

**PUBLIC HEALTH PROTECTION THROUGH  
AIR QUALITY CONTROLS**

*Thesis submitted to the  
Cochin University of Science and Technology  
for the award of the degree of  
Doctor of Philosophy*

*By*

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*Under the supervision of*

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**August 2009**

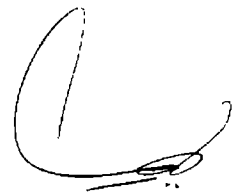
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**CERTIFICATE OF THE SUPERVISING GUIDE**

This is to certify that this thesis entitled "**Public Health Protection through Air Quality Controls**" submitted by Sri. Pauly Mathew for the Degree of Doctor of Philosophy under the faculty of law is the record of bonafide research carried out under my guidance and supervision in the School of Legal Studies, Cochin University of Science and Technology. This thesis, or any part thereof, has not been submitted elsewhere for any degree.



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## *Declaration*

I do hereby declare that the thesis entitled "**Public Health Protection through Air Quality Controls**" is the record of original work carried out by me under the guidance and supervision of Dr.D. Rajeev, Director, School of Legal Studies, Cochin University of Science and Technology. This has not been submitted either in part, or in whole, for any degree, diploma, associateship, fellowship or other similar titles or recognition at any University.

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# Certificate

Certified that the important research findings included in this thesis have been presented and described in a Research Seminar at the School of Legal Studies, Cochin University of Science and Technology on 13<sup>th</sup> February, 2009.

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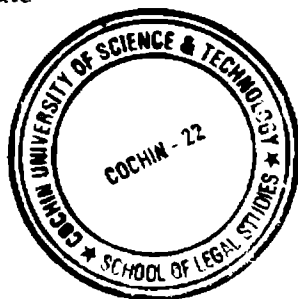


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## *Preface*

Health is an important aspect of everybody's life. Today, there is an increasing recognition and commitment to the pursuit of health both within government and beyond. Any attempt on the part of the State to protect and promote people's health, in turn, must be accompanied by effective controls on air quality, as air constitutes one of the important elements of man's life and the consequences of air pollution covers a very wide spectrum ranging from material damage to personal discomfort and illness.

The broad social and economic objectives adumbrated in the Directive Principles of State Policy including the commitment to improve public health underlying in Article 47 and the obligation to preserve and protect the natural environment cast under Article 48A of the Constitution are being used as versatile weapons by the State to regulate the public health scenario. Preservation and maintenance of air quality is a significant area within the sphere of public health, where the regulatory arm of the law is not adequately touched and in this arena urgent State intervention through legislative and administrative action is called for in the well-being of the society. Judiciary also plays a pivotal role in this arena in the larger interest of the society and for the benefit of the present and future generations.

The research study is an attempt to analyze how far the existing legal system, for maintaining air quality and in controlling air pollution, is effective in protecting public health. The study also analyzes the limitations of the control mechanisms. The study focuses on industrial air pollution, indoor and personal air pollution, vehicular pollution and noise pollution which are today appearing as the major public health hazards affecting the air quality. However, this is not to overlook the importance of controls required under other areas of public health.

The Research study comprises of nine chapters. The first is the introductory chapter. The second chapter is a conceptual overview of right to health and public health. The third chapter is an appraisal of the evolution and development of air quality control laws in India. The fourth chapter deals with control of industrial air pollution. The fifth chapter is on control of indoor and personal air pollution. The sixth chapter is the study on vehicular pollution, controls and judicial responses. The seventh chapter deals with air quality control under the noise regulations. The eighth chapter exposes the changing trends in traditional remedies. The last chapter presents the findings and suggestions.

I am beholden to my revered Supervising Guide, Dr.D.Rajeev, the Director, School of Legal Studies, Cochin University of Science and Technology, whose timely advice, supervision and help in every stage was the perennial source of inspiration and strength in my journey through the lanes and bylanes of the area of study. It was his patronage that stirred and plunged me in undertaking this endeavour. I am also extremely grateful to Professor K.N. Chandrasekharan Pillai, Dean, Faculty of Law, Cochin University of Science and Technology for his patronage, encouragement, co-operation and support. I was greatly benefited from the fruitful and effective discussion which I had with Dr.P.Leelakrishnan, Professor Emeritus and Former Dean, Faculty of Law, Cochin University of Science and Technology and I place on record my heartfelt sentiments of gratitude to him. Dr. A.M. Varkey, a senior member of the faculty at School of Legal Studies had extended me immense help by motivating me and offering valuable suggestions when circumstances warranted for completing the study and I acknowledge sincerely my indebtedness to him. Prof.N.S.Gopalakrishnan, Dr.V.S.Sebastian, Dr.Valsamma Paul, Dr.N.S.Soman, P.S. Seema and Vani Kesari, the faculty members at School of Legal Studies have also extended their patronage and co-operation which is gratefully

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I am also extremely indebted to the librarians and library staff of the School of Legal Studies Library; Cochin University Central Library; Kerala High Court Library; the Kerala Legislature Library; Medical College Library, Thiruvananthapuram; Sree Chitra Thirunal Institute for Medical Sciences and Technology Library, Thiruvananthapuram; Bangalore National Law School of India University Library and American Consulate Library, Chennai. Grateful I am to my colleagues and friends, especially Krishnakumar and Naveen, for rendering assistance to me in the completion of this work. Last but not the least, I would be failing in my duty if I don't thank Smt.Divya G. and Sri.Shabeer whose manual labour resulted in getting this work neatly typed.

**Pauly Mathew**

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# *Chapter -1*

## **INTRODUCTION**

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1. Sources of Air Quality Degradation
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## INTRODUCTION

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Everyone likes to live in a healthy and productive environment<sup>1</sup>, for it is a basic human necessity. Healthy and wholesome environment<sup>2</sup> is a nature's gift and air<sup>3</sup> is an integral component of it. The right to have living atmosphere congenial to human existence is a right to life<sup>4</sup>. Safe air quality which is part of safe environment has now come to be recognized within the ambit of right to life<sup>5</sup>. For a peaceful, quiet and healthy co-existence, it is therefore necessary that the air environment should be kept clean and pollution-free<sup>6</sup>.

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<sup>1</sup> The word 'environment' is of broad spectrum which brings within its ambit "hygienic atmosphere and ecological balance". See *Virender Gaur v. State of Haryana*, (1995) 2 S.C.C.577 at p.580, per K.Ramaswamy and N.Venkatachala, JJ.

<sup>2</sup> The concept of 'wholesome environment' was articulated as implicit part of the right under Article 21 of the Indian Constitution by regarding it as necessary for the enjoyment of quality of life in its richness and fullness and it also means pollution-free air. For a discussion of the concept, see *Subhash Kumar v. State of Bihar*, (1991) 1 S.C.C. 598; *Chhetriya Pradhushan Mukti Sangarsh Samiti v. State of U.P.*, (1990) 4 S.C.C. 449; *Consumer Education and Research Centre v. Union of India*, A.I.R.1995 S.C.922; *N.D.Jayal v. Union of India*, A.I.R.2004 S.C.867.

<sup>3</sup> Air is a mixture of various gases, particulate matter and moisture that forms the earth's atmosphere. These gases consist of nitrogen, oxygen, argon, carbon dioxide and others. It also includes trace quantities of ozone and inert gases like neon, helium, krypton, xenon, radon, water vapour, dust particles and plant spores. See *The New International Webster's Comprehensive Dictionary*, Encyclopedic Edition, Trident Press International (1996), p.30.

<sup>4</sup> *Virender Gaur*, *supra*, n.1.

<sup>5</sup> For example, see the judgment of Justice Chettur Sankaran Nair of the Kerala High Court in *P.A.Jacob v. Supdt. of Police, Kottayam*, A.I.R. 1993 Ker.1. Taking the view that exposure of unwilling persons to dangerous and disastrous levels of noise amounts to infringement of right to life, Court observed: "Right to life comprehends right to a safe environment, including safe air quality, safe from noise". *Id.*, p.9; see also the approaches of different High Courts in *Bijayananda Patra v. District Magistrate, Cuttack*, A.I.R. 2000 Ori.70; *Maulana Mufti Sayed M.N.R.Barkati v. State of West Bengal*, A.I.R.2000 Cal.15; *V.Lakshmipathy v. State of Karnataka*, A.I.R.1992 Kant. 57.

<sup>6</sup> Nelson Mandela in his speech to the UN General Assembly said: "No people could truly say they were blessed with happiness, peace and prosperity when others continued to be afflicted with misery, armed conflict, terrorism and deprivation" as cited in Mohd. Yousuf Bhat, *Environment and Human Rights*, Reference Press, Delhi (2004), p.11.

Humans, as rightly put by Virginia W. Rasumussen, are 'technological creatures' and tinkering is our habit<sup>7</sup>. Tinkering with nature is, however, not always done intelligently enough to avoid its impairment. The magnitude, comprehensiveness and speed of man's environmental intrusion have created the present critical condition to the biosphere<sup>8</sup>. The limited demands of man and his consumption patterns have made him to forget that human life is sustained by air. Ignoring the super importance of air, man is polluting his life sustaining supply as a result of massive industrialization<sup>9</sup>, urbanization, mechanization, motorization and chemicalization of agriculture etc., which have led to poisoning of the air and degradation of the air quality<sup>10</sup>. It has made the lives of the citizens not worth living. Cities, though expanding in population and size<sup>11</sup>, are now plagued with smoke, vapour, noise, suspended solid particulates, poisonous gases, acid rains, smog, haze, odours and other hazardous air pollutants<sup>12</sup>, posing a serious threat to public health and the environment<sup>13</sup>. The consequent result has been the deterioration of air quality and the threat of change in the very composition of the urban atmosphere.

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<sup>7</sup> As cited in Vid Vukasovic, "Human Rights and Environmental Issues" in Weeramentry, C.G., *Human Rights and Scientific and Technological Development*, United Nations University Press, Tokyo(1990), p.185.

<sup>8</sup> Sivakumar,S., "Environmental Protection: International and National Perspectives", [2004] C.U.L.R. 279 at p. 282.

<sup>9</sup> Industrialization has been one of the most important transformative forces in our society. Though it has improved country's economic position, it has tremendously influenced our relations with nature and is one of the main causes for urbanization. See Hans Van Raay, G.T. and Ariel E.Lugo, *Man and Environment: Natural Imbalances and Social Justice*, Rotterdam University Press (1974), p.159.

