

## **INTRODUCTION**

The Blue space viewed as the ethereal canopy over the earth, the moving air, the water flowing or conserved and the land on the plains and the hills that allow raising of fields, farms and forests on it are all varied forms of nature. The exploitation of environment by man is nothing new. This has increased to the maximum in the 20th century all over the world. Man exploits natural resources like ores minerals, oils, underground waters and above all plants and trees but substitutes nothing to maintain equilibrium. In the environment the various elements are measured. Their quality and quantity have been laid down which is considered to be a standard or normal ratio. The industrial growth, vehicular movements and fast urbanizing trends in the society have affected the nature's equilibrium. The ratio of the gases in the environment has got aberrations. The alarming situation may be referred to the increasing ratio of Carbon dioxide in the environment.

Air pollution is a major threat and a matter of greatest concern in the world today. Depletion of ozone layer is another big problem that the world is facing. Air is one of the most important constituents of man's environment. It is calculated that a man breathes about 22,000 times a day inhaling about 16 Kg of air by weight. Therefore clean and pure air is very essential for his health and survival. Any changes in the normal composition of the air either quantitative or qualitative that may affect adversely the living system, particularly the human life inevitably because air pollution. The problems created by air pollution need to be studied to enable one to understand the problem of air pollution. To protect the environment from air pollution which is causing serious damage to the public health and property.

One of the main objects of the study is to look into the problem posed by the gap between policy framework and present state of achievement in our country. The policy frame of this problem is to find out all sources and

elements which are responsible for causing pollution of air. Then to find out the method to eliminate the pollutants from its source and also from the atmosphere by applying various means. This means should certainly be scientific but the legal means cannot be ignored. The work being a piece on legal study would concentrate more on the legal problem and policy for controlling air pollution.

The importance of clean and pure air is known to all is very essential for the life of an individual. In change in the normal composition of air qualitatively or quantitatively initiates the process of air pollution. The initiation of this problem becomes grave when it starts affecting the living system adversely. Air is the most vital component of the biosphere without which no living organism can survive. It is this urge for survival, which leads us to trace the various sources of air pollutants.

According to Bureau of Indian Standards, IS-4167 (1980) air pollution is the presence of substances, in the ambient atmosphere generally resulting from the activity of man in sufficient concentration present for a sufficient time. It interferes with comfort, health or welfare of persons or with reasonable use or enjoyment of property. Thus, if concentration of any substance or element in air is more than a certain value, it may affect man and property, directly or indirectly and may be termed as air pollution. The meaning of pollution is limited only to outdoors i.e. ambient air.

'Air Pollution' is defined<sup>1</sup> to mean any solid, liquid or gaseous substances (including noise)<sup>2</sup> present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment. Section 2(b) defines 'air pollutant' as it means the presence in the atmosphere of any air pollutant.

Air pollution is the contamination of air by discharge of harmful substances. Air pollution can cause health problems including eyes and nose, itchy irritated throat and breathing problems. Some chemicals found in polluted

---

<sup>1</sup> Under Section 2(a) of the Air (Prevention and Control of Pollution) Act 1981.

<sup>2</sup> w.e.f 1-4-1988.

air can cause cancer, birth defects, brain and nerve damage, and long-term injury to the lungs and breathing passages in certain circumstances. Above certain concentrations and durations certain air pollutants are extremely dangerous and can cause severe injury or death. It can also damage the property, trees, lakes and animals.

Air pollution has also thinned the protective ozone layer above the earth. The bluish-green layer of ozone if disappeared, then all life on earth would disappear and the sun's ultraviolet rays would sterilize the surface of the globe, annihilating all terrestrial life. This thin filter efficiently screens out all the ultraviolet rays from the sun. Slightest damage to this layer, will inevitably and dramatically lead to rise in an all round disaster. It would lead to the ultraviolet rays to reach the earth's surface and this ground level radiation would have adverse effects on human health, damaged ecosystems and destroy all life forms.

