Chapter 3

EVOLUTION AND DEVELOPMENT OF AIR QUALITY CONTROL LAWS IN INDIA: AN APPRAISAL

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Traditionally, air as an integral part of nature occupied a significant place in man’s life, inviting eternal vigilance and guard. It was the dharma of each individual to protect nature. The ancient religious literature, more particularly, the Vedas, Upanishads, Smritis, and Dharmas preached a worshipful attitude towards the earth, sky, air, plants, trees and animals and advocated respect for nature and environmental harmony and conservation. It regarded air, earth, forest, fire, sun as God and Goddesses. The Panchaboothas were regarded as divine incarnations. Natural resources management including air quality management was given a prime importance in ancient India.

All the religions taught that man holds the nature in trust for God. Being just a trustee, he does not possess divine power of control over the nature. Earth has been held to be a heavenly home for all creatures. All lives, human and non-human, were considered to be of equal value and have the same right to existence. Further, it was

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1 The sanskrit word dharma means ‘righteousness’.
2 Manu VIII, p. 282.
3 It refers to the “five elements” of nature, viz., earth, air, water, fire, and ether.
7 George A. James, Ethical Perspectives on Environmental Issues in India, A.P.H. Publishing Corporation, New Delhi (1999), p.163.
considered that to achieve salvation one has to surrender himself to
know that he is part of nature in spiritual parlance8.

Earlier Legislative Attempts

The history of air quality control laws in India is a sequence of
responses to progressively identified adversities needing a legal
response, namely, the need to prevent transmission of disease
through public health or environment health legislation, to prevent
human beings from being poisoned by air through pollution-control
restrictions and the need to meet aesthetic and cultural requirements
for the built and the natural environment through protection of
buildings and landscapes9. The traditional conception was that the
surroundings that humans inhabit are for human benefit and must
be regulated accordingly10.

The Indian Penal Code, 1860 enacted during the British regime
contains an exclusive chapter11, which deals with offences affecting
public health, safety, convenience, decency and morality. Section 278
has a direct bearing on the air environment12. Sections 284, 285 and
286 specified the negligent conduct with respect to poisonous
substances, combustible matter and explosive substances.

The Oriental Gas Company Act, 1857 and the Bengal Smoke
Nuisance Act, 1905 were enacted to prevent or reduce
atmospheric/air pollution in and around Calcutta. The Bombay
Smoke Nuisance Act, 1912 was passed to check smoke nuisance in
Bombay area. Forests plays a cardinal role in maintaining and

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10 For an analysis of the traditional thinking about the environment and its philosophical roots, see
11 Ch. XIV.
12 Section 278 lays down that whoever voluntarily vitiates the atmosphere so as to make it noxious to
the health of persons in dwelling or carrying on business in the neighbourhood or passing along a
public way shall be punished with fine which may extend to Rs.500.
preserving the air quality and for preservation of forests, the Cattle Trespass Act, 1871 and Indian Forest Act, 1927 were passed.

Municipal and Public Health Acts\(^\text{13}\) on the pattern of Local Authorities Act of United Kingdom were enacted and it conferred powers on the local bodies for controlling air pollution. These Acts have treated any attempt or interference with the quality of air or anything contributing to air pollution as public nuisance and provided remedy for abating the same. But, these laws were applicable to large industrial cities and municipal towns. However, it deserves to be noted that until 1947, the problem of air pollution was not serious enough because of the low rate of population growth and lack of industrialization, except in and around a few big cities.

It is true that the legislations enacted during the pre-independence era, more particularly, the Indian Penal Code, 1860 contained some provisions for abatement of pollution. However, the only thing that was absent in these legislations was environment consciousness and hence these scattered and mutually inconsistent provisions could not be put to much use. This was for the reason that pre-independent India was not a single politic entity and there was no uniform agenda for environmental protection throughout the country and the priority for environmental conservation varied from time to time and from ruler to ruler. Though the purpose of British rule in India was not to protect the nature's wealth and people's interest in India, their model initiatives in making laws on every needed area paved the way for establishment of a formalized legal regime in the country and provided a platform for the development of environmental jurisprudence in India\(^\text{14}\).

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\(^{13}\) See Madras Public Health Act, 1939; The Travancore-Cochin Public Health Act, 1955 is also modeled on the lines of the Local Authorities Act of UK.

\(^{14}\) Pushpakumar, L., supra, n.4 at p.121.
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Constitutional Scheme on Public Health and Air Quality

In all civilized societies, the State assumes responsibility for the health and welfare of the citizens. Protection and promotion of health is the primary responsibility of every welfare State. After Independence, the Indian administration took various efforts to review, overhaul, modify and repeal the hitherto environment unfriendly laws and policies to make it in tune with the constitutional theme and vision. Right to health and public health has now come to be articulated as a facet of the right to life under Article 21, and has been legitimized as a fundamental right. Consequently, any disturbance of the basic environment element including air is regarded as hazardous to 'life' within the meaning of Article 21. Yet, the extent of the State obligation still remains as an unresolved issue. The existing attitude and practices speak volumes of the fact that State often places reliance on market conditions as an evasive attempt to escape from public health responsibility which also includes the duty to ensure safe, clean and breathe-worthy air.

The Constitution of India provides for a federal structure within the framework of Parliamentary form of Government. Part-XI of the Constitution governs the division of legislative and administrative authority between the Centre and States. Article 246 divides the subject areas for legislation into three lists, viz, Union List, State List and Concurrent List and empowers Parliament of India and the State Legislatures to enact laws as per the entries enumerated in List-1 and List-II of the seventh schedule respectively. List-III is the

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16 List I, Union List, contains 97 Entries and subjects pertaining to air environment therein include, Entry 6-Atomic energy and mineral resources necessary for its productions; Entry 14-Entering agreement with foreign countries and implementing of treaties, agreements and convention with foreign countries; Entry 29-Airways, regulation and organization of air traffic and of aerodromes; Entry 52-Industries; Entry 53-Regulation and development of oil fields and mineral oil resources; and Entry 54-Regulation of mines and mineral development.
17 List II, State List contains 66 Entries and those which relate to air environment therein include Entry 6- Public health and sanitation; Entry 10-Burials and burial grounds, cremations and cremation grounds; Entry 14-Agriculture, protection against pest and prevention of plant diseases;
Concurrent list on which the Parliament and State Legislatures can make laws. When a Central law conflicts with a State law on a concurrent subject, the Central law prevails. However, if the State law enacted subsequent to the Central law obtains the assent of the President, the State law will prevail\(^\text{19}\). The Parliament can also make laws on the residual power\(^\text{20}\), in the national interest\(^\text{21}\), on any State subject based on the consent of the State legislatures\(^\text{22}\), or to give effect to treaties and international agreements\(^\text{23}\).

Public health is listed as a State subject\(^\text{24}\) and by virtue of the power derived from Article 246(3) of the Constitution, the legislature of any State has exclusive power to legislate for that State in matters pertaining to public health. Centre can also legislate on this subject either under Article 249 or under Article 252 of the Constitution of India. Legislation can also be made by the Centre under Article 253\(^\text{25}\) to give effect to any international treaty obligation or to implement the decision taken in any international conference or convention. These provisions of the Constitution give a dominant role for the Central Government to legislate on matters pertaining to public health and air quality maintenance and control.

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18 Concurrent List contains 52 Entries and subjects therein on air environment are: Entries 17A- Forests; Entry 17B-Protection of wild animals and birds; Entry 20-Economic and social planning; Entry 20A- Population control and family planning; Entry 29-Prevention of the extension from one State to another of infecting or contagious diseases or pests affecting men, animals or plants; Entry 36- Factories; and Entry 37- Boilers.

19 Article 254 of the Constitution of India.

20 On any subject not covered by the three lists of seventh schedule, see Article 248.

21 Article 249.

22 See Article 252. Instance of such legislation is The Water (Prevention and Control of Pollution) Act, 1974.

23 See Article 253 of the Constitution. The instances of such legislation are: The Air (Prevention and Control of Pollution) Act, 1981; The Environment (Protection) Act, 1986; The National Environmental Tribunal Act, 1995. While the first two legislations above mentioned were brought in to give effect to the commitment arising from the Stockholm Declaration, 1972, the third one was enacted to give effect to the obligation arising from the Rio Declaration on Environment and Development, 1992.

