

Water Pollution : A Survey of the Existing Law and Some Suggestions

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The environment pollution problem is, in fact, a world wide one and questions are being asked everywhere about the future of mankind if such hazards are not checked without delay. It has posed the highest threat to human existence at present, though the problem of pollution of environment is as old as the emergence of *homo sapiens* on the planet and it was realized in the times of Plato 2500 years ago¹. The problem, though, is not new, but the urgency of its solution is new.

The advancement in the field of science and technology, apart from urban industrialization, has been responsible for the present crisis of environmental pollution. There are various ways in which the environment gets polluted. Water source is one of the hazards which has a direct bearing on public health. The Mediterranean Sea, widely believed to be the cradle of civilization has been made a cesspool and the situation is being worsened by modern civilization. There is the mass poisoning of fish in the Rhine, the contamination of Lake Geneva, the industrial effluents which have ruined rivers and seas in Norway, Japan and the United States and nearer home, the growing pollution of the Ganges in India as a result of the omissions from the Barauni Oil Refinery, the risks to the surrounding areas from the new Mathura Oil Refinery on the bank of the river Jamuna.

Almost everywhere the threat is becoming serious and the attention of governments is being increasingly focussed on the consequences of industrialisation. The developed countries are already affected to a large extent, and many developing countries are now facing that threat as more and more factories are coming into existence. It has been estimated that by 2000 A.D., the volume of waste water and other liquids discharged by Indian industries may reach the level of the domestic sewage flowing into the country's water

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1. See Hambro E., *The Human Environment-Stockholm and After*, *Year Book of World Affairs* 204, 206 (1974).

courses. It is only fifty percent of the collected sewage in the country today which is chemically treated before being let into the natural drainage system. The rest fifty percent mixed with wastes flows directly into the water courses, including the principal rivers from which the water supply of several towns situated downstream is arranged.

It is not the factory alone which causes impurities, there is the problem created by the dumping of human refuse into rivers and streams in various parts of the country. The Calcutta urban complex and the industrial townships in Bengal, with a population of about 25 million, dumping about 25 million kg. of human refuse every day into rivers. Bombay's problem is believed to be still worse because of the marine pollution and the overloaded sewage system. Some of the other industrial towns such as the complexes of Delhi and Kanpur are also confronted with similar problems, though on a smaller scale. Maritime pollution, that is, pollution of the seas around Bombay and Calcutta also poses a major problem. About 525 million gallons of polluted water enters the river Ganges and the Damodar river systems from the Bengal industrial complexes every day. Filtering arrangements exist there, but even after this process the water of the rivers has been found to be unfit for drinking. No wonder the fish in the seas around Bombay and Calcutta and also the waters of some of the large river systems get poisoned now and then.

The objectives of the Act

In March, 1974, the Government of India enacted the Water (Prevention and Control of Pollution) Act, 1974, the main object of which was to prevent and control water pollution, to maintain or restore wholesomeness of water for domestic, commercial, industrial and agricultural or any other legitimate use. The Act has been passed in pursuance of clause (I) of Article 252 of the Indian Constitution, in consequence with the resolutions passed by all the Houses of the legislatures of the States of Assam, Bihar, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala, Madhya Pradesh, Rajasthan, Tripura and West Bengal. Section 4 of the Act makes a provision for the constitution of the Boards for prevention and control of water pollution both at the centre and in the states. The following are the important functions which have been entrusted under section 17 of the Act to the State Boards :

- a) to plan comprehensive programme for the prevention, control or abatement of pollution of streams and wells in the State and to secure the execution thereof;
- b) to advise the state government on any matter concerning the subject;

- c) to collect and disseminate information relating this matter;
- d) to encourage, conduct and participate in investigations and research relating to this problem;
- e) to collaborate with the Central Board in organising the training of persons engaged or to be engaged in programmes and to organise mass education programmes;
- f) to inspect sewage of trade effluents, works and plants for the treatment of sewage and trade effluents and to review plans, specifications or other data relating to plants set up for the treatment of water works for the purification thereof and the system of disposal of sewage or trade effluents or in connection with the grant of any consent as required by this Act;
- g) to lay down, modify or annul effluent standards for the sewage and trade effluents and for the quality of receiving waters resulting from the discharge of effluents and to classify waters of the state;
- h) to evolve methods of utilization of sewage and suitable trade effluents in agriculture;
- i) to evolve economical and reliable methods of treatment of sewage and trade effluents, having regard to the peculiar conditions of soils, climate and water resources of different regions and more especially the prevailing flow, characteristics of water in streams and wells which render it impossible to attain even the minimum degree of dilution;
- j) to evolve efficient methods of disposal of sewage and trade effluents on land, as are necessary on account of the predominate conditions of scant stream flows that do not provide for major part of the year, the minimum degree of dilutions;
- k) to lay down standards of treatment of sewage and trade effluents to be discharged into any particular stream taking into account the minimum fair weather dilution available in that stream and the tolerance limits of pollution permissible in the water of stream, after the discharge of such effluents;
- l) to make, vary or revoke any order (i) for prevention control or abatement of discharges of water into streams or wells; and (ii) requiring any person concerned to construct new systems for the disposal of sewage and trade effluents or to modify, alter or extend any such

existing system or to adopt such remedial measures as are necessary for the purpose;

- m) to lay down effluent standards to be complied with by persons while causing discharge of sewage or sullage or both and to lay down, modify or annul effluent standards for the sewage and trade effluents;
- n) to advise the state government with respect to the location of any industry the carrying on of which is likely to pollute a stream or well;
- o) to perform such other functions as may be prescribed or as may, from time to time, be entrusted to it by the central board or the State government.

