderson has said: "Union Carbide has a moral responsibility in this whole issue, and we are not ducking it. . . .I am confident that the victims can be fairly and equitably compensated without a material adverse affect on the financial condition [of the company]. . . .You can't put a secondhand facility some place outside the U.S. and expect it to operate."

Melvin Belli, an attorney for many of the victims, counters Anderson's statements. "This can happen in the U.S., but why doesn't it? Every manufacturer knows there are inspectors in each of the fifty states, and they can't get by with [poor safety procedures]. They get by with it abroad and it is criminal. It is shocking." Rocky Mountain News, Dec. 11, 1984, at 36, col. 1.

18. *See generally* ENVIRONMENTAL LAW AN IN-DEPTH REVIEW, UNEP Report No. 2 (1981).

19. *See supra* note 1.

20. *Id. See also*, Lehman, *Can Pollution Be Destroyed?*, 12 EPA J. 12 (1986). Lehman states: "Experience has taught us that there is no such place as 'away,' especially for hazardous wastes." This idea is supported by the idea that toxics threaten people who are close to the site, and those who are far from it. *See* Anderson, *Hazardous Wastes: Superfund Solution*, 1 WM. MITCHELL ENV'TL L.J. 162, 163 (1983).

Another important development in international law that makes international environmental law applicable to the Bhopal tragedy is movement of international law toward addressing issues which have timeless dimensions.[21] The inference drawn from the United Nations Declaration on the Human Environment is environmental protection for present and future generations.[22] Some scholars have suggested that the present generation has a fiduciary obligation to future generations.[23]

Bhopal is a reminder that the effect of industrial tragedies and environmental degradation are not exclusively problems of More Developed Countries (MDC),[24] they also effect Less Developed Countries (LDC). It stands as testimony to the fact that every society on earth is vulnerable to the effects of environmental degradation.[25]

III. INADEQUACIES OF INTERNATIONAL LAW

The continued growth and influence of multinational corporations is an important aspect of the Bhopal tragedy. Union Carbide is only one of the many major multinationals based in the United States.[26] The theories which support (*e.g.* comparative advantage),[27] and criticize (*e.g.* imperial-

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21. The problems presented by human "advancement" namely, toxic chemicals and radioactive substances have been identified by nine common characteristics: 1) Ignorance to mechanism, *i.e.* the present state of knowledge is limited and limiting; 2) Potential for catastrophic costs; 3) Relatively modest benefit associated with the environmental risk gamble; 4) Low subjective probability of catastrophic outcome; 5) Internal transfer of benefits *i.e.*,use of dangerous product allows for lower market price; 6) External transfer of costs to those not in market transaction; 7) Collective risk (many people may be affected simultaneously; 8) Latency, the health effects of cancer are not immediately detectable as an effect; 9) Irreversibility - *e.g.* plutonium's half life is 24,000 years. *See* Page, *A Generic View of Toxic Chemical and Similar Risks*, 7 ECOLOGY L.Q. 207 (1978). Another problem is that the problem has advanced more quickly than a legal response. "Pesticides, toxic chemicals, and hazardous wastes are diffused into the environment in ways that make it impossible to trace casual relationships between exposure and harm. As such, science can only demonstrate that various risk levels of future harm are thereby created." *See* Tarlock & Tarak, *An Overview of Comparative Environmental Law*, 13 DEN. J. INT'L L. & POL'Y 85 (1983).

22. Weiss, *International Law, Common Patrimony and Intergenerational Equity: Research in Progress*, in THE FUTURE OF THE INTERNATIONAL LAW OF THE ENVIRONMENT 445 (R. Dupuy ed. 1984).

23. Thatcher, *Serving Future Generations*, in THE FUTURE OF THE INTERNATIONAL LAW OF THE ENVIRONMENT 451, 453 (Dupuy ed. 1984).

24. Weiss, *The Planetary Trust: Conservation and Intergenerational Equality*, 11 ECOLOGY L.Q. 495 (1984).

25. For example, even though the U.S. is considered to have relatively strict environment regulations the Bhopal accident has brought out reports that show the extent of the nonconventional pollutant problem. 1) Union Carbide knew of the possibility of a runaway reaction at its West Virginia plant as well as its sister plant in Bhopal. 2) Files show that 12 pounds of poisonous gas are released into the air from the West Virginia plant each hour in the manufacture of the deadly chemical. 3) There have been 61 leaks or in plant losses of deadly chemicals from January 1, 1980 - December 14, 1984, at the West Virginia plant. *See* Varma, *supra* note 6, at 142, citing an Environmental Protection Agency Report.

26. *See generally* W. OPHULUS, ECOLOGY AND THE POLITICS OF SCARCITY (1977).

27. Three fourths of multinationals with sales over 10 billion a year are based in the

ism)[28] multinationals are well know and greatly debated.

