

The Emergence of Environmental Law in the Developing Countries: A Case Study of India

*Kilaparti Ramakrishna**

INTRODUCTION

India is the second most populous country in the world, with almost 700 million people.¹ Covering over 3.2 million square kilometers, it is also the seventh largest nation on Earth.² India's agricultural regions are widely distributed geographically, while its natural resources, such as forests, minerals, and energy resources, are concentrated in certain areas. Thousands of years of cultivation, a century of industrialization, and a phenomenal population increase during the twentieth century have considerably altered the country's natural environment.³

Population growth, urbanization, and industrial and agricultural development underlie the primary environmental problems facing India today.⁴ Population growth has created water supply, sewage, and waste disposal problems. The concentration of population and industrial activity in large cities has overburdened municipal sanitation facilities. Intensive application of chemical fertilizers, insecticides, and pesticides used to

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* Assistant Professor of Research, Indian Society of International Law, New Delhi, India; Member, International Council of Environmental Law, Bonn; 1985-86, Fulbright Visiting Scholar, Harvard Law School; Ph.D. 1985, Jawaharlal Nehru University; M. Phil. 1978, Jawaharlal Nehru University; B.L. 1967, Andhra University. The author wishes to acknowledge his intellectual debt to Professor Rahmatullah Khan of Jawaharlal Nehru University for introducing him to the study of legal problems of environmental protection and for offering several useful comments on an earlier version of this Article.

1. According to the 1981 Indian census, India's population numbered 685,184,692. RESEARCH & REFERENCE DIV., MINISTRY OF INFORMATION, GOV'T OF INDIA, INDIA: A REFERENCE ANNUAL, 1983, at 6 (1983) [hereinafter cited as INDIA 1983].

2. R. KHAN & L. GUNDLING, FOREST RESERVE MANAGEMENT: LEGAL AND POLICY PROBLEMS IN INDIA AND GERMANY 3 (1984).

3. See R. RAMA RAO, ENVIRONMENT: PROBLEMS OF DEVELOPED AND DEVELOPING COUNTRIES (1976).

4. See generally the following reports prepared by the Committee on Human Environment of the Indian Department of Science and Technology: SOME ASPECTS OF ENVIRONMENTAL DEGRADATION AND ITS CONTROL IN INDIA (1971); SOME ASPECTS OF RATIONAL MANAGEMENT OF NATURAL RESOURCES, LAND, WATER, AND FORESTS (1971); SOME ASPECTS OF PROBLEMS OF HUMAN SETTLEMENT IN INDIA (1971); QUANTITATIVE PROJECTIONS OF ECONOMIC AND DEMOGRAPHIC SITUATION 1968-1969 TO 1985-1986 (1971). These reports were prepared for India's participation in the 1972 United Nations Conference on the Human Environment (UNCHE).

meet the demands of the growing population for agricultural products from a limited area have caused further environmental deterioration.⁵

Initially, environmental protection was seen by many developing nations,⁶ including India,⁷ as a goal conflicting with developmental priorities. Some nations even regarded the industrialized nations' recommendations that developing countries adopt environmental policies as a ploy to divert them from achieving their own economic development.⁸ The late Indian Prime Minister Indira Gandhi expressed this attitude in 1972 at the United Nations Conference on the Human Environment,⁹ when she asked: "How can we speak to those who live in villages and in slums about keeping the oceans, rivers and the air clean when their own lives are contaminated at the source?"¹⁰

In the ensuing decade, India developed a new attitude which recognizes the compatibility, interdependence, and mutually reinforcing nature of environmental protection and economic development.¹¹ Prime Minister Gandhi articulated this new view in her inaugural address at the Conference of Non-Aligned Nations in 1983 when she stated: "[T]he preservation of the environment is an economic consideration since it is closely related to the depletion, restoration and increase of resources. In

5. For a comprehensive assessment of India's environmental problems, see CENTRE FOR SCIENCE AND ENVIRONMENT, *THE STATE OF INDIA'S ENVIRONMENT 1982: A CITIZEN'S REPORT* (1982) [hereinafter cited as *INDIA'S ENVIRONMENT*].

6. See Anand, *Development and Environment: The Case of the Developing Countries*, 20 *INDIAN J. INT'L L.* 1 (1980).

7. See WOODROW WILSON INT'L CENTER FOR SCHOLARS, *THE SUMMARIES OF NATIONAL REPORTS IN PREPARATION FOR THE UNITED NATIONS CONFERENCE ON THE HUMAN ENVIRONMENT* (1972).

8. See de Araujo Castro, *Environment and Development: The Case of the Developing Countries*, 26 *INT'L ORGANISATION* 401 (1972). At the UNCHE, for example, the government of Cameroon rated "development" as an absolute priority "whatever the side effects." See WOODROW WILSON INT'L CENTER FOR SCHOLARS, *supra* note 7, at 10-11.

9. The Conference took place in Stockholm on June 5-16, 1972. See Report of the United Nations Conference on the Human Environment, U.N. DOC. A/CONF.48/14/REV.1 (1972).

10. Prime Minister Gandhi added that "the rich countries may look upon development as the cause of environmental destruction, but to us it is one of the primary means of improving the environment of living, of providing food, water, sanitation and shelter, of making the deserts green and mountains habitable." *Times of India* (New Delhi), June 15, 1972.

11. In the 1950's and 1960's, "development" encompassed only the economic aspects of growth. The 1970's gave rise to enlarged concepts of development in which environmental impacts were seen, not as a separate sector, but as an inherent aspect of development. This approach was affirmed in the Declaration of Environmental Policies and Procedures Relating to Economic Development, adopted in New York on February 1, 1980, and signed by the International Bank for Reconstruction and Development, the Arab Bank for Economic Development in Africa, the African Development Bank, the Caribbean Development Bank, the Inter-American Development Bank, the Asian Development Bank, the Commission of European Communities/European Development Fund, the Organization of American States, the U.N. Development Programme, and the U.N. Environment Programme. See Talbot, *The World Conservation Strategy*, in *SUSTAINING TOMORROW* 3, 14 n.1 (F. Thibodeau & H. Field eds. 1984).

any policy decision and its implementation we must balance present gains with likely damage in the not too distant future"¹²

Today in India, environmental pollution is a problem of urgent national concern. The Indian government has tried to accommodate both the interests of environmental protection and economic development in its policies.¹³ This Article examines this effort and the emergence of environmental law in India. Part I considers Indian federalism and the division of authority between the states and the central government over environmental issues. Part II analyzes the origins and functions of central government administrative agencies with authority over environmental concerns. Part III discusses legislation addressing major environmental issues including water quality, air quality, and the protection of forests and wildlife. Part IV examines the role of the courts in implementing Indian environmental law. The Article serves primarily as a survey of the current state of Indian environmental law. Suggested reforms focus on methods of increasing the role of individual citizens in both the political process and litigation.

I

INDIAN FEDERALISM AND ENVIRONMENTAL LAW

A. *Division of Authority Under the Constitution*

Legislative and administrative schemes in India typically reflect the underlying structure of the government, especially the tension between the authority of the central government and the individual states. The Indian Constitution,¹⁴ in effect since 1950, provides for a federal republic with a parliamentary form of government. It gives the twenty-two states great autonomy, but vests the ultimate authority in the central government (the "Union" or "center").

The Constitution sets forth detailed lists enumerating the areas of legislative jurisdiction of the Union (list I—union list) and the states (list II—state list), as well as areas of concurrent jurisdiction (list III—concurrent list).¹⁵ The union list gives Parliament exclusive jurisdiction over

12. Gandhi, *Address of the Prime Minister, Shrimati Indira Gandhi, at the Inaugural Session of the Seventh Conference of Heads of State or Government of Non-aligned Countries: New Delhi, March 17, 1983*, 23 *INDIAN J. INT'L L.* 301, 304 (1983).

13. Professor Rahmatullah Khan of Jawaharlal Nehru University maintains that the governments of developing countries no longer pose the problem as "environment vs. development" but as "environment and development," with environmental integrity as a precondition to development. KHAN & GUNDLING, *supra* note 2, at 3.

14. The Indian Constitution is an extensive document containing 395 articles and ten schedules of definitions and lists. It comprehensively lists and catalogs the rights and responsibilities of the various political entities.

15. These three lists are set out in the seventh schedule of the Indian Constitution. *INDIA CONST.* art. 246.

97 topics including foreign affairs,¹⁶ defense,¹⁷ the regulation and development of oilfields,¹⁸ and interstate rivers.¹⁹ The state list gives state governments exclusive power over areas such as public health and sanitation,²⁰ agriculture,²¹ water supplies and irrigation,²² land reform and improvement,²³ and fisheries.²⁴ Under the concurrent list, both the union government and the states may regulate criminal law and procedure,²⁵ forests, protection of wild animals and birds,²⁶ population control and family planning,²⁷ prevention of cruelty to animals,²⁸ and many other subjects.²⁹ A union law regarding a concurrent subject generally prevails over a state law on the same subject, thus providing some administrative uniformity throughout the country.³⁰

During the framing of India's Constitution, the central issue debated by the Constituent Assembly³¹ was the allocation of power between the national and state governments. Debate over where to locate authority to regulate environmental matters was primarily a manifestation of this more fundamental power dispute. The proponents of a strong center had attempted, unsuccessfully,³² to transfer virtually all of the entries on the state list to the concurrent list.³³ Pro-center members of the Constituent

16. INDIA CONST. seventh sched., list I, entry 10.

17. *Id.* entry 1.

18. *Id.* entry 53.

19. *Id.* entry 56. Other union list entries include: (6) atomic energy and mineral resources; (24) shipping and navigation on inland waterways; (25) maritime shipping and navigation; (27) ports; (29) regulation of air traffic; and (57) fishing and fisheries beyond territorial waters.