24 Part-II, Entry 6 of the 7th Schedule to the Constitution of India.

25 It is also the duty of every citizen to foster respect for International law and treaty obligations as mandated by Article 51(C). India is also a signatory to the Alma-Ata Declaration of 1978 and hence it warrants greater participation and commitment to the goal of Public health at the level of both individuals and the government.
The socialistic framework\textsuperscript{26} of the Constitution articulates that public policy decisions must enable the society to maximize social gain and not private profit. This framework also envisages a catalytic role for the State in the social and economic transformation of the country. Since June 1991, there has been a tilt in economic policy towards liberalization and globalization\textsuperscript{27} and the above trends continue even today, clearing the path for its continued existence at least for some more time. The importance of sustainable development is also being stressed in such a context as an objective of such public policy. Rio Declaration and the shift in economic policy has led the Government of India to re-examine the command and control (CAC) type of regulatory regime for environmental protection and to explore the feasibility of combining regulatory instruments along with economic instruments for controlling environmental pollution\textsuperscript{28}.

**Directive Principles of State Policy**

The Constitution of India provides for a number of Directive Principles of State Policy which are included in Part-IV and by virtue of operation of Articles 39(b)\textsuperscript{29}, 47\textsuperscript{30}, 48\textsuperscript{31}, and 49\textsuperscript{32} it made a feeling of reference to environment, but only indirectly\textsuperscript{33}. The characteristic feature of the Directive Principles of State Policy is that they are “fundamental in the governance of the country”\textsuperscript{34} and thus, it is the

\textsuperscript{26} The 42\textsuperscript{nd} Amendment Act of 1976 included the word ‘socialism’ in the preamble to the Constitution of India.

\textsuperscript{27} It is pointed out that globalization has resulted in the marketing of the Indian culture and civilization, see Goel, M.M., Environmental Implications of Globalization for India” in Anju Kohli et al., (Eds.) Management of Environmental Pollution, Book Enclave, Jaipur (2003) at p.17.


\textsuperscript{29} Article 39(b) reads: “that the ownership and control of the material resources of the community are so distributed as best to subserve the common good”

\textsuperscript{30} Article 47 is worded as follows: “The State shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties and, in particular, the State shall endeavour to bring about prohibition of the consumption except for medicinal purposes of intoxicating drinks and drugs which are injurious to health”.

\textsuperscript{31} It deals with organization of agriculture and animal husbandry.

\textsuperscript{32} Article 49 provides for protection of monuments and places and objects of national importance from spoliation, disfigurement, destruction, removal, disposal or export, as the case may be.

\textsuperscript{33} It invited staunch criticism from constitutional commentators, like Upendra Baxi who expressed the view that Constitution of India was “environmentally blind”.

\textsuperscript{34} See Article 37 of the Constitution of India.
duty of all the organs of the State including the judiciary to apply it while making the laws. It also means that if any action is taken in violation of the Directive Principles of State Policy enshrined in Part IV of the Constitution, the same can be declared as unconstitutional by the courts.

These Directive Principles, however, did not prescribe a uniform and comprehensive national agenda to protect and conserve the environment and its resources in its totality. This flaw in constitutional legislation remained without remedy at least for some time leaving no chance for the judiciary too to legislate in this arena, until the passing of the constitutional amendments.

Constitutional Amendments

The Constitution of India was amended in 1976 to incorporate two vital provisions on environment. Article 48A was inserted into Part-IV making environment protection as part of Directive Principles of State Policy and Article 51A(g) was incorporated casting a duty on the citizens to preserve and protect the environment. This was a significant leap forward in the scheme of environmental management in India. These provisions operate in aid of the State obligation in the arena of constitutional environmentalism. A significant aspect of Article 48A and 51A(g) is that State and its citizens shall not only protect the environment but also improve it. This duty to protect and improve the environment is based on the "doctrine of public trust".

37 The Constitution (Forty Second Amendment) Act, 1976 which came into force with effect from January 3, 1977.
38 It is often argued that if Directive Principles were absent in the Constitution it would not have made any difference because economic justice and public welfare could have been realized through fundamental rights read together with restrictions. For details of this proposition, see Seervai, H.M., Constitutional Law of India, Vol.II, Tripathi, Bombay(4th edn.,1993), pp.1932-1945.
39 Seervai, H.M., Constitutional Law of India: A Critical Commentary, Tripathi, Bombay(1993), p.2019. Contextually, it may be noted that Swiss, Greek, Sri Lanka, China and some other European
Article 48A mandated the State to make new laws and policies for the protection of environment. Placing reliance on this provision and the principle of ‘right to life’ under Article 21, several public interest litigations were filed in 1980s by citizens asserting their environmental rights and a substantial number of such cases expressly dealt with air quality conservation and control.

The Constitution 42nd Amendment Act, 1976 also inserted a new entry “population control and family planning” into the concurrent list, while “forests” and “protection of wild animals and birds” were moved to the Concurrent List from the State List enabling both Parliament and State Legislatures to enact suitable laws on the above subjects.

Sixteen years later, another revolutionary measure became adopted in the Constitution by adding Part IX and IX-A into the Constitution through the 73rd and 74th Constitutional Amendments in 1992 to give constitutional sanction to democracy at the grassroot levels through Panchayats and Municipalities. By and through it, the local bodies were assigned with the power to perform various environmental and public health functions as enumerated in Eleventh and Twelfth Schedule of the Constitution. This was indeed a right step in the right direction and the accomplishment of a long felt necessity, as though many entries in the three lists dealt with location-specific subject which generally fall under the jurisdiction of local bodies, viz, municipalities and panchayats, they were not given necessary powers to deal with these subjects. Article 40 provided the
constitutional sanction\footnote{It reads thus: "The State shall take steps to organise Village Panchayats and endow them with such powers and authority as may be necessary to enable them to function as units of self-government".} for such an innovative step. With the 73\textsuperscript{rd} and 74\textsuperscript{th} Constitutional Amendments taking legislative teeth, the local bodies are now made well equipped to function as effective instruments in preserving air quality and in preventing and controlling air pollution.

Now under the new environmental jurisprudence and constitutional environmentalism, the State is under a positive obligation to ensure clean and healthy environment for enjoyment of life of every individual\footnote{Bhaskar Kumar Chakravarty, “Environmentalism: Indian Constitution and Judiciary”, 48 J.I.L.I. (2006)99 at p.103.}. In the context of expanding horizons of human rights, right to life, liberty, public health, fresh and unpolluted air and surroundings are guaranteed by the Constitution under Articles 21, 39(e), 41A, 47, 48A, and 51A(g). Thus, it is the duty of the State to take effective steps to protect these constitutional rights\footnote{Charan Lal Sahu v. Union of India, (1990) 1 S.C.C. 613 at p.717. see also F.K. Hussain v. Union of India, A.I.R. 1990 Ker. 321 at p.323; Subhash Kumar v. State of Bihar, (1991) 1 S.C.C. 598 at p.604; Virender Gaur v. State of Haryana, (1995) 2 S.C.C. 577.}.  

Role of Five-Year Plans and Air Quality Management

The planning process in India responded to the problem of environmental protection at a snail's pace. It was only in the Fourth Five Year Plan that the necessity of introducing environmental considerations into the planning process was felt necessary and articulated\footnote{The Fourth Five Year Plan stated: "It is necessary, therefore, to introduce the environmental aspect into our planning and development. Along with effective conservation and rational use of natural resources, protection and improvement of human environment is vital for national well-being", see Fourth Five Year Plan, 1969-74, Planning Commission, Government of India, Ch.2.}. By that time, the deterioration in the external environment had continuously shown a consistently rising tendency\footnote{For an analytical comment on the issue, see Gupta, S.P., Planning and Development in India: A Critique, Allied Publishers, New Delhi (1989), p.62; Satyanarayan, B., Growth, Industrialization and New Economic Reforms in India, Concept Publishing House, New Delhi (2000), p.14, World}. The Fifth Plan (1974-79) stressed the need for
environmental protection while pursuing development. The Sixth Plan (1980-85) devoted a complete section to “Ecology and Environment” and called for a bold and new approach to development based on techno-environmental and socio-economic evaluation of each development project. The Seventh, Eighth, and Ninth Plans also emphasized the need for environmental planning.

The Tenth Plan (2002-2007) proposed vital environmental strategies for achieving sustainable development by using certain key indicators\(^5^1\). The Eleventh Plan (2007-2012) lays emphasis on protection of environment as part of sustainable growth strategy and envisages measures for improvement of air quality and for controlling vehicular emissions\(^5^2\). The responsibility for enforcing environmental laws is proposed to be shared with States to broadenbase the enforcement effort. There is also proposal to strengthen the enforcement strategy based on polluter-pays principle\(^5^3\). Indian Five Year Plans have also stressed goals such as balanced regional development.

