

CHAPTER - III

INDIA'S POLLUTION CONTROL MEASURES: A REVIEW

Legislation: A Review

The problem of air and water pollution owing to rapid industrialisation in India have assumed serious dimensions. It was only after Independence that problems of industrial pollution became conspicuous as large scale and rapid industrialisation and urbanisation started mainly after 1947. India has established many large, medium and small scale industries over the last three decades and these with the already existing industries have started to create serious problems of pollution.

India is no doubt one of the few countries in the world to make constitutional provisions for the protection of environment and to lay adequate stress on a careful utilisation of natural resources. With a broad vision the Article 48(A) in the Constitution states that "the state shall endeavour to protect and improve the environment and to safeguard the forest and wildlife in the country". Also Article 51(A)8 appeals to the fellow citizens "to protect and improve natural environment including forest, lakes, rivers and wildlife and to have compassion for living creatures". It is therefore apparent that the country has a commitment to plan its policies, its laws and regulations to tackle the problem of environment.

A concrete step towards environmental protection was taken only after 1972, thanks to the conference on environment held in Stockholm in the same year. As a follow-up action of this conference, the Government of India established the National Committee on Environment Planning and Co-ordination (NCEPC) in 1972, to co-ordinate the country's effort to ensure a clean environment.

In the recent years, some specific laws have been enforced to ensure environmental protection in particular areas such as the Wildlife (Protection) Act, 1972, the Water (Prevention and Control of Pollution) Act, 1974, the Forest Conservation Act, 1980 and the Air (Prevention and Control of Pollution) Act, 1981. Very recently a more comprehensive Environment (Protection) Act, 1986 was passed.

The Prevention of Water Pollution Bill was passed in the Parliament in 1974. The act demanded that all the states should enforce and implement control measures. Except two states viz., Orissa and Maharashtra all the other states had agreed to enforce the law initially as the two states had their own state enactments for water pollution control. Therefore, except for these two, the Central enactment was applicable to all the states in regard to water pollution.

Under this act the Central Government and most states have constituted Central and State Boards for the prevention and control of water pollution. They have also been entrusted with the tasks relating to the Air Pollution Control Act as well. In 1977 another legislation was put on the statute viz., the Water (Prevention and Control of Pollution) Cess Act, 1977. Its purpose was to augment the resources for the Central and State Pollution Boards through the levy of a cess on the consumption of water by specific industries at rates specified in the schedule to the Act. The amount collected is made available to the State Pollution Control Boards according to a prescribed formula for utilization by them to carry out their function.¹

A more comprehensive Environment (Protection) Bill was passed in 1986, which not only consolidated some of the earlier Acts which were in a piece-meal state, but also is supposed to have given more powers to the Central and State boards for prevention and control of pollution and increased the penalties and terms of imprisonment for non-compliance.²

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1. Government of India, The Water (Prevention and Control of Pollution) Cess Act, 1977.
 2. It is doubtful if indeed the new Act is more deterrent. Parameswaran Iyer has pointed out that according to the new Act, "action punishable under both it and any other act will in fact be punished under the older act, thereby effectively keeping in place the minimal fines of the air and water acts". As quoted by Susan G. Hadden, in "Statutes and Standards for Pollution Control in India", Economic and Political Weekly, Vol 22 (16), April 18, 1987, pp. 716 and 720 (FN 39).

Under the 1986 law, the Central Government can even order the closure of an industrial unit violating pollution standards or order the stoppage of the supply of electricity or water or any other service. Since litigation takes a long time, the power to order closure of the offending units is needed for preventing pollution in the meanwhile. It appears that such powers are vested only with Central Government, and not yet delegated to state boards. Besides, it is doubtful if at least now the penalties for non-compliance are deliberately made costlier than compliance, which did seem to have been the case under the earlier law. Obviously the penalty rates have to be revised from time to time, taking note of inflation, particularly the cost of pollution prevention, so that penalties are always higher than these costs, so that there is a strong incentive - negative, though - to adopt pollution control.