Some scholars believe that the only connection to international law arises from the multinational character of Union Carbide.[29] Others insist on the existence of a greater connection between international law, multinationals, environmental quality, and the NIEO.[30]

A. Criticism of the Existing System and a Need for a New Alternative.

The NIEO is a group of values, ideas and laws developed as a reaction to the lack of economic and political equality in the world community.[31] The NIEO action plan calls for the redistribution of wealth, political power, technology and the industrial infrastructure from the More Developed Countries (MDC) to LDC in order that the world community truly exist as equals.[32] While Union Carbide's presence in India cannot be attributed to the NIEO, the acceptance of the type of development that industrialization brings to LDC is congruent with the NIEO policy.

None of the three legal regimes was, or is, currently equipped with the mechanisms necessary to prevent other tragedies such as the one that occurred in Bhopal. Scholars believe that the inadequacies exist for two reasons: international institutions are fundamentally tied to an industrial development world view; and States are not connected in any way to the natural ecological balance.[33]

The mainstream approach to international environmental law, is to treat it like any other body of public international law, by positing that the law gives no right to intervene in the domestic affairs of States when there are no transboundary effects.[34] The focus of international environmental law is on transboundary effects, supported by the two major occurrences in international environmental law, the *Trail Smelter* case,[35]

United States. *See* A.F. LOWENFELD, INTERNATIONAL ECONOMIC LAW (2d ed.) VOL II INTERNATIONAL PRIVATE INVESTMENT (1982).

28. A.F. LOWENFELD, INTERNATIONAL ECONOMIC LAW (2d. ed.)VOL I INTERNATIONAL PRIVATE TRADE (1981).

29. H. MAGDOFF, THE AGE OF IMPERIALISM (1969).

30. Wali, *The Interface of Ecology and Law: Science, the Legal Obligation, and Public Policy*, 12 SYR. J. INT'L L. & COM. 221 (1985).

31. "Bhopal and Seveso further demonstrate that the technologies which produce industrial poisons know no frontier and require international law." *See* Layton, *One Europe: One World*, 20 J.W.T.L. 1 (Special Supp. No. 4 1986).

32. Boczek, *Ideology and the Law of the Sea: The Challenge of the New International Economic Order*, 7 B.C. INT'L & COMP. L. REV. 1 (1984).

33. *See* Declaration on the Establishment of a New International Economic Order, May 1, 1974, G.A. Res. 3201, 29 U.N. GAOR Supp. (No. 1), U.N. Doc A/9556 (1974), reprinted in 13 I.L.M. 715, 720 (1974). *See also* Charter of Economic Rights and Duties of States, Dec. 12, 1974, G.A. Res. 3281, 30 U.N. GAOR Supp. (No. 31) at 50, U.N. Doc. A/9631 (1975), *reprinted in* 14 I.L.M. 251 (1975).

34. *Ecological Balance*, in 1 TOWARD A JUST WORLD ORDER 435 (R. Falk, S. Kim, & S. Mendlovitz eds. 1982).

35. Von Muench, *International Environmental Law: Some Remarks*, 23 INDIAN J. INT'L L. 210 (1983).

and the 1972 Declaration on the Human Environment.[36]

Developments since 1972 have begun to broaden international environmental law from simply a prohibition of transboundary effects to recognition of a duty of individuals and states to preserve and protect the environment for future generations.[37] This concept goes beyond the traditional public international law idea of international personality, by making a State responsible to its citizens and future global citizens as opposed to States being responsible to other States.[38]

Very little work has been done in the area of international environmental law outside the rubric of transboundary pollution, and what work that has been done beyond that rubric has mostly been on the State to State level.[39] The NIEO movement was able to legislate the idea that MDC's would have to financially assist LDC's in their implementation of stricter environmental controls into the 1972 Declaration and Environmental Action Plan.[40] While there has been some limited assistance,[41] the more fundamental problem of the interaction of industrialization and environmental law in developing countries (*e.g.* restrictions on multination-

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36. The 1949 Trail Smelter case is considered one of the founding precedents upon which international environmental law was built. The case held, "[n]o state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or properties or person therein. Trail Smelter Case (U.S. v. Can.), U.N. Rep., 3 Int'l Arb. Awards 1905 (1949).

37. Principle 21 was one of the most important statements in the Declaration: "States have in accordance with the charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction." June 16, 1972, 48/14 U.N. Doc. A/Conf. 21 (1972).