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\(^5^1\) They are i) encouraging multistakeholder participatory process involving effective exchange of information; ii) supplementing command and control regime with market based economic instruments and evolving environmental markets at least on experimental basis; iii) evolving methodologies and apparatus for indicators/indices of sustainability, monitoring process assigning responsibility, incentives and accountability; iv) promoting sustainable consumption levels and patterns through effective classification and awareness programmes; v) promoting sustainable production, transportation, clean technology, waste minimization, renewable energy, and energy efficiency; vi) institutionalizing cross-sectoral and inter-disciplinary research and transparency in decision-making; vii) professionalizing Pollution Control Boards with built-in accountability, etc. For details, see Srikanta K. Panigrahi, “Environment Protection and The Tenth Plan”, Yojana (Jan. 2003), pp.37-42.

\(^5^2\) The planned measures for improvement of air quality include determination of status and trend in ambient air quality and consequent parameters like benzene and polyaromatic hydrocarbons, assessment of health hazard and damage to materials, development of preventive and corrective measures and understanding the natural cleansing process. As part of measures designed to control vehicular emissions, it is proposed to have uniform fuel quality and emission standards across the country and to discourage the use of diesel in private vehicles and to impose higher annual tax on personal transport. Details of the priorities fixed by the Eleventh Plan in respect of improvement of air quality is available at http://planningcommission.nic.in/plans, visited on May 15, 2009.

\(^5^3\) Ibid.
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Pitamber Pant and Tiwari Committees

Little before the Stockholm Conference, 1972, the Pitamber Pant Committee was set up by the Government of India to prepare a report on the state of environment in India. Based on its recommendations, a National Committee on Environmental Planning and Co-ordination (NCEPC) was constituted by Government of India in the same year itself within the Department of Science and Technology to plan and co-ordinate environmental programmes and policies and advise various Ministries on environmental protection. In 1980, a high powered committee headed by N.D. Tiwari was constituted which *inter alia* recommended a series of legal and administrative measures\(^{54}\) for environmental protection, the prominent of which was the insertion of a new entry on “Environmental Protection” in the Concurrent list to enable the Parliament to legislate on environmental matters and the need for the proper management of the country’s natural resources in order to conserve the nation’s ecological base\(^{55}\). Unfortunately, even after three decades have passed by, the above laudable suggestions are yet to see the light of the day\(^{56}\). It requires to be stated that Tiwari Committee gave swelling stress on the need for laws to abate pollution with administrative machinery to implement them, but

\(^{54}\) Its other major recommendations were creation of a comprehensive environmental code to cover all types of pollution and environmental degradation; constitution of Environment Courts in all District headquarters and the appointment of experts to assist the court; creation of a Department of Environment, setting up of a Central Land Commission; provision of economic incentives to industries to encourage use of environment friendly products, income tax and sales tax benefits for adopting clean technology, investment tax credits for purchases of purification devices, inclusion of replacement cost of purification equipment in annual operating costs, and minimal tax or no tax on the manufacture of pollution control devices; insisting environmental impact assessment (EIA) as a pre-requisite for industry to start, and to be repeated periodically.

\(^{55}\) Report of the Tiwari Committee for Recommending Administrative Measures and Legislative Machinery for Ensuring Environmental Protection (1980), Government of India, Department of Science and Technology, New Delhi.

\(^{56}\) But it is worth noting that some other suggestions of the Tiwari Committee stands implemented, which were not difficult for the Government to implement. The Government had constituted the Department of Environment in 1980, which was transferred to the newly created Ministry of Environment and Forests (MoEF) in 1985. It had also set up the Land Commission. Fiscal incentives such as rebates on excise/customs duties for pollution control equipments, accelerated depreciation allowance on selected pollution control equipments, financial and technical assistance to small scale units in industrial clusters to set up air pollution control devices were also insisted. EIA was made mandatory for highly polluting industries since 1994.

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neglected the preventive measures. The problems created by cottage and small scale industries were also totally neglected by Tiwari Committee.

It is worthy to be mentioned that Stockholm has marked water shed in environmental conservation movement as well as in the development of environmental regulations in India. It recognized man as the creator and molder of his environment and therefore emphasized that natural and man—made environment as essential to his well—being and to the enjoyment of basic human rights including the right to life. Therefore, it mandated all the countries to approach environmental problems with a new vigor by enacting fresh laws and policies in their countries. India also responded to this clarion call by enacting special legislations and by revising/upgrading existing ones.

**Air Quality Preservation and Air Pollution Control Laws**

Threat to public health is generated from air pollution and air quality degradation. The legal mechanism in India to control air pollution and to preserve air quality exists under four categories, namely, crime, tort, statutory regulations and the fundamental right to protect environment. However, the earlier legislative attempts towards environment protection and management were piecemeal and inadequate. They were outdated, lacked statements of explicit policy objectives, mutually inconsistent, did not contain provisions for helping the implementing machinery and envisaged no procedure for reviewing the efficacy of laws. But after Stockholm, Indian

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Parliament began to enact comprehensive environmental laws and the Central Government came out with various environmental policies, especially to meet the problems posed by industrial activities.

Legislations on Air quality control can be classified under two different heads, i) those laws dealing with Air quality preservation; and ii) those dealing with Air pollution control.

i) Air Quality Preservation Laws

Air quality preservation laws as now in force in the country are:

a) Wildlife (Protection) Act, 1972;
b) The Forest (Conservation) Act, 1980;
c) The Protection of Plant Varieties and Farmers’ Rights Act, 2001;

(a) Wildlife (Protection) Act, 1972

The Act provides for the protection of wild animals, birds and plants and constitutes authorities such as Director of Wildlife Preservation, Wildlife Wardens, and Wildlife Advisory Boards for that purpose. According to the Act, wildlife means and includes any animal, bees, butterflies, crustacean, fish and moths and aqua or land vegetation, which form part of any habitat. The Act was amended twice in 1986 and 1991 respectively and by which, it prohibited all kinds of trade of wild animals and animal articles.

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(b) The Forest (Conservation) Act, 1980

It is a significant piece of legislation that seeks to conserve forests from any sort of developmental activity. The underlying spirit of the Act is that it prohibits the use of forest land for any non-forest purpose, except with the prior approval of the Central Government. 'Non-forest purpose' means breaking up or clearing of any forest land for cultivation of tea, coffee, spices, rubber, palms, oil-bearing plants, horticulture crops or medicinal plants and any purpose other than reforestation.

(c) The Protection of Plant Varieties and Farmers’ Rights Act, 2001 and (d) The Biological Diversity Act, 2002

These legislations contain as their cardinal principles, provisions to conserve and protect the plant genetic resources and biological diversity which are vital to air environment. The rights of the farmers and plant breeders are recognized by the Protection of Plant Varieties and Farmers’ Right Act and they are encouraged to develop new varieties of plants. However, the ramifications of the law on local farming communities and their relationship with plant genetic resources are yet to be fully fathomed. The Biological Diversity Act, 2002 is the result of recognition of the ideal that biological diversity is the basis of continuous evolution of life forms and hence necessary for maintaining the life sustaining systems of the biosphere. The dependence of human beings on biodiversity is undoubted especially in matters pertaining to health and other needs of the everyday life.

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(ii) Legislation on Air Pollution Control

The legislations enacted from time to time which have a bearing on air quality and air pollution control are generally the Air (Prevention and Control of Pollution) Act, 1981, The Environment (Protection) Act, 1986; the Public Liability Insurance Act, 1991; the National Environmental Tribunal Act, 1995 and the National Environmental Appellate Authority Act, 1997.

(a) The Air (Prevention and Control of Pollution) Act, 1981

The Air Act was enacted principally for the purpose of prevention, control and abatement of air pollution. Central Pollution Control Board and State Pollution Control Boards are envisaged by the Act. For the purpose of the Air Act, the Boards constituted under the Water Act, 1974 shall be the Boards for the preservation and control of air pollution. The main characteristic feature of the Act is that it provides for declaration of air pollution control areas and envisages a mechanism for consent for establishing or operating any industrial activity in an air pollution control area. State Governments are given the power to declare air pollution control areas. Consent of the State Pollution Control Board is required to establish or operate any industry in an air pollution control area. Similarly, State Pollution Control Boards can launch prosecutions against the industries violating the conditions laid down in the consent orders or other provisions of the Act. The Act was amended in 1987 by which, it empowered the citizens to file cases against polluting industries after giving 60 days notice to the State Pollution Control Board. The emerging position even after the Air Act Amendment is that provisions could be manipulated to the advantage of the polluters.