Ozone ( $O_3$ ) is a gas that is a variety of oxygen. Ozone is the upper atmosphere, where it occurs naturally in what is known as the ozone layer, shields the earth from the sun's dangerous ultraviolet rays. However, at ground level where it is a pollutant with highly toxic effects, ozone damages human health, the environment, crops and the wide range of natural and artificial materials. Ground-level ozone can irritate the respiratory track, caused chest pain, persistent cough, an inability to take the breath and an increased susceptibility to lung infection. Ozone can damage trees and plants and reduce visibility. Ground-level ozone comes from the breakdown (oxidation) of volatile organic compounds found in solvents, vehicles and industries.

The major air pollutants are Carbon Monoxide (CO), Carbon Dioxide ( $CO_2$ ), Chlorofluorocarbons (CFC) Lead (Pb), Nitrogen Oxide ( $NO_2$ ), Sulfer Dioxide ( $SO_2$ ), Hazardous Air Pollutants, Particulate Matter and Volatile Organic Compounds ( $VOC_3$ ). Carbon monoxide, carbon dioxide and nitrogen oxide are produced by the incomplete burning of carbon-based fuels, including gasoline, oil and wood. Low concentration of CO after being inhaled can cause dizziness, headaches and fatigue; high concentrations can be fatal.  $CO_2$  if

inhaled it can be toxic in high concentrations, causing an increase in the breathing rate, unconsciousness and death. Chlorofluorocarbons (CFCs) are chemicals used in great quantities in industry, for refrigeration and air conditioning and in consumer products. CFC's when released in the air, rise into the stratosphere (a layer of atmosphere high above the earth). In the stratosphere, CFCs take part in chemical reactions that result in reduction of the stratospheric ozone layer, which protects the earth's surface from the sun. Reducing the release of CFC emissions and eliminating the production and use of ozone-destroying chemicals is very important to the earth's stratosphere, as once they are emitted into atmosphere, they will persist for several decades.

The other greenhouse gas emissions are primarily Carbon dioxide, methane and nitrous oxide. The main cause of global warming is green house gases. The naturally occurring green house gases keep the earth warm enough to be habitable. Prior to the industrial revolution, the amounts of these gases remained constant over thousand years. Another main cause of global warming is ozone depletion in outer atmosphere.

Lead is a highly toxic metal that produces a range of adverse health effects particularly in young children. Lead can cause nervous system damage and digestive problem and some lead containing chemicals cause cancer. Lead can also harm wild life. Lead can be inhaled or ingested from the source that include paint (for houses and cars), smelters, manufacture of lead batteries, fishing lures, certain parts of bullets, some ceramic ware, miniblinds, wind pipes and a few hair dye products. Nitrogen oxide and Sulfur dioxide is major contributor to smog and acid rain. It causes harm to vegetation and metals and can cause lung problems including breathing problems and permanent damage to lungs. Nitrogen oxide is produced from burning fuels, including gasoline and coal. Some industrial processes such as production of paper and smelting of metals produce sulfur dioxide.

Hazardous air pollutants are chemicals that cause serious health and environmental effects. Health effect include cancer, birth defects, nervous system problems and death due to massive accidental releases, such as disaster

that occurred in the Bhopal holocaust (1984), where more than 3000 persons died and about 2 lakh were effected by the leakage of Methyl Isocyanate (MIC) gas. Hazardous air pollutants are released by sources such as chemical plants, dry cleaners, printing plants and motor vehicles including cars, trucks and planes.

Particulate matter is any type of solid in the air in the form of smoke, dust and vapours, which can remain suspended for extended periods. Apart from reducing visibility and soiling clothing, microscopic particles in air can be breathed into lung tissue becoming lodged and causing increased respiratory disease and lung damage. According to the West Bengal Pollution Control Board Index, the ambient air quality from Haldia in the South to Siliguri in the North is unhealthy. A survey of the town in the State indicated that the air has 361 micrograms (average) of suspended particulate matter, way above 200 mark adopted by the Central Pollution Control Board as the air quality in residential areas.

From Television report<sup>3</sup> it is found that 46 percent of the urban children between the ages of four to fifteen is said to be severely effected by the air quality in the city compared to 14 percent in the rural areas. The children are finding it difficult to breathe and as a result it has been affecting their performance in the field of games and study. Another television report<sup>4</sup> stated that a large number of persons in the city of Delhi are having breathing problem together with heart problems and 40 percent of such problems have been attributed to the menacing air pollution of which vehicles are a major source. The health of a man is determined by the interplay and integration of the internal environment of man himself and external environment that surrounds him. A disease is only due to a disturbance in the delicate balance between man and his environment.