38. From the changes made in the general language of the evolving international principles, from the Stockholm conference and the progression toward the Nairobi session, a new attention to the special quantities of nonconventional pollution is inferable. A good example of the new futuristic tendency is found in the Law of the Sea treaty, which will obligate every state to protect and to preserve the marine environment. Law of the Sea Treaty, *opened for signature* Oct. 7, 1982 U.N. Doc. A/Conf/62/122 *reprinted in* 21 I.L.M. 1261 (1982). Another example of the international legal communities heightened awareness of environmental concerns was the creation of the United Nations Environmental programme (UNEP). Probably one of the most significant statements to come out of UNEP occurred during a conference held in Nairobi ten years after the Stockholm conference. The Nairobi Declaration Principle 10 states: "The world community of states solemnly reaffirms its commitment to the Stockholm Declaration and Action Plan . . . [and] urges all governments and peoples of the world to discharge their historical responsibility, collectively and individually, to ensure that our small planet is passed over to future generations in a condition which guarantees a life in human dignity for all." *See* Struthers, *U.N. Environmental Programme After a Decade*, 12 DEN. J. INT'L L. & POL'Y 269 (1983).

39. *See generally* Barberis, *La Personalidad Juridica Internacional*, in VÖLKERRECHT ALS RECHTS ORDNUNG INTERNATIONALE GERICHTSBARKEIT MENSCHENRECHTE- FESTSCHRIFT FÜR HERMAN MOSLER 25 (1983).

40. *See generally* Caldwell, *supra* note 1.

41. Ramakrishna, *Interest Articulation By The Developing Countries in The International Environmental Movement, 1984*, 2 INT'L REV. CONTEMP. L. 45 (1984).

als) has not been addressed by international environmental law.[42] This may be one of the reasons that even though international environmental law has grown immensely in the past two decades, the quality of the global environment continues to deteriorate.[43]

LDC's have attempted to regulate multinationals' activities mainly through taxation and agreements.[44] When those routes have failed, some LDC's have resorted to exportation.[45] GATT and the United Nations Conference on Trade and Development (UNCTAD) have completed studies on international pollution control and international trade, focusing on whether the stricter environmental standards of MDC's would impede imports from LDC's.[46] GATT has done nothing to prevent the further deterioration of LDC's environment; the closest GATT has come to approaching the subject is its provision against dumping, however, that provision is not sufficiently broad to encompass "eco-dumping."[47]

Multinationals and the current law of international trade brought more industrialization and increased environmental degradation to LDC's. The law only protects the MDC's from environmental degradation and risk.[48]

The NIEO is a reaction to the dominance of MDC's both politically and economically, and has been designed to redistribute power and wealth from rich countries to poor countries.[49] The NIEO focuses on countries rather than on individuals.[50] Human rights thinking and the need to include a Basic Needs approach are not important factors in the formulation of the NIEO.[51] Alston wrote:

> [I]t is not difficult to conceive of the future existence of a NIEO characterized by automatic and greatly enhanced North-South resource transfers, higher and more stable prices for primary commodities, democratically run international financial institutions, more equitable arrangements of transfer of technology, the location of a higher proportion of the world's industrial capacity in the South, and the

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42. *Id.* at 52.

43. Caldwell, *supra* note 1.

44. *Id.*

45. *See generally* LOWENFELD, *supra* note 28.

46. *Id.*

47. An example of the issues dealt with would be if the use a pesticide is prohibited in the U.S., and the prohibited pesticide is used in Mexico, would that usage prevent Mexico from importing its produce to the U.S. *See*, Ramakrishna, *supra* note 41, at 50. *See also* Schwartz, *Are the OECD and UNCTAD Codes Legally Binding?* 11 INT'L L. 529 (1977).

48. "Eco-dumping" is when a product is produced in a State that has lax environmental standards and is exported to compete with products produced under more stringent environmental standards. According to one scholar this inadequacy is not due to the inability of GATT mechanisms to deal with the problems, but because of some purposeful oversight. *See* Rehbinder, *Environmental Protection and the Law of International Trade*, in THE FUTURE OF THE INTERNATIONAL LAW OF THE ENVIRONMENT 357 (R. Dupuy ed. 1984).

49. *Id.*

50. Boczek, *supra* note 32.

51. *Id.*

> achievement of a more effective control by host countries over the activities of transnational corporations but which is nevertheless not accompanied by significant improvement in the human rights situation.[52]

The failure of the NIEO to integrate a Basic Needs approach, has resulted in an LDC "developing" in the same fashion as an MDC. This failure would invite and nurture pollution prone industries.[53]

There is now a greater understanding of the need to integrate the Basic Needs and NIEO approaches.[54] The major obstacle toward the development of a NIEO that would contribute to ensuring that all citizens exist in a clean and healthy environment, is the continued inability of the MDC positive alternatives.[55] While the possibility for progress exists, the results thus far have been unfortunate: the income gap between South and North continues to widen,[56] and the environment degradation of LDC's continues to grow.[57] The ability of society to create a tragedy as demonstrated in Bhopal: human beings can enter into social relations with one another which, no doubt, they themselves created, but work behind their backs or above their heads and lead to consequences which become independent of human motives and goals.[58] Hopefully, such a statement will assist policy makers to understand that environmental problems cannot be isolated from the broader questions underlying the administration of society.[59]

The usual response to environmental degradation and industrial accidents has been to rationalize and compartmentalize them.[60] The required response should be holistic, emphasizing organic and functional relations[61] in attempting to create legislation directed at avoiding other Bhopals. It must be understood that a certain world view has been institutionalized,[62] and any regulations or laws growing from those institutions will ceremoniously, not consciously, be attached to that world view.[63]

Scholars suggest that social dilemmas, such as environmental degradation, cannot be effectively prevented unless there is a change within the

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52. *Id.*

53. *Id.* at 232, citing Alston, *Development and the Rule of Law: Prevention versus Cure as a Human Rights Strategy*, in DEVELOPMENT, HUMAN RIGHTS AND THE RULE OF LAW 31, 90 (1981).