20. INDIA CONST. seventh sched., list II, entry 6.

21. *Id.* entry 14 (includes agricultural education and research, protection against pests, and prevention of plant diseases).

22. *Id.* entry 17 (includes water supplies, irrigation canals, drainage, water storage, and water power, subject to the provisions of union list entry 56, *supra* note 19).

23. *Id.* entry 18 (rights and tenures, including landlord and tenant relations, transfer of agricultural land, land improvement and agricultural loans, and colonization).

24. *Id.* entry 21. Other state list entries include (1) burial and burial grounds and (15) preservation, protection and improvement of stock and prevention of animal diseases.

25. INDIA CONST. seventh sched., list III, entries 1, 2.

26. *Id.* entry 17A (forests), entry 17B (protection of wild animals and birds). These two entries, formerly on the state list, were moved to the concurrent list by the Forty-second Amendment Act in 1976. *See infra* note 44 and accompanying text.

27. *Id.* entry 20A (added by the Forty-second Amendment Act in 1976; *see infra* note 44 and accompanying text).

28. *Id.* entry 17.

29. Other concurrent list entries include: (20) economic and social planning; (29) prevention of interstate spread of contagious disease or pests affecting [people], animals, or plants; (32) shipping and navigation on inland waterways, subject to union powers over national waterways; and (36) factories.

30. R. NYROP, *AREA HANDBOOK FOR INDIA* 315 (1975).

31. The Constituent Assembly was elected in 1946 by the provincial legislative assemblies to draft India's Constitution. *Id.* at 312.

32. CONSTITUENT ASSEMBLY OF INDIA, 9 CONSTITUENT ASSEMBLY DEBATES: OFFICIAL REPORTS 719-964A (1949).

33. For example, Constituent Assembly member Brijeshwar Prasad proposed an amend-

Assembly argued vehemently for retaining topics such as forests and agriculture on the concurrent list, so that the central government could conduct research on an all-India basis, and coordinate the activities of the various states.³⁴ The Ministry of Health successfully proposed an amendment to the union list that gave Parliament broader legislative power over the development of interstate rivers.³⁵ In support of this amendment, the Ministry argued that the Union must be given the legislative powers necessary to control water pollution because problems such as river pollution by industrial wastes and sewage and diminution of city water supplies by the diversion of water for irrigation could have serious interprovincial consequences.³⁶ On the other hand, proponents of a more decentralized federalism feared the coercive effect on the states of giving the center too much power over such topics.³⁷

ment for entries 1-66 of list II (state list) to be transferred to list III (concurrent list). *Id.* at 864. Another member T.T. Krishnamachari analogized the attempts to transfer as many entries as possible to list III to

[a] saying current in my part of the country, which says that if you throw as many stones as you can at a mango tree, at least one of them is bound to hit a mango and bring it down. Likewise my friend seems to have a series of amendments to get as many subjects transferred from List II to List III in the hope that at least one amendment of his would be accepted by the house.

Id. at 894.

34. *Id.* at 897.

35. As originally proposed, draft entry 74 read: "The development of inter-state waterways for purposes of flood control, irrigation, navigation and hydro-electric power." The proposed amendment read: "The development of inter-state rivers and inter-state waterways for purposes of flood control, irrigation, navigation and hydro-electric power *and for other purposes where such development under the control of the Union be declared by Parliament by law to be expedient in the public interest.*" (Emphasis added.) As finally adopted, union list entry 56 reads: "Regulation and development of inter-State rivers and river valleys to the extent to which such regulation and development under the control of the Union is declared by Parliament by law to be expedient in the public interest." INDIA CONST. seventh sched., list I, entry 56.

36. See S. RAO, *THE FRAMING OF INDIA'S CONSTITUTION: SELECT DOCUMENTS* 642 (1978). The Ministry of Agriculture had proposed amendments that would have placed "coordination of the development of agriculture, including animal husbandry, forestry and fisheries" on the union list, and reclamation of waste lands, forest laws, and inland fisheries and fishery laws on the concurrent list. *Id.* at 310-11. In support of these amendments, the Ministry of Agriculture argued that the "forests have a great bearing on the general agricultural development and prosperity of the country as a whole" and that "it is essential to ensure that no Province or State follows, even inadvertently, a policy which will be detrimental to the rest of the country." *Id.* at 315. These amendments, however, were rejected.

37. For example, Constituent Assembly member Gobind Ballabh Pant opposed locating "forests" on the concurrent rather than the state list. In response to Jawaharlal Nehru's query as to what would happen if the Union adopted legislation relating to forests under its authority to undertake national planning, Pant replied: "[i]f it is hoped that the Provinces can be made to cooperate against their own will by means of a central legislation, that hope is not likely to materialize." G. AUSTIN, *THE INDIAN CONSTITUTION* 200-01 (1966).

B. *The Forty-second Amendment Act*

The Forty-second Amendment Act,³⁸ passed in 1976, explicitly incorporated environmental protection into the Indian Constitution for the first time. First, article 48A, added to the Directive Principles of State Policy,³⁹ imposed on "the State"⁴⁰ the responsibility to protect the environment: "The State shall endeavour to protect and improve the environment and to safeguard the forests and wild life of the country."⁴¹ Second, article 51A of a new chapter entitled "Fundamental Duties" imposed a similar duty on all Indian citizens: "It shall be the duty of every citizen of India . . . to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures."⁴²

The Forty-second Amendment Act also added entries to the concurrent list. The Act inserted a new entry, "Population control and family planning,"⁴³ and moved "Forests" and "Protection of wild animals and birds," from the state list to the concurrent list.⁴⁴

Some members of the Indian academic community believe that the Forty-second Amendment gave the central government new powers to protect the environment, powers that the center did not previously possess.⁴⁵ Debate over the interpretation of the Forty-second Amendment Act centers on whether the central government's objective in passing the Act was simply to express its willingness to deal with environmental problems, or actually to acquire additional powers necessary to do so. To evaluate these opposing contentions, and to determine to what extent the center's ability to pass environmental legislation is limited by the division of powers among the lists, it is necessary to analyze the extent to which the provisions added by the Forty-second Amendment Act altered the distribution of powers in the original Constitution.

If the central government's intention in passing the Act was only to express its willingness to prevent environmental pollution, the incorporation of Article 48A in the Chapter on Directive Principles of State Policy

38. The Forty-second Amendment Act [hereinafter cited as 42d Am. Act] amended the Constitution of India for the forty-second time. For a detailed discussion of this Act, see Ramakrishna, *Indian Environmental Laws: A Note on the Existing Legislative Framework*, 24 PRODUCTIVITY (1983-84).

39. The Directive Principles of State Policy set forth goals intended to guide legislators and executives in governing the country. R. NYROP, *supra* note 30, at 313.

40. As used in article 48A, "the State" includes the national, state, and local governments. See INDIA CONST. pt. IV, art. 36; pt. III, art. 12.

41. INDIA CONST. pt. IV, art. 48A (added by 42d Am. Act § 10).

42. INDIA CONST. pt. IVA, art. 51A(g) (added by 42d Am. Act § 11).

43. INDIA CONST. seventh sched., list III, entry 20A (42d Am. Act § 57(c)(iii)).

44. Prior to the Forty-second Amendment Act, these two entries were listed in the state list as entries 19 and 20, respectively. *Id.* list II.

45. See, e.g., Jariwala, *The Constitution—42nd Amendment Act and the Environment*, in LEGAL CONTROL OF ENVIRONMENTAL POLLUTION 1, 1-7 (S. Agarwal ed. 1980).

certainly served that purpose. For the first time, the policy of environmental protection was given constitutional status. On the other hand, if the central government's intention was to acquire more powers, then it must be determined what additional powers the government actually gained.

Although article 51A(g) states that "it shall be the duty of every citizen of India . . . to protect and improve the natural environment,"⁴⁶ no enforcement mechanism is provided.⁴⁷ Further, while article 51A(g) establishes a citizen *duty*, the language of article 48A, that "[t]he state shall *endeavour* to protect and improve the environment,"⁴⁸ is significantly weaker. In sum, these two articles do not seem to grant any additional powers to the central government.

Finally, the insertion of new entries in the concurrent list did not by itself give the Union new powers that it did not have previously. The concurrent list gives the Union the upper hand should it decide to legislate on concurrent topics, but moving the forests and wildlife entries from the state list to the concurrent list did not diminish the states' right to make laws. The issue is whether or not union government legislation has preempted state legislation.

C. Central Government Authority Over International Affairs

Article 253, contained in part XI of the Constitution, "Relations Between the Union and the States," provides:

Notwithstanding anything in the foregoing provisions of this Chapter, Parliament has power to make any law for the whole or any part of the territory of India for implementing any treaty, agreement or convention with any other country or countries or any decision made at any international conference, association or other body.⁴⁹

This article, in conjunction with the other constitutional provisions relating to the union government's powers in the area of international relations,⁵⁰ enables Parliament to enact laws on virtually any entry con-

46. See *supra* text accompanying note 42, for the full text of article 51A(g).

47. The Sardar Swaran Singh Committee recommended that Parliament be empowered to enact legislation imposing penalties or punishment to enforce article 51A(g). This recommendation was, however, deleted from the final amendment. See SARDAR SWARAN SINGH COMMITTEE, PROPOSALS 4.