65 The Air (Prevention and Control) of Pollution Act, 1981, Ss. 3 and 4.
66 Id. S.19.
67 Id. S.21.
68 Id. S.43.
69 Chandrasekharan Pillai, K.N., "Criminal Sanctions and Enforcement of Environmental Sanctions".
(b) The Environment (Protection) Act, 1986

This enactment was the response to a widely felt need for a general legislation for environmental protection. The notable feature of the Act is that it empowers the Central Government to take all measures necessary to protect and improve the environment. It is a comprehensive legislation covering not only industrial pollution, but all aspects of environmental degradation including degradation to the air environment. It does not create any permanent authority like Pollution Control Boards, as in the case of the Air Act. Central Government is given sweeping powers to take all measures deemed necessary or expedient for the purpose of protecting and improving the quality of the environment and preventing, controlling and abating environmental pollution. It is also given the power to lay down standards for the quality of the environment in its various aspects and to lay down standards for emission or discharge of environmental pollutants from various sources.

The Act also gives other powers such as restriction of areas for location of industries, laying down procedures and safeguards for prevention of accidents and for the handling of hazardous substances, examination of manufacturing process likely to cause pollution, carrying out and sponsoring investigations and research relating to pollution, inspection of premises, establishment/ recognition of environmental laboratories, collection and dissemination of information in respect of pollution, preparation of...
manuals, codes and guides relating to prevention, control and abatement of pollution, etc. The Central Government is also empowered to constitute authority/authorities for the purpose of exercising and performing the powers and functions of the Central Government and for taking measures with respect to matters referred to in Section 3(2) of the Act. The Act also gives powers to the Central Government to make rules or notifications or in connection with creation of any authority to deal with specific environmental problems in the country. Some of the Notifications and Rules made under the Act are Hazardous Wastes (Management and Handling) Rules, 1989; Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989; the Bio-Medical Waste (Management and Handling) Rules 1989; Coastal Regulation Zone Notification, 1991; the Scheme of Labeling of Environment Friendly Products (Eco-marks) 1992; the Notification on Environmental Statement 1992; the Notification on Environmental Impact Assessment 1994; the Notification on Public Hearing 1997; the Recycled Plastics Manufacture and Usage Rules 1999; the Notification on Dumping and Disposal of Fly-ash 1999; the Noise Pollution (Regulation and Control) Rules, 2000; Municipal Solid Waste (Management and Handling) Rules, 2000 etc. These are other rule making attempts intended to complement the provisions of the basic enactment.

But there are several left areas in the Act. The definition of 'environmental pollutant' in the Act does not include heat energy,

74 Id. S.3(2)(v) to 3(2)(xv).
75 Id. S.3(3).
76 Id. S.6. The power to make rules to regulate environmental pollution conferred by Section 6 also relates to the standards of quality of air, the maximum allowable limits of concentration of various environmental pollutants including noise for different areas. The Environment(Protection) Rules, 1986 also inter alia provide for the standards of quality of air and the maximum allowable limits of concentration of various environmental pollutants(including noise) for different areas.
80 It came into force on February 14, 2000.
sound and nuclear radiation or even pollution caused by deforestation and unrestricted development. There is absence of a suitable entry in the concurrent list of the Constitution in respect of environmental pollution by specially referring to air, prevention of hazards to human beings, other living creatures, plants, microorganism and property.

(c) The Public Liability Insurance Act, 1991

This Act was enacted to provide for public liability insurance as immediate relief to the public affected by accidents occurring during the course of handling hazardous substances. The owner of the industry is obliged to compensate the victims irrespective of any negligence or default on their part. Where any death or injury has occurred to any person, other than a workman, or any damage to any property has resulted from an accident, the owner will be liable to give relief as specified in the Schedule. The maximum compensation for injury or death is Rs. 25,000/- and the compensation in respect of any damage to private property is restricted to Rs. 6,000/-. 

Every industry must carry liability insurance against claims arising from potential accidents. The Act does not apply to workmen of the industry covered by the Workmen's Compensation Act, 1923.

(d) The National Environmental Tribunal Act, 1995

This Act was enacted to provide for strict liability for damages arising out of any accident occurring while handling any hazardous substance. A National Environmental Tribunal was to be set up under the Act for effective and expeditious disposal of cases arising from industrial accidents with a view to giving relief and

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compensation for damages to persons, property, and environment. Despite the passage of a long period of about 15 years, the legislative mandate has not been brought into force.

**(c) The National Environmental Appellate Authority Act, 1997**

The Act has established a National Appellate Authority to hear appeals against orders granting environmental clearance in areas where restrictions are imposed on setting up of any industry, operation or process, subject to certain suggestions as provided under the Environment (Protection) Act, 1986.

**Other Major Legislations**

Other main legislations relating to air quality protection enacted by the Parliament during this period were the Factories Act, 1948; the Mines and Minerals (Regulation and Development) Act, 1957; the Atomic Energy Act, 1962; and the Insecticides Act, 1968. The Factories Act, 1948 provides that the gases and fumes generated during a manufacturing process should be treated before their final disposal to minimize the adverse effects on air environment. Similarly, the Mines and Minerals Act, 1957, Atomic Energy Act, 1962 and Insecticides Act, 1968 also contained provisions for preservation of the air quality. However, it requires to be noted that during this period, the main focus of economic policy was on planned economic development in a mixed economy framework. Hence, the dominant policy objectives were economic growth, employment generation, balanced regional development and equity. Though disappointing, it can be safely stated that environmental considerations did not play any major role in policy making during this period.

**Environmental Policies**

In India, policies do not precede laws. The usual practice is that whenever the government is convinced that a problem persist
requiring solution, a policy will be formulated describing the strategies to solve the problem. The next step leads to enactment of a law to implement such a policy.

In India, it is the other way round. A law will be enacted first to fulfill an international commitment or to satiate the public outcry. Later, on realizing that the law does not have policy back up, a policy is hurriedly brought in to fill the vacuum. These policies are primarily the brainchild of bureaucrats leaving little scope for equitable public participation in the whole process. However, recent trends reveals otherwise.

In India, the policies pertaining to air environment are: The National Forest Policy, 1988; the Policy Statement for Abatement of Pollution, 1992; the National Conservation Strategy and Policy Statement on Environment and Development, 1992; the Wildlife Conservation Strategy, 2002; National Biodiversity Strategy and Action Plan, etc. The Policy Statement for Abatement of Pollution, 1992 issued by the Ministry of Environment and Forests in February 1992 identifies the environment problems and admits that 'the state of the environment continues to deteriorate'. It favours a mix of instruments in the form of legislation and regulation, fiscal incentives, voluntary agreements, educational programmes and information campaigns. It recommends the polluter pays principle, involvement of the public in decision making and new approaches for considering market choices 'to give industries and consumers clear signals about the cost of using environmental and natural resources'.

Of late, the National Environment Policy 2006 was evolved by the Central Government and it is intended to be a statement of India's commitment in making a positive contribution to international efforts. Environment has been defined in holistic terms as, "comprising all entities, natural or man-made, external to oneself,  

and their interrelationships, which provide value, now or perhaps in the future to humankind and environmental concerns relate to their degradation through actions of humans. The Policy envisions various strategic interventions by different public authorities at Central, State, and Local Government levels for achieving its goals.

**Judicial Activism and Public Interest Litigation**

Judicial intervention in environmental matters has changed the state of environment in our country in a significant and profound manner. It has given new rays of hope in an otherwise growing environment of cynicism and despair. Initially common law principles and the provisions of the civil and criminal laws were invoked within our legal system by treating environmental problems including air quality issues as public nuisance cases. Later, judiciary though continued using common law principles, also placed reliance on new environmental laws and policies for addressing the issue.

The human rights approach given by the apex Court to Section 133 Cr.P.C. in *Ratlam* shows how an activist court can transform a seemingly dull legislation into a powerful mandate to protect environment. Around 1980, the Indian legal system, particularly in the field of environmental legislation, underwent a sea change in terms of discarding its moribund approach and, instead, charted out new horizons of social justice.