Abatement Strategy and its Working:

In India as elsewhere the regulatory method is being followed for pollution control. Under this approach, the pollution control authorities prescribe the environmental quality standards for water and air with which the polluting industries must comply. The Indian Standards Institution (ISI) formulates standards for environmental management in India. "The method adopted to fix the

standards ensure that they are based on scientific and technical data and consistent with the existing institutional structure of the economy".³ Though the tolerance limits in the form of standards are fixed in the light of similar standards fixed abroad, they take into account the techno-economic feasibility of treatment techniques in India, their efficacy in terms of protection to environment, the likely damage to receiving media, and the use of receiving waters. The standards set by ISI are given below in the Appendix to this chapter.

The selection of environmental standards, however, (maximum permissible level or tolerance limit) is not convincing as it ought to incorporate information related to the damage generated by external diseconomies. The regulatory method envisages installation of Pollution control devices but does not mandate the type of technology to be adopted in achieving desired results. It only calls for achieving mandated permissible levels of effluents/emission which ensure human health and so on. Though apparently anti-pollution law is made stricter now, it is not likely by itself to achieve a significant improvement in pollu-

3. Ajit K. Dasgupta and M.N. Murthy, 'Economic Evaluation of Water Pollution Abatement: A Case Study of paper and pulp industry in India', Working Paper, August, 1983, Institute of Economic Growth, New Delhi, p. 12.

tion abatement particularly of air pollution. The major weakness of the regulatory system is the large amount of discretion and even laxity that it allows the authorities in charge of monitoring and ensuring the implementation of the law. Merely because it exists in the statute book, its implementation cannot be taken for granted as automatic. The authorities have often swung into action only after local people have strongly protested with perseverance. This is not to cast aspersions on the sincerity of the official machinery in charge of implementing the anti-pollution law. Even where the officials may be sincere, they do not have adequate staff to inspect all units, and even where they inspect, pressures operate to give a long rope to units both in terms of time and the extent to which standards are fulfilled. It is in this regard the present study takes a stand in favour of pollution tax in place of an exclusive reliance on the regulatory measures.

The Central Board has been preparing industry-wise comprehensive documents, the purpose of which is essentially to evolve the industry specific Minimal National Standards (MINAS) through evaluating cost of various levels of effluent treatment.] The modalities and procedures

followed in these documents have already been discussed in the first chapter of this thesis.

The comprehensive Industry document contains certain important points such as that the annual burden of treatment as percentage of annual turnover remains within one percent for many type of industry and crosses the upper limit of 3 percent for industries generating synthetic chemicals such as Pesticides, Pharmaceuticals and dye intermediates.

Table 3.1: Percentage of annual burden of treatment to annual turnover across various types of industries.

Type of industry	Ratio of annual burden of treatment to annual turnover (%)
(i) Sugar	0.54
(ii) Oil refinery	0.1
(iii) Man-made fibre of synthetic group	0.3
(iv) Textile Mills	1.2
(v) Fertilizer units	2.3
(vi) Fermentation group	0.5
(vii) Pesticide, Pharmaceutical dye-dye intermediates	3

Source: Central Board for the Prevention and Control of Water Pollution, Comprehensive Industry document, New Delhi, (1984).

The Central Board for the prevention and control of water pollution through the state Pollution Control Boards, have completed a countrywide inventory of the water polluting large and medium industries and the status of treatment of waste water in those units as in December 1984.