48. Emphasis added. See *supra* text accompanying note 41, for the full text of article 48A.

49. INDIA CONST. pt. XI, art. 253.

50. These include article 51(c) and union list entries 14 and 15. Article 51(c) reads: "The State shall endeavour to foster respect for international law and treaty obligations in the dealings of organised peoples with one another." *Id.* pt. IV, art. 51(c). Entry 13 states: "Participation in international conferences, associations and other bodies and implementing of decisions made thereat." *Id.* seventh sched., list I, entry 13. Entry 14 provides: "Entering into treaties and agreements with foreign countries and implementing of treaties, agreements and conventions with foreign countries." *Id.* entry 14.

tained in the state list. A close reading of article 253 reveals that, even without an international obligation, the union government can legislate on matters enumerated in the state list. As R.B. Loper, writing about India's treaty-making power, pointed out: "[I]n India . . . parliament has power to make laws implementing not only international obligations of the Union arising out of treaties, agreements, and conventions, but also *decisions* of any international conference, association, or other body, although such decisions are not legally binding upon India."⁵¹ Loper predicted an "inevitable and irresistible invasion of the state list by the Parliament under article 253 of the Constitution," because of "the vast range of subjects covered by the conventions, treaties, agreements and recommendations of various specialized agencies and international conferences" to which India belonged.⁵²

The foregoing analysis of the effect of article 253 undermines the view that the central government does not have the power to enact environmental legislation for topics on the state list.⁵³ The Parliament has broad powers to pass laws covering the state list entries, even without the Forty-second Amendment Act.

II

ADMINISTRATIVE AGENCIES AND ENVIRONMENTAL ISSUES

The structure of India's administrative agencies reflects the split between union and state authority. Some divisions of the civil service provide India-wide administration, while other administrative services may be regulated by either the union or state governments, or both.⁵⁴ Within the union government, the Planning Commission is one of the most important government entities. Although not specifically authorized by the Constitution, the Commission, formed in 1950, plays a key role in formulating national economic policy. Among other things, it drafts India's "Five Year Plans," which set targets for the country's economic growth.⁵⁵ While the states have some input into these Plans through the National Development Council, the Union, through the Planning Commission, has primary authority for national planning.⁵⁶

51. Loper, *The Treaty Power in India*, in THE BRITISH YEARBOOK OF INTERNATIONAL LAW 1955-6, at 305-06 (1957).

52. *Id.* at 306. Loper maintained that the state list entries most susceptible to such an invasion were prisons, intoxicating liquors, burials, communications, agriculture, fisheries, protection of wild animals and birds, industries, and the production, supply, and distribution of goods. *Id.*

53. For further discussion concerning union-state relations and environmental protection, see Ramakrishna, *What Can and Needs To Be Done for the Prevention and Better Control of Water Pollution: Does a Fresh Look at the Centre-State Relations Help?*, 5 WATER WORLD (1983) and 6 WATER WORLD (1984).

54. R. NYROP, *supra* note 30, at 331-33.

55. *See id.* at 402-09.

56. *See id.* at 332-33. The Planning Commission recommends major policy directions in

Though the Planning Commission did not begin to focus explicitly on the issue of environmental degradation until the Fourth Five Year Plan (1969-74),⁵⁷ it did address sanitation and public health needs from its inception. The First Five Year Plan (1952-56) initially provided for state water supply and sanitation schemes, but failed to provide the central leadership and direction necessary to implement those schemes. Subsequently, at the request of state governments, the Union Health Ministry created the National Water Supply and Sanitation Program in 1954 as part of its Health Scheme under the Plan.⁵⁸ The Program contained specific provisions to assist the states in implementing their urban and rural water supply and sanitation schemes. This program has been carried out through the Public Health Engineering Departments of the individual states under the advice and guidance of the Central Public Health and Environment Engineering Organization (CPHEEO).⁵⁹

During the Third Five Year Plan (1961-66), the Planning Commission established the Committee on Natural Resources to coordinate long-term planning for natural resource development and to make policy recommendations. This committee, now defunct, conducted studies and published reports on a wide range of natural resource issues.⁶⁰

The government's increasing concern with environmental problems culminated in the Fourth Five Year Plan (1969-74), which for the first time explicitly articulated the need for integrating environmental considerations into economic development planning.⁶¹ A passage from the Plan, entitled "Quality of Environment," acknowledged the interdependence of living things and the environment, and then stated:

Planning for harmonious development recognises this unity of nature and man. Such planning is possible only on the basis of a comprehensive appraisal of environmental issues, particularly economic and ecological. There are instances in which timely specialised advice on environmental aspects could have helped in project design and in averting adverse effects on the environment, leading to loss of invested resources. . . . It is particularly important that long-term basic considerations should prevail over short-term commercial considerations, the [sic] social costs and benefits

science, technology, and investment to the cabinet of India's central government. Rao, *Science and Technology in India*, 229 Sci. 130, 131 (1985).

57. See *infra* notes 61-63 and accompanying text.

58. See MINISTRY OF HEALTH, GOV'T OF INDIA, REPORT OF THE NATIONAL WATER SUPPLY AND SANITATION COMMITTEE 1960-61 (1962).

59. According to the latest figures released by CPHEEO regarding water supply and sanitation, 107 million people (80% of the urban population) in 1,890 towns have piped water supply and 14.5 million people in 217 towns have sewage facilities. About 50 million people (10% of the rural population) in 64,000 villages have piped water supply or tubewells. See CPHEEO, MINISTRY OF WORKS AND HOUSING, GOV'T OF INDIA, INDIA: MARCH TOWARDS BETTER WATER SUPPLY AND SANITATION (1977).

60. These studies survey geology, soil and land use, forests, coastal areas, and towns; wasteland and ravine reclamation; and utilization of urban, agricultural, and industrial wastes.

61. PLANNING COMM'N, GOV'T OF INDIA, FOURTH FIVE YEAR PLAN 1969-74 (1970).

be used as the yardstick rather than private gains and losses.⁶²

The Plan noted, however, that there was "no point in the structure of Government where the environmental aspect receives close attention in an integrated manner."⁶³ Therefore, to bring about greater coherence and coordination in environmental policies and programs, India established a National Committee on Environmental Planning and Coordination (NCEPC) in 1972.⁶⁴ During the nine years of its existence, NCEPC functioned as a central advisory body for environmental management issues.⁶⁵

The Sixth Five Year Plan (1980-1985) also accorded special significance to environmental issues.⁶⁶ The Plan proposed spending 400 million rupees on various environmental management programs and organizations.⁶⁷ Moreover, perceiving the need for a comprehensive evaluation of administrative and legislative approaches to environmental protection, the government of India⁶⁸ created the blue-ribbon Tiwari Committee, in 1980.⁶⁹ The Committee recommended the creation of a Department of Environment (DOE) under the direct charge of the Prime Minister.⁷⁰

The DOE was established November 1, 1980.⁷¹ DOE's functions

62. *Id.* at 49.

63. *Id.*

64. *See* INDIA'S ENVIRONMENT, *supra* note 5, at 177. In 1981, NCEPC became a division of the Department of Environment and was renamed the National Committee on Environmental Planning (NCEP). *Id.*

65. NCEPC's tasks included:

1. Coordinating environmental and economic policies, and reviewing development activities from an environmental perspective.
2. Reviewing government policies and programs which significantly affect environmental quality.
3. Recommending legislative and regulatory changes.
4. Promoting environmental education in schools and increasing public awareness of environmental problems.
5. Working with the United Nations and other international agencies on global environmental issues.

DEP'T OF ENV'T, GOV'T OF INDIA, NATIONAL COMMITTEE ON ENVIRONMENTAL PLANNING AND COORDINATION 1972-81: RECOMMENDATIONS AND ACTIVITIES (1982) (provides a detailed description of the Committee's activities).

66. *See* INDIA'S ENVIRONMENT, *supra* note 5, at 177.

67. *See id.* at 181.

68. The President of India, in his address to the Joint Session of Parliament on January 23, 1980, referred to the need to set up a specialized machinery with adequate powers to incorporate measures to maintain ecological balance in all planned development. DEP'T OF SCI. & TECH., GOV'T OF INDIA, RES. NO. 1/4/80-ENV. (Feb. 29, 1980).

69. *Id.* *See also* INDIA'S ENVIRONMENT, *supra* note 5, at 177. The committee was named after its founder, N.D. Tiwari, who was at that time the Deputy Chair of the Planning Commission.

70. DEP'T OF SCI. & TECH., GOV'T OF INDIA, REPORT OF THE [TIWARI] COMMITTEE FOR RECOMMENDING LEGISLATIVE MEASURES AND ADMINISTRATIVE MACHINERY FOR ENSURING ENVIRONMENTAL PROTECTION para. 4.7-.8 (1980) [hereinafter cited as TIWARI COMMITTEE REPORT]. The primary role assigned to the new Department was that of a "watchdog," to study and bring to the attention of government and Parliament instances, causes, and consequences of environmental degradation in all sectors. *Id.* at paras. 4.7-9.

71. INDIA'S ENVIRONMENT, *supra* note 5, at 177.

include environmental appraisal of development projects, direct administrative responsibility for pollution monitoring and regulation, conservation of critical ecosystems designated as biosphere reserves, and conservation of marine ecosystems.⁷² The Department has divided its functions into several administrative divisions.⁷³ In addition to its important role in safeguarding the environment, DOE has helped to mobilize public opinion in favor of environmental protection.⁷⁴

Under the DOE, the National Committee on Environmental Planning (NCEP)⁷⁵ assumed coordination of environmental policy. In addition to serving as an environmental policy "think tank," NCEP's duties also include preparing an annual "State of the Environment" report, formulating guidelines for preparation of environmental impact statements, and organizing public hearings and conferences on environmental issues.⁷⁶

The Indian government has also established institutes which conduct research and provide information to national, state, and local administrative agencies which deal with environmental problems. For example, the Indian Standards Institute, through its Environmental Protection Advisory Committee, sets acceptable pollution levels. The Institute then provides guidance to different agencies in an attempt to coordinate environmental protection efforts.⁷⁷ In 1978 and 1979, the National Environmental Engineering Research Institute established air pollution monitoring stations in major Indian cities and published a report of its findings.⁷⁸ These research programs attest to the increasing sophistication of India's approach to solving environmental problems.