54. Visvanathan, *supra* note 4, at 154.

55. Baxi, *supra* note 57.

56. Rostow, *Terms of a North-South Economic Partnership*, 14 J. INT'L STUD. 22 (1985).

57. Boczek, *supra* note 32.

58. Caldwell, *supra* note 1.

59. Sarkar, *The Green Movement in West Germany*, 11 ALTERNATIVES 219 (1986).

60. Bouchardeau, *On the Combating of Industrial Pollution*, 1984, 1 INT'L REV. CONTEMP. L. 23, 30 (1984).

61. Visvanathan, *supra* note 4.

62. Ragsdale, *Ecology, Growth and Law*, 16 CALIF. W.L. REV. 214, 218 (1980).

63. *See generally id.*

dominant social paradigm.[64] International law is beginning to adhere to the interconnected view, indicated by acceptance of the right to development,[65] and various UN activities.[66]

IV. PROPOSALS FOR CHANGE

There have been numerous proposals for change demonstrated by the three legal regimes discussed. Of those proposals that have been written with environmental disasters in mind, a limited number of them will be outlined.

Most suggestions have dealt with improving the effectiveness and efficiency of compensation for victims of pollution. The ideas include: enterprise liability,[67] the polluter pays principle,[68] State responsibility,[69] emphasizing the common law,[70] legislative balancing,[71] and insurance.[72]

The problem with focusing on compensation as opposed to prevention is explained by one scholar: "In theory a potential tortfeasor could calculate the cost of liability, discounted by the probability of its imposition, and thereby determine whether the benefit derived from risky activity was worth seeking." The problem is with toxics whereby "the goal of compensation and 'optimal' deterrence may be meaningless" due to the special properties of nonconventional pollutants.[73]

Suggestions which would be congruent with this idea include: equitable use,[74] public trust,[75] planetary trust,[76] clean environment as a human

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64. Reynolds, *Foundations of an Institutional Theory of Regulation*, 15 J. ECONOMIC ISSUES 641 (1981).

65. Pirages, *The Origins of Eco-Politics*, in TOWARD A JUST WORLD ORDER VOL. I (R. Falk, S. Kim, S. Mendlovitz eds. 1982).

66. Nanda, *Development as an Emerging Human Right Under International Law*, 13 DEN. J. INT'L L. & POL'Y 161 (1984).

67. An example is the statement of the UN Symposium on Interrelations Among Resources, Environment, Population and Development: Stockholm, 6-10 August 1979, *reprinted in* 5 ALTERNATIVES 418 (1980).

68. Klemme, *Enterprise Liability Theory of Torts*, 47 U. COLO. L. REV. 153 (1976).

69. HANSMEYER, *Cost Apportionment Principles in Environmental Protection*, in TRENDS IN ENVIRONMENTAL POLICY AND LAW 51 (M. Bothe ed. 1980).

70. Goldie, *Transfrontier Pollution -From Concepts of Liability to Administrative Conciliation*, 12 SYR. J. INT'L L. & COM. 185 (1985).

71. Tracey, *Hazardous Wastes and Strict Liability: A Case for Holding Producers of Hazardous Wastes Responsible for their Actions*, 59 N.D.L. REV. 605 (1983).

72. Sagoff, *Economic Theory and Environmental Law*, 79 MICH. L. REV. 1393 (1981).

73. Bo Bramsen, *Transnational Pollution and International Law*, 42-43 NORDISK TIDSSKRIFT FOR INTERNATIONAL RET 153 (1972-73). For a suggestion where insurance would cover damage to nature as well as humans, *see* Bilder, *Settlement of Disputes in the Field of the International Law of the Environment*, 144 (1) Recueil Des Cours-Academie De Droit International 139 (1975).

74. Shavell, *Strict Liability vs. Negligence*, 9 J. LEGAL STUD. 1 (1980).

75. Handl, *The Principle of 'Equitable Use' as Applied to Internationally Shared Natural Resources: its Role in Resolving Potential International Disputes over Transfrontier Pollution*, 14 REVUE BELGE DE DROIT INTERNATIONAL 40 (1978).