<sup>10</sup> In fact, in 1982, the General Assembly of the United Nations adopted the *World Charter for Nature*, which proclaims *inter alia* that nature shall be respected and its essential processes shall not be impaired and that the genetic viability on earth shall not be compromised. See *World Charter For Nature*, 1982.

<sup>11</sup> Singh, R.B., *Sustainable Urban Development*, Concept Publishing Co., New Delhi (2006), p.431.

<sup>12</sup> Other hazardous air pollutants also include chlorine, oleum, methyl-isocyanate, ammonia, rodenticides, pesticides, fly ash, steam, sprays, cement, asbestos etc.

<sup>13</sup> It is revealed that concentrations of air pollutants such as suspended particulate matter can be thousands of times greater in cities than in rural areas. This not only endangers human beings and animal life, but also seriously affects the vegetation on earth. For details, see Dietrich Schwela, *Public Health Implication of Urban Air Pollution in Developing Countries*: Paper presented at the 10<sup>th</sup> World Clean Air Congress, Erjos, Finland, May 28-June 2, 1995, p.1.

Human intervention is on the verge of damaging even the 'ozone layer' which is a vital protective cover of the earth. It is found that ozone level exceeds air quality standards<sup>14</sup>. Thus, air quality degradation has reached a stage that threatens to destroy not only the environment but the mankind along with it<sup>15</sup>. Robert Arvill warns about the dangers of air pollution by stating thus:

“An average person requires over thirty pounds of air a day or about six pints every minute and he has to take it as it comes. He would not readily stand in sewage or drink dirty water. Yet daily the individual draw 26,000 breaths, between 18 and 22 each minute, many of which—if not in some cases—are of filthy air”<sup>16</sup>.

With air becoming unfit to breathe, several hundreds of species of animals and birds are threatened with extinction and further more already destroyed, plant communities disrupted, forest cover shrinking, population exploding. These issues have assumed new public health, legal, social and economic dimensions making the enforcement authorities unable to combat the current challenges.

### **Sources of Air Quality Degradation**

The quality of air is becoming unbreathable-worthless everywhere. The perennial reason for it is the vehicular and industrial pollution<sup>17</sup>. The incidence of respiratory diseases among the citizens emerges higher than the All India average in the cities, due to air pollution

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<sup>14</sup> According to the *U.S. National Air Quality Emission Trend Report, 1988*, nearly 80 million people live in countries where ozone level exceed air quality standards and that 61 million breathe too much carbonmonoxide and 32.6 million share air space with too many particles. As cited in Noel Grove, “An Air of Uncertainty”, *Span*, March 1988, p.48.

<sup>15</sup> Human activities release poisonous substances into air such as lead, antimony, zinc, cadmium, copper, arsenic, uranium etc. Lead concentration alone is two million tonnes as against 6000 tonnes from natural resources. For details, see *World Watch Institute Report*, Washington, D.C. (1987), pp. 158-160.

<sup>16</sup> Arvill, R., *Man and Environment*, Penguin Books, London(1967), p.97.

<sup>17</sup> Delhi, Mumbai, Chennai, Baroda, Ahmedabad are rated amongst the worst polluted cities of the world with pollution levels fairly higher than the WHO standards, which prescribes 500 mg/m<sup>3</sup> as the maximum permissible level of air pollution in urban areas.



from these sources<sup>18</sup>. There is also the problem of air pollution emerging from indoor and personal sources. Smoke inhaled by women while cooking with wood or animal dung is found to be the world's worst air pollution problem<sup>19</sup>. This sort of domestic practice along with other forms of man-made pollution like smoking, incineration of waste (both biodegradable and non-biodegradable)<sup>20</sup> and the rising menace of noise pollution also affects the air quality and make the air environment unsuitable to live in<sup>21</sup>. As rightly described, 'India is now facing a total collapse of urban environment'<sup>22</sup>.

In many developing countries, air quality has deteriorated due to rising industrial activity, increasing power generation and the congestion of streets with poorly maintained motor vehicles that use leaded fuel. The spewing of thousands of tons of particulate and air-borne gases into atmosphere by human activities leading to 'green house effect' and 'depletion of the ozone layer' is the cause of worry everywhere. Air pollution problems as now confronted by mankind arise as the negative impact of the very process of development and also from conditions of poverty and underdevelopment.

### **Significance and Magnitude of Air Quality Deterioration**

Air is never completely pure. Natural processes<sup>23</sup> occasionally pollute it. But natural air pollution as distinct from man-made

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<sup>18</sup> *The State of India's Environment, 1982: A Citizen's Report*, Centre for Science and Environment, New Delhi (1992), p.39.

<sup>19</sup> *Id.*, p. 42.

<sup>20</sup> If solid wastes are left untreated, they would attract rodents and flies which would then spread diseases. They would also ferment slowly and produce bio-gas containing 65-75 percent methane gas which is a greenhouse gas having global warming potential 34 times more than that of carbon dioxide. Therefore, it calls for other clean technologies to address the issue of garbage and solid waste disposal. For a comprehensive analysis of the issue, see Kirit S. Parikh *et al.*, "Environment Can Neglect No Longer" *India's Development Report 1997*, Oxford University Press, Delhi, p.101.

<sup>21</sup> It is estimated that about 1.3 billion urban residents worldwide are exposed to air pollution level above recommended limits and the impact of noise on safe air quality cannot be ignored.

<sup>22</sup> *State of India's Environment, The Citizen's Fifth Report*(1999), p.207. See also Nath, "Urbanization in India", *Economic and Political Weekly*, Feb.22, 1986, p.339.

<sup>23</sup> They include volcanic eruptions, decay of vegetation, forest fires, dust storms and such other processes letting into air gases like sulphurdioxide, carbondioxide and methane, etc.

pollution is not that serious enough requiring control. The term 'air pollution' signifies the presence in the ambient<sup>24</sup> atmosphere of substances<sup>25</sup> generated by the activities of man in concentration that interfere with human health, safety or comfort, or injurious to vegetation and animals<sup>26</sup>. The phenomenon called 'man-made pollution' exists in diverse forms<sup>27</sup>. The direct effect of air pollutants on plants, animals and soil is that it can influence the structure and function of ecosystems, including its self-regulation ability, thereby affect the quality of life<sup>28</sup>. In the past, air pollution ordinarily meant smoke pollution. But, today it has become more subtle and recognizes no geographical or political boundaries and it is one of the serious present-day public health problems throughout the world.

Pollutant emission includes particulate<sup>29</sup> and gaseous<sup>30</sup>. It is found that air pollutants finding their way into the stratosphere remain stable there for about 100 years. A massive cloud of smoke and exhaust fumes which mainly consists of 200-250 tonnes of carbon monoxide, nitrogen oxide, lead oxide and other hydrocarbon

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<sup>24</sup> The term 'ambient' means surrounding.

<sup>25</sup> Substances mean gases, mixers of gases, and particulate matter.

<sup>26</sup> U.S. Department of Health and Education's definition of air pollution as cited in *Lal's Commentary on Water and Air Pollution and Environment (Protection) Law*, Delhi Law House (5<sup>th</sup> edn., 2008), p. 280. According to the definition adopted by the WHO expert committee, it means "substances put into air by the activity of mankind in concentration sufficient to cause harmful effects on health, vegetation, property or to interfere with the enjoyment of property". According to S. 2(b) of the Air (Prevention and Control of Pollution) Act, 1981, 'air pollution' means the presence in the atmosphere of any air pollutant and 'air pollutant' as per S.2(a) of the Act means any solid, liquid or gaseous substance including noise present in the atmosphere in such concentration as may or tend to be injurious to human beings or other living creatures or plants or property or environment.

<sup>27</sup> Chhatwal, G.R. et al., *Encyclopaedia of Environmental Pollution and Its Control*, Vol. I, Anmol Publications, New Delhi (1989), pp. 1-2. They are: i) Personal Air Pollution, which refers to exposure by an individual himself to pollutants such as dust, fumes and gases, as involved in the case of smoking; ii) Occupational Air Pollution, which refers to exposure of individuals to potentially harmful concentration of air pollutants in their working environment and which fall within the province of industrial hygiene and safety; and iii) Community Air Pollution, which involves a varied assessment of pollution sources, contaminants, meteorological factors and wide diversity of adverse social, economic and health effects.

<sup>28</sup> WHO, *Air Quality Guidelines for Europe*, WHO Regional Publication, European Series No. 23, Copenhagen (1987).

<sup>29</sup> Particulate emissions consist of fine solids or liquid droplets suspended in air. The larger sized particles are grit, fly ash, dust, and soot and the smaller sizes are smoke, mist, and aerosol.

<sup>30</sup> Gaseous pollutants include the ideal gases such as sulphur dioxide, nitrogen oxides, carbon monoxide, ozone, hydrocarbons, inorganic acids, fluorine and the odours emitted by the gaseous contents.

hangs over 194 sq. kms expanse of city<sup>31</sup>. The WHO has prescribed permissible limit of dust (suspended particulate matter) in residential areas as 200 ug/m<sup>3</sup>. The National Ambient Air Quality standards in respect of dust in residential areas also run more or less similar to WHO standards<sup>32</sup>.

In the urban areas, air quality is posing a dismal picture<sup>33</sup>. It is estimated that industries account for nearly 45% of the total air pollution load<sup>34</sup>. People living in the congested industrial areas suffer from a higher incidence of diseases like chronic bronchitis, tuberculosis, skin allergy and irritation of the eyes due to the harmful effects of oxides of sulphur, nitrogen and suspended particulate matter<sup>35</sup>. The deterioration of air quality in many of the Indian cities is compounded further by air contaminants emitted from domestic, municipal incineration systems and increasing transportation<sup>36</sup>. According to a Report of National Environmental Engineering Research Institute, 60% population of Calcutta suffers from respiratory diseases due to air pollution<sup>37</sup>. Delhi has an incidence of respiratory ailments 12 times higher than the national average and

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<sup>31</sup> *The Hindu Survey of the Environment, 1992*, p.105.

<sup>32</sup> National Ambient Air Quality Standards in respect of suspended particulate matter (SPM) specified in Schedule VIII framed under R.3 of the Environment (Protection) Rules, 1986 is 500 ug/m<sup>3</sup> in industrial area, 200ug/m<sup>3</sup> in residential, rural and other areas, and 100 ug/m<sup>3</sup> in sensitive area. National Ambient Air Quality Standard refers to the level of air quality necessary, with an adequate margin of safety, to protect public health, vegetation and property and whenever two consecutive values exceed the limit specified for the category, regular/continuous monitoring and further investigation becomes necessary.