III

LEGISLATION CONCERNING SPECIFIC ENVIRONMENTAL ISSUES

A. *Water Quality*

India entered a new era in the field of environmental legislation with

72. *Id.*

73. The following divisions either currently exist or have been proposed: 1) pollution control, 2) environmental assessment, 3) living natural resources conservation, 4) ecodevelopment, 5) environmental research promotion, 6) environmental training, education, and awareness, 7) environmental law, 8) society-environment interactions, 9) coordination-liaison with state governments, 10) environmental information, 11) international cooperation, 12) administration, and 13) finance. See generally DEP'T OF ENV'T, GOV'T OF INDIA, PROFILE (1983).

74. See, e.g., DEP'T OF ENV'T, GOV'T OF INDIA, 1983-1984 ANN. REP. 37-41.

75. The replacement of NCEPC with NCEP, see *supra* note 64, was another of the Tiwari Committee's recommendations. See TIWARI COMMITTEE REPORT, *supra* note 70, para. 4.11.

76. DEP'T OF ENV'T, GOV'T OF INDIA, RES. NO. F.1/8/81-ENV. 4-5 (1981). NCEP was constituted for a two-year term, beginning April 1, 1981. *Id.* at 5.

77. 27 INDIAN STANDARDS INST. BULL. 371.

78. See INDIA'S ENVIRONMENT, *supra* note 5, at 73-74.

the passage of the Water (Prevention and Control of Pollution) Act of 1974.⁷⁹ This Act represents the nation's first comprehensive program for dealing with an environmental problem.⁸⁰ Many earlier pieces of legislation, still in effect, attempted to regulate various aspects of water quality, but their approach was piecemeal and unsuccessful. A short review of some earlier national and state legislation, although their provisions are vague and poorly enforced, is useful before examining the Water Act of 1974 in detail.

1. *Water Pollution Legislation Prior to the Water Act of 1974*

The earliest legislation concerning water pollution is the Shore Nuisance (Bombay and Kolaba) Act of 1853.⁸¹ This Act authorized the Collector of Land Revenue in Bombay to order the removal of any nuisance below the high-water mark in Bombay harbor.⁸² Another early law, the Oriental Gas Company Act of 1857,⁸³ attempted to regulate all water pollution produced by only one enterprise, the Oriental Gas Company.⁸⁴ The Act imposed fines on the Company and gave a right of compensation to anyone whose water was "fouled" by the Company.⁸⁵ Private property rights of riparian owners are guaranteed by the Easements Act of 1882.⁸⁶ The Act protects owners against "unreasonable" pollution by upstream users,⁸⁷ against "material" diversion or diminishment of streams,⁸⁸ and against "material" draining of lakes and ponds.⁸⁹

Several other pre-independence pieces of legislation touch on water pollution. These include laws prohibiting the use of poisons to kill fish,⁹⁰ regulating the discharge of oil into port waters,⁹¹ and prohibiting the poisoning of water in forests.⁹²

Two post-independence laws mandate regulation of water pollution

79. [The] Water (Prevention and Control of Pollution) Act, 1974, (Act No. 6 of 1974), 21 INDIA ALL INDIA REPORTER [A.I.R.] MANUAL (3d ed. 1974) [hereinafter cited as 1974 Water Act].

80. INDIA'S ENVIRONMENT, *supra* note 5, at 30.

81. Act XI of 1853, 18 INDIA A.I.R. MANUAL (3d ed. 1973).

82. *Id.* § 2.

83. Act V of 1857, 15 INDIA A.I.R. MANUAL (3d ed. 1973). The Act, which originally encompassed Oriental Gas Company activities only in Calcutta, was extended to include operations throughout India in 1867. Act XI of 1867, *id.*

84. Act V of 1857, *id.* preamble.

85. *Id.* §§ 15-17.

86. Indian Easement Act, (Act V of 1882), § 7, 9 INDIA A.I.R. MANUAL (3d ed. 1970).

87. *Id.* § 7, illus. (f).

88. *Id.* § 7, illus. (h).

89. *Id.*

90. [The Indian] Fisheries Act, 1897, (Act IV of 1897), § 5, 11 INDIA A.I.R. MANUAL (3d ed. 1971).

91. [The Indian] Ports Act, 1908, (Act XV of 1908), § 21, 16 INDIA A.I.R. MANUAL (3d ed. 1972).

92. [The Indian] Forest Act, 1927, (Act XVI of 1927), § 26(i), 11 INDIA A.I.R. MANUAL (3d ed. 1971) [hereinafter cited as 1927 Forest Act].

by the states. The Factories Act of 1948⁹³ requires all factories to make "effective arrangements" for waste disposal,⁹⁴ and empowers state governments to make rules implementing this broad directive.⁹⁵ Five states have made rules for the disposal of factory waste under this Act. The River Boards Act of 1956 provides for the creation of river boards for the regulation and development of interstate rivers and river valleys.⁹⁶ Section 4(1) of the Act empowers the central government to set up river boards upon the request of the state.⁹⁷ While in theory the boards have broad powers to prevent pollution,⁹⁸ their main function in fact is to advise the state governments.⁹⁹ In 1961, some states began to establish river boards on the Narmada, the Krishna, and the Godvari rivers. In 1964, however, there was a change in policy, and the idea of establishing the boards was abandoned.¹⁰⁰

Some states have also enacted water pollution acts. The Maharashtra Prevention of Water Pollution Act of 1970, for example, emphasizes the negotiation of effluent standards with industry.¹⁰¹ Uttar Pradesh¹⁰² and Tamil Nadu¹⁰³ have both established water boards to protect the drinking water supply.

The Indian Penal Code includes provisions aimed specifically at water pollution as well as general anti-pollution provisions. The Code imposes a fine or prison term on "whoever voluntarily corrupts or fouls the water of any public spring or reservoir, so as to render it less fit for the purposes for which it is ordinarily used."¹⁰⁴ A fine or prison term is also imposed for negligent acts likely to spread infection or disease dangerous to life.¹⁰⁵ In addition, the Code proscribes the handling of poisonous substances in such a manner as to endanger life or cause injury.¹⁰⁶ Finally, pollution of a kind not specified in the Code may be punishable as a public nuisance, subjecting the polluter to a fine.¹⁰⁷

93. Act LXIII of 1948, 10 INDIA A.I.R. MANUAL (3d ed. 1971).

94. *Id.* § 12(1).

95. *Id.* § 12(2).

96. Act XLIX of 1956, 18 INDIA A.I.R. MANUAL (3d ed. 1973).

97. *Id.* § 4(1).

98. *Id.* § 14.

99. *Id.* § 13.

100. Gulhati, *Inter-state Rivers*, 14 INDIAN J. PUB. AD. 907 (1968).

101. MAHARASHTRA GOV'T GAZETTE, pt. IVB at 722 (May 5, 1970). The central and state governments of India publish Gazettes, which are official reporters of legislative activity.

102. See SOME ASPECTS OF ENVIRONMENTAL DEGRADATION AND ITS CONTROL IN INDIA, *supra* note 4, at 43-45; see also *Uttar Pradesh Water Supply and Sewage Act of 1975*, reprinted in 16 ENCYCLOPEDIA OF THE UTTAR PRADESH LOCAL ACTS (1793-1981) 263-301 (K. Chandra ed. 1981).

103. See INDIA'S ENVIRONMENT, *supra* note 5, at 109.

104. 2 INDIA PEN. CODE § 277 (2d ed. 1974).

105. *Id.* § 269.

106. *Id.* § 284.

107. *Id.* § 290.

2. *The Water Act of 1974*

The history and the preamble of the Water Act of 1974 indicate that only state governments can enact water pollution legislation.¹⁰⁸ The Water Act was approved by the central government only after a history of lengthy discussion and subsequent approval at the state level. In 1965, the central government drafted and circulated to the states a water pollution control bill on the recommendation of two advisory committees. By 1969, six states had adopted enabling resolutions, and a bill was introduced in Parliament pursuant to article 252(1) of the Constitution.¹⁰⁹ After significant revisions, the Water Act was passed by Parliament.¹¹⁰ The President approved the Act in 1974.

By the time the Water Act came into force, twelve of the states had passed enabling resolutions, and the remaining states approved the Act soon thereafter. The Water Act is thus a milestone in the growing Indian consensus that water pollution is a problem of national scope.

a. *Framework of the Act*

As the Act's full title suggests, it is designed to prevent future and control existing water pollution. The Act is comprehensive in its coverage, applying to streams (including those temporarily dry), inland waters (whether natural or artificial), subterranean waters, and sea or tidal waters.¹¹¹ Notably, the Act is also an enabling law. It provides for the establishment of state and central water boards and gives wide powers to these boards, without imposing any rules, regulations, or standards.¹¹² These boards can sue and be sued, and have full time staff.¹¹³ Agricultural, fishing, industrial, and trade interests are represented on the boards.¹¹⁴ Companies or corporations owned, controlled, or managed by the central and state governments are also represented.¹¹⁵

108. The preamble of the Act states that the Parliament has no power to make laws for the states with respect to water pollution control, except as provided in articles 249 and 250 of the Constitution. 1974 Water Act, *supra* note 79, preamble.

109. Article 252(1) states:

If it appears to the Legislatures of two or more States to be desirable that any of the matters with respect to which Parliament has no power to make laws for the States except as provided in articles 249 and 250 should be regulated in such States by Parliament by law, and if resolutions to that effect are passed by all the Houses of the Legislature of those States, it shall be lawful for Parliament to pass an act for regulating that matter accordingly, and any act so passed shall apply to such States and to any other State by which it is adopted afterwards . . . by each of the houses of the legislature of that state.