76. Nanda & Ris, *The Public Trust Doctrine: A Viable Approach to International En-*

right,[77] and the common heritage of humanity doctrine.[78]

Whether a new international law would be effective in preventing another Bhopal, one must consider many things, among them being: the goals of the NIEO, human rights thinking, economic aspects, and the reality of human tragedy.

On both a national and international level, the basic philosophy underlying environmental regulation is to preserve the environment in a wholesome state and safeguard it against disastrous and irreversible degradation. International environmental concerns, at least in the last resort, aim at the prevention of transnational inflictions of such degradations. Hence, potentially catastrophic consequences dwarf the legal relevance of the probability of such consequences and may alone warrant prevention of the hazardous activity.[79]

The above is contrasted by other scholars who view a healthy environment as essential to one's Basic Needs,[80] and believe that other values, such as GNP, must be measured in terms of sustainable development as opposed to numbers growth.[81] Innovative approaches needed in this area, given its complexity, are crucial. To a certain extent, the ideas that have come forward have had, and will continue to have, positive repercussions for the mainstream of international legal theory.[82]

This development seems to indicate that many of the world's scholars are in agreement with McDougal. McDougal believes that humanity's problems today are transnational and interconnected in origin and impact.[83] Scholars have proposed various programs and principles to provide the ideals with "teeth." So far the international community has balked at implementation of any of the proposed theories.

IV. "NEW" SUGGESTION-FORCED INTERNALIZATION OF EXTERNAL COSTS

The suggested principle of international law is that no individual can operate a production process unless all costs of that production process are internalized.[84]

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vironmental Protection, 5 ECOLOGY. L.Q. 291 (1976).

77. Weiss, *supra* note 24.

78. W. GORMELY, HUMAN RIGHTS AND ENVIRONMENT: THE NEED FOR INTERNATIONAL COOPERATION (1976).

79. Which appears in the Law of the Sea Treaty, *opened for signature* Oct. 7, 1982 U.N. Doc. A/Conf/62/122 *reprinted in* 21 I.L.M. 1261 (1982).

80. Kirgis, *Technological Challenge to Shared Environment*, 66 AM. J. INT'L L. 290, 335 (1972).

81. Steiger, DEMEL, FEY, & MALANCZUK, *The Fundamental Right to a Decent Environment*, in TRENDS IN ENVIRONMENTAL POLICY AND LAW 1 (M. Bothe ed. 1980).

82. *See generally* Kothari, *Environment and Alternative Development*, 5 ALTERNATIVES 427 (1980).

83. Sand, *Environmental Law in the United Nations Environmental Programme*, in THE FUTURE OF THE INTERNATIONAL LAW OF THE ENVIRONMENT (R. Dupuy ed. 1984).

84. M. MCDOUGAL & W. REISMAN, INTERNATIONAL LAW IN CONTEMPORARY PERSPECTIVE

Externalities are undemocratic, the benefactors of the transaction are rarely the same people as the victims of the transaction. According to Rawls, that scenario runs counter to the natural duty all persons owe to others, "to do no harm."[85] This idea is further defined by scholars in the area of toxics, by pointing out that the combination of involuntary risk and the dangers of toxics justify strong restrictions.[86]

Left alone, our government will not always look after the public interest. In the environmental area there is a natural, built-in imbalance. Private industry, driven by its own profit incentives to exploit and pollute our natural resources uses its inherent advantage to exert political pressure to resist environmental requirements. The machinations of industry explain at least in part why the abuses of pollution become so severe before steps are taken to establish controls.[87]

International markets create a situation that motivates individuals to seek methods of production that will make their commodities less expensive than their competitors (i.e. many of these production means are carried out at the expense of the environment).[88] This need for more efficient means of production is exaggerated in the LDC's that are striving for economic "development," the result of which is severe environmental degradation.[89] In many cases people of LDC's face the risks and costs of economic "development" (*e.g.* pollution) directly, however, they receive only indirect benefits, if any. Benefits received from industrial development will not necessarily go to all the inhabitants of the LDC's.[90]

V. CRITICISM-RESPONSE

In the 1960's and 1970's LDC's did not consider environmental costs.

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at xvii (1981).

85. Returning to the automobile example, under this principle an individual could not purchase gasoline, unless their would not be any negative effect on people who are not in the transaction. Gasoline could only be purchased if their car was designed in such a way that no externality would be created by the transaction.

86. J. RAWLS, A THEORY OF JUSTICE 114 (1971).

87. "A powerful justification for regulating pesticide use or discharge of toxic substances. . .is the fact that those who are involuntarily exposed to the risk of future ill health often have little or no idea of the dangers of such exposure." Tarlock & Tarak, *supra* note 21, at 88. *See also* Starr, *Social Benefit versus Technological Risk-What is Our Society Willing to Pay for Safety?* 165 SCIENCE 1232 (1969).