The inventory pointed out that of the 4054 industrial units surveyed in the country 1731 large and 2323 medium sized were identified as significant from the point of view of pollution. Out of 4054 industrial units 51 percent have taken appropriate measures to treat the waste water before discharge. The state like Karnataka, Gujarat and Maharashtra topped the list in setting up of effluent treatment facilities with 97 percent,⁴ 86 percent and 80 percent of the units respectively having such facilities. The other states which lagged behind are Andhra Pradesh, West Bengal, Tamil Nadu, Haryana and Uttar Pradesh. Seventy five percent of the surveyed units identified were situated in these eight states.⁵

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4. In Karnataka, against a total of 201 industrial units 274 units had taken up water pollution control measures, the proportion being 97.5 percent.
 5. Central Board for the prevention and control of Water Pollution, National Inventory of Water Polluting industry and effluent treatment plant status, Dec. 1984, New Delhi.

In India comprehensive legislation for prevention and control of air pollution for stationary sources was enacted in 1981. The act is only eight year old and it is too early to assess the impact of this law on air quality or air pollution control, etc. The State Pollution Control Boards themselves agree on the point that India has not made much headway in regard to air pollution control when compared to the water pollution control status. Thus, it is only in respect of water pollution that some control is exercised. Industries by and large have hardly installed equipment for air pollution abatement, except for raising the height of chimneys. Air pollution is still an area marked with uncertainty and latitude.

But the problems of air pollution in India have assumed serious dimension, the Bhopal Gas tragedy being a conspicuous example. Discussion with the State Board reveals that India adds every year about 4 tonnes of sulphurdioxide, 7 million tonnes of particulates, one million tonnes of carbon-monoxide, 0.5 million^{tonnes} of nitrogen oxide and 0.2 million tonnes of hydrocarbons.⁶ It is known for certain that air pollution causes a number of

6. The Karnataka State Pollution Control Board for Water Pollution Control, Bangalore.

adverse effect on health of the people living in industrial cities. An example of city suburbs like Chembur in Bombay can be referred in this context. People living in these areas suffer from a much higher incidence of disease like Chronic bronchitis, skin allergy and irritation of the eyes, etc.

The State Boards are under respective State Governments and often buckle under the pressure of industrialists and their threats that they would close down rather than bear the 'high' costs of abatement. Since the State Governments vie with each other in attracting entrepreneurs and their industries to their states, often they do not mind relaxing pollution abatement requirements in actual practice. Even in the states with a relatively good record of treatment plants being installed, industries have not been strict in actual operation, since they can save on electricity and chemical inputs needed for treatment. Government undertakings are not an exception in adopting this narrow policy, since they are under pressure to show increasing profit margins (or decrease loss). What is even more painful, even trade unions of a big industrial unit in the public sector were reported to have backed the management, when local people protested against

pollution reaching intolerable levels.⁷ The unions were told that since the undertaking was already running at loss, a further expenditure on strict compliance of law would lead to its closure and consequently to unemployment of workers.

Though India has been adopting the direct regulatory method to combat industrial pollution, the industry specific documents prepared by the Government have indicated that the conventional method by itself has proved inefficient in bringing desired results. The Government is inclined to adopt fiscal incentives as additional measures, some of which have already been adopted.

The Water (Prevention and Control of Pollution) Cess Act of 1977 provided for a levy and collection of a Cess on water consumed by industries, the rate of which varied with the amount of pollution potential involved. For example, a Cess of three-fourth of a paisa per kilo litre was levied on water used for industrial cooling, but raised to two paise per kilo litre on water consumed

7. As told by Shri Balasubramanian, a Ph D student of our Institute, who talked to a cross section of people including Union leaders on this, in the course of his study of the problem of urbanisation in an industrial town in Bhadravathi, Karnataka.

resulting in bio-degradable pollutants, and two-and-half paise per kilo litre of water where pollutants are toxic or non-bio-degradable. However, a rebate of 70 percent on the cess is allowed where treatment plants are installed for treating polluted water. No such cess is levied on the use of air resulting in polluted emissions, though there are indications that an environment cess to comprehensively deal with all types of degradation caused by industry is being thought of.⁸ Its effectiveness would depend not only on how well it is administered but also on whether the cost of penalty for non-compliance would exceed the cost of abatement. There is no indication as yet that such indeed is the intension.