INDIA CONST. art. 252, § 1.

110. See generally RAJYA SABHA SECRETARIAT, JOINT COMMITTEE ON THE PREVENTION OF WATER POLLUTION BILL 1969 REPORT.

111. 1974 Water Act, *supra* note 79, preamble.

112. *Id.* § 2(j).

113. See *id.* §§ 3(3), 4(3).

114. *Id.* §§ 3(2)(d), 4(2)(d).

115. *Id.* §§ 3(2)(e), 4(2)(e).

The central board may advise the central government on matters concerning water pollution, coordinate activities among the state boards, carry out or sponsor investigation and research relating to water pollution, and educate the public on water pollution problems.¹¹⁶ The central board may also organize training programs in connection with prevention and control of water pollution¹¹⁷ and establish or recognize laboratories to help the board perform its function.¹¹⁸ The central board acts as the state board for the Union Territories.¹¹⁹ The central board's functions also include: planning a comprehensive program for the prevention and control of water pollution; inspecting sewage or trade effluents; developing economical and reliable methods of treatment of sewage and trade effluents; and developing efficient methods of disposal of sewage and trade effluents.¹²⁰

The central board is bound only by the directions of the central government. The state boards, however, are bound by the directions of both the central board and the state government. When a direction given by the state is inconsistent with the direction given by the central board, the matter is referred to the central government for decision.¹²¹

The state water boards control new sewage and industrial effluent discharges by approving or rejecting applications for consent to discharge.¹²² Any person discharging sewage or industrial effluent before a state water board was constituted is given three months from the date the water board is constituted to apply for consent to discharge.¹²³ The state water boards also minimize water pollution by advising state governments on appropriate locations for new industry.¹²⁴

b. Enforcement Problems Under the Act

Several features of the Act severely limit the effectiveness of the water boards. First, although the Act expressly confers powers and functions on the water boards, it is silent on the matter of funding. Section 37 simply provides that the state government may make such contributions to its state board as it deems necessary to enable the board to perform its

116. *Id.* § 16(2).

117. *Id.* § 16(2)(d).

118. *Id.* § 16(3).

119. *Id.* § 4(4). India has nine Union Territories, each of which is governed by an administrator appointed by the Indian President. The national Parliament enacts laws for the Territories. INDIA CONST. pt. VIII. The Territories include: Arunachal Pradesh; Chandigarh; Delhi; the Andaman and Nicobar Islands; the Laccadive, Minicoy, and Amindivi Islands; Mizoram; Dadra and Nagar Haveli; Goa, Daman, and Diu; and Pondicherry. D. BASU, SHORTER CONSTITUTION OF INDIA 3 (9th ed. 1984).

120. 1974 Water Act, *supra* note 79, § 17.

121. *Id.* § 18.

122. *Id.* § 25.

123. *Id.* § 26.

124. *Id.* § 17(1)(n).

functions under the Act.¹²⁵ As long as there are insufficient funds, it is unreasonable to expect the state boards to enforce the Act effectively.¹²⁶

Second, enforcement of the Act is hindered by the requirement that to violate the Act, the polluter must have "knowledge." Under section 24(1)(a), it is an offense to *knowingly cause or permit* to enter into any stream any matter which may substantially aggravate pollution.¹²⁷ Under this provision, the prosecution must prove knowledge on the part of the polluter before the polluter can be held responsible; negligent, unknowing polluting of a stream is not covered. In contrast, the Prevention of Food Adulteration Act of 1954 incorporates a strict liability standard; knowledge is not a necessary element of an offense committed under this Act.¹²⁸ Comparing these two provisions, it is difficult to understand why the legislature inserted the word "knowingly" in the Water Act. Whatever the reason, this particular provision undermines the avowed objectives of the Act.

Third, the water boards have no authority to deal directly with erring industries, but instead must seek judicial remedies.¹²⁹ The court procedures are time consuming and prevent quick corrective action.¹³⁰

Fourth, injunctive relief is unavailable under the Water Act. Even though the company management can be punished with imprisonment and a fine if found guilty of polluting,¹³¹ there is no provision to enable a court to direct any industry to close down. Unfortunately, closure is often the only adequate weapon for controlling pollution. For example, the Zhuari Agro Chemical company, located in the state of Goa, refused repeated government requests to treat its effluent water. The resulting pollution killed fish, cattle, and coconut trees. Popular protest against the company and political pressure resulted in a shutdown ordered by the District Magistrate under a public nuisance act. Two years of destructive pollution, however, occurred before the shutdown. Within two months of the shutdown, the Company undertook measures to treat the effluent water, and the factory was allowed to resume its operation.¹³²

125. *Id.* § 37.

126. For example, the Gujarat State Board in its report for the period 1974-77 appropriately complained of limited resources as a constraint. The West Bengal State Board pointed out that the total grant put at its disposal by the government in the first year of its operation hardly even covered the traveling expenses of the chair and member-secretary of the Board.

127. 1974 Water Act, *supra* note 79, § 24(1)(a).

128. [The] Prevention of Food Adulteration Act, (Act XXXVIII of 1954), § 19(1), 17 INDIA A.I.R. MANUAL (3d ed. 1973).

129. 1974 Water Act, *supra* note 79, § 33.

130. For example, the Andhra Pradesh State Water Board has requested that the state government empower the Board to cut off water and power supply to industries that pollute. The Board asserted that remedies existing under the Water Act are time consuming and that the penal provisions are too stringent, which makes courts reluctant to enforce them. Andhra Pradesh State Water Board Res. No. 120 (Mar. 8, 1979).

131. 1974 Water Act, *supra* note 79, § 47.

132. INDIA'S ENVIRONMENT, *supra* note 5, at 26.

To provide state governments with a more effective method for fighting pollution, water boards should be empowered to order closure of the offending industry for a fixed period.

Section 32 of the Water Act empowers the State Boards to take some emergency measures.¹³³ That section, however, applies only when it appears to the state board that polluting matter is present in any stream or well *due to any accident or other unforeseen act or event*. In such an event, the boards are empowered to remedy the pollution¹³⁴ or order immediate restraints on the discharging factory.¹³⁵

Fifth, there is no provision in the Water Act that shifts the burden of proof from the prosecution to the polluter, a provision generally found in other acts such as the Industries (Development and Regulation) Act of 1951.¹³⁶ As a result, the burden of proof under the Water Act lies on the prosecution, which must establish that the effluents in a given case endanger public safety. Establishing this finding is often expensive and difficult, a heavy burden when prosecutorial resources are limited.

Finally, section 49(1) of the Water Act provides that "no court shall take cognizance of any offence under this Act except on a complaint made by or with the previous sanction in writing of the State Board . . ." ¹³⁷ Thus, there is no private right of action. A private right coupled with a state right of action would significantly strengthen the Act. These enumerated problems make implementation of the Act difficult, and water pollution remains a severe problem in India.

c. Funding the Water Boards: The Water Cess Act of 1977

The central government passed the Water Cess Act¹³⁸ in 1977 to help meet the expenses of the central and state water boards. The tax collected under this Act is payable by every person carrying on any specified industry¹³⁹ and by every local authority¹⁴⁰ which uses water for pur-

133. 1974 Water Act, *supra* note 79, § 32.

134. *Id.* § 32(b).

135. *Id.* § 32(c).

136. Section 28 of the Industries (Development and Regulation) Act states: "When any person is prosecuted for contravening any order made under section 18G which prohibits him from doing an act . . . without a permit . . . the burden of proving that he has such authority, permit . . . shall be on him." [The] Industries (Development and Regulation) Act, 1951, (Act LXV of 1951), § 28, 12 INDIA A.I.R. MANUAL (3d ed. 1971).

137. 1974 Water Act, *supra* note 79, § 49(1).

138. The Water (Prevention and Control of Pollution) Cess Act, 1977, (Act No. 36 of 1977), 1978 A.I.R. (Acts) 14-18 [hereinafter cited as Water Cess Act]. A cess is an assessment or tax, usually levied for a particular purpose. 1 M. DESAI, A. AIYAR & J. LAL, LAW LEXICON 192-1 (1971).

139. Water Cess Act, *supra* note 138, § 3(2)(a). The specified industries are ferrous metallurgy, non-ferrous metallurgy, mining, ore-processing, petroleum, petro-chemical, chemical, ceramics, textiles, paper processing, fertilizer production, coal (including coke), power (thermal and diesel) generation, and processing of animal or vegetable products.

140. *Id.* § 3(2)(b).

poses specified in the Act.¹⁴¹ Incentives in the form of rebates of seventy percent of the tax payable under the Act are given to those who install any plant for the treatment of sewage or trade effluent.¹⁴² The proceeds of the tax are credited to the consolidated fund of India.¹⁴³ The central government, after deducting the expenses of collection, may pay to the central board and every state board such sums of money as it deems necessary to enforce the provisions of the Water Act.¹⁴⁴

The Water Cess Act was passed by the central government without state approval and gives the central government rulemaking authority over substantial aspects of pollution control.¹⁴⁵ This significant increase in centralized power led many industries to challenge the Act in the Indian courts.¹⁴⁶ The courts ruled, however, that the central government did not exceed its legislative power in enacting the Water Cess Act of 1977. The courts saw the act as merely a tax law and not as an attempt by the central government to increase its authority over substantial environmental issues.¹⁴⁷

In addition, the provision listing the industries and activities subject to the tax¹⁴⁸ has generated considerable litigation. Many industries have contended that they were not covered by those lists, and have drawn subtle distinctions to avoid falling within the Act.¹⁴⁹ The existence of these suits suggests that Parliament should have included all industrial activities in the Water Act. Also, the present language of the Water Cess Act creates the erroneous impression that the tax collected from the polluting industry is a fine, which was never the intention of the legisla-

141. *Id.* § 3. Column 1 of schedule II of the Act specifies the purposes for which the water is consumed as: (i) industrial cooling, spraying in mine pits or boiler feed; (ii) domestic purpose; (iii) processing whereby water gets polluted and the pollutants are easily biodegradable; (iv) processing whereby water gets polluted and pollutants are not easily biodegradable and are toxic. *Id.* sched. II.