88. Duvall, *The Deep Ecology Movement*, 20 NAT. RESOURCES J. 299, 319 (1980).

89. This holds true no matter if a firm is trying to maximize profit (traditional western method of measuring economic success), or maximizing throughput (traditional eastern method of measuring economic success), or minimizing costs, or just trying to continue in business with some kind of rate of return. A method often chosen to better the position of a firm/individual operating in the competitive framework is to sacrifice environmental quality (i.e. the process of creating a negative externality). *See generally* Varma, *supra* note 6.

90. Handl, *An International Legal Perspective on the Conduct of Abnormally Dangerous Activities in Frontier Areas: the Case of Nuclear Plant Siting*, 33 ECOLOGY L.Q. 7 (1979).

They felt that a clean environment was a luxury for developed nations.[91] Scholars reflecting this sentiment state that considerable debate exists about the priority to be given environmental issues in developing countries. Many of these nations view stringent environmental protection policies as luxuries they cannot afford or, worse yet, as a plot by the developed nations to perpetuate the present unequal distribution of wealth throughout the world.[92] Before and during the Stockholm conference the majority of LDC's adhered to their position in the Founex Report, which basically stated that environmental protection should not get in the way of the overriding task of development. That idea influenced the Action Plan of the Declaration on the Human Environment.[93] At that time LDC's realized that the right to a clean environment is not fundamental.[94] In 1972, Prime Minister Gandhi expressed the position of developing nations at Stockholm: "The rich countries may look upon development as the cause of environment destruction, but to us it is one of the primary means of improving the environment of living. . . . How can we speak to those who live in villages and in slums about keeping the oceans, rivers and air clean when their own lives are contaminated at the source?"[95]

In the decade that followed the Stockholm Conference the LDC's struggled between environmental degradation and the views in which they had previously held.[96] Some became increasingly aware that pollution-generating and disaster-prone industrial plants 'exported' from the MDC's, which had been gratefully accepted by some Third World elites,

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91. An example of unequal distribution of income exists in Chile. In Chile economic growth will lead to an increase in income for a small percentage of the population, while most people do not receive direct benefits from the increase. Chile (Distribution of Income 1978): Highest Fifth-5.2%, Second Fifth-9.3%, Third Fifth-13.6%, Fourth Fifth-20.9%, Lowest Fifth-51.0%. *See*, Foxely, *Stabilization Policies and Their Effects on Employment and Income Distribution: A Latin American Perspective*, in ECONOMIC STABILIZATION IN DEVELOPING COUNTRIES 191 (W. Cline and S. Weintraub eds. 1981). On the other hand a country like Sweden which enjoys one of the highest living standards in the world, shares both the costs and benefits of economic "development" among its citizens because of the equality of income distribution. Sweden (Distribution of Income 1976): Highest Fifth-37.0%, Second Fifth-24.8%, Third Fifth-18.5%, Fourth Fifth-13.1%, Lowest Fifth-6.6%. *See* R. O'CONNOR, E. O'MALLEY & A. FOLEY, ASPECTS OF THE SWEDISH ECONOMY AND THEIR RELEVANCE TO IRELAND 13 (1978).

92. Biswas, *Environment and Law: A Perspective from Developing Countries*, in THE FUTURE OF THE INTERNATIONAL LAW OF THE ENVIRONMENT 389 (R. Dupuy ed. 1984).

93. Tarlock & Tarak, *supra* note 21. The idea that the environment is a luxury good is supported by one scholar feels "environmental amenities are, from the viewpoint of economic analysis, luxury goods for the affluent." Kmiec, *Environmental Inequities-Observations on Mandelker's Environment and Equity-A Regulatory Challenge*, 57 NOTRE DAME L. REV. 313, 319 (1981).

94. For example recommendation 103 of the Action Plan. *See*, Ramakrishna, *supra* note 41.

95. Nascimento, *supra* note 10, at 229.

96. Struthers, *supra* note 38.

may not be the route to true development.[97] It is gradually accepted that the environment and development are two sides of the same coin.[98]

This change is reflected in the following statements attributed once again to Mrs. Gandhi: "Interest in conservation is not a sentimental one but rediscovery of the truth well-known to our ancient sages. The Indian tradition teaches us that all forms of life—human, animal and plant—are so closely interlinked that disturbance in one gives rise to imbalance in the others."[99] We do not attach priority to the environment. We have to make our people more alive to the fact that conservation is not something extra, but is essential in the counting of costs - social costs and even basic economic costs.[100]

Even though this new awareness of the interconnection of the importance of the environment and real long term development is shared by many developing nations,[101] it is still very difficult to get States to forego immediate industrial and economic advances in favor of long-run, sound development policies.[102] At an environmental session in Nairobi "the delegates generally agreed that poverty and war formed the greatest obstacles to improving environmental conditions."[103]

A new focus on Basic Needs of all countries is required in order that citizens of LDC's and MDC's can enjoy their fundamental rights, including the right to a clean environment. Such a commitment will take more than just a declaration of support,[104] rather, it requires a restructuring or rediscovery of values,[105] and a redistribution of resource usage.[106]

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97. Biswas, *Environment and Law: A Perspective from Developing Countries*, in THE FUTURE OF THE INTERNATIONAL LAW OF THE ENVIRONMENT 389 (R. Dupuy ed. 1984).