<sup>33</sup> We seem to add every year about four million tonnes of sulphur dioxide, seven million tonnes of particulates, one million tonnes of carbonmonoxide, 0.5 million tonnes of nitrogen oxide and 0.2 million tonnes of hydrocarbons into the air coming from domestic, industrial and transportation sources. See "Environmental Abuse on Rise," *Indian Express*, New Delhi, December 2, 1985, p.10.

<sup>34</sup> These industries include petrochemical complexes, fertilizer, textiles, leather, thermal power plants, mining processing, chemical industries. They emit smoke, particulate matters, gases, and a variety of other toxic substances in thousands of tonnes into the atmosphere.

<sup>35</sup> Kamat, S.R., "Lethality of Pollution Killing Us Softly" in *The Hindu Survey of the Environment, 1992*, p.57.

<sup>36</sup> A recent study undertaken with specific reference to the city of Mumbai shows that it emits daily about 2971 tonnes of air pollutants into the air, of which 52% comes from transport, 46% from industries and 2% from domestic and other sources. However, in Delhi, which occupies the dubious distinction of being the fourth most polluted city in the world, emission is around 2090 tonnes of air pollutants every day, out of which about 60% of it comes from automobile exhaust. The position in other cities are also not better. Even in Chandigarh, the best planned city, the annual geometric mean of dust is considerably higher than the WHO standard. *Id.*, p. 63.

<sup>37</sup> Kamat, S.R., *supra*, n.35.

30% of the capital's population suffers from various disorders caused by air pollution<sup>38</sup>.

Aesthetic quality of the environment could be directly damaged due to air pollutants such as smoke, chemical fumes, dust etc. and such damage cannot be measured in monetary terms. They have adverse reactions on stone, metals, wood and paints etc. Corrosion of metals, withering of stones and wood by acidic gases, mists, sulphur dioxide, carbon dioxide now pose a serious threat to the survival of historical monuments, such as the Taj Mahal<sup>39</sup> and other architectural and art forms. The smoke filled valleys and centers could discourage tourism and reduce the land value of spectacular view sites. Therefore, it is said that aesthetics have an economic value in such cases<sup>40</sup>. It is also found that air pollution has socio-economic effects<sup>41</sup>.

In Kerala, vehicular and industrial emissions account as the major sources of air pollution. Suspended particulate matter and Respirable particulate matter regularly exceed the allowable limits in the State<sup>42</sup>. The ever increasing use of fossil fuel in transportation

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<sup>38</sup> A CRRRI study revealed that Delhi traffic constables run high risk of health damage due to excessive exposure to carbon monoxide and other vehicular pollutants. Carboxyhemoglobin levels in blood samples of policemen on duty at busy intersections was found to be 20 times higher than their counterparts in office environment, see "Gas Masks for Delhi Traffic Cops", *The Tribune*, June 16, 1992, p.4.

<sup>39</sup> In *M.C. Mehta v. Union of India*, (1997) 2 S.C.C. 353, precautionary principle was directly applied by Justice Kuldip Singh of the Supreme Court for protecting the 'Taj Mahal' from the corrosive effects of air pollution. Expert studies proved that emissions from coke/coal based industries in the 'TTZ' had damaging effect on the Taj Mahal. The Court emphasizing on aesthetic quality observed thus: "...The atmospheric pollution in TTZ has to be eliminated at any cost. Not even one percent chance can be taken when human life apart, the preservation of a prestigious monument like the Taj is involved..." *Id.*, p.384.

<sup>40</sup> Chhatwal *et. al, supra*, n.27 at p.154.

<sup>41</sup> The socio-economic effects would emerge in the form of monetary losses due to illness, death and incidental loss resulting from abstention from work and decreased productivity; increase of travel costs, time of travel and risk of accidental injury due to reduced visibility; increase of cost of artificial illumination; repair of damage to buildings and other structures; increased cost of cleaning; losses due to damage to crops and vegetation; losses due to injury to animals of economic importance; extra manufacturing costs; investment loss in control of air pollution. For details, see Pramod Singh, *Environmental Pollution and Management*, Chugh Publications, Allahabad(1987), p.103.

<sup>42</sup> According to the *State of Environment Report Kerala, 2005* published by Kerala State Council for Science, Technology and Environment, the impact of vehicular emission and noise is widespread in Kerala, whereas the industrial emission is limited to the areas around the industries. The ambient air

and industrial sectors are also adversely affecting the air quality and increasing the ambient noise. Thus, control of air pollution is becoming a difficult task for the administrators.

### **Effects on Climatic Conditions and the General Environment**

Air pollution has immense impact on the quality of regional and global ecological system. Increased precipitation,<sup>43</sup> smog,<sup>44</sup> storms,<sup>45</sup> increased acidity of rain droplets<sup>46</sup> are reportedly ascribed to air pollution. It is apprehended that some types of pollution emissions may cause important changes in the operation of planetary ecological system as well. The build up of large quantities of green house gases<sup>47</sup> such as carbondioxide, methane, ozone, nitrous oxide and chlorinated hydrocarbons etc. in the atmosphere, could rise global temperatures, changing the global weather pattern and leading to devastating consequences such as flooding of coastal cities, destruction of agricultural areas and marine life in many countries<sup>48</sup>.

Changes in the upper atmosphere, i.e. stratosphere are also being feared, as there are several predictable possibilities like depletion of the 'ozone layer'. Scientists believe that increased concentration of water vapours, carbondioxide, oxides of nitrogen and

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quality of Ernakulam has been adversely affected by the presence of most number of major and medium-scale industries and maximum number of vehicles. Of the 640 large or medium industries in the State, nearly 510 are located at Kochi. Air quality degradation was observed in Kanjikode in Palakkad due to large number of electric furnace-based industries located there.

<sup>43</sup> In the State of Washington, a 30% increase in average precipitation has been attributed to particulate emissions from pulp and paper mills. See Chhatwal et al., *supra*, n.27 at p.158.

<sup>44</sup> Smog formation in the cities of New York, Los Angeles and Pennsylvania is reported to be due to huge emissions from industries and transportation. *Id.*, p.159.

<sup>45</sup> Recent studies shows that pollution emissions from a variety of community sources are resulting in increased rainfall and storm activity in areas downwind from large metropolitan areas. *Ibid.*

<sup>46</sup> In Netherlands and Sweden, an increase in the acidity of rain droplets has increased the acidity of small lakes and rivers threatening the stability of their ecosystems and survival capacity of certain aquatic animals. The increased acidity apparently has been due to emission of sulphur dioxide from industrial sources in Western Europe. *Ibid.*

<sup>47</sup> See Sandra Postal, "Future of Earth—It is Now or Never", *The Hindu Survey of the Environment*, 1992, p.17.

<sup>48</sup> See Schneider, S., *Global Warming: Are We Entering the Green House Century*, Science Club, San Francisco (1988); Shea, C.P., "Protection of Life on Earth: Steps to Save Ozone layer", Paper No. 87, World Watch Institute, Washington (1988); WHO Report 'Our Planet and Our Health' Series No.303 (1992) at p.36.

sulphur, chlorofluorocarbons<sup>49</sup> compounds from supersonic aircrafts,<sup>50</sup> surface transportation, aerosol sprays and refrigeration etc. due to their longer endurance, peculiar condition in stratosphere<sup>51</sup> and photochemical action, deplete the ozone layer. A continuing deterioration of earth's ozone shield would expose human beings to increased ultraviolet radiation, causing skin cancers.

### **Impact on Human Health and Safety**

Every day a person inhales about 7500 litres of air to keep his lungs and respiratory system to have contact with<sup>52</sup>. Particulate pollution, either on its own or in combination with sulphur dioxide, leads to wide range of respiratory and exacerbating heart diseases, causing at least 5,00,000 premature deaths and 4.5 million new cases of chronic bronchitis each year<sup>53</sup>. The consequences of air pollution range from material damage to personal discomfort and illness<sup>54</sup>. However, the ill-effects that are of immediate concern are those that influence man's health, well-being and enjoyment of the world.

Though there is no established clear cut cause and effect relationship between air pollution and human health, there has been a growing body of medical opinion which indicates that air pollution contributes to increase in death rate, morbidity and earliest onset of

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<sup>49</sup> It is estimated that western countries produce about 7,50,000 tons of chlorofluorocarbons(CFCs) each year. Russia alone account for 60,000 tons and the world production of other probable ozone depletes amount to 2,00,000 tonnes. See "Concern Over Ozone Depletion", *The Hindustan Times*, New Delhi, September 30, 1987 at p.6.

<sup>50</sup> The US National Academy of Science reports that 100 supersonic aircrafts could reduce ozone by 0.02%. See Dix, H.M., *Environmental Pollution*, John Willey, New York(1981), p.62.

<sup>51</sup> Air pollutants finding their way into stratosphere remain stable there for 100 years. In the stratosphere there is very little gaseous circulation, diffusion and there is greater intensity of ultra violet solar radiation, *Ibid*.

<sup>52</sup> Chhatwal *et.al*, *supra*, n. 27 at p. 214.

<sup>53</sup> The World Bank, *World Bank Report*, 1992, Washington, D.C.

<sup>54</sup> It depends upon a number of variables such as the nature, concentration, dispersal and synergistic interaction of air pollutants.

respiratory diseases<sup>55</sup>. However, the determination of health effects of air pollutants is a difficult task<sup>56</sup>.

Human health could be badly affected either due to exposure of the workers to air pollution giving rise to occupational hazards or through inhalation of polluted air by the public, indoor or outdoors. The general and widespread effects<sup>57</sup> of air pollution are that it causes chronic pulmonary diseases such as bronchitis, asthma, emphysema, etc.<sup>58</sup>; cardiac vascular diseases due to long-term exposure to atmospheric pollutants like carbon monoxide<sup>59</sup> emitted from motor vehicles, burning of coal and oil furnaces, smoking, and lead<sup>60</sup> emitted from vehicular or industrial pollution; cancers caused by inhalation of air polluted with benzene, carbon monoxide. Apart from it, gases like hydrogen sulphide, ammonia, chlorine etc. have noticeable odours even at low concentrations and these pollutants cause annoyance to the sense organs, personal discomfort to the people, irritation of eyes, nose and throat. Exposure to chemical agents in air can also play a role in infectious diseases, by rendering the body less able to ward off infections<sup>61</sup>. Human safety can also be threatened during the periods of high air pollution when the visibility

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<sup>55</sup>Dr.Irving J. Selikoff, commenting on the health effects of air pollution rightly observed: "Air pollution is modern man's wolf at the door... we don't really know what many of the substances in the air do to people. It may take 50 years to know that", cited in Noel Grove, *supra*, n.14.