142. *Id.* § 7.

143. *Id.* § 8. The Indian government keeps all receipts and disbursements under two separate headings, the consolidated fund and the public account. The consolidated fund contains all revenues received, loans raised, and money received in repayment of loans by the central government. No money can be withdrawn from the fund except under the authority of an act of Parliament. The public account contains all other receipts, such as deposits, service funds, and remittances. Disbursement from the public account does not require an act of Parliament. INDIA 1983, *supra* note 1, at 182.

144. Water Cess Act, *supra* note 138, § 8.

145. *See id.* §§ 7, 17(1).

146. *See, e.g.,* Municipal Corporation of Jullunder v. Union of India, Civil Writ Petition No. 5152 (Punjab and Hariyama H.C. 1979); Janata Coop. Sugar Mills Ltd. v. Punjab Water Board, Civil Suit No. 15 (Court of Subjudge 1st Class, Julludav 1980); Gwalior Rayon Silk Mfg. (Wvg) Co. Ltd. v. Union of India, 1983 A.I.R. (Kerala) 110.

147. *See, e.g.,* Gwalior Rayon Silk, 1983 A.I.R. (Kerala) at 111.

148. Water Cess Act, *supra* note 138, § 2(c), sched. I.

149. *See, e.g.,* Gwalior Rayon Silk, 1983 A.I.R. (Kerala) at 110 (held that defendant industry, which made rayon, was a chemical industry and, therefore, was a specified industry under section 2(c) of the Act); *see also* INDIA'S ENVIRONMENT, *supra* note 5, at 30.

ture.¹⁵⁰ Although the Water Act is a significant advance toward comprehensive environmental protection, the loopholes within the Act weaken its enforcement.

d. The Water Act Amendments of 1978

Parliament amended the Water Act in 1978 in an effort to strengthen the implementation powers of the boards.¹⁵¹ The legislative assemblies of only three states passed resolutions approving the Amendments.¹⁵² Moreover, the resulting Amendment Act failed to bring about any changes likely to provide improved implementation; the amendments are largely cosmetic.

Numerous commentators, including the Tiwari Committee,¹⁵³ have since proposed additional amendments to the Water Act. These proposals include incorporating a strict liability standard into the Act; authorizing the boards to take certain steps to prevent pollution without having to invoke the jurisdiction of the courts; authorizing the board to enhance the penalty for polluting; and establishing special courts for cases brought under the Act.¹⁵⁴

These recommended amendments would greatly strengthen the implementation powers of the state boards. If the central government follows the usual procedure of circulating a draft for state approval, though, passage will take a long time. Rather than having the central government circulate a draft, the state boards should persuade their state governments to prepare a draft amendment for presentation to the central government. The central government is more likely to be attentive when a state legislature makes a request than when the same request is made by the state water boards.

Although the Water Act was passed more than a decade ago, its implementation has been fairly ineffective and its coverage less than comprehensive. Lack of a private right of action and insufficient funding of the water boards have hindered enforcement of the Act. Subsequent amendments did little to strengthen the Act because they were cosmetic and not adopted by most states. Further amendments to regulate more industries under the Act and to allow the boards to act directly against polluters would help relieve India's severe water pollution problems.

150. Water Cess Act, *supra* note 138; Statement of Objects and Reasons, GAZETTE OF INDIA, pt. II, § 2, ext. at 564 (Nov. 11, 1977). The Statement of Objects and Reasons is the official government explanation of the contents and scope of a legislative act.

151. The Water (Prevention and Control of Pollution) Amendment Act, 1978, (Act No. 44 of 1978), 1978 A.I.R. (Acts) 252.

152. *Id.* preamble.

153. See *supra* notes 69-70 and accompanying text.

154. See INDIA'S ENVIRONMENT, *supra* note 5, at 181.

B. Air Quality

Although India has had air pollution laws on the books for the last 80 years,¹⁵⁵ Parliament has only recently made a concerted attempt to enact comprehensive legislation for the prevention and control of air pollution. The earlier laws encountered a variety of problems, including the absence of standards, inadequate monitoring and surveillance capabilities, weak enforcement agencies, and ill-informed public opinion.¹⁵⁶

To remedy the various problems inherent in the earlier existing laws, the union government appointed an Expert Committee on Air Pollution in 1970 to draft an enforceable air pollution and control bill.¹⁵⁷ The resulting Air (Prevention and Control of Pollution) Act was passed in 1981, "to provide for the prevention, control and abatement of air pollution"¹⁵⁸

1. Framework of the Air Act

The Air Act's framework is similar to that of the Water Act.¹⁵⁹ The Air Act establishes both a central and state air boards.¹⁶⁰ The central board's responsibilities include advising the central government,¹⁶¹ coordinating the state boards' activities,¹⁶² establishing air quality standards,¹⁶³ and creating or recognizing laboratories for the study of air pollution.¹⁶⁴ State boards have the power to advise state governments,¹⁶⁵ to inspect industrial plants and give orders necessary for air pollution control,¹⁶⁶ and to develop comprehensive air pollution control programs.¹⁶⁷

The union government's view is that there should be an integrated

155. Many Indian localities enacted laws for the control of air pollution in the form of smoke nuisance acts, e.g., Calcutta in 1905, Bombay in 1912, and Kanpur in 1958. See INDIA'S ENVIRONMENT, *supra* note 5, at 73-74. In addition, the Motor Vehicles Act of 1939 empowers state governments to regulate smoke, vapor, and other particulate automotive emissions. Act IV of 1939, § 70(1), (2)(h), 14 INDIA A.I.R. MANUAL (3d ed. 1972).

156. See SOME ASPECTS OF ENVIRONMENTAL DEGRADATION AND ITS CONTROL IN INDIA, *supra* note 4, at 55-60. Moreover, the smoke nuisance acts are limited in scope and outdated in the modern context of diverse industrial stack emissions. Regional Seminar on Air Pollution Control, U.N. Doc. WHO/SEA/Env.San./118, at 42 (1978).

157. Pearson, Assignment Report on Legislation on the Control of Air Pollution in India, U.N. Doc. WHO/SEA/Env.San.97/Corr.1, at 1 (1971).

158. The Air (Prevention and Control of Pollution) Act, 1981, (Act No. 14 of 1981), preamble, 1981 A.I.R. (Acts) 197 [hereinafter cited as Air Act].

159. For a discussion of the Water Act, see *supra* notes 111-24 and accompanying text.

160. Air Act, *supra* note 158, §§ 3, 4.

161. *Id.* § 16(2)(a).

162. *Id.* § 16(2)(c).

163. *Id.* § 16(2)(h).

164. *Id.* § 16(3).

165. *Id.* § 17(1)(b).

166. *Id.* § 17(1)(e).

167. *Id.* § 17(1)(a).

approach to all environmental problems, particularly pollution.¹⁶⁸ Therefore, the government has proposed that the central board constituted under the Water Act also perform the functions of the central board under the Air Act. The government also proposed that the state boards constituted under the Water Act perform the functions of the state boards for air pollution prevention, control, and abatement. The consolidation of the air and water boards, however, is not easily implemented. The Air Act is nationwide and compels all states to set up state air boards.¹⁶⁹ In contrast, the Water Act was enacted pursuant to article 252 of the Indian Constitution¹⁷⁰ and gives the states discretion to set up state water boards. Not all states have established water boards.¹⁷¹

2. Federalism Issues: Article 253 and the Air Act

The Air Act represents the Indian Parliament's first implementation of environmental legislation using article 253 of the Indian Constitution. Article 253 empowers Parliament to make laws implementing treaties, agreements, conventions, or decisions made by international conferences.¹⁷² In the Air Act,¹⁷³ Parliament explicitly refers to the principle of preserving the natural resources of the Earth enunciated at the United Nations Conference on the Human Environment.¹⁷⁴ The Act then states that it represents an implementation of the decisions made at the Conference.¹⁷⁵

In the absence of article 253, Parliament's authority to legislate on air quality issues is questionable. Parliament enacted the Air Act, unlike the Water Act, without the consent of the states.¹⁷⁶ Moreover, air pollution is not a subject specified on any of the constitutional lists.¹⁷⁷ Parliament does have residuary power to legislate on matters not included on the state list or concurrent list,¹⁷⁸ but the residuary power is ill-defined and controversial. Parliament does, however, have explicit constitutional authority to participate in international conferences and implement the decisions made at the conferences¹⁷⁹ and to enter into and implement

168. See LOK SABHA SECRETARIAT, PARLIAMENT OF INDIA, REPORT OF THE JOINT COMMITTEE ON THE AIR (PREVENTION AND CONTROL OF POLLUTION) BILL, 1978 (1979).

169. Air Act, *supra* note 158, § 1(2).

170. See *supra* note 109 and accompanying text.

171. See INDIA'S ENVIRONMENT, *supra* note 5, at 82. As of 1982, six states had not established water boards. *Id.*

172. See *supra* notes 49-53 and accompanying text.

173. Air Act, *supra* note 158, preamble.

174. Report of the United Nations Conference on the Human Environment, U.N. Doc. A/CONF.48/14/Rev.1 (1972).

175. Air Act, *supra* note 158, preamble.

176. See *supra* notes 169-70 and accompanying text.

177. For a discussion of the division of state and federal powers under the Indian Constitution, see *supra* notes 14-30 and accompanying text.