In India, the judiciary through its dynamism and pro-activism has been adopting different approaches, forging new methods, tackling different situations, setting new goals to be achieved in its zeal to promote public health by maintaining the air quality. This can

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be seen as an attempt to reinforce the character of a welfare state. Courts have taken the consistent view that life, health and ecology have greater importance for the people and therefore, it is its legitimate duty as enforcing organs of constitutional objectives to forbid all actions of the State and of the citizens upsetting the environmental balance. Supreme Court has used several strategies to eradicate pollution, and thus provide the citizens with a healthy environment. Courts in most of the cases have been contributing to the development of law by directing the authorities to enforce the law in letter and spirit.

While explaining the scope and ambit of the fundamental duty of the citizens to “protect and improve the environment” enshrined in Article 51A(g) of the Constitution, Court has rightly interpreted that it “creates” right in favour of citizens to move the Court to see that the State performs its duties faithfully and in accordance with the law of the land. Thus, the Court while interpreting the scope of the fundamental duty, strived hard by converting and elevating it to the status of right, with a view to broaden the concept of access to justice and to encourage peoples’ response in public health and environmental issues. This is an instance of a progressive interpretation towards the problems having their roots in social milieu, which cannot be ignored. As a result, environmental jurisprudence in India has grown steadily and it displays the story of judicial response to citizens’ complaints against environmental degradation and administrative sloth.

95 Shyam Divan and Armin Rosencranz, supra,n.87 at p.1.
It is a constitutional reality that judicial process is also ‘state action’ under Article 37 and hence the judiciary is bound to apply the directive principles while rendering the judgments. In fact, now the directive principles have been raised to the level of inalienable fundamental human rights and even made justiciable. It has been held that when the Court is called upon to give effect to the directive principles and fundamental duties, the “Court is not to shrug its shoulders and say that priorities are a matter of policy and so it is a matter for the policy making authority. The least the Court may do is to examine whether appropriate considerations are born in mind and irrelevancies excluded.” Thus, it is clear that the Court is competent to give necessary directions in cases where the problem of air pollution or air quality degradation assumes public health proportions and that it shall not shy away from performing the above constitutional responsibility when situations warrant.

The judiciary in India has interpreted the “right to life and personal liberty” in Article 21 as including within its ambit right to protection of public health, right to live in healthy and clean environment, right against pollution and right to pollution-free air and this right has been extended to the neighborhood also. The concept of expanding the reach and ambit of fundamental rights by judicial interpretation enabled the court to expand Article 21 in such a way that the non-justiciable directives contained in Article 48A got resurrected as enforceable fundamental right, in a manner beyond the comprehension of the makers of the Constitution.
means that for all purposes the directives contained in Article 48A have been raised to the status of fundamental right\textsuperscript{102} enforceable through the writ mechanism.

The concept of Public Interest Litigation propounded by the US Supreme Court in the 1970s was safely implanted in our legacy in the 1980s. This mechanism was utilized by individuals, social workers, NGOs and Advocates to fight against various social maladies including those pertaining to air quality and other forms of environmental degradation. Through the magical wand of judicial activism, courts have encouraged the mechanism in several ways profusely and prominently\textsuperscript{103}. PIL is primarily a judiciary-led and even to some extent judiciary induced and a product of juristic and judicial activism of the Supreme Court\textsuperscript{104}.

Much of the activism under the garb of PIL took its wings under Article 21 of the Constitution. The precursor was Maneka\textsuperscript{105}, wherein ‘right to life’ in Article 21 assumed new meaning and dimensions. With the above dictum, the scope of Article 21 widened and ‘life’ was interpreted as not just mere animal existence, but extends to the right to live with basic human dignity\textsuperscript{106}. Slowly, it came to be realized that right to live being the most important of all human rights implies the right to live without the deleterious invasion of pollution, environmental degradation and ecological imbalance\textsuperscript{107}, and it also means the right to live in a clean and healthy environment\textsuperscript{108}.

\textsuperscript{103} Judicial creativity led to waiving of procedural formalities, relaxing locus standi, and anybody with pro bono publico could move it.
\textsuperscript{105} In Maneka Gandhi’s case, supra, n.100, the right flowing from Article 21 was interpreted by the Supreme Court in such a manner that it can be deprived only by fair, just and reasonable procedure.
The late 80s and 90s were the golden era for environmental litigations encouraged by Public Interest Litigations to redress environmental injustice. In Subhash Kumar\textsuperscript{109}, Justice K.N. Singh of the Supreme Court specifically endorsed the view that right to life includes right to enjoyment of pollution-free air also which is required for full enjoyment of life. Right to environment was specifically recognized as falling within the ambit of the right under Article 21 in Chhetriya Pardhushan\textsuperscript{110}.

In Taj Mahal case\textsuperscript{111} the Supreme Court dealt with many foundries, chemical industries and the mathura refinery that damaged the splendour of Taj through corrosive air pollution. Court ordered local authority to establish ‘TTZ’ by creating greenbelt around Taj. Court also directed 292 hazardous industries to either switch over to natural gas as an alternate fuel or relocate. Justice Kuldip Singh held that the old concept of ‘development and ecology cannot go together’ is no longer acceptable and further opined that ‘sustainable development’ is the answer.

In Delhi Vehicular Pollution case\textsuperscript{112}, Supreme Court ordered the Delhi Transport Corporation to withdraw buses over 15 years old and directed them to switch over to CNG instead of diesel to prevent air pollution. Court also fixed a quota regime for registration of private non-commercial vehicles in the National Capital Territory.

In Godavarman\textsuperscript{113}, Supreme Court progressively interpreted forest to include even the private forest areas, as the preservation of forest is sentinel for the preservation of the air quality. In relation to seven north-eastern States, Court banned felling and transportation of trees and timber from the forest. Directions were also issued to the State Governments to the effect that no patta should be issued with

\textsuperscript{109} \textit{Subhash Kumar, supra, n.48.}

\textsuperscript{110} \textit{Chhetriya Pardhushan Mukti Sangharsh Samiti v. State of U.P., (1990) 4 S.C.C. 449 at 452.}

\textsuperscript{111} \textit{M.C. Mehta v. Union of India, A.I.R. 1997 S.C. 734.}

\textsuperscript{112} \textit{M.C. Mehta v. Union of India, A.I.R. 1999 S.C. 291.}

\textsuperscript{113} \textit{T.N. Godavarman Thirumulpad v. Union of India, (2001) 10 S.C.C. 645.}
regard to forest land to anyone on any grounds. In Banwasi,\textsuperscript{114} Supreme Court held that with regard to land that forms part of reserve forest, tribals could claim rights\textsuperscript{115}.

In Damodhar Rao,\textsuperscript{116} Court held that protection of the environment is not only the duty of the citizens but also the obligation of the State. In Lakshmipathy\textsuperscript{117} and Attakoya cases, the Court upheld the environmental rights of people over the developmental plans of respective States.

The efforts of the Court to make the city clean and hygienic is seen projected in Koolwal wherein the Court held that health, sanitation and environment falls within Article 21 conferring on the citizens the fundamental right to ask for affirmative action.

In the process of judicial activism, many new doctrines and principles were evolved and imported into our legal system such as polluter pays, precautionary, sustainable development\textsuperscript{120}, public trust\textsuperscript{121}, absolute liability\textsuperscript{122}, and inter-generational equity\textsuperscript{123}.

The judicial response to almost all public health litigations has been very positive in India. In R.R. Delvai v The Indian Overseas Bank,\textsuperscript{124} Justice Srinivasan of the Madras High Court observed thus:

"...Being aware of the limitations of legalism, the Supreme Court in the main and the High Courts to some extent for the last decade and a half did their best to bring law into the service of the poor and downtrodden under the banner of Public Interest Litigation. The range is wide enough to cover

\textsuperscript{115} The question involved in the case was as to whether Adivasis living within the forest area had any claim over the land.
\textsuperscript{116} T. Damodhar Rao, supra, n.91.
\textsuperscript{117} V. Lakshmipathy v. State of Karnataka, A.I.R. 1992 Kant. 57 at p.66.
\textsuperscript{119} L.K. Koolwal v. State, A.I.R. 1933 Raj. 2.
\textsuperscript{124} A.I.R.1991 Mad. 61 at p.69.
from bonded labour to prison conditions and from early trial to environmental protection...."