Tropospheric and stratospheric ozone depletion, aerosol scattering and absorption of solar and terrestrial radiation, green house, gas warming, rain and

---

<sup>3</sup> Zee News, June 23, 2000.

<sup>4</sup> Zee News, June 9, 2000.

precipitation quality, long range transport of air pollutants, heat island are known to be the main global air problems. Significant and sometimes devastating effects of air pollutants have been recognized on plants. Thick smog has killed more than a million trees in southern California. The visible injury symptoms on plants and leaves are tissue collapse and neurotic patterns, chlorosis, colour patterns and growth alterations.

Air pollution damage to property is a very important economic aspect of pollution. Air pollution damage to property covers a wide range corrosion of metals, soiling and eroding of building surfaces, fading of dyed materials, rubber cracking. Air pollutants have a direct or indirect effect on climate, vegetation, man and material. Research suggests that in West Bengal alone 30 lakhs patients are admitted in hospitals every year due to air pollution related diseases.<sup>5</sup> The impact of air pollution is not just persistent cough or the burning sensation in the eyes but worse, lungs are bleeding internally and victims remain unaware.

People in large cities are visiting 'Oxygen Cafes' at least some days a week to compensate for the inadequacy of oxygen in the body due to the quality of breathing air. Similarly, a man walking in the park taking deep breaths may be attempting a 'Oxygen therapy' an alternative therapy that is the newest fashion in our polluted cities today.

Pure, clean and healthy air is in reality nature's invaluable gift to mankind. We must strive to preserve our atmosphere from being polluted, because a person can survive for five weeks without food and five days without water but only five minutes without air. A need to find out the methods for implementation of the goal to prevent air pollution has become necessary. The study should be made at first to ascertain how the pollution of air has paved the way for enacting laws to prevent air pollution. Law has played effective roles in controlling and regulating.

One of the more specific problems of air pollution in the cities and towns is incessant pumping out of poisonous gases from the vehicles, which

---

<sup>5</sup> Times of India, Jan 15, 2000.

are sometimes very highly injurious to life. The problem is graver in the developed and developing cities. Vehicular pollution suffers from a remarkable lack of adequate and functionally competent normative structure. This arises out of the belief that such pollution is relatively a minor problem in developing countries like India. Increasing urbanization and industrialization, however, come hand-to-hand with atmospheric pollution. Dust fumes particulates from industrial process and vehicular traffic characterize the atmosphere in most cities in India.

Ultimately during the last two, three decade the increasing depletion of natural resources and the degradation of environmental quality evoked deep concern of mankind. For the first time in the decade of seventy of the 20<sup>th</sup> century attention of the world community was drawn towards environment in serious manner. In 1972, from June 5 to 16 under the auspices of UNO, a conference was held at Stockholm (Sweden) known as Stockholm Conference on Environment and Development. Its declaration on Action programme of the protection of Environment has awakened the mankind to undertake all possible ways and means to control the growing pollution of the mother earth, air and space or prepare to face disastrous consequences which make the very existence of life impossible in the years to come. While stressing on the qualities of life of human being the Stockholm Declaration stated that man has the fundamental right to adequate conditions of life, in a environment of quality that permits a life of dignity and well being. Further a responsibility to protect and improve the environment for present and future generation has also been imposed on every individual. The Conference has also directed the member States to make such environmental policies as to enhance their present and future development. Subsequently at the International level some developments have taken place which shall be studied at due place.

As the emission of smoke and gases from industrial activity and disposal of chemical and factory wastes in river causes pollution of environment and thereby affect the quality of life, so also excess of sound may causes disturbance to the living being leading to the interference with the right to

wholesome environment. Excess of sound, which is regarded as noise, is a type of pollution. Emission of noise causes environmental pollution whose growing menace is increasing day by day.

Law has played an effective role in controlling and regulating the human conduct. The present work looks into the aspect of the legislative measures which have been taken to curb the menace of air pollution. Since law is something which is evolved by the society to curb the social problem. The study analyses the development of law for prevention of air pollution. There is an attempt to trace laws relating to the control of air pollution from the common law principles till this date. It also attempts to study how far these laws are effective in controlling air pollution.