The Board, under this Act, has been authorised to establish a laboratory or laboratories to enable it to perform its functions under section 17 of the Act efficiently including the analysis of samples of water from any stream or well or of sewage or trade effluents. The Board, to achieve the above mentioned ends, has been empowered to accord consent to the intending industries for discharge of sewage or trade effluents into a stream or well. In this connection sections 24, 25, 26 and 27 of the Act give the following powers to the board :

1) *Prohibition on use of stream or well for disposal of polluting matter etc.*

Section 24 lays down that no person shall knowingly cause or permit any poisoning, noxious or polluting matter to enter into the river, stream or well nor he will allow entry of polluting matter directly or in combination with other matters so as to impede the normal flow of the water of the stream, therefore, aggravating the pollution, all the industries which are discharging or intend to discharge their effluents into any river or stream shall not do so without the prior consent of the State Board.

2) *Restrictions on new outlets and new discharges*

Every industry, under section 25 of the Act, is required to seek consent of the board for opening a new or bring into use an altered outlet for discharge of sewage and trade effluents.

3) *Provision regarding existing discharge of sewage or trade effluents*

Under section 26 of the Act, even the existing industries, local bodies and other public sector undertakings which are already discharging sewage or

trade effluents have also to seek consent of the board for continuing the discharge of the effluents into stream or well. The applicant industries are requested not to conceal any information asked for in the above application as the concealment of any relevant information or wilfully making a false statement is punishable under section 42 of the Act.

Rajasthan experience

In the State of Rajasthan, the Board, under section 17 (i) (m) of the Act, has adopted the following standards to be followed for the sewage and trade effluents :

- 1) I.S.S. 2296-1974 tolerance limits for inland surface waters subject to pollution (first revision);
- 2) I.S. 2490 (Part—I) 1974 tolerance limits for industrial effluents discharged into inland surface water Part—I General applicable limits;
- 3) I.S. 3306-1974 tolerance limits for industrial effluents discharged into public sewer (first revision).
- 4) I.S. 3307-1965 tolerance limits for industrial effluents discharged on land for irrigation purpose;
- 5) I.S. 4764-1974 tolerance limits for sewage effluents discharged into surface water (first revision).

The Rajasthan State Board has further provided availability of guidance in its office if there is any difficulty in filling up the application.

The facilities for testing the effluents and seeking advice have been made available by the Board at many places. After receipt of the application, if it is found necessary, the authorised officers of the State Board inspect the site and check up the data furnished by the applicant industries. The applicant as provided under sections 20 and 22 of the Act, is advised to allow the State Board officials to inspect and take samples, make surveys of any area, gauge, make records of flow and other characteristics of the effluent as well as of the stream in which the effluent is to be discharged.

The Act has further provided penalty in cases of contravention of the provisions of sections 24, 25, 26 of the Act. The applicant industry, local body or organisation is rendered itself liable to prosecution and punishment under sections 43, 44 and 45 of the Act.

A review of the working of the Rajasthan State Board during the year

1975-76 shows that it got 145 polluting industries inspected and analysed 150 effluent samples. The Board issued notices to 330 industries inviting their attention to the relevant provisions of the Act and advised them to submit consent applications as required under section 26 of the Act. The field staff of the Board also inspected the existing effluent treatment and disposal systems of 26 industries in connection with the grant of consent. The Board took steps to give wide publicity of the Act through newspapers, brochures, personal contacts with the individual units and arranged meeting of the representatives of industries and local bodies and others at important towns in Rajasthan. The Board received 91 applications during the year.

During the year 1975-76 it did not launch any prosecution because it was of the view that the problems of pollution should be approached by persuasion, necessary advice and guidance to the industries and local bodies as most of the industries and local bodies were not aware of the publication of the Act and its implications and the State had a limited facility of testing laboratories and consultancy services. However, during the year 1976-77, the Board launched 3 cases against the industries for violating the provisions of sections 24, 25 and 26 of the Act.

The Water (Prevention and Control of Pollution) Act, 1974 cannot be considered to be a comprehensive measure taken by the Government of India at National level. It lacks to provide the machinery for rigorous implementation of the Act for the prevention of pollution which is the urgent need of the hour.