<sup>56</sup>The specific concentration at which a contaminant will damage health depends on how the word health is defined, the nature of the contaminant, and length of time the air containing them gets breathed or comes in contact with the receptor.

<sup>57</sup>The effects of exposure may sometimes be short-term, reversible and may not cause permanent damage. But sometimes during the periods of intense air pollution, excessive exposure may result in deaths as were there due to killed smog in Meuse Valley, Belgium in 1930; in Donora, Pennsylvania in 1948; and in London in 1952 and 1962 in which thousands of people lost their lives. See Dix, *supra*, n.50 at pp. 60-61.

<sup>58</sup>Epidemiological studies reveal that majority population in London, San Francisco and Los Angeles suffer from persistent coughs and sputum. See WHO, *Research into Environmental Pollution*, Technical Series No. 406 (1968), pp. 35-37.

<sup>59</sup>Atmospheric carbonmonoxide level sufficient to produce 2% carboxyhaemoglobin are relatively common in large cities having large number of automobiles, the latter causes malfunctioning of the heart, see Chhatwal *et al.*, *supra*, n.27 at p.228.

<sup>60</sup>The acute effects of lead entering the blood through respiration are irritability, anemia, miscarriage, mental retardation in children etc. *Id.*, p. 229.

<sup>61</sup>Sadhana Kothari *et al.*, "Environmental Pollution and Health Hazards" in Anju Kohli *et al.*, *Management of Environmental Pollution*, Book Enclave, Jaipur (2003), p.53.

decreases appreciably giving rise to severe hazards to land and air navigation<sup>62</sup>.

There are various sources which pave the way for air pollutants. It has been found that aldehydes produced by thermal decomposition of fats, oils, glycerol causes irritation to nasal and respiratory tracts; ammonia resulting from chemical process, dye making, explosives, fertilizers causes inflammation of upper respiratory passage; arsenic produced from coal and oil furnaces, glass manufacturing damage the kidneys, cause jaundice, lung and skin cancer; benzene emitted from refineries, motor vehicles, smelters cause leukemia. Similarly, studies reveal that exposure to carbon monoxide produced from motor exhausts, steel plants, smelters, oil and coal furnaces damages lungs and heart, weakens bones, starves the body of oxygen; chlorine emitted by chemical industries attacks respiratory tract, mucous membranes; fluoride emitted from steel plants affects teeth; hydrocarbons produced by unburned gasoline vapour affect respiratory system; hydrogen cyanide produced from chemical manufacturing process interfere with nerve cells and produce dry throat, affect vision, cause headache. So also, exposure to hydrogen chloride causes irritation of the eyes, lungs; hydrogen fluoride emitted from petroleum refineries and fertilizer plants irritate skin, eyes, mucous membranes; exposure to manganese produced from steel plants and power plants cause parkinson's disease; nickel emitted by coal and oil furnaces leads to lung cancer; nitrogen oxide, a motor vehicle exhaust leads to bronchitis, lowers resistance to influenza; ozone aggravates asthma and irritates eyes. Equally harmful are the effects of phosgene, sulphur dioxide which are also air pollutants<sup>63</sup>.

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<sup>62</sup> For details, see *supra*, n.27 at pp.220-223.

<sup>63</sup> Research conducted in the field reveal that phosgene induce cough; lead damages the brain, affects the growth and causes high BP; exposure to sulphur dioxide obstructs breathing and irritates the eyes; and suspended solids causes emphysema eye irritation and cancer.



## **Impact on Women, Children and Aged People**

Many chemical pollutants have the potential to produce estrogenic effects when absorbed into the body, a factor in the development of breast cancer. Organochlorine resulting from industrial manufacturing, energy production, and traffic exhaust when being inhaled by women can also cause mammary tumors<sup>64</sup>. Such toxins when get stored in women's fat bring hormonal changes during pregnancy, lactation and menopause. Women's exposure to occupational chemicals may affect their reproductive capacity adversely in the form of reduced fertility, spontaneous abortion, low birth weight, birth defects and developmental disabilities<sup>65</sup>.

Children are more vulnerable to air-borne pollution as their airways are narrower than adults and they have markedly increased needs for oxygen relative to their size. They also breathe more rapidly and inhale more pollutants per pound of body weight and spend more time engaged in vigorous outdoor activities than adults. Existing epidemiological studies indicate a relationship between outdoor air pollution and adverse respiratory effects in children, and the most common pollutants implicated are respirable particulates and ozone. Air pollution correlates with increased prevalence of chronic cough, chest illness, bronchitis, hospital admissions for respiratory conditions, and decrements in lung function<sup>66</sup>.

Senior citizens have been identified as at special risk with regard to air pollution episode. Aging individuals are more susceptible to air pollution because of the declining margin of safety in various organ systems, including the respiratory and immune systems. Skin cancer and other malignancies are much more prevalent among the elderly, due to the cumulative effects of sun exposure. The elderly

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<sup>64</sup> Mohd. Yousuf Bhat, *supra*, n. 6 at p.56.

<sup>65</sup> Details of the impact of air pollution on women's health is available at <http://www.nutrained.com/environment/airpollutionintro.htm>, visited on December 20, 2008.

<sup>66</sup> *Ibid.*

living in areas with serious air pollution problems are exposed to stress, anxiety, depression and other physical problems<sup>67</sup>.

### **Impact on Plants and Animals**

Air pollution has been found to affect plants to varying degrees by visible damage, cumulative chronic effects, genetic effects or gradual changes in the composition of the plant community. Air pollutants could also get stored in the plants and introduced into the food chain, affecting animals which eat the plants. Smoke, sulphur dioxide and nitric oxides are particularly harmful to plants. Scientists believe that acid rains have killed forest trees in Germany and United States<sup>68</sup>. Direct exposure to high levels of sulphur dioxide or acid deposition can cause defoliation and dieback<sup>69</sup>. Soot and dust affect photosynthetic activity of plants by depositing on the surface of leaves<sup>70</sup>. Physiological effects of air pollution on plants generally appear in the form of stunted growth,<sup>71</sup> damage to vegetation and reduced yields leading to great economic loss<sup>72</sup>.

Animals may be expected in general to suffer more or less the same effects as human beings suffer, on exposure to or consumption of contaminated fodder. The gaseous and particulate air pollutants affect the health of animals and cause various diseases like pulmonary congestion, bronchitis, cardiological disorders, irritation to sense organs, depending upon the length of exposure and nature of pollutants<sup>73</sup>. Cattle grazing on grass having concentration of

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<sup>67</sup> *Ibid.*

<sup>68</sup> Dix, *supra*, n.50 at pp.45-46.

<sup>69</sup> *World Development Indicators 1999*, The World Bank, Washington DC, USA, p.168.

<sup>70</sup> Chhatwal *et al.*, *supra*, n.27, at pp.184-85.

<sup>71</sup> Scientific observations in Leeds have revealed reduced growth of lettuce and radish in heavily polluted areas. See Dix, *supra*, n. 50 at p.59.

<sup>72</sup> For example, ozone resulting from automobile emission annually reduced soybean harvest as much as by 20%. Noel Grove, *supra*, n.14 at p.42.

<sup>73</sup> See Chhatwal *et al.*, *supra*, n. 27 at pp.181-82, 204, 206.

pollutants like fluorine near smelters, ores, factories, brick kilns have been known to show the ill effects of these toxic substances<sup>74</sup>.

### **Public Health and Air Quality Protection**

Air quality is directly related to public health. Bad air quality or poor air quality often brings public health to causality, paving the way for spread of air-borne epidemics and infectious diseases, apart from making impossible productive, meaningful and qualitative life in its richness<sup>75</sup> and fullness. Therefore, air quality degradation should be approached from a public health point of view and any human activity leading to air quality degeneration should be viewed as an invasion of the right to public health.

Public health is generally concerned about the maintenance and improvement of the health of the people. It has understood to be a level permitting man to lead a socially and economically productive life<sup>76</sup>. It is not only concerned with sanitary conditions, hygiene, prevention of communicable diseases, but many other matters relating to life and death comes within its purview. Professor C.E.A. Winslow, a pioneer in public health advocacy in early 1920s defined public health as:

“The science and art of preventing disease, prolonging life and promoting health and efficiency through organized community effort”<sup>77</sup>.

According to WHO, public health means a state of complete physical, mental, and social well-being and not merely the absence of

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<sup>74</sup>As early as in 1902 the death of 625 sheep from arsenic poisoning had been reported in an area within a distance of 40 Kms, from Anaconda copper smelter in Montana. Lead and Zinc poisoning in cattle and horses from foundries in Germany were reported, fatally affecting them. *Id.*,p.202. The loss of appetite, reduced milk yield, joint stiffness have been the common symptoms noticed in the cattle.

<sup>75</sup>*State of H.P. v. Umed Ram Sharma*,(1986) 2 S.C.C. 68, per V.D.Tulzapurkar, R.S.Pathak & Sabyasachi Mukharji, JJ.

<sup>76</sup>Kumar,R., *Environmental Pollution and Health Hazards in India*, Ashish Publishing House, New Delhi(1987), p.6.

<sup>77</sup> Emphasis supplied. Article titled “The Untilled Fields of Public Health”, *Science Magazine* (1920).

disease or infirmity<sup>78</sup>. The United Nations, domestic Governments, International and multilateral Organizations are addressing public health in the perspective of promotion of complete physical, mental, and social well-being. Such an approach can be found in Agenda 21<sup>79</sup>.

In UK, public health legislation mainly covers prevention and control of diseases, atmospheric pollution control, hygiene and sanitation, waste disposal and collection, statutory nuisances and noise nuisance, control of offensive or dangerous trades<sup>80</sup>. The Public Health Act of 1875 was mainly concerned with sanitary regulations. The Alkali Works Regulation Act, 1906 incorporated provision for securing the condensation of hydrochloric acid gas in works and for preventing the discharge of noxious and offensive gas. The Clean Air Acts 1956 and 1968 envisaged provision for the abatement of air pollution due to the discharge of smoke, dust and grit from chimneys. Such provisions included the obligation to fit plant to new furnaces for arresting grit and dust<sup>81</sup> and the specification of smoke control areas<sup>82</sup>. Under Section 16 of the Clean Air Act, 1956 any smoke not being emitted from the chimney of a private dwelling that is injurious or likely to be injurious to public health was made a statutory nuisance, with exceptions available for research and investigation<sup>83</sup>. Where any such nuisance existed, occupier was required to be notified<sup>84</sup> and abatement notice to be served on him and complaint for abatement to be made in the same manner as for the abatement of any statutory nuisance under Part III of the Public Health Act,

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<sup>78</sup> Erik P. Eckholm, "Environment and Human Needs", *Down to Earth* (1991), p.48.