178. INDIA CONST. seventh sched., list I, entry 97.

179. *Id.* entry 13.

treaties and agreements with foreign countries.¹⁸⁰ Parliament, therefore, derives the authority to legislate the Air Act from specific constitutional provisions read with article 253. The central government can use this power to legislate on many other environmental issues in the future.

C. *Protection of Wildlife and Forests*

1. *Early Legislation*

The first Indian legislation protecting wildlife was limited to specific areas and particular species. For example, in 1873, Madras passed the first wildlife statute, which protected only wild elephants.¹⁸¹ Other states soon passed similar legislation,¹⁸² and in 1879 the central government passed the Elephants' Preservation Act.¹⁸³ In 1912, the central government passed a broader Wild Birds and Animals Protection Act, which many states later incorporated.¹⁸⁴

These statutes related primarily to regulation of hunting and did not regulate taxidermy or trade in wildlife and wildlife products, both major factors in the decline of Indian wildlife.¹⁸⁵ Despite these laws, wildlife eradication continued and many species became extinct.¹⁸⁶

2. *The Wild Life¹⁸⁷ Protection Act of 1972*

In the 1950's, the central government recognized the need for comprehensive legislation to conserve wildlife. As early as 1952 the Central Board for Wildlife, an advisory body to the central government, recommended that there should be unified legislation for wildlife conservation in India.¹⁸⁸ At the time, forests and wildlife were under state control and the central government could not act unilaterally but rather had to obtain state approval of proposed legislation as provided in article 252 of the Constitution.¹⁸⁹ Parliament passed the Wild Life Protection Act in

180. *Id.* entry 14.

181. The Madras Wild Elephants Preservation Act, 1873, (Act No. 1 of 1873), 1 MADRAS CODE 150 (8th ed. 1958).

182. *See, e.g.*, The Bengal Cruelty to Animals Act of 1869, 1 WEST BENGAL CODE (1958).

183. [The] Elephants' Preservation Act, 1879, (Act VI of 1879), 9 INDIA A.I.R. MANUAL (3d ed. 1970).

184. Act VIII of 1912, 16 INDIA A.I.R. MANUAL (3d ed. 1972).

185. Statement of Objects and Reasons of [the] Wild Life (Protection) Bill, 1972, GAZETTE OF INDIA, pt. II, § 2, ext. at 784 (1972).

186. *See* INDIA'S ENVIRONMENT, *supra* note 5, at 165-73.

187. Certain Indian legislation and official documents separate the word "wildlife" in to two words, *i.e.* wild life. When referring to such legislation and documents this Article uses the original term.

188. Saharia & Pillai, *Organisation and Legislation*, in WILDLIFE IN INDIA 66 (V. Saharia ed. 1982).

189. *See supra* note 109. In 1976 forests and the protection of wild animals were transferred from the state list to the concurrent list of the Indian Constitution by the Forty-second Amendment Act. *See supra* notes 38-44 and the accompanying text.

1972¹⁹⁰ after eleven states had adopted the Act by resolution.¹⁹¹ As of 1983, all the states had adopted the Act, except Jammu and Kashmir (a single state) which has passed similar state legislation.¹⁹²

The Wild Life Act provides for state wild life advisory boards, wild life wardens to administer the Act,¹⁹³ regulations for the hunting of wild animals,¹⁹⁴ the establishment of national parks, game reserves, and sanctuaries,¹⁹⁵ and the regulation of trade and commerce in wild animals, animal articles, and trophies.¹⁹⁶ The Act also provides for the prevention and detection of violations.¹⁹⁷ The Act divides Indian wildlife into five schedules. Schedule I lists rare and endangered species, which are protected throughout the country.¹⁹⁸ Schedule II lists several game species that require special protection.¹⁹⁹ Schedule III contains big game,²⁰⁰ and Schedule IV lists small game.²⁰¹ Vermin are listed on Schedule V.²⁰²

3. *Administrative Consolidation of Forest and Wildlife Conservation*

India's national forest policy, declared in 1952, emphasizes the inclusion of wildlife protection within the field of forest management.²⁰³ The Wild Life Act mandates that the chief conservator of state forests shall be a member ex officio of the state wild life advisory board.²⁰⁴ Most states have implemented the Act by establishing Wildlife Wings within their forest departments.²⁰⁵ The Chief Wildlife Warden, a position specified in the Act,²⁰⁶ is often made an Additional or Deputy Chief Conservator of Forests in the state forest department.²⁰⁷ In many states, wildlife wardens are also divisional forest officers.²⁰⁸ In addition, in most states the Wildlife Wings of the forests departments manage zoological

190. [The] Wild Life (Protection) Act, 1972, (Act No. 53 of 1972), 21 INDIA A.I.R. MANUAL (3d ed. 1974) [hereinafter cited as Wild Life Act].

191. *Id.* § 1(2).

192. INDIA 1983, *supra* note 1, at 5 (1983).

193. Wild Life Act, *supra* note 190, ch. II.

194. *Id.* ch. III.

195. *Id.* ch. IV.

196. *Id.* ch. V.

197. *Id.* ch. VI.

198. *Id.* § 9(1), sched. I.

199. *Id.* § 9(2), (5), sched. II.

200. *Id.* § 9(5), sched. III.

201. *Id.* § 9(5), sched. IV.

202. *Id.* sched. V.

203. See INDIA 1983, *supra* note 1, at 254. The policy also advocated the control of agricultural development in forests and recommended that 33% of India's land should be preserved as forest. *Id.*

204. Wild Life Act, *supra* note 190, § 6(d).

205. Saharia & Pillai, *supra* note 188, at 53.

206. Wild Life Act, *supra* note 190, § 4(a).

207. Saharia & Pillai, *supra* note 188, at 153.

208. *Id.* at 53.

parks. Foresters also plan and manage most of India's zoos.²⁰⁹

Administrative organization in the central government also combines wildlife conservation and forest management. The Forestry Division, within the Ministry of Agriculture, is headed by an Inspector General of Forests who is also the Chief Executive of Forestry and Wildlife, and a Joint Secretary is responsible for forests and wildlife.²¹⁰ The central government has combined training in forest management and wildlife protection by establishing a Directorate of Wildlife Environmental Research and Education within the national Forest Research Institute and Colleges at Dehra Dun, Uttar Pradesh. This Directorate conducts a postgraduate course in wildlife management for senior level foresters.²¹¹

4. *Enhancement of the Central Government's Role*

In 1976, the Forty-second Amendment Act transferred forests and protection of wildlife from the state list to the concurrent list of the Constitution.²¹² This transfer gave the central government the power to act directly to protect forests and wildlife. The Central Board for Wildlife, redesignated the Indian Board for Wildlife (IBWL), became the primary framer of wildlife conservation policy in India. The IBWL's power was enhanced further in the 1980's when Prime Minister Indira Gandhi became its Chairperson.²¹³

The IBWL has about seventy members, including government officials and eminent naturalists.²¹⁴ The Board reviews the schedules of the Wild Life Act²¹⁵ and recommends amendments.²¹⁶ The Board also recommends areas for the establishment of national parks, sanctuaries, and zoological parks.²¹⁷ As of 1983, India had forty-five national parks, 211 wildlife sanctuaries, and thirty-five zoological parks.²¹⁸ The IBWL has promoted public interest and education in wildlife.²¹⁹ The Board also advises the central government on trade policies involving wildlife and wildlife products. On recommendation of the Board, India exports a very restricted number of species and their products under strictly enforced quotas.²²⁰

The central government has also assumed a greater role in forest

209. *Id.* at 54.

210. *Id.* at 53.

211. *Id.* at 56.

212. *See supra* notes 38-44 and accompanying text.

213. Saharia & Pillai, *supra* note 188, at 54.

214. *Id.* at 65.

215. *See supra* notes 198-202 and accompanying text.

216. Saharia & Pillai, *supra* note 188, at 66.

217. *Id.* at 66-67.

218. INDIA 1983, *supra* note 1, at 5.

219. Saharia & Pillai, *supra* note 188, at 67-68.

220. *Id.* at 69.

conservation since the Forty-second Amendment Act. In 1980, Parliament legislated a Forest Conservation Act without prior approval of the states.²²¹ This Act prevents the states from removing land from reserved forest status²²² without prior approval of the central government.²²³ The Act also prohibits the states from approving any breaking up or clearing of forest land for any purpose other than reforestation without central government approval.²²⁴

The IBWL has also assumed a greater role in forest management. An informal group of the Board recently reviewed a new draft National Forest Policy. The informal group revised the draft by reordering its priorities to emphasize conservation rather than exploitation of forest resources.²²⁵

India's participation as a party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)²²⁶ is a factor, in addition to the Forty-second Amendment Act, that has increased the role of the central government in wildlife protection. CITES provides for an international system of licensing and legal procurement certificates to control trade in designated species. To implement CITES, India appointed the Inspector General of Forests and the Director of Wildlife Preservation as management authorities. India's scientific authorities under CITES include the Director of the Zoological Survey, the Director of the Botanical Survey, and the Director of the Central Marine Fisheries Institute. In addition, Delhi, Bombay, Madras, and Calcutta are the only ports for the export of wildlife and wildlife products. This export trade is closely controlled by the central government.²²⁷

5. Biosphere Reserves

India is a member of the International Co-ordinating Council of the Programme for Man and the Biosphere (MAB).²²⁸ MAB is a worldwide program designed to study the structure and functions of ecosystems and the impact of human intervention. The program seeks to conserve representative ecological areas known as biosphere reserves and to preserve

221. The Forest (Conservation) Act, 1980, (Act No. 69 of 1980), 1980 A.I.R. (Acts) 163 [hereinafter cited as Forest Conservation Act].