The primary concern of the Court while dealing with public health hazards or environmental related issues has been to see that the enforcement agencies, whether it is the State or any other authority, take effective steps for the enforcement of the laws. Even though it is not the function of the Courts to see the day-to-day enforcement of the law, that being the function of the executive, but because of the non-functioning of the enforcement agencies to implement the law, the Courts as of necessity had to intervene and pass orders directing the enforcement agencies to implement the law for the protection of the fundamental right of people to lead a meaningful and productive life in a healthy environment. But such exercises have always been cautious. Passing of appropriate orders by the judiciary directing the enforcement agencies requiring them to implement the law cannot be regarded as usurpation of the function of the legislature or the executive or as disturbing the theory of separation of powers.

Though Public Interest Litigation opened new vistas of environmental justice, it also led to frivolous cases and malafide actions, which made the Supreme Court to evolve guidelines to entertain Public Interest Litigations125.

It is obvious that the Court has taken quasi-legislative and quasi-administrative functions. While the judgments have been helpful in pressurizing the non-complying polluting units to comply with the legislations, in reminding the responsibilities of the enforcing agencies and also in awakening public awareness of the environmental problems, they have generated some issues for detailed examination. First, the existing information base and the capacity of the regulatory agencies for monitoring and enforcing the

125 See Subhash Kumar’s case, supra,n.48; see also Chhetriya Pradushan Mukti Sangharsh Samiti, supra, n.110.
regulations are weak. Second, the judicial process is time-consuming. For example, the writ petition relating to the Vellore Citizens Welfare case was filed in 1991 and the judgment was delivered only in 1996 with an inordinate delay of 6 years. The Court directed the Central Government to constitute an Authority under Section 3(3) of the Environment Protection (Act), 1986 before September 30, 1996 to assess the loss to the ecology in the affected areas, and to identify the individuals/families who have suffered because of the pollution to assess the compensation to be paid to the said individuals/families. This Authority was constituted only in 1998 and the assessment has not yet been completed. Even when the assessment is done, much litigation would arise at the time of disbursement of the compensation to the said individuals/families. Third, there is lack of sufficient legal expertise to deal with environmental cases particularly those involving valuation of the damages. Hence, there is a need to develop the expertise. Fourth, sometimes the judicial order is not fully obeyed by the parties concerned. At times it is found that even the Government and its agencies like Pollution Control Board (PCB), Municipal and other local bodies have been issuing directions contrary to the orders of the Court. Sometimes, the Courts may not have any scientific and technical expertise in the matter involved and it has to depend upon the findings of various Commissions and other bodies.

State of Implementation—Command and Control Regime

The Stockholm Conference on Environment and Development exerted great influence on environmental policy making leading to amendment of the Constitution, passage of important legislations such as Air (Prevention and Control of Pollution) Act, 1981 and creation of institutional mechanisms such as Central and State

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Pollution Control Boards for implementing the provisions of the Air Act. The Bhopal gas tragedy in 1984 triggered the passage of comprehensive environmental legislation, namely, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991. The new economic policy of the Indian Government initiated in 1991 favoured decentralization, de-bureaucratization and globalization. Closely on its heels, constitutional amendments were made in 1994 to facilitate devolution of powers and resources to local bodies. The Policy Statement on Pollution Abatement issued by the Central Government in 1992 pointed to the need for combining regulatory instruments with market based instruments and various supportive measures to deal with air quality protection. Of the various developments, the most salutary was the evolution of a legal framework for air quality protection.

But the implementation scenario is so deplorable that it has a telling effect on the overall air quality management in the country and it has made the legal framework without any purpose. The main reasons for this situation are the missing vision and commitment to achieve a good air quality management, lack of information and understanding of the applicable laws and policies to preserve air quality by the enforcement agencies, industrial managers and other stakeholders and the social evil of corruption rampant throughout the administrative system. Though judicial interference has kindled the state of implementation immensely and the laudable efforts of the motivated individuals and voluntary organizations have raised the hope substantially, ideal and breathe-worthy air quality still remains as an unaccomplished dream.

Many shortcomings were noticed in the enforcement and implementation of laws. This state of affairs has been to a certain extent due to swelling stress on 'command and control regime' rather than incentive based economic instruments. The legislature is quick to enact laws regulating industrial and developmental activity, but
chary to sanction enforcement budgets for its effective implementation. To make things worse, governmental agencies are reluctant to use their powers to discipline violators, which are industries, mines and polluters.

Judiciary, which remained as a mute spectator to environment problems for about three decades, was constrained to step in and has recently assumed a productive role of public educator\textsuperscript{128}, policy maker\textsuperscript{129}, and even super administrator\textsuperscript{130}.

**Air Quality Control Laws—A Critique**

(a) **Structure of Governance of the Pollution Control Boards**

In the face of the evolving rights of the common citizens, it requires an examination of the structure of governance provided in the air pollution control laws in India. Under the Air Act, Pollution Control Boards have been set up exclusively to prevent and control pollution as well as to regulate industrial activities resulting in pollution of air. These Boards are exclusively nominated bodies which have the representatives from the Governments\textsuperscript{131}, Industries, and a very marginal extent of representation from agriculture and fisheries\textsuperscript{132}. They have been empowered to advise the governments on prevention, control and abatement of pollution, conduct training programmes for the personnel involved in environmental administration, inspect emissions, lay down or modify standards of emissions and most importantly to administer the consent procedure for regulation of industrial activity in a given jurisdiction\textsuperscript{133}.

Under the Environment (Protection) Act, 1986, the Central Government has assumed to itself very comprehensive and sweeping
powers\textsuperscript{134}. Provisions similar to Section 3(1) conferring such sweeping power is perhaps found only in wartime regulations\textsuperscript{135} which conveys the legislative intention and places an obligation on the Central Government to take up environmental protection measures on a war footing\textsuperscript{136}.

(b) Citizens' Suit Provision

The crucial question remaining unanswered is what about citizens' rights? Section 19 of the Environment (Protection) Act, 1986 provides for citizens' suit provisions, which was introduced in the Air Act also at a later stage by way of an amendment made in 1988\textsuperscript{137}. The Section bars the cognizance of offence under these enactments except on a complaint made by the Central or State Governments or Pollution Control Boards or any Officer authorized by it. At the same time, a citizen has been authorized to make a complaint after giving 60 days notice to the Central Government or Pollution Control Board concerned, for the purpose of furnishing to him any statistics, accounts and such other information. However, it has been provided that they may refuse to make any such report or information, if the same is, in their opinion, against the public interest\textsuperscript{138}.

For all practical reasons, the period of 60 days provided to the Board and consequently to the industry, may mend the ways and remove the traces of statutory violations. This makes citizens' right to obtain information from the stipulated authority a farce, since it is not exercisable and merely a show of citizens' power. For these reasons, these laws have been regarded as toothless tigers, which

\textsuperscript{134} S. 3 (1) of the Act reads as follows "Subject to the provisions of this Act, the Central Government shall have the power to take all such measures as it deems necessary or expedient for the purpose of protecting and improving the quality of the environment and preventing, controlling, and abating environment pollution".

\textsuperscript{135} The Essential Commodities Act, 1955, S. 3 giving such power is an illustration of a peace-time legislation.

\textsuperscript{136} S. 3(2).

\textsuperscript{137} See Air (Prevention and Control of Pollution)Act, S.43, as introduced by the Amending Act of 1988.

\textsuperscript{138} Id. S.43(2).
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seldom punish the offending industry or authority for not providing the information to the empowered citizen\(^\text{139}\).

**(c) Sampling Provision**

Another instance of mere show of empowered citizen and providing nothing in substance is the sampling provision\(^\text{140}\). They may appear to empower the citizen to initiate action against the offending industry or authority in a court of law. Section 26(2) of the Air Act which deals with admissibility of the samples of air or emission specifies that it is admissible only if the samples are taken in compliance with law\(^\text{141}\). By this, it may so happen that a common citizen may take sample and get it analyzed, but it is not admissible in the proceedings that the citizen might initiate. This position means that he has a right to initiate an action against industry or authority engaging in pollution of air, but no right to pursue his case in court of law. This thus, makes the provision providing a right to initiate action in a court of law as nothing less than a fraud on the citizens’ rights.

**(d) Consent Procedure Regulations**

Yet another area in the Air Act leaving hardships and causing extreme prejudices is with reference to the constitution of Pollution Control Boards to administer the consent procedure to regulate industrial pollution. Boards are exclusively nominated bodies with thick governmental representation and thin representation of interest groups like industries, agriculture and no representation for the common citizenry\(^\text{142}\). In the ultimate analysis, though it may be argued that members nominated by the Governments are the representatives of the people themselves, because it is the people who elect these Governments, yet in the present day context when the

\(^\text{139}\) Shyam Diwan and Armin Rosencrantz, *supra*, n.60.