<sup>79</sup> Chapter 6 of Agenda 21 is specifically addressing on "Protecting and promoting human health".

<sup>80</sup> 35 *Halsbury's Statutes*, Butterworths & Co., London (4<sup>th</sup> edn.,1987), pp. 2-4.

<sup>81</sup> See Clean Air Act, 1956, S. 6; Clean Air Act, 1968, S.3.

<sup>82</sup> Clean Air Act, 1956, Ss. 11-15; Clean Air Act, 1968, Ss. 8 &9.

<sup>83</sup> See Clean Air Act, 1956, S. 21.

<sup>84</sup>*Id.* S. 30.

1936<sup>85</sup>. Recurring nuisance was expressly covered by Public Health (Recurring Nuisances) Act, 1969.

The Control of Pollution Act, 1974 also envisaged provisions for protecting air quality by regulating the composition and use of motor fuel<sup>86</sup> and the sulphur content of oil fuel for furnace and engines<sup>87</sup>. Similarly, Section 78 of the Act made cable burning an offence unless burning takes place at works registered under the Alkali Works Regulation Act, 1906. The Act also empowered local authorities to collect and publish information on air pollution in their respective areas<sup>88</sup>.

### **Right to Public Health—International Initiatives**

Historically speaking, right to public health was one of the last attended and least touched areas of interest in any legal system. A breakthrough occurred in the global outlook with the Universal Declaration of Human Rights, 1948, which under Article 25 specifically recognized the right to a standard of living adequate for the health and well-being of oneself and of one's family. It also recognized related rights such as right to life, right to effective remedy for violation of fundamental right, right to protect one's interest through collective bargaining<sup>89</sup>. However, the Declaration did not contain specifically public health or environmental issues. At a later stage in 1968 the UN General Assembly for the first time acknowledged the existence of right to environment adequate to support human health and dignity by passing a resolution in that regard<sup>90</sup>. This concept was further strengthened by the WHO Constitution<sup>91</sup> which also affirmed that it is one of the fundamental

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<sup>85</sup> *Id.* Ss. 93 & 94.

<sup>86</sup> Control of Pollution Act, 1975, S. 75.

<sup>87</sup> *Id.* S. 76.

<sup>88</sup> *Id.* Ss. 79-83.

<sup>89</sup> Articles 3, 8, 23 (3) of the *Universal Declaration of Human Rights*, UN DOC A/811, pp. 21-27.

<sup>90</sup> 1968 United Nations Year Book, "Problems of the Human Environment", 473, 476, U.N. DOC A/L533 as given in "NIMBY", 23: GA. J. INT'L & COMP. L.(1993)409 at p.420

<sup>91</sup> See the Preamble to the WHO Constitution.

rights of every human being to enjoy the highest attainable standard of health. Since then, health has gained positive recognition as a fundamental right, available to all and irrespective of any distinction<sup>92</sup> and warranting State protection and promotion. All such developments were the result of a concretized notion which regarded pollution issue as a major international public health hazard<sup>93</sup>.

Right to public health has hitherto generated several questions which ultimately have brought within its purview, *inter alia*, the right to responsibility for health, the right to quality of life and the right to healthy environment<sup>94</sup>. This right is no longer accepted as a charity or privilege of the few, but demanded as a right for all. It is a matter of public concern and that it involves combined efforts of the whole social fabric acting in partnership, viz, the individual, the community and the State.

### **Stockholm and Rio—Catalysts in Legal Management of Air Quality**

Two international conferences on Environment and Development—one at Stockholm in 1972 and the other at Rio de Janeiro in 1992—have vitally influenced the environmental and public health policies in most countries, including India and placed compulsion on them to preserve and conserve the natural resources including air for the present and future generations through

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<sup>92</sup> *Ibid.*

<sup>93</sup> Goel, S.L. and Jain, R.K., “Administration of Environmental Health Programmes”, in Kumar, R.,(Ed.) *Environmental Pollution and Health Hazards in India*, Ashish Publishing House, New Delhi (1987), p.29.

<sup>94</sup> Judiciary has also articulated right to healthy environment as part of right to life and health. See the Judgment of Syed Shah Mohammed Quadri & S.N.Phukan, JJ. of the Supreme Court in *Hinch Lal Tiwari v. Kamla Devi*, (2001) 6 S.C.C.496 at p.499 wherein the Court categorically held that healthy environment and enjoyment of a quality of life is the essence of the right under Article 21 of the Constitution. Similarly, in *M.C. Mehta v. Kamal Nath*, (2000) 6 S.C.C.213 Justice Saghir Ahmad developed the position that any disturbance of the basic environment element including air would be hazardous to ‘life’ within the meaning of Article 21. For similar view, see also the Judgment of the Madras High Court in *Shoba Ramasubramanyam v. Member Secretary, Chennai Metropolitan Development Authority*, A.I.R.2002 Mad.125, *per* B.Subhashan Reddy, C.J. and K.P.Sivasubramaniam, J. In this case, when it was complained of by the residents of a locality against noise pollution and vibration caused by digging foundation for a multi-storied building, the Division Bench restrained the builders from proceeding further with foundation work by using driven-pile system.

appropriate careful planning and management<sup>95</sup>. Stockholm Declaration further emphasized on the inter-relationship between the enjoyment of human rights and the quality of the environment<sup>96</sup>. After the Stockholm Declaration, environmental protection became the universal goal to be achieved through national attempts and countries approached the goal in different ways<sup>97</sup>. Resultantly, many countries and international agencies have accepted the 'polluter pays' principle, 'precautionary' principle and the concept of 'intergenerational equity' as the guidelines for designing environmental policies aimed towards protection of public health. The right to pollution-free air and environment, the principles of sustainable development and strict liability also were invoked to tackle air pollution problems at the grassroot levels at elementary stages. The concept of clean air to breathe is the result of such efforts for over the last few decades and synthesizes a new rationale within the human rights dictum<sup>98</sup>. It thus came to be regarded as community right rather than individual right<sup>99</sup>.

The Statement of the Rio Declaration of 1992 holds that human beings are entitled to healthy and productive life in harmony with nature, which is re-affirmed in the Millennium Development Goals<sup>100</sup>. Agenda 21 produced by the Rio Conference on Environment and Development also recognized the dependency of human health on a healthy environment<sup>101</sup>.

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<sup>95</sup> Principle 2 of the *Stockholm Declaration on Human Environment*, 1972.

<sup>96</sup> See the *Report of the United Nations Conference on the Human Environment*, UN DOC A/CONF.48/14/ Reb.1, SCC.1(1972), reprinted in 11 I.L.M.(1972)1416; Also see United Nations Conference on Human Environment held at Stockholm in 1972 in British Institute of International and Comparative Law, *Selected Documents on International Environmental Law* (1975), pp. 3-28.

<sup>97</sup> Martin A Mattes, "The Right to a Human Environment: A Seminar", *Environmental Policy and Law* (1975)86.

<sup>98</sup> Richard Desgagne, "Integrating Environmental Values into the European Convention on Human Rights", 83 A. J. I. L.(1995)263.

<sup>99</sup> *Ibid.*

<sup>100</sup> It invites nations to concentrate on programmes like eradication of poverty, putting all children into primary school, stemming the spread of infectious diseases such as HIV/AIDS as matters of immediate attention in the public health sphere. For details, see Girija Tickoo(Ed.), *Public Health*, U.S.Embassy Public Affairs Section Publication, New Delhi, p.2.

<sup>101</sup> *Supra*, n. 79.

## **OSPAR Hazardous Substances Strategy, 1998 and Copenhagen Consensus, 2004**

The OSPAR Hazardous Substances Strategy, 1998 seeks to reduce the concentrations of hazardous substances in the environment to near background values for naturally occurring substances and close to zero for man-made synthetic substances, and to move to the complete cessation of discharges of hazardous substances by 2020<sup>102</sup>.

The Copenhagen Consensus, 2004 has included climate change, communicable diseases, governance and corruption within a list of 10 challenges facing the world<sup>103</sup>. In fact, economic development, social development and environmental protection are now accepted as interdependent and mutually reinforcing pillars<sup>104</sup>. The above trends have projected the necessity of preserving and protecting air environment as means to public health protection and has made air environment as the nucleus in the ebb of public health spectrum.

### **Role of Civil Society and Good Governance**

Civil society plays an important role in giving voice to the concern of citizens and rendering services that meet people's needs<sup>105</sup>. It has a significant role to play in matters affecting air quality. Concept of good governance comprises the mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations, and mediate their differences<sup>106</sup>. Good governance is

<sup>102</sup> Strategy as reaffirmed in 2003, Reference number: 2003-21.

<sup>103</sup> Bjorn Lomborg(Ed.),*Global Crisis, Global Solutions, Copenhagen Consensus 2004*, Cambridge University Press, Cambridge (2004). However, the issue of climate change was ranked at the bottom of challenges as the costs of its mitigation would outweigh the benefits.

<sup>104</sup> Kevin R. Gray, "World Summit on Sustainable Development: Accomplishments and New Directions", *I.C.L.Q.*(2003)256 at p.268.

<sup>105</sup> Singh, A.P., "Civil Society and Good Governance: Emerging Challenges", *50 J.I.L.I.*(2008)81 at p.82.

<sup>106</sup> United Nations Development Programme, *Governance for Sustainable Human Development: A UNDP Policy Document*, Ch.1(1997).



epitomized by predictable, open and enlightened policy making; a bureaucracy imbued with professional ethos acting in furtherance of the public good; the rule of law; transparent processes; and a strong civil society participating in public affairs<sup>107</sup>. A country's economic success depends in large measure on the quality of governance it enjoys<sup>108</sup>. UNDP lists nine characteristics of good governance, which are participation<sup>109</sup>, rule of law,<sup>110</sup> transparency<sup>111</sup>, responsiveness<sup>112</sup>, consensus orientation,<sup>113</sup> equity,<sup>114</sup> effectiveness and efficiency,<sup>115</sup> accountability,<sup>116</sup> and strategic action<sup>117</sup>. Good governance is specifically linked to sustainable development<sup>118</sup>. The Panchayati Raj system introduced through 73<sup>rd</sup> Constitutional Amendment in India is the most positive step towards re-energizing democracy in the history of independent India. Panchayati Raj Institutions cover more than 96% of India's rural population, where Grama Sabhas act as platforms for people's participation and to ensure transparency and accountability<sup>119</sup>.