98. Varma, *supra* note 6, at 144. This new realization is congruent with an idea of development which stresses participation rather than industrialization. "Let them come and see men and women and children who knew how to live, whose joy of life had not yet been killed by those who claimed to teach other nations how to live." C. ACHEBE, NO LONGER AT EASE 45 (1960). Cited in Koehn, *African Approaches to Environmental Stress: A Focus on Ethiopia and Nigeria* in INTERNATIONAL DIMENSIONS OF THE ENVIRONMENTAL CRISIS 253 (R. Barrett ed. 1982).

99. Biswas, *supra* note 97, at 391.

100. *Id.*

101. Mrs. Gandhi interviewed at the 1981 United Nations Conference on New and Renewable Sources of Energy. *See* Struthers, *supra* note 38.

102. In 1982, the developing nations are among the ardent supporters of ecological planning and protection, and there seems to be wide spread recognition that development and environmental protection are inseparable and that some long-range restraint on exploitation is essential. *See id.*

103. Caldwell, *supra* note 1, at 297.

104. Struthers, *supra* note 38.

105. The Indian Constitution in the section on Directive Principles of State Policy Art. 51-A states: "It shall be the duty of every citizen of India. . . to protect and improve the natural environment including forests, lakes, rivers and wildlife, and to have compassion for living creatures," *quoted in*, Biswas, *supra* note 97, at 395.

106. Gandhi has said: "Earth provides enough to satisfy every[one's] need but not for every[one's] greed." Scholars have also stated that in the traditional Indian world view justice, ecological and social stability are intrinsically linked. *See* Shiva, *Ecology Movements in*

Forced internalization of costs would, according to mainstream economic theory, result in less production at a higher price.[107] This idea is the basis of the well known dichotomy between the environment and the economy.[108] While accepting the mainstream (supply and demand) logic as all powerful is unwise,[109] most scholars have accepted the mainstream theory as their starting point, plowing forward from there.[110] Both approaches treat the environment as a resource, or a "good" which is bought and sold according to the "laws" of supply and demand.[111] Therefore, economics is perceived to be a tool to efficiently distribute resources or "goods."[112]

This approach can be criticized from two perspectives: first, a clean environment is a right, and not a "good" which is traded in the marketplace. Thus, the environment should enjoy a higher place in society's value structure and, therefore, a more protected position than accorded to "goods" no matter what economic theory would apply.[113] Second, the underlying economic theory is faulty and, therefore, any theory developed from that faulty basis suffers from the same weaknesses.[114]

Judge Posner furthers the view that economic efficiency *i.e.* wealth maximization, is society's goal.[115] This goal can be reached by allowing the market to operate freely.[116] Posner believes this framework can be useful in dealing with all legal problems.[117]

India, 11 ALTERNATIVES 255 (1986).

107. The incredible sums spent on military spending dwarfs current spending on environmental preservation and indicates that implementation of internalization is financially possible. "As a matter of record and perspective for the decade, the nations of the United Nations will in 1982 spend more money on arms and armies in a mere six hours than they have provided over the past ten years to implement the United Nations Environmental Programme." *See* Struthers, *supra* note 38. *See also* Hettne, *Transcending the European Model of Peace and Development*, 10 ALTERNATIVES 453 (1985).

108. This can be shown by the use of a simple supply and demand curve. As costs of production/transaction rise the supply curve shifts to the left, if all other elements remain constant, the price rises and the quantity produced falls. *See M. Bronfenbrenner, W. Sichel,* and *W. Gardner, Economics* 708 (1984).

109. *E.g.*, E. MILLS, *supra* note 13.

110. For one criticism of the mainstream approach, *see* D. LEVINE, CONTRIBUTIONS TO THE CRITIQUE OF ECONOMIC THEORY (1977).

111. Even though many scholars have pointed out the weaknesses in mainstream (neoclassical) economics, it is adhered to as if it was some kind of "self-perpetuating religious order." G. ROTH, THE ORIGIN OF ECONOMIC IDEAS 311 (1977).

112. *See* Hansmeyer, supra note 69.

113. *See generally* Bronfenbrenner *supra* note 108.

114. Examples of this line of reasoning can be found in the following works: Tribe, *Constitutional Calculus: Equal Justice or Economic Efficiency*, 98 HARV. L. REV. 592 (1985). R. DWORKIN, A MATTER OF PRINCIPLE (1985). TINBERGEN, *The Right to Health-An Economist's View*, in THE RIGHT TO HEALTH AS A HUMAN RIGHT (R. Dupuy ed. 1979).

