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Air Quality Management Policies and Legislation

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Abstract

Air pollution may be defined as the presence of impurities in excessive quantity and duration to cause adverse effects on plants, animals, human beings and materials. The abundantly available air on the earth is polluted because of emission of sulphur dioxide, carbon monoxide, nitrogen oxide, hydrocarbons etc., by anthropogenic activities. In this review legislation in India, international conventions, judicial responses to air pollution issues in India and setbacks are discussed.

Keywords: *Constitution, air pollution, policy*

Introduction

According to Article 51-A (g) of the Constitution of India, it shall be the duty of every citizen of India 'to protect and improve the natural environment including forests, lakes, rivers, and wild life and to have compassion for living creatures'. India has national commitment to protect and improve environment and preserve air quality.

Scale of Air Pollution

Vertical Scale	Time Scale	Level	Level of action
Height of stacks	Hours	Local	Municipal
Lower kilometres	Days	Urban	District
Troposphere	Months	Regional	State/ National
Stratosphere	Years	Continental	National/International
Atmosphere	Decades	Global	International

Basic principles of environmental laws are (i) Precautionary Principle (ii) Polluter Pays Principle.

The United Nations Conference on Environment and Development(UNCED) in Rio de Janeiro, in the year 1992, lists a number of principles of which the 15th is precautionary principle. Principle 15 'In order to protect the environment, the precautionary approach shall be widely applied according to the capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainity shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation'. The process of applying the precautionary principle must be open, informed and democratic and must include potentially affected parties. It must also involve an examination of the full range of alternatives, including no action.

Next, Polluter-Pays Principle is only a payment method designed to finance pollution control activities, it cannot guarantee efficiency or cost effectiveness in environmental protection.

Laws prior to Indian Independence are

(i) The Oriental Gas Company Act,1857
(ii) Indian Penal Code,1860
(iii) The Bengal Smoke Nuisance Act,1905
(iv) The Bombay Smoke Nuisance Act, 1905
(v) The Motor Vehicles Act,1939

Present scenario

1. The Factories Act,1948

This was the first act dealing with air pollution of independent India. It emphasizes on proper ventilation, dust, fumes and humidity related to health of labour.

2. The Mines Act,1952

Air pollution was dealt with respect to ventilation, actions to be taken in respect of inflammable and noxious gases including precautions against spontaneous combustion and underground fire.

3. The inflammable Substance Act, 1952

This act declared certain dangerously inflammable substances and regularizes with Petroleum Act, 1934.

4. The Atomic Energy Act,1962

This act look into health impact and safety from radioactive materials and control over atomic energy and radioactive substances.

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

This was the first act exclusively for the prevention, control and abatement of air pollution throughout the country. This law confers on boards, its power and functions. At United Nations Conference on the Human Environment held at Stockholm in June 1972, in which India participated, the conference decided to preserve the natural resources of earth including air quality and control of air pollution.

6. The Environment Protection Act, 1986

This law is serving as an umbrella act for various laws and rules. E.g., Notification on lead free petrol and catalytic convertors for vehicles etc.

7. Motor Vehicle Act,1988

This act imparts control of automobile emissions and also specifies vehicular emission standards.

8. The Ozone Depleting Substances(Regulation and Control) Rules,2000

India is also categorized under Montreal Protocol Regulation of production and consumption of ozone depleting substances. This act prohibits new investments with ozone depleting substances. The Ozone Cell established by Ministry of Environment and Forests (MoEF) is given the responsibilities to phase out ozone depleting substances.

9. The Municipal Solid Waste (Management & Handling)Rules, 2000

Ambient air quality monitoring is mandatory under this law.

10. The Noise Pollution(Regulation and Control) Rules,2000

In this law, noise is viewed in terms of ambient air quality standards and classified on the basis of area and time.

International Conventions and Protocols

1. Montreal Protocol on Ozone depleting substances, 1985 (India signed it on 19 June,1992)

United Nations Environment Programme (UNEP) concluded the necessity for intensive international research to monitor the ozone layer. The Vienna Convention 1985 is a framework agreement among the states to cooperate in research and scientific assessments of the ozone problem and to exchange information to adopt measures.

2. Helsinki Protocol on the Reduction of Sulphur Emissions or their transboundary fluxes, 1986

The major air pollutant sulphur emissions was resulted into a protocol to the convention on long range transboundary air pollution. 1993 was the target year for the sulphur protocol and all parties to that protocol have reached the target.

3. Sofia Protocol, 1988

This protocol was to control the emissions of Nitrogen Oxides or their transboundary fluxes. This protocol was adopted in Sofia(Bulgaria). A new tool was prepared for the reduction of nitrogen compounds including ammonia and volatile organic compounds.

4. Geneva Protocol concerning the control of Emissions of Volatile Organic
Compounds(VOCs) or their transboundary fluxes,1991.

Volatile Organic Compounds(VOCs i.e., hydrocarbons) are the second major air pollutant responsible for the formation of ground level ozone. This Protocol specifies three options for emission reduction for the member countries.

(i) 30% reduction of volatile organic compounds by 1999

(ii) Ensure by 1999 total national emissions do not exceed 1988 levels

(iii)Emissions in 1988 did not exceed the specified levels, parties may opt to stabilize at that level of emissions by 1999

5. United Nations Framework Convention on Climate Change(UNFCCC) 1992(signed by India on 1 November,1993)

"Earth Summit", held in Rio de Janeiro, 1992 in which international environmental treaty on climate change was negotiated. The aim of the treaty was to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with climate system.