It must be realised that choices and preferences on quality of life and lifestyles are made at the community, household and at individual levels. Since they relate to consumption of environmental resources, they have direct impact on the local environment. Common citizens and civil society groups are the consumers of

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<sup>107</sup> *Ibid.*

<sup>108</sup> Kofi A. Annan, "We the Peoples; The Role of the United Nations in the 21<sup>st</sup> Century" G.A. Res. 2000, U.N. GAOR, 54<sup>th</sup> Sess., *U.N. Doc. A/54/2000* at p.22.

<sup>109</sup> All men and women should have a voice in decision-making, either directly or through legitimate intermediate institutions that represent their interests.

<sup>110</sup> Legal frameworks should be fair and enforced impartially.

<sup>111</sup> Transparency is built on the free flow of information. Processes, institutions and information are directly accessible to those concerned with them, and enough information is provided to understand and monitor them.

<sup>112</sup> Institutions and processes try to serve all stakeholders.

<sup>113</sup> Good governance mediates differing interests to reach a broad consensus on what is in the best interest of the group.

<sup>114</sup> All men and women have opportunities to improve or maintain their wellbeing.

<sup>115</sup> Processes and institutions produce results that meet needs while making the best use of resources.

<sup>116</sup> Decision-makers in government are accountable to the public and to institutional stakeholders.

<sup>117</sup> Leaders and public have a broad and long term perspective on good governance and human development.

<sup>118</sup> *United Nations Conference on Environment and Development, 2002* (Johannesburg Summit).

<sup>119</sup> Singh, A.P., *supra*, n.105 at p.86.

environment which is a trust in the hands of the incumbent Governments<sup>120</sup>. It is only by being informed with basic facts about the quality of their environment, citizens and civil society groups can become active participants in identifying and resolving issues at both local and national levels<sup>121</sup>.

India is a 'Democratic Republic' and in a democratic set up, people have the right to participate in governmental decisions. It is of equal importance that people have the right to know and have access to information of government policies<sup>122</sup> which is very important for the success of public health and air quality management policies. This has come to be recognized in Europe as a fundamental right with the *Aarhus Regulation* coming into force<sup>123</sup>. But this is yet to receive its full recognition in India. Nevertheless, it is the responsibility of the Government to make the people aware of the adverse consequences of pollution and other public health hazards<sup>124</sup> so that people should not only protect and promote public health, but should also ensure the compliance of public health and environmental laws and if need be, take recourse to judicial proceedings to enforce such laws for the benefit of the present and future generations.

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<sup>120</sup> *M.C Mehta v. Kamal Nath*, (1997) 1 S.C.C. 388.

<sup>121</sup> Singh, A.P., *supra*, n.105 at p.89.

<sup>122</sup> The necessity of access to information concerning the environment is highlighted in Principle 10 of the *Rio Declaration on Environment and Development*, 1992.

<sup>123</sup> *Aarhus Regulation-Regulation (EC) 1367/2006* of the European Parliament and of the Council of 6 September 2006 on the Application of the Aarhus Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters to Community Institutions and Bodies, OJ L 264/13, 25 September 2006. The Aarhus Regulation entered into force on 28 June, 2007 and it recognized the fundamental right of access to environmental information. However, in *WWF-EPO v. Council of the European Union*, decided by the Court of First Instance on 25 April, 2007 and little before Aarhus Regulation came into force, we see a contrary stand depicted whereby Court takes the position that right applies only to access to documents and not to environmental information.

<sup>124</sup> The importance of environmental education is emphasized by Principle 19 of the *Stockholm Declaration*, 1972 and Chapter 36 of *Agenda 21 of the Earth Summit*.

## **Right to Know and Public Awareness: Role of NGOs in Air Quality Maintenance**

Right to know is a basic democratic right<sup>125</sup>. Knowledge is power, but information is the oxygen of knowledge<sup>126</sup>. The right to participate in the affairs of the country is meaningless unless the citizens are well informed on all sides of the issues, in respect of which they are called upon to express their views. One sided information, disinformation, misinformation and non-information all equally create an uninformed citizenry which makes democracy a farce<sup>127</sup>.

In India, NGOs, media and corporate world owe a social responsibility towards environmental well-being<sup>128</sup>. The Government of India in its Policy Statement for abatement of pollution specifically gave importance to public partnership in implementing environmental laws<sup>129</sup>. As a result of increased awareness of the citizens, increased legislation, increased involvement of NGOs and Consumer awareness, business houses are not only forced to adopt better environmental practices, but are being pressurized by citizens, NGOs and consumers to change their behaviour. Such change is necessary and fundamental to the continued well-being and existence

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<sup>125</sup>Highlighting the importance of the right to know, *Mathew, J. in State of U.P.v. Raj Narain*, A.I.R. 1975 S.C.865 at p.884 observed thus: "In a Government of responsibility like ours where all the agents of public must be responsible for their conduct, there can be but few secrets. The people of this country have a right to know every public act, everything that is done in a public way, by their public functionaries. They are entitled to know the particulars of every public transaction in all its bearing". For the importance of 'right to know', see also *Peoples' Union for Civil Liberties v. Union of India*, A.I.R. 2003 S.C. 2363, per M.B.Shah, P.Venkatarama Reddy & D.M.Dharmadhikari, JJ.; Aravind Jasrotia, "Environmental Protection And Sustainable Development: Exploring The Dynamics of Ethics and Law" 49 J.I.L.I(2007)30.

<sup>126</sup>Fareed Ahmed, "Right to Clean Environment: A Legal Respective" XIII K.U.L.R.(2006)110 at p.121.

<sup>127</sup>In *S.P. Gupta v. President of India and Others*, A.I.R.1982 S.C.149, Justice P.N.Bhagwati of the Supreme Court made it clear that the concept of an open government is the direct emanation from the right to know which seems to be implicit in the right of free speech and expression guaranteed under Article 19(1)(a). Court thus observed: "Open government is the new democratic culture of an open society towards which every liberal democracy is moving and our country should be no exception" *Id.*, p.234.

<sup>128</sup>*Id.*, p.191.

<sup>129</sup>*Maheshwara Swamy et al., Law Relating to Environmental Pollution and Protection*, Asia Law House, Hyderabad (2<sup>nd</sup> edn., 2003), p.76.

of life<sup>130</sup>. The need for public awareness and NGOs involvement was highlighted in Rio. On 29 April 1999, the UN Secretary General, Kofi Annan, while addressing the NGOs Forum on Global Issues, specifically recognized the importance and role of NGOs in the following terms:

“In the United Nations a few decades ago, Governments were virtually the sole players. Of course, NGOs have played significant role in forming the United Nations and are mentioned in the charter (Art.71). Even before that, NGOs led the charge in the adoption of the Slavery Convention of 1926. And NGOs have a long and proud history of fighting against tyranny and providing humanitarian assistance to the victims of conflict and natural disasters. NGOs armed with e-mail and internet have been proved more powerful than landmine. The Nobel Committee has recognized their work, awarding its peace price to NGOs, the church and academic groups and others. But NGOs have also come in for a less welcome sort of recognition. You have been denied access to meetings and information; your representatives have been harassed, jailed and exiled, tortured and murdered. It is to your credit that such acts have failed to deter you from your chosen causes”<sup>131</sup>.

NGOs are considered to be the people’s platform for struggle against indifferent and hostile forces of the State. They perform myriad roles and functions in the area of environmental awareness and protection<sup>132</sup>. The Environment Impact Assessment Regulation of 1994, as amended in 1997 conferred right on public to assess the “executive summary” of a proposal submitted by the project proponent. This access was to enable citizens to participate at a public bearing. This provision was made use of by NGOs’ in their attempt to make the air environment clean and pollution-free. The passing of the Right to Information Act, 2005, has also given a

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<sup>130</sup> Rao, P.K., *International Environmental Law and Economics*, Blackwell, Oxford (2002), p.32.

<sup>131</sup> Furquan Ahmad, “Environmental Awareness and Enforcement” [2007] C.U.L.R. 191 at p.193.

<sup>132</sup> They can make significant contributions by conducting education and citizen awareness programmes; fact finding and analysis; filing PIL; innovating and experimenting in areas which are difficult for government agencies to make changes in; providing expertise and policy analysis; providing factual and reliable information with a network of professional expert staff; remaining independent while passing relevant information to the public and governmental bodies; expressing solidarity and support to environmental defenders; working at grassroot levels to support people; working in collaboration with the government for capacity building and by promoting community participation in environmental awareness and protection.

tangible and enforceable shape to the right to information<sup>133</sup>. People and NGOs' have now the right to inspect documents and records, take notes, extracts or certified copies of those documents and records. They can also obtain information in any electronic mode<sup>134</sup>. The Environment (Protection) Act, 1986 together with the Right to Information Act, 2005 have made the public more powerful in obtaining information relating to environmental abuses<sup>135</sup>.

Information media consisting of the World Wide Web, television, radio, and print media can play a cardinal role in increasing environmental awareness or even help remedying environmental problems<sup>136</sup>. The Communication media can play a positive role in the protection and preservation of environment by discharging its basic responsibilities<sup>137</sup>. They are integral forces for protecting public health and for sustaining the air quality.

In India, air pollution hazards are becoming a major threat to nation's growth and peaceful existence. Delhi is rated as the third grubbier city in the world in so far as air quality is concerned. It is estimated that 4.5 million vehicles operate in Delhi, apart from several hazardous industries, stone crushers, thermal plants and other operating agents emitting hazardous substances into the air. Confronted with such situation, Supreme Court took up the task of

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<sup>133</sup>Sheena Shukkur, "Freedom of Information: Legal and Constitutional Dimensions", [2007] C.U.L.R. 125; see also Das, P.K., *Handbook on The Right to Information Act*, 2005, Universal Law Publishing, New Delhi.

<sup>134</sup> Right to Information Act, 2005, S.2(8).