\(^\text{141}\) The procedure of taking the sample is specified in sub-sections (3)& (4) of S. 26.

\(^\text{142}\) *Id.* Ss.3-15.
Government itself run industries and when they have their representatives in the Board, there appears to be a very thin line dividing the role of the Government as an industrial entrepreneur and representative of the people, creating confusion on the roles and objectives of the Government.

(e) Consent Administration System

The system of consent administration envisaged under the Air Act is not at all transparent and befitting the requirements of time\textsuperscript{143}. Consent orders impose conditions of volume, nature, composition, temperature, rate of emission and as per the procedure insisted, they are required to be endorsed in the register. However, the register is not open to public scrutiny and the right to obtain information about so many things that affect the rights of the common man are not made available to them. Without access to information, how can a citizen be expected to participate in decision making process that affect his rights and the rights of the succeeding generations closely and comprehensively? On a closer analysis, it is discernible that there is absolutely no role conferred on the citizenry in consent administration. It is true that after 1997, some element of public hearing was introduced in the consent process by way of a notification\textsuperscript{144} making it compulsory to hold public hearing before sanctioning a project having a bearing on the local environmental resources and environmental cleanliness. Another initiative in this regard was the introduction of Environmental Impact Assessment\textsuperscript{145}. But still there is only little improvement. The way in which these processes are administered shows that there is little scope for affecting the grant of consent in a substantial manner\textsuperscript{146}. These

\textsuperscript{143} Id. S.21.
\textsuperscript{144} S.O.318 (E) dated 10 April 1997.
\textsuperscript{145} S.O. 85 (E) dated 29 January 1992.
\textsuperscript{146} For e.g., Environmental Impact Assessment(EIA) is to be done by the project promoter and at his own cost. How can one expect the expert, who is involved in preparing an EIA report to prepare a report which goes against the interests of the person who is paying for the preparation of such report, see para 4 (III) of the EIA Notification, dated 29 January 1992.
meaningless provisions makes public participation and civil society initiatives that affect common citizens closely and comprehensively mere mockery, reflecting the state of affairs—giving with one hand and taking back with the other.

**Role of Institutional Mechanisms in Air Quality Drive**

The nodal agency for implementing various legislations relating to environmental protection at the Centre is the Ministry of Environment and Forests. Besides giving directions to the Central Pollution Control Board on matters relating to prevention and control of pollution, the Ministry is responsible for designing and implementing a wide range of programmes relating to environmental protection. The whole issue of pollution prevention and control is dealt with through a combination of command and control methods as well as voluntary regulations, fiscal measures, promotion of awareness, involvement of public, etc.

As stipulated in the environmental laws and in compliance with the directions given by the Supreme Court, the Central Government has created a number of authorities for designing, implementing and monitoring its environmental programmes. At the State level, most States have set up Department of Environment and the State Pollution Control Board.

The Central Pollution Control Board and the State Pollution Control Boards are responsible for implementing legislations relating to prevention and control of pollution. Pollution arises both from point sources, for example, factories and non-point sources, for example, automobiles. Source-specific emission standards have been fixed for polluting point sources. For non-point sources, as

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147 *Annual Report of the Ministry of Environment and Forests, 1996-97* states that the focus of various programmes of the Ministry and its associated organizations aimed at prevention and control of pollution is on issues such as promotion of clean and low waste technologies, waste minimization, reuse or recycling, improvement of air quality, environmental audit, natural resource accounting, development of mass based standards, institutional and human resource development, etc.
monitoring of pollution generation is very difficult, indirect measures of pollution prevention control such as catalytic converters in automobile engine for new cars, lead-free petrol, fuel with low sulfur content, periodic inspection of vehicles etc. are being adopted. In addition, ambient standards for air have been laid down and are being regularly monitored by the Central Pollution Control Board with the support of the State Pollution Control Boards.

It is found that despite the legislative and administrative efforts and fiscal incentives for pollution control, 'ambient standards of air' continue to be routinely exceeding and in some places quality has distinctly deteriorated\textsuperscript{148}. This arises from among other things to a certain hiatus between the macro goals of the environmental policy and the micro nature of operational provisions for enforcement of the policy. Hence, though standards have been laid down for ambient air quality, actual enforcement relates mostly to source standards laid down for individual polluters, factories, transport vehicles and so on. Furthermore, the ambient and source standards are laid down independently, unrelated in terms of the volume of pollution generating activities. Hence, it is quite conceivable that the quality of the air environment could continue to deteriorate despite high degree of compliance among individual polluters. It is also possible, that the degree of compliance itself is poor; adding to the adverse effects of the policy hiatus\textsuperscript{149}. There are also problems in the determination of and enforcement of the source-specific standards, which also requires to be focused.

\textsuperscript{149} \textit{Id.}, pp.1-2.
Determination of Ambient Air Quality Standards—Prevailing Conflicts

What purports to be an 'environmental quality standard'\textsuperscript{150}, on closer examination, often actually turns out to be a public health standard, almost entirely oriented towards the protection of human welfare and neglecting the requirements of non-humans\textsuperscript{151}. The ultimate environmental quality standard is that the air or any other environmental media should not be contaminated by a level of human produced pollutants. In respect of hazardous substances, this position seems to be accepted as a longer-term objective at the regional international level under the OSPAR Convention\textsuperscript{152}.

An air quality standard should be a statement of the minimum acceptable state of air and its biological components, with a corresponding legal obligation that no deterioration below that standard should be permissible. The end point is the formulation of precise qualitative and quantitative standards for air, analogous to existing legal obligations for meeting and maintaining the quality standards.

Under Rule 3A of Environment Protection Rules, 1986, the Government of India notified on May 19, 1993 that emission or discharge of environmental pollutants from industries, operations or processes shall not exceed the relevant parameters and standards specified in schedule VI\textsuperscript{153}.

\textsuperscript{150} 'Standard' is being used in a narrow sense of a statement of precise chemical and physical parameters that determine the acceptability of a part of an environmental medium for a particular purpose. Hence, a contrast is to be drawn with an environmental quality objective, which state the general purposes for which an environmental medium is to be used, whereas environmental quality standard defines, in precisely stated parameters, what quality is needed for that purpose to be realized. For details, see Royal Commission on Environmental Pollution, Twenty-first Report, Setting Environmental Standards, Cm 4053 (1998), p.4.


\textsuperscript{153} The Environment (Protection) Rules came into force on February 16, 1987. The standards specified in the schedule came into effect on January 1, 1994.
Emission standards are of three types. The concentration based standards relate to 12 parameters including suspended particulate matter (SPM), fluoride, mercury, chloride, carbon monoxide, lead and sulphur dioxide. The concentrations are not to exceed the permissible levels specified in mg/m³. Equipment based standards for control of sulphur dioxide emissions are achieved through dispersion. Maximum stack height limits are prescribed which vary with capacity. Load/mass-based standards are prescribed for fertilizer (urea), copper, lead and zinc smelting converter, nitric acid, sulphuric acid, coke oven, oil refineries, aluminium plant and glass units. Noise standards are prescribed for automobiles, domestic appliances and construction equipments at the manufacturing stage.

The State Governments and the State Pollution Control Boards can prescribe stricter standards taking into consideration the assimilative capacity of the local environments. The Central Government can prohibit/restrict operations of industries in certain areas. The Environment (Protection) Rules, 1986\(^\text{154}\) mentions the following considerations which may be taken into account in arriving at this decision: (i) standard for quality of environment, (ii) maximum allowable limits for various pollutants, (iii) likely emission or discharge of pollutants from the industries, (iv) topographic and climatic features of the area, (v) biological diversity, (vi) environmentally compatible land use, (vii) net adverse environmental impact likely to be caused, and (viii) proximity to protected areas like ancient monument, sanctuary, national park, game reserve, closed area under Wildlife Protection Act and proximity to human settlement.

Thus, it is clear that the Central Pollution Control Board and the State Pollution Control Boards have powers of examination of such manufacturing processes, materials and substances as are likely to cause environmental pollution. The polluting industries

\(^{154}\) Id. R.S.
coming under the Air Act and Environmental (Protection) Act are required to get consent certificates from their respective State Pollution Control Boards for starting an industry or continuation of production. They are also required to submit environmental audit statements in the prescribed format to the State Pollution Control Board annually.