6. Kyoto Protocol(Protocol to the United Nations Convention on Climate Change) 1997

After two and a half year of intense negotiations, the Kyoto Protocol was adopted in Kyoto, Japan on 11 Dec, 1997 and entered into force on 16 Febrruary,2005. This protocol places burden on developed countries which are much more responsible for Green House Gas (GHG) emissions as a result of industrial activity. By April 2012 more than 4000 projects registered under Clean

Development Mechanism, India at second amongst the 74 countries. Technology transfer and additional foreign investments in the sectors like renewable energy, energy generation, efficiency promotion and afforestation projects are the benefits to our nation. India facilitated clean technology projects with national sustainable development priorities.

7. Basel Convention, 1989

This convention dealt with transboundary movement of hazardous waste between nations. This activity indirectly counts for air pollution.

8. Stockholm Convention on Persistent Organic Pollutants(POPs)

This is a global treaty to control and reduce the use of persistent organic pollutants(POPs) which remain in the environment for long periods and are toxic to living organisms.

Judicial Aspects of Environmental Issues: Public Interest Litigations

1. Taj Trapezium Case, Agra

This case is about the corroding effect of the gleaming white marbles of Taj Mahal because of acid rain in this area as a result of air pollution. In addition to the iron foundries, ferro-alloys industries, rubber processing, lime processing, chemical industries, brick kilns, and refractory units, particularly the Mathura Refinery and Ferozabad bangles and glass industries are the sources of air pollution in this area.

The verdict of the case was all the 292 industries had to get gas connection from Gas Authority of India Limited(GAIL) or approach the Utterpradesh government for alternative location outside Taj Trapezium Zone. The Honorable Supreme Court directed the Mahajan Committee to inspect green belt development and the Taj Trapezium Zone Pollution(Prevention and Control) Authority to monitor the implementation of schemes.

2. Delhi Air Pollution Case

This case was filed under Article 21 of the constitution of India in 1985 regarding air pollution in Delhi. The petitioner challenged the in action of Delhi administration(Government of National Capital Territory of Delhi) regarding the corrosive gases allowed into the air. The Honorable Supreme Court passed orders and directions to take steps to stop vehicular pollution in Delhi which include elimination of leaded petrol, replacement of old autos, taxies and buses and strengthening the air quality monitoring.

3. Vellore Citizen Welfare Forum versus Union of India and others,1996

The Honorable Supreme Court gave verdict based on precautionary principle and polluter pays principle. The directions were that transport sector all over India to allocate CNG.

4. Noise Pollution by Firecrackers

Honorable Supreme Court issued directions to all the States and Union Territories to control noise pollution resulting from bursting of firecrackers, limiting time period, listing silence zones and creating public awareness. The rules were framed under the Environment Protection Act 1986.

5. Union Carbide Corporation versus Union of India 1992

In Union Carbide versus Union of India, review petitions under Article 137 and writ petition under Article 32 of the constitution, world's worst industrial disaster " Bhopal Gas Leak Disaster" considered to be unprecedented to its nature and magnitude where fundamental issues of constitutionality, settlement of the claims to the victims were raised.

Important Aspects

1. National Ambient Air Quality Standards(NAAQS):

The Ministry of Environment and Forests(MoEF) has notified National Ambient Air Quality Standards(NAAQS) under the Environment Protection Act 1986. Its salient features are

(i) Area classification based on land use such as residential and industrial areas.
(ii) Stringent standards for NOx and SOx in the Ecologically Sensitive Areas.
(iii) More stringent limits for lead.
(iv) Suspended Particulate Matter(SPM) replaced by fine particulate matter($PM_{2.5}$)
(v) Ozone, arsenic, benzene are added.

sensitive to air pollution. Damage to these crops give

2. Continuous Ambient Air Quality Monitoring stations are specified for industries.

3. Monitoring of heavy metals as compliance conditions.

4. Continuous Emission Monitoring System for Industries

5. Vehicular emission standards specified.

6. Promotion of low carbon transport.

7. National Noise Monitoring Program,2010.

Setbacks

Technical:

1. Laboratory facilities are inadequate for monitoring dioxins and furans.

2. Central Pollution Control Board(CPCB) is executing a nationwide program known as National Air Quality Monitoring Program(NAMP). The network consist of more than 300 operating stations covering around 125 cities all over the country.

3. Available technology is not efficient and economic to prevent and control the automobile pollution.

4. No policies are formulated for economic loss due to air pollution. No law is comprehensive.

5. Some species of plants(crops) are rise to food and economic loss.

6. Indoor air pollution are not focussed by regulatory agencies. Indoor air pollution leads to premature deaths.

Non technical:

1. Some policies are developed without considering root level situations. So, during implementation they lead to some other environmental issues.

2. People are not involved during formation of policies. They come to know only after the formation of policies.

3. Acts, laws fail during implementation. The reasons are lack of willingness of the authorities, lack of public awareness.

4. Need of composite law. Environmental laws focuses only one aspect of environmental protection at a time.

5. Most of the environmental laws are only reactive approach to Public Interest Litigations(PIL), international treaties. So, time consumption in judiciary responses is an important factor.

Conclusion

Proactive participatory is required in environmental issues.

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