<sup>135</sup> Furqan Ahmad, *supra*, n.131 at p.195.

<sup>136</sup> The role of the electronic and print media in creating environmental awareness was stressed by the Supreme Court in *M.C.Mehta v. Union of India*, A.I.R. 1992 S.C.382 at pp.384-385, *per* Ranganath Misra, C.J. and G.N.Ray, A.S.Anand, JJ.

<sup>137</sup> The basic responsibilities of the communication media are reporting and publishing the truth; conducting thorough probes into issues relating to legal violations; highlighting the failure of government officials; not to succumb to pressure tactics; forming others to avoid making political mileage from issues relating to the violations. The role of the television and print media is more important here. Radio has a large audience in the rural areas. Issues of public health such as air quality degradation arising from indoor pollution, community pollution could be highlighted on a regular basis. Audit visual media could relay documentaries on environmental abuses and facilitate awareness by interviews with environmental activists. They can also alert people about environmental damages, expose the corporate failure to meet its legal obligations and make truthful analysis of new legislations.

cleaning the air in and around Delhi<sup>138</sup>. The National Environmental Engineering Research Institute, Nagpur filed status report regarding air pollution in Delhi in the Supreme Court which reports that in case air pollution is not controlled by 2025, it might be difficult for the Delhi residents to breathe freely. They may have to put on gas masks to survive<sup>139</sup>. The above descriptions have become the characteristic features of any Indian city. It would be foolish to think that pollution is temporary and by some natural phenomenon it would be automatically cleaned. In fact, we are heading towards a calamity which may be the worst for the mankind in the coming years<sup>140</sup>. Therefore, with a view to provide healthy life to the people, which are their fundamental right, the problem of air pollution shall have to be controlled by taking effective regulatory measures. It is in this context that the study on public health protection through air quality controls assumes significance for the benefit of the present and future generations.

### **Research Problems**

Legal and governmental mechanisms envisaged to maintain and control air quality and to protect public health are piecemeal and scattered and the same is to be collected from a large number of related environmental legislation. The existing provisions are highly insufficient, unsatisfactory and it does not meet the needs of the time. The Indian judiciary had to step in often as the protector of the rights of the common man to fill the cavernous gaps in the existing law by devising different methods of judicial law-making, interpretative processes and monitoring techniques. But still the judiciary has expressed its inability over the issue on account of its institutional and functional limitations. The existing hurdles and lacunas have to be identified and remedied and the system of

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<sup>138</sup>See *M.C.Mehta v. Union of India*, (1991) 2 S.C.C.353, *per* Ranganath Misra, C.J. & Kania, Kuldeep Singh, JJ.

<sup>139</sup>Already Oxygen bars have been set up in Delhi so that people can have few puffs of oxygen to purify their lungs.

<sup>140</sup> Kuldeep Singh, "Environmental Protection –The Role of Judiciary", [2004] C.U.L.R.15 at p.18.

regulation made effective, utility oriented and beneficial to community interest. Hence, the diverse problems probed into by this study are:

- i) What are the existing air quality maintenance and control laws and policies in India intended to protect public health?;
- ii) Whether the legislative and administrative measures designed to prevent and control air pollution and air quality degradation have succeeded in achieving their objects?;
- iii) Whether the existing provisions meant to abate public health hazards arising from air pollution and air quality degradation are foolproof and sufficient to meet the exigencies of the situation and does it actually serve in meaningfully and effectively protecting public health and in improving quality of life?;
- iv) How are the laws meant to preserve air quality and to prevent air pollution enforced and whether there exists a gap between the formulation of policy and implementation of legal controls?;
- v) Whether the existing provisions sufficiently take into account the environmental and societal changes?; If not, what changes and reforms can make the air quality control system effective, utility-oriented and beneficial to the community interest?;
- vi) How the judiciary has considered the impact of socio-economic problems such as industrialization and urbanization on public health and air quality maintenance?; and
- vii) What has been the response of the people and NGOs for the protection and improvement of public health and air quality?

## **Objectives of the Study**

The objectives of the study are:

- i) to identify the Central, State and Municipal laws bearing on air quality maintenance and control and to examine their efficacy;
- ii) to trace out the functional limitations and impediments involved in the operation of the legal and governmental mechanisms in preventing, controlling and abating public health nuisances arising from air pollution and air quality degradation;
- iii) to identify the role played by the judiciary in India to develop clean air and public health jurisprudence under air quality maintenance and control laws and to make the functional authorities conscious and devoted to their statutory duties; and
- iv) to provide suggestions for the improvement of the existing control mechanisms to make them effective and utility oriented for meeting the public health causalities arising from air pollution and air quality degradation.

## **Methodology**

To identify the Central, State and Municipal laws on the subject, an attempt has been made to analyze the Central and State Acts, Rules, Regulations, Orders, Notifications, Circulars, etc. The functional aspects concerning the topic were also examined, analyzed and studied by resorting to the research techniques of observation and discussion.

In ascertaining the contribution made by the judiciary in developing clean air jurisprudence as a public health protection measure, an attempt has been made to collect and evaluate the



decisions rendered by the courts on the subject. The same were subjected to close scrutiny in the light of past judicial approaches, to assess and determine the nature and extent of transition that has taken place in the judicial trends with the passage of time and new challenges evolving and posing threat to air environment, compelling the judiciary to resolve the issues in the midst of legislative and executive silence and mounting public expectations and faith in judiciary.

The collected data is subjected to evaluation, taking cue from the existing legal, statutory and policy materials. An examination of the comparable practices, as far as feasible, is also undertaken. The important findings are closely evaluated and ultimate conclusions are deduced after taking into account expert opinions from diverse sources.

## *Chapter -2*

### **RIGHT TO HEALTH AND PUBLIC HEALTH: A CONCEPTUAL OVERVIEW**

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1. From Natural Right to Human Right
2. Legalistic Thoughts on Rights
3. 19<sup>th</sup> Century Schools of Thought: From Individual to Community
4. 20<sup>th</sup> Century Philosophy: Towards Articulation of Human Rights
5. Hohfeld's Right-Duty Relation: Jurisprudential Foundation of Socio-Economic Rights and their Enforceability
6. From Human Right to Fundamental Right
7. Right to Health and Public Health: Evolution from International Instruments
8. States' Obligation in the Context of Public Health
9. Tackling Violations of Right to Health: Role of European Human Rights Bodies – Case Study
10. Right to Healthy and Balanced Environment
11. Indian Judicial Role
12. Jurisprudential Paradigm for Judicial Activism in Public Health
13. Clean Air as part of Right to Health and Public Health
14. Conclusion

## RIGHT TO HEALTH AND PUBLIC HEALTH: A CONCEPTUAL OVERVIEW

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Right to health has passed through different stages of evolution to reach the present state of recognition and justiciability as a fundamental right. Its development is traceable from jurisprudential and international perspectives and both have cast a positive obligation on the State to protect public health. Yet, the often raised question is what the 'State obligation' means, and what is its extent? This chapter makes an analysis of the nature and extent of State obligation in relation to public health.

In western jurisprudence it was the Greeks who first thought of legal concepts systematically. Aristotle interpreted life as meaning not mere living, but living well<sup>1</sup>. If good life is the aim of man's life, then its pursuit and achievement involves the fulfillment of certain conditions of social life, which are termed as 'rights'<sup>2</sup>. A 'right' in the legal sense may be defined as an advantage or benefit conferred upon a person by a rule of law<sup>3</sup>. They are necessary for the adequate development of one's personality and environment. Viewed negatively, rights are those opportunities, the absence of which deprives man of something essential. Rights are also being considered as a special advantage that one gains on account of one's status, as a human

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<sup>1</sup> Anup Chand Kapur, *Principles of Political Science*, S. Chand and Company Ltd., New Delhi (1996), p.222.

<sup>2</sup> As far back as the fourth century B.C., Aristotle expressed the importance of health in the following words: " If we believe men have any personal rights at all as human beings, they have an absolute right to such measure of good health as society, and only society alone is able to give them". See Romer, R., "The Right to Health Care" as cited in Fuenzalida-Puelma and Connor(Eds.), *The Right to Health in the Americas* (1987), p.20.

<sup>3</sup> Fitzgerald, P.J., *Salmond on Jurisprudence*, Sweet & Maxwell, London (12<sup>th</sup> edn., 1966), p. 41.

being, a woman, a minority, a child, or as a citizen<sup>4</sup>. The evolution and development of right to health and public health at the domestic and international levels is the story of a voyage from natural right to human right, and further from human right to fundamental right and now getting recognition as justiciable and implementable rights at least to the limited extent of a country's available resources.

### **From Natural Right to Human Right**

The concept of human rights is as old as the doctrine of 'natural rights' founded on the concept of natural law and which considers nature as the provider of certain rights that have a universal, rational, eternal and immutable character. Human rights were adopted only in the present century from the expression previously known as 'natural rights' or 'rights of man'<sup>5</sup>. According to this ancient theory, rights being rationally deducible from man's nature, have their universal application, irrespective of the difference of place, time and environment. Based on the above notion of rights, the Stoics of ancient Greece upheld the right to equality as given to mankind by nature<sup>6</sup>. This school of thought<sup>7</sup> also held the view that human conduct should be judged according to and brought into harmony with the law of nature<sup>8</sup>. Polybius and Cicero, the Roman thinkers, also emphasized on the existence of law of nature to which laws of State must conform<sup>9</sup>.

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<sup>4</sup> A legal right may also be defined as an interest recognized and protected by a rule of law, an interest the violation of which would be a legal wrong done to him whose interest it is, and respect for which is a legal duty. For a full discussion on the analysis of such terms as "right" and "duty", see Hart, "Definition and Theory in Jurisprudence" 70 L.Q.R.(1954) 37.

<sup>5</sup> Attar Chand, *Politics of Human Rights and Civil Liberties: A Global Survey*, UDH Publishers and Distributors, New Delhi(1985), p.45.

<sup>6</sup> As cited by Johari, J.C., *Principles of Modern Political Science*, Sterling Publishers Pvt. Ltd., New Delhi (1989), p.178.

<sup>7</sup> It was founded by Zeno of Citium.

<sup>8</sup> Richard Pierre Claude and Weston Burns, H., *Human Rights in the World Community: Issues and Actions*, University of Pennsylvania Press, Philadelphia(1989).

<sup>9</sup> Ritchie, D.G., *Natural Rights*, London (3<sup>rd</sup> edn., 1916),Ch.2; See also Sir Frederick Pollock, "The History of the Law of Nature" in : *Essay in the Law*, Bibliolife(2008).