222. The Indian Forest Act of 1927 empowered states to designate state owned forest land as reserved forest and to regulate the use of such forests. 1927 Forest Act, *supra* note 92, §§ 3, 28, 29, 32.

223. Forest Conservation Act, *supra* note 221, § 2(i).

224. *Id.* § 2(ii).

225. Saharia & Pillai, *supra* note 188, at 69-70.

226. Convention on International Trade in Endangered Species of Wild Fauna and Flora, entered into force July 1, 1975, 993 U.N.T.S. 243.

227. See Saharia & Pillai, *supra* note 188, at 72-73.

228. *Bulletin of the Man and the Biosphere Programme*, 20:4 NATURE & RESOURCES 23 (1984).

genetic material contained in these regions.²²⁹

In 1980, a subcommittee of the IBWL recommended the amendment of the Wild Life Act to provide for the creation of biosphere reserves.²³⁰ Draft legislation has been prepared in cooperation with the International Union for Conservation of Nature and Natural Resources (IUCN),²³¹ and the Indian government has prepared comprehensive project documents for five reserves.²³² Altogether, India has identified twelve sites, some of which extend into more than one state, as potential biosphere reserves.²³³ Controversy over the roles of the state and central government in administering the reserves has delayed their establishment.²³⁴ Currently, the states administer national parks and sanctuaries with some financial assistance from the central government.²³⁵

Arguments for central government control over biosphere reserves are strong. First, many identified reserves are larger than established national parks and extend into more than one state;²³⁶ this makes central administration desirable. Second, the biosphere reserve project documents recommend that the project be financed entirely by the central government.²³⁷ A third argument favoring central administration is that the proposed reserves include some land within "scheduled" areas. Under the Indian Constitution, certain groups of indigenous peoples are designated as scheduled tribes and some of their homelands are designated scheduled areas.²³⁸ Although the state governments administer the scheduled areas directly, the central government retains the power to regulate the states' administration.²³⁹ The tribal people living within scheduled areas have special rights, and the state must consult local tribal councils before imposing regulations on tribes.²⁴⁰ Some tribes are

229. *Action Plan for Biosphere Reserves*, 20:4 NATURE & RESOURCES 11 (1984).

230. Saharia & Pillai, *supra* note 188, at 71.

231. The IUCN is a coalition of private organizations, national agencies, and international agencies that seeks to implement a worldwide conservation strategy. For a comprehensive review of the IUCN world conservation strategy, see generally Scharlin, *Strategies for World Conservation: The IUCN Redefines Its Partnership*, 69:5 SIERRA 31 (1984).

232. See DEP'T OF ENV'T, GOV'T OF INDIA, BIOSPHERE RESERVES: INDIAN APPROACH (1983) [hereinafter cited as BIOSPHERE RESERVES].

233. These sites and their states or union territories are: Nilgiri (Tamil Nadu, Karnataka, Kerala); Namdapha (Arunachal Pradesh); Nanda Devi (Uttar Pradesh); Uttarakhand (Uttar Pradesh); North Islands of Andaman (Andaman and Nicobar); Gulf of Mannar (Tamil Nadu); Kaziranga (Assam); Sunderban (West Bengal); Thar Desert (Rajasthan); Mannes (Assam); Kanha (Madhya Pradesh); and Norkek (Tura Range). Reports have been prepared for proposed reserves in Nilgiri, Namdapha, Uttarakhand, and Norkek. *Id.*

234. *Id.*

235. INDIA 1983, *supra* note 1, at 5.

236. See, e.g., GADGIL, THE NILGIRI BIOSPHERE RESERVE PROJECT (Indian Nat'l Man & Biosphere Comm., Dep't of Env't, Project Doc. 1, 1980).

237. See BIOSPHERE RESERVES, *supra* note 232.

238. INDIA CONST. art. 244, scheds. 5, 6.

239. *Id.* sched. 5.

240. *Id.*

present in all the proposed biosphere reserves. A declaration of biosphere reserves as scheduled areas appears possible; this would increase central government control of the reserves.

The states also have good arguments for having a role in administering the biosphere reserves. The Indian government proposes to implement the biosphere reserve program by amending the Wild Life Act.²⁴¹ This Act is administered primarily through state agencies. Draft legislation does provide for a few positions that will clearly be filled by central government officials,²⁴² but management of the reserves will require large numbers of scientific, administrative, and field personnel. Although project documents recommend that local personnel be hired,²⁴³ it is unclear whether these will be central or state employees.

States may be reluctant to yield control of biosphere reserves because the reserves can provide substantial revenues. For example, musk deer are found in the proposed Namdapha Biosphere Reserve. The report on this reserve recommends the farming of musk deer and harvesting of their valuable musk excretions.²⁴⁴

The issues raised in this section merely exemplify unresolved questions involving the biosphere program. Such questions must be raised at an early stage of implementation to achieve the necessary consensus of interested parties. A prestigious advisory board, modeled on the IBWL might aid in the achievement of such a consensus.

Over the last twenty years, the Indian government has significantly increased comprehensive, nationwide legislation to protect the environment. This legislation, however, has often been ineffective in protecting the environment. This may be explained in part by the inadequate representation of the interests of citizens in the legislative process; industrial interests, on the other hand, usually are adequately represented. Lawmakers have typically denied ordinary citizens a seat on the central and state pollution boards, perhaps out of fear that citizen representatives would complicate the work of the boards or challenge government actions.

In addition, the legislative process is often very slow. For example, the final enactment of the Air Act took more than ten years.²⁴⁵ The central government then took eighteen more months to accept rules enforcing the Act. In the interim, environmental problems reach crisis levels, and exploiters of natural resources increase their activities in anticipation of regulation. Even more damaging is the reluctance of local

241. See *supra* note 230 and accompanying text.

242. See BIOSPHERE RESERVES, *supra* note 232.

243. See, e.g., GADGIL, *supra* note 236.

244. NAIR, NAMDAPHA BIOSPHERE RESERVE (Indian Nat'l Man & Biosphere Comm., Dep't of Env't, Project Doc., 1981).

245. INDIA'S ENVIRONMENT, *supra* note 5, at 82.

officials to enforce the laws. Without the political will to enforce the laws, no amount of legislation can improve India's environmental situation.²⁴⁶

IV

THE JUDICIARY AND ENVIRONMENTAL LAW

The courts can play an important role in protecting India's environment. For example, Indian environmental groups have attempted, with varying degrees of success, to influence political decisions concerning the environment.²⁴⁷ These groups, however, have generally not attempted to use courts because they lack standing. Parliament could strengthen the role of the courts by enacting provisions which give citizens affected by pollution standing to sue polluters.²⁴⁸

A few courts have already applied more liberal standing in environmental cases. The decision of the Indian Supreme Court in *Municipal Council of Ratlam v. Vardhichand*²⁴⁹ is most significant. In *Vardhichand*, residents of Ratlam Municipality suffered from the stench of open sewers and public excretion. The residents petitioned the local magistrate under Penal Code section 133 to require the municipality to end the nuisance. The magistrate directed Ratlam to draft a plan for solving this problem. After a series of appeals, the Indian Supreme Court affirmed the magistrate's order.²⁵⁰ This decision openly acknowledges the responsibility of local governments toward residents for the protection of the environment. Lower courts have also ordered polluters to take measures to arrest public nuisances. For example, in *Dasari Koteswara Rao v. Kolleru Paper Mills Ltd.*, the Andhra Pradesh High Court granted a writ petition filed by residents of a polluted area and directed the defendant company to stop dumping effluents in a local canal.²⁵¹

In many other cases, however, courts have been unwilling to recognize violations of environmental regulations as serious crimes. Courts have either not imposed punishment or have ordered such petty fines that

246. For a general discussion of problems in the implementation of Indian environmental law, see *id.* at 180-81.

247. India has the most varied and strongest nongovernmental environmental organizations in the developing world. For discussions of the influence of these groups in framing environmental law, see Tucker, *India's Emerging Environmentalists*, 69:4 SIERRA 45 (1984). See generally INDIA'S ENVIRONMENT, *supra* note 5 (provides detailed discussions of grassroots movements).

248. At present, the courts provide the only legal recourse to individuals affected by environmental degradation. The Indian Penal Code provides for criminal prosecution of some polluters and has provisions which give aggrieved parties remedies. See *supra* notes 104-07 and accompanying text.

249. 1980 A.I.R. (S.C.) 1622.

250. *Id.* at 1622.

251. Writ Petitions & Misc. Petitions, Nos. 1303, 2089 (Andhra Pradesh H.C. 1981).

polluters continue to pay fines rather than cease polluting.²⁵² Moreover, even active enforcement efforts are hindered by ineffective legislation. For example, as of 1981, the central water board had taken over one hundred polluters to court. A few offenders were prosecuted, but most escaped through loopholes provided in the Water Act.²⁵³

CONCLUSION

India has made significant progress in its pursuit of environmental protection over the last decade. As an important first step, the government has officially accepted the coexistence of economic development and environmental protection. A central government administrative framework is in place, and Parliament has enacted significant legislation in substantial areas of environmental law. A variety of problems, though, still remain. These include uncertainty about the legislative authority of the central government to implement environmental statutes, enforcement problems, lack of a private right of action, and insufficient resources to implement environmental laws. A concerted, unified effort by the Indian government is necessary to solve these problems and to assure the future integrity of India's environment.

252. See generally Ramakrishna, *Environmental Litigation and the Need for Judicial Reform*, 7 ACADEMY L. R. (1983).

253. INDIA'S ENVIRONMENT, *supra* note 5, at 30.