Concessions or positive incentives have, however, dominated rather than fiscal discentives as a supplement to the regulatory method. For example, as against the general rate of 15 percent depreciation allowance, the general allowance on pollution control equipment was raised from 30 to 50 percent in the 1988-89 budget. This is in addition to a 25 percent Investment Allowance on new plant and machinery. In order to help in reducing congestion and overcrowding in cities, industries are exempt from the Capital Gains tax if they sell their assets and move to a new place.

8. As per a report in the Economic Times, Bombay dated 11-12-1988, p. 1.

In addition, Industrial Credit and Investment Corporation of India (ICICI) has been providing easy finance for pollution control equipment at a concessional interest rate of 11.5 percent. Almost 80 to 85 percent of the total cost of plant and equipment is covered under this financial aid.⁹

It is surprising that inspite of these liberal incentives, the performance particularly in respect of air pollution prevention leaves much to be desired, suggesting that a regulation-cum-subsidy (or incentive) method is not sufficient and needs to be backed up also by properly administered penal disincentives. The industrial circles have of course almost invariably preferred regulation to taxes as the instrument of pollution prevention, demanding also more and more concessions and subsidies for compliance. If a country has preferred regulation-cum-subsidies to taxes, it is not necessarily because the former is a better instrument; it may only reflect the power of the industrial lobby.

9. Ibid.,

APPENDIX 3.1

SELECTIVE LIST OF ENVIRONMENTAL RELATED LEGISLATION

Central Enactments

1. Water Pollution:
 - 1.1 The River Boards Act, 1956
 - 1.2 The Merchant Shipping (Amendment) Act, 1970
 - 1.3 The Water (Prevention and Control Pollution) Act, 1974
 - 1.4 The Water (Prevention and Control Pollution) Cess Act, 1977
2. Air Pollution:
 - 2.1 The Indian Boiler's Act, 1923
 - 2.2 The Factories Act, 1948
 - 2.3 The Industries (Development and Regulation) Act, 1951
 - 2.4 The Mines and Minerals (Regulation and Development) Act, 1947
 - 2.5 The Air (Prevention and Control of Pollution) Act, 1981.

State Enactments

1. Water Pollution:
 - 1.1 Orissa River Pollution Prevention Act, 1953
 - 1.2 Maharashtra Prevention of Water Pollution Act, 1969
2. Smoke Control:
 - 2.1 The Bengal Smoke Nuisance Act, 1905
 - 2.2 The Gujarat Smoke Nuisance Act, 1963
 - 2.3 The Bombay Smoke Nuisance Act, 1912

Source: The Citizen's Report, The State of India's Environment, 1984-85.

APPENDIX 3.2

TOLERANCE LIMITS FOR INDUSTRIAL EFFLUENTS DISCHARGED

Sl. No.	Parameter	Surface Water	Land for Irrigation	Marine Water	Public Sewer
1	Suspended Solids mg/L Max	100	200	100	600
2	pH Value	6.0 to 8.5	6.0 to 8.5	6.0 to 8.5	6.0 to 8.5
3	Bio-chemical Oxygen Demand (BOD) (5 days at 20° C) Max.	30.0	100.0	100.0	350.0
4	Chemical Oxygen Demand mg/L Max.	250.0	Not pre- scribed	250.0	Not pre- scribed

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Source: Indian Standard Tolerance Limits for industrial effluents,
Part I General Limits, 1982, Indian Standard Institution.

APPENDIX 3.3

AMBIENT AIR QUALITY STANDARDS

Area	Category	Concentration microgrammes per metre cube			
		SPM	SO ₂	CO	NO _x
A	Industrial and mixed use	500	120	5000	120
B	Residential and Rural	200	80	2000	80
C	Sensitive	100	30	1000	30

Note: SPM - Suspended Particulate Matters

SO₂ - Sulphur Dioxide

CO - Carbon Monoxide

NO_x - Oxide of Nitrogen