Chapter I of the work introduces the subject. Chapter II traces the development of the law to control air pollution from common law principles. At common law the rules of pollution control exists in the areas such as nuisance, negligence and strict liability. It consists of several heads and sub heads. It explains the concept of negligence and the degree of care, which is required in a particular situation to avoid imputation of negligence. It also deals with the origin of the principle of strict liability, the defenses to the rule and the evolution of a more stringent rule of strict liability in India i.e. the concept of absolute liability. Finally it deals with nuisance, which is most closely connected with "Protection of environment". The Private nuisance and Public nuisance have been discussed at lengths.

In pursuant to the United Nations Conference on Human Environment held in Stockholm in 1972, in which India participated, the Constitution (42<sup>nd</sup> Amendment) Act 1976 was passed. By this amendment Articles 48-A and 51-A(g) were incorporated, regarding protection of environment into the Constitution. Article 253 of the Constitution empowers Parliament to make laws implementing India's international obligations. Under third chapter the Constitutional provisions providing for the legislative competence relating to the control of air pollution is incorporated.

The right to clean air as a fundamental right has been evaluated along with the infringement of right to life by smoking which has upheld in a recent case-by the Supreme Court. The other sub-headings include noise pollution and Fundamental Right, the right for prevention of air pollution exercised under Articles 32 and 226 along with Public Interest Litigation. A number of cases decided by the Apex Court and various High Courts have been examined.

To prevent and control air pollution there has been score of legislations laying down measures to control air pollution. These legislations have been examined under chapter four. The effectiveness of the legislative provisions under the Indian Penal Code, Civil Procedure Code, Criminal Procedure Code, Easement Act, Specific Relief Act, Factories Act and other Acts have been analyzed in different sub topics.

Chapter five deals with the problem of air pollutions and the development of the special legislations to control it. This chapter also consists of work dealing with the Air (Prevention and Control of Pollution) Act 1981, the Environment Protection Act, 1986 the legislative developments to prevent vehicular pollution, the Noise Pollution Regulation and Control Rules, 2000 and the legislative measure for protection of ozone layer. These Special legislation have been studied analytically to find out their effectiveness.

In 1984 there was the world's most disastrous accident in Bhopal killing thousands and injuring lakhs of people. The problem of compensation to such large number of victims drew attention of the Parliamentarians and the Government. The quick remedy to the sufferers was the basic issue and consequently two legislations namely Public Liability Insurance Act was passed in 1991 and National Environment Tribunal Act was passed in the year 1995 for providing expeditions remedy. The focus on the authority empowered to give remedy, and nature along with the principles of liability has been dealt under chapter VI. The procedure and other incidental power of authorities under Public Liability Insurance Act and National Environment Tribunal Act 1995 have been studied. The efficacy of National Environment Appellate Authority Act 1997 has also been studied. The rules framed under the

Environment Impact Assessment Regulation 1994 have been analyzed. People participation in selecting the sites etc have been given a statutory status have been given. It shall be looked how far the public has some say in the aforesaid aspect.

The seventh chapter includes the judicial approach to the problem. In present day situation when judicial activism is at its peak, the Supreme Court has handled environmental issues in its original jurisdiction. The existing Environmental legislations have yet to see the door of the Supreme Court, as a not a single case has reached in the Court involving interpretation of the Air Act. Such ventures have been bearing fruitful results and as such could not be ignored in the larger context. Here both substantive and procedural provisions of the Constitution, namely Article 21 and Article 32, in the garb of public interest litigation has been looked into with an aim to prevent and control air pollution and the environmental pollution in general. The other approach of the court towards the control of air pollution has also been analyzed. The Supreme Court appears to be deeply concerned over the risk posed by pollutants in the environment and therefore playing a leading role to prevent and control the degradation of environment. The court has introduced a new principle of liability that is the absolute liability in the Indian soil a step ahead of the strict liability concept. The sustainable development and its elements have been recognized and implemented as part of Indian Environmental law by the Apex Court. The cases related to such issues have been cataloged, analyzed and an appraisal of such observations have been made. The judicial decisions on the air pollution issues are in fact the bulk of laws controlling the air pollution. Therefore, a detailed study has been made on such cases.

Finally the eighth and last chapter contains the conclusions of the work and some suggestions for curbing the menace of air pollution have been made.