The above discussion would lead to certain questions arising from the criteria set to arrive at the standards and their relevance to the whole country. In the determination of standards two considerations are important: (i) the impact of the release of pollutants into the environment on human health, plant and animal life and eco-system; and (ii) the technical and economic feasibility of prevention, control and abatement of pollution. Any regulation, including imposition of standards on the polluting units, involves costs to society and these costs have to be weighed against the benefits arising from improvement in air quality. The experiences of developed countries, indicate that many including USA, initially prohibited the weighing of benefits against costs in setting of environmental standards but after a decade or so, these countries required that benefit-cost-analysis be performed for all major regulations. In USA, the standard setting exercise is a transparent process and an opportunity is given to all the parties, including the polluters, to participate in the standard determination process.

In India, the standards are determined mainly on the basis of comprehensive industry-based studies undertaken by technical institutions at the initiative of the Central Pollution Control Board. These studies provide estimates of pollution generation industry-wise, assess available abatement technologies and give tentative estimates.

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of costs of abatement for different levels of abatement. The polluting units are not given an opportunity to air their views in the matter. It is the often raised complaint from the part of the owners and managers of polluting industries that (i) the standards have been borrowed from developed western countries without assessing their relevance to Indian conditions, and (ii) standards for certain parameters have been fixed without considering the availability of least-cost abating technologies.

Another issue germinating at the implementation level is whether or not a nation-wide uniform emission standard is desirable. Critics of nation-wide uniform standards point out that the carrying capacities of different regions differ and the trade-off between environmental quality and other goals such as growth and employment also differ in different regions. At present, the Air (Prevention and Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986 give powers to the Central and State governments to restrict or prohibit certain activities in certain areas. But the rules do not permit any State government or State Pollution Control Board to lower the standards fixed by the Central Government in any region. The pollution haven argument favours uniform standards throughout the country because in the absence of such standards, State Governments may lower the standards in order to attract new industries.156

Enforcement of Air Quality Standards—Existing Issues

When the standards are the same for many industries or even when industry-specific standards are applied to all firms in the same industry, the aggregate costs of compliance with the standards will not be minimized. The reason is that the marginal abatement costs even for firms within an industry vary from firm to firm because of

156 For a discussion on this argument and its relevance to India, see Gupta, S., Environmental Policy and Federalism in India, National Institute of Public Finance and Policy, New Delhi (1996), pp.32-34.
variations in factors such as vintage of the firm, technology used, quality of input used, product mix, size of the firm, etc. When a regulatory agency puts restrictions on the process used or prescribes input-output norms or imposes other physical standards, the firms' choices in the minimization of abatement costs are constrained.

Effective enforcement of the standards involves costs to the State Pollution Control Boards. In the absence of meters which can record the quantities and concentrations of pollutants in the emissions, the State Pollution Control Boards can monitor the firms' behaviour only by inspection and sampling. The Acts provide powers to the State Pollution Control Boards to inspect the premises of the polluters and take samples in the manner prescribed. Recognized laboratories must test the air quality and report the results. When the concentrations of pollutants exceed the permissible levels, the State Pollution Control Boards can issue show cause notice. The polluting units are given an opportunity to go to the Appellate Court. Meanwhile, the State Governments can also intervene and influence the decisions of the State Pollution Control Boards. Even though the State Pollution Control Boards are autonomous bodies, the members owe their positions to the State Governments and the Boards depend on the State Governments for financial support. Many State Governments are under pressure to delay or stop proceedings against the erring units because of fear of loss of output or/and employment.

There are various reasons for the poor enforcement of the standards. Firstly, the pollution control authorities do not have reliable information regarding the quantities of emissions and their characteristics. There is information asymmetry: the polluters know more about the source, magnitude and concentration of pollutants as well as the costs of controlling pollution than the regulators. It is very difficult and perhaps there is no motivation on the part of the regulating agencies to acquire and process the information from thousands of units dispersed in their regions. Secondly, the
regulators face budget constraints. Most State Pollution Control Boards do not have adequate technical facilities and skilled manpower for monitoring the polluting units and filing charges against the units violating the standards. Thirdly, the fines are fixed in nominal terms and are independent of the extent of violation. Penalties such as imprisonment of officials, stoppage of water and electricity and closure of units can impose hardships on the affected firms, but in a weak enforcement regime with principal agent problem, collusion between regulators and regulated units are possible. Dispute settlement by going to the courts is a cumbersome process and involves considerable delays. This situation creates an opportunity to indulge in rent-seeking activities.

Until recently, the Central Pollution Control Board and the State Pollution Control Boards concentrated their efforts on enforcing compliance with the standards by large and medium size units. They have classified the units under three categories—Red, Orange and Green, in terms of their pollution intensities. They have identified 17 categories of highly polluting industries. Fiscal incentives such as rebates on customs duties/excise duties on pollution control equipments and accelerated depreciation allowances on certain investments in pollution abatement plans as well as the belief that setting up of abatement measure is the first necessary step in meeting the requirements of the State Pollution Control Boards have encouraged the units to set up the abatement measures. But the firms have an incentive to operate their plants on their own only when the net operating cost, that is, the gross operating cost less the value of products recovered is negative.

As on July 31, 1995 of the 6214 cases under the Air Act and Water Act, decisions were made on 2758 cases and 3456 cases were pending. Of the 2758 decisions, 1010 were against the Boards, 821 cases were either dismissed or withdrawn.

According to the Annual Report of the Ministry of Environment and Forests, 1997-98, out of the total number of 1351 industries belonging to the 17 categories of highly polluting industries, 1261 industries had already installed adequate pollution control facilities to comply with the stipulated standards, 125 units had been closed down and the remaining 165 were in the process of installing the requisite pollution control facilities. However, it does not mean that the 1261 industries comply with the standards. Id., p.66.
This situation points to the necessity of adhering to alternative solutions. The authorities can experiment with alternative means such as adverse publicity for non-compliance by units, higher probability of inspection or/and sampling of units with poor compliance records, or/and seeking the assistance of NGOs and other local residents in detecting the violations.\(^{159}\)

**Transition to Market—Oriented Policy Regime**

Though substantial progress has been made in India on account of the economic reforms implemented in relation to the external sector, industrial sector, fiscal sector and monetary sector, there has been only little progress in public sector reforms, administrative reforms and environmental and public health policy reforms.

Agenda 21 of the Rio Conference, the “green print” for global partnership aiming at a high quality environment and a healthy economy, stresses the need for internalizing the externalities and endorses the polluter pays principle.\(^{160}\) It also recommends that prices of scarce natural resources should reflect their scarcity values. Environmental standards are being brought into world trade agenda. Indian exporters of leather goods, textile garments, face difficulties in gaining access to the markets of developed countries because of the allegation that these products are being produced under conditions which do not meet globally recognized environmental standards. Hence, India's environmental law and policy regime must make the producers to comply with the environmental standards strictly.

\(^{159}\) In February 1991, the Ministry of Environment and Forests launched a scheme of labeling of environment friendly products with Ecomark. Under this scheme, any product which is made, used or disposed of in a way that significantly reduces the harm it would otherwise cause to the environment would be considered as environment friendly product. Many large industrial units which are desirous of exporting their products are obtaining ISO 9001 certificates to get market access to the European Union, USA and other countries.

India's pollution control regime may be seen as a "standard and regulation" regime. The command and control policies do not take into account the private information available with the polluters regarding pollution prevention and control and that they are not cost effective. The penalties for non-compliance with the standards are unrelated to the costs of compliance. However, most charge systems take into consideration both the volume of emission and concentration of pollutants in the emission. Such charge system also generates revenues to governmental agencies.

Conclusion

Social justice has been one of the cherished goals in India's socio-economic policies. The dependence of the poor on environmental resources is greater than that of the rich. Also, the poor do not have the resources to undertake pollution averting measures and to meet the health costs arising in the event of illness. Dasgupta\textsuperscript{161} has given a clear description of how the erosion of common property resources can come about 'in the wake of shifting populations and the consequent pressure on the resources, technological progress, unreflective public policies, predatory governments and thieving aristocracies'. He points to the need for increased decentralization of rural decision making but stresses on the role of Governments in providing infrastructure and credit and insurance facilities, and also in ensuring that the seat of local decisions is not usurped by the powerful. India's air quality maintenance and control regulations need a shift in approach to prevent the erosion of common property resources.