115. *See* Kelman, *Misunderstanding Social Life: A Critique of the Core Premises of 'Law and Economics,'* 33 J. LEGAL EDUC. 274 (1983).

116. Posner, *Wealth Maximization Revisited*, 2 NOTRE DAME J.L. ETHICS & PUBLIC POL'Y 85 (1985).

117. *See generally* POSNER, ECONOMIC ANALYSIS OF LAW (2d ed. 1977).

Judge Posner's theory is only useful when a private right can be created.[118] This framework proves to be inadequate when dealing with non-conventional pollutants because of their special qualities.[119] Under Posner's application of mainstream economics the basket of "goods" one chooses is the one that maximizes their "utility" or pleasure.[120] This means that all people make a voluntary choice about the "goods" they consume. Such an assumption is inappropriate for the poor of Bhopal and others who do not have enough money to make the choices Posner's application of mainstream economic theory discusses.[121]

VI. CONCLUSION

Under a forced internalization cost structure, individuals and firms compete on the same level. There would no longer be any incentive to develop where the environment would be sacrificed. A law that creates an internalized cost structure is one way to ensure that another Bhopal will not occur.

The internalization approach is workable for "developed" as well as "developing" countries, requiring change in the current dominant social paradigm of "growth at any cost" for the individual's dominance over nature, and also requiring an understanding that everyone is a very small part of an on-going process.[122] This new *Weltanschauung* has been dubbed deep-ecology.[123] Other scholars have called it the second Copernican revolution.[124]

> It must be recognized that the problems of poverty, hunger and development are long term problems. There is no short term easy answer.

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118. *Id.*

119. *See generally* Coleman, *Economics and Law: Critical Review of the Foundations of the Economic Approach to Law*, 94 ETHICS 649 (1984).

120. For example some pollutants lifespan and migration abilities. *See generally* Varma *supra* note 6.

121. Posner *supra* note 116, at 10.

122. One can not characterize poor children living in Los Angeles as having made a voluntary choice; their is no basket of goods to choose from. *See* Silver, *The Common Law of Environmental Risk and Some Recent Applications*, 10 HARV. ENV'TL L. REV. 61 (1986).

123. This requires that the traditional, Judeo-Christian idea of individuals dominance over nature is to be traded for an idea that individuals are a part of nature. For example the current concept of wilderness builds a division between what is "natural" and what is "civilized," it is this idea that the environment is something extra that must be changed. Henry Skolimowski,a philosopher, said:"We are in a period of ferment and turmoil, in which we have to challenge the limits of the analytical and empiricist comprehension of the world as we must work out a new conceptual and philosophical framework in which the multitude of new social, ethical, ecological, epistemological, and ontological problems can be accommodated and fruitfully tackled." *See* Duvall, *The Deep Ecology Movement*, 20 NAT. RESOURCES J. 299, 309 (1980).

124. "Deep ecologists are committed to rapid movement to a 'steady state' or 'conservor society' both from ethical principles of harmonious integration of humans with nature and from appreciation of ecological realities." *Id.*, at 312. "[Individuals] are part of the world ecosystem, we cannot talk of this ecosystem on Earth, this nature, without [Individuals]." Lee, *infra* note 149.

> It has been said that: [Humanity] must become the steward of its 'body', the eco-system upon which it depends and which now depends upon it for its health.[125]

The solution to the problems of industrial pollution does not simply lie in a law calling for the internalization of costs, or any other law. Progress toward a solution can only be made when individuals begin to participate in the decisions that effect their lives and pollute their environment.[126]

Since it is in the best interest of humanity to avoid another Bhopal, there are few alternatives. This article offers the forced internalization of costs, its workability and its congruence with the current trends in international law as one alternative.

To espouse and enforce such a principle: ". . .means development of a better theoretical understanding of nature, production, and society. . .to move forward fully conscious of the reciprocality and interdependence of nonhuman nature and human needs and aspirations."[127]

If we do not vigorously pursue such an alternative, incidents such as that of Bhopal will not only be revisited, but may very well become the rule.[128]

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125. This revolution would remove humans from the center of the biosphere, just as the first removed earth for the center of the universe. *See* Caldwell, *supra* note 1.

126. Lee, *On Marxian View of the Relationship Between Man and Nature*, 2 ENV'T. ETHICS 1, 2 (1980).

127. Bouchardeau, *supra* note 60, at 27. *See also* P. FREIRE, PEDAGOGY OF THE OPPRESSED (1968); PAUL & DIAS, *Developing Human rights for Human Needs Centered Development*, (1985)(available from the International Center for Law in Development).

128. Tolman, *Karl Marx, Alienation and the Mystery of Nature*, 3 ENV'T. ETHICS 63 (1981). An example of that understanding can be found in the Dia Dong Declaration: Independent Declaration on the Environment, *reprinted in* 1 TOWARD A JUST WORLD ORDER 492 (R. Falk, S. Kim, S. Mendlovitz eds. 1892).