In the United States there are two enforcement procedures requiring participation of the Secretary of the Interior, *viz.*, direct equitable relief from the courts when waste discharges violate approved state stream standards, alternatively, (2) the Secretary upon a complaint by a qualified party may institute a series of conferences and public hearings to reach a mutually satisfactory abatement programme with the delinquent firm. In case these cooperative measures fail, the Secretary can still have recourse to court action to obtain adequate abatement. Thus, any firm which violates stream standards must face court action with its attendant expenses, inconvenience and adverse publicity.

The U.S. Government has municipal construction grants, a variety of research projects, training grants, technical assistance programmes and planning grants to aid industries and cities for the development of new techniques through the expansion of the study of capital personnel and through specific assistance on special problems. In some cases these grants have been valuable to private industry because municipal plants often treat large amounts of industrial waste.

There is a Federal Water Pollution Control Administration (FWPCA) which has surveyed the cost of expenditure which would be involved in dealing with the pollution problem of the country.

The Government of India may take similar steps in the country besides some of the following suggestions.

i. Tax Incentives

The Government can help in solving the complex problem of pollution in a number of ways. One important way is the tax incentives which can be given to the industries. The following tax incentives can be given :

- a) In purchase of machines and tools;
- b) In purchase of chemicals etc.;
- c) In payment of general taxes;
- d) In payment of income tax;
- e) In payment of sales tax; and
- f) In payment of excise duty etc.

ii. Imposition of taxes

This is an important suggestion requiring political boldness of the government while dealing with this important problem. In this method the government should plan imposition of taxes on the consumer. Why not there be imposition of taxes on the consumer who uses the product? After all who benefits from this dirty water? The answer is those individuals who purchase the goods whose production generated the pollution, as well as, those individuals who "Own" inputs (capital, land or labour) that have special usefulness in producing these goods.

iii. Increase in the prices of goods

At the moment the individuals do not pay for the "external" costs which are imposed on them. The logic of economic efficiency indicates that in the long run consumers and producers of pollution creating products should pay prices which reflect the real total costs of society of producing the goods in question including the cost of abating their pollution. Thus, subject to some complicated economic qualifications the prices of pollution-producing goods should be raised enough to cover cost of controlling that pollution.

However, the government grants can reduce the costs of pollution producing goods, a nonoptical set of goods will be produced by the society.

b Subsidies

Government subsidies for industrial treatment also encourage joint treatment even where it is not technically efficient to do so.

v Imposition of service charge

Imposition of service charge by the municipality or the government is an important way in handling the grave problem of pollution in the country. In a way it would be better than many other steps.

vi Permission for residence

Environmental pollution directly results from population explosion, particularly in big cities. Moreover, there is a tendency of mobility of rural population to the big cities. It has, therefore, become extremely necessary to curb this unusual growth of population in big cities. We should follow the example of the steps taken in Moscow. In U.S.S.R. no person can reside and settle anywhere without obtaining prior permission. It is extremely difficult to get such a permit there. This helps in controlling the concentration of population at one place. This method of prescribing permit system in India, to great extent, may check the growing problem of pollution.

vii Check in the concentration of industries at one place

One of the major reasons for the environmental problem is the concentration of big industries in big cities. For example, in the cities of Bombay, Ahmedabad and Kanpur, a large number of factories have been established and still there is phenomenal development of many new industries in these big cities. If these industries are removed from the cities and are established in small places, the problem of pollution of environment will be reduced to a large extent.

ix Right to prosecution by victims

At present the right of prosecution has not been given to the victims of pollution. Facilities should be allowed to the victims and sufferers of pollution to prosecute the careless and guilty entrepreneurs in the courts.

Remedies

The water pollution problem is too complex to allow for simple solutions. The objective of water pollution Act is to improve the quality of the water in the nation's streams and rivers. The waters produced by human activity are of great concern to everyone because they affect the complicated bio-chemical process which control that quality. Determining how to preserve water quality at minimum cost in any given river basin is a complex problem, but in order to understand the most effective way to achieve pollution control it is necessary to familiarise with some of its facets.

It is gratifying to note that the water pollution control has received wide public attention but the solution to the problem, unfortunately, is not an easy one. The subtle characteristics of stream by drology, abatement of techniques and economic behaviour must be incorporated into the operation of a national pollution control system. Traditional remedies are inadequate. Tax incentives, grants, or loans to the industries should be introduced so as to make the scheme for prevention of pollution more satisfying. Expansion of municipal facilities to treat industrial water is necessary. Every effort should be made to meet the situation in an effective manner without hindering the nation's industrial progress. The anti-pollution devices have to be adopted and made mandatory. Unfortunately, civil consciousness has not progressed adequately and there is a tendency at many places to ignore the pollution hazards. More scientists and technical experts should be utilized to keep the water supplies clean and healthy. The organic wastes should be properly treated and processed. The earth's environment is common and in many regions the sources of water run across international frontiers. Each country has to take the requisite measures against pollution but coordinated international action is also called for because the problem has global aspect.