The Medieval period spreading from the 13<sup>th</sup> century till the Treaty of Westphalia (1648), and with the advent of the period of Renaissance and the fall of feudalism, certain basic changes occurred in the beliefs and practices of society. People increasingly felt the idea of human rights as a general social need. The said belief reached its climax in 1215 A.D. with the declaration of *Magna Carta* and the doctrine of natural rights thereby passed into the realm of practical reality when King John, an absolute monarch, was made to acknowledge that there were certain rights of the subjects which could not be violated even by a Sovereign in whom all powers were legally vested<sup>10</sup>.

Natural Law postulation was further strengthened by Saint Thomas Aquinas (1224-1274) who advocated that natural law was the part of God's perfect law which could be divined through the application of human reason<sup>11</sup>. Part of Aquinas early natural law philosophy advocated that all people, whatever be their status, were subjected to the authority of God<sup>12</sup>. From this, it was possible to state that all human beings were endowed with a unique individual identity which was separate from the State. This facet of natural law doctrine sowed the seeds of the natural rights idea that each person constituted an autonomous individual<sup>13</sup>.

### **Petition of Rights and the Bill of Rights**

The events like the Petition of Rights<sup>14</sup> and the Bill of Rights<sup>15</sup> testified the increasing popular view that all human beings are endowed with certain eternal and inalienable rights and they could never be renounced even when humankind contracted to enter the

<sup>10</sup> Basu, D.D., *Human Rights in Constitutional Law*, Wadhwa and Co., Nagpur (2005), p.49.

<sup>11</sup> As cited by Scott. Davidson, *Human Rights*, Philadelphia Open University Press (1993), p. 27.

<sup>12</sup> According to Thomas Aquinas, an ardent supporter of natural law theory, natural law sets a standard for the general good, rather than for the advantage of an individual or a particular class. For details, see *Thomas Aquinas: Selected Political Writings*, Eng.trans. by J.G.Dawson, Oxford (1948).

<sup>13</sup> Charles Grove Haines, *The Revival of Natural Law Concepts*, Cambridge, Mass.(1930), Chs.1-3.

<sup>14</sup> *Petition of Rights*,1628.

<sup>15</sup> *English Bill of Rights*, 1689.

civil society<sup>16</sup>. This was a progressive vision of rights and it blossomed and took the real wings as natural rights in the 17<sup>th</sup> and 18<sup>th</sup> centuries.

### **Theory of Social Contract**

The doctrine of natural rights received further impetus at the hands of the great protagonist of the theory of social contract, particularly Locke and Rousseau, who sought to trace the genesis of political society and government in an agreement into which individuals entered to form a collective society to ensure their general interest and objects, but at the same time without interfering with their 'natural rights' which already belonged to them as human beings<sup>17</sup>. Locke's theory was that, in the original state of nature, man was governed by the law of nature, but for the sake of better safety he joined in a political society by means of a 'social contract' for the mutual preservation of life, liberty and property<sup>18</sup>. The government so set up by a contract was naturally one of limited powers and was bound to the community by the guarantee that the people's natural rights would be preserved. The legislature was thus limited by natural law, and a law made by legislature contrary to the law of nature or violative of the natural rights of the individual was invalid<sup>19</sup>. However, Locke's philosophy of social contract was full of contradictions and ultimately, it was Rousseau who gave kinetic impetus to the doctrine by emphasizing that the sole justification of the State, which derives its authority from the people, was to guarantee the natural rights of man, of freedom and equality<sup>20</sup>. These were 'natural rights' in as much as they inhered in man in the 'state of nature'. These inherent rights logically included individual and

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<sup>16</sup>Arun Kumar Palai, *National Human Rights Commission of India, Formation, Functioning and Future Prospects*, Khanna Publishes, New Delhi (1998), p.3.

<sup>17</sup>Rousseau, *Social Contract*, 1762 (Everyman) I, p (vi).

<sup>18</sup>John W. Yolton, "Locke on the Law of Nature" in : *The Philosophical Review*, Vol.1, LXVII(1959), pp.477-498.

<sup>19</sup>Harold J.Laski, *Political Thought in England from Locke to Bentham*, London( 1920).

<sup>20</sup>Rousseau, *supra*, n.17, 1, i ; Discourse on Inequality, Pt. II.

public health as part of human and social wellbeing. Still, Rousseau observed:

“Man is born free and everywhere he is in chains”<sup>21</sup>.

### **Legalistic Thoughts on Rights**

It is striking that the concept of natural rights, as binding on many political authority, crept into the thoughts of legalist like Blackstone whose writings in 1765<sup>22</sup>, made a sharp distinction between absolute and relative rights. By absolute rights of individuals, Blackstone meant “those which are so in their primary and strictest sense; such as would belong to their persons merely in a state of nature; and which every man is entitled to enjoy, whether out of society or in it”. These are to be distinguished from relative rights which, according to him, are incidental to individuals only as members of society. He advocated that it is the duty of the political society to protect these absolute rights and, therefore, the State or any authority therein cannot interfere with or encroach upon these natural rights except in so far as it is essential for the free maintenance or proper enjoyment of such rights as members of collective society. By this version, he stretched the doctrine of natural rights from the realm of political philosophy into the realm of jurisprudence<sup>23</sup>.

### **Virginia Bill of Rights**

The Virginia Bill of Rights drafted by George Mason<sup>24</sup> and adopted in State Constitution of Virginia in 1776 was the first declaration of rights in a written Constitution “as the basis and foundation of government”. The edifice of the doctrine of natural

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<sup>21</sup>Vaughan, C.E., *Studies in the History of Political Philosophy Before and After Rousseau*, Manchester, Vol.1, Ch.4 (1925).

<sup>22</sup>Blackstone,(1765) 1 Comm.(Coleridge Ed.), Ch. I, pp. 123-25.

<sup>23</sup>*Id.*, Book I, Ch. 2, pp. 161-62.

<sup>24</sup>Scott. Davidson, *supra*, n.11 at p. 3.

rights is to be found in the Preamble of the said Declaration which states:

“All men are by nature equally free and independent and have certain inherent natural rights of which when they enter society, they cannot by any contract deprive or divest their posterity<sup>25</sup>.

With this, the concept of inalienable natural rights of man found an entry into the world of constitutionalism.

### **Inalienable Rights and the Declaration of American Independence**

The Drafters of the US Constitution, influenced by Mason’s Virginia Declaration, included the protection of certain minimum rights. The Declaration of American Independence, drafted by Jefferson in 1776, stated:

“We hold these truths to be self-evident; that all men are created equal; that they are endowed by their creator with certain inalienable rights; that among these are life, liberty, and the pursuit of happiness”<sup>26</sup>.

Though it was not part of the written Constitution, it asserted “certain inalienable rights”, as against any government in power, adding that “to secure these rights governments are instituted among men, deriving their just powers from consent of the governed<sup>27</sup>.

However, the Americans did not stop at reciting these rights in an ornamental preamble to the Constitution, but adopted them as part of their Constitution to serve as the legal limitation on the powers of each of the organs of State and to make rights enforceable

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<sup>25</sup> Basu, D.D., *supra*, n.10 at p. 51.

<sup>26</sup> *Ibid.*

<sup>27</sup> *Ibid.*



by the Courts. Judicial Review thus became an inseparable concomitant of the Fundamental Rights<sup>28</sup>.

### **French Declaration of the Rights of Man and the Citizens**

Inspired by the American Declaration of Independence, the French National Assembly in 1789 formulated the Declaration of the Rights of Man and the Citizens. According to the Declaration, true happiness is to be found in individual liberty which is the product of 'natural, inalienable and sacred rights of man'. Thus, the Declaration states that certain individual rights are protected in the arms of the State.

The philosophy underlying the doctrine of inalienable rights, regarded as superior to the civil rights, is best explained by Thomas Paine, a contemporary political thinker as:

“...all men are born equal and with equal natural rights”<sup>29</sup>.

Whatever be the theoretical or doctrinal debates over the English, American and French Revolutions and approaches, it is clear that each, in its own way, contributed towards development of forms of liberal democracy in which certain rights were regarded as paramount in protecting individuals from the State's inbuilt tendency to authoritarianism. What was significant about these protected rights was that those were predominantly “freedoms from” rather than “rights to”<sup>30</sup>.

### **19<sup>th</sup> Century Schools of Thought: From Individual to Community**

In modern parlance, natural inalienable rights would be called civil and political rights, since they dealt primarily with individual's relationship with the organs of the State. In the nineteenth century

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<sup>28</sup> *Id.*, p. 52.

<sup>29</sup> Thomas Paine, *Rights of Man* (1791-92), (1958 Everyman edn.), pp. 42, 44-45.

<sup>30</sup> Paras Diwan, *Human Rights and Law*, Deep and Deep Publications, New Delhi (1996), p. 6.

under the influence of German Idealism of Hegel that “State is a march of God on earth”<sup>31</sup> and the rising European nationalism together with Marxian school of thought<sup>32</sup>, an offshoot of Hegelian thought and dialectical approach, did not reject individual rights altogether, but maintained that right derived from whatsoever source belong to the community or the whole society and not only to individuals.

The idealistic school of thought propounded by Kant not only presented the philosophical views on rights, but also explained the nature, practice and objective of the rights from a moral perspective and concluded that morality is the force for both the individual and the society<sup>33</sup>. According to him, rights are nothing but a moral expression of individual actions, and the recognition by the society towards the right is essentially a moral action and all laws are essentially to be moral in legislation to protect and uphold the freedom of the individual and to him freedom is not only moral but also universal to be exercised by all individuals<sup>34</sup>.

### **20<sup>th</sup> Century Philosophy: Towards Articulation of Human Rights**

In the early 20<sup>th</sup> century, The Great Economic Depression of 1930 struck the first blow to the lofty philosophy of individualism. The social reality projected that beneath the lofty idealism of laissez faire philosophy laid hidden the most demeaning aspect of Capitalism. In the words of Julius Stone:

“The fallacy of supposing that a workman, living from hand to month on daily labour in the same way as a great commercial or industrial corporation resents restrictions on its free bargaining is now well recognized”<sup>35</sup>.

<sup>31</sup> Agarwal, R.C., *Political Theory*, S. Chand and Company Ltd., New Delhi (1997), p.186.

<sup>32</sup> Sidney Hook, *From Hegel to Marx: Studies in the Intellectual Development of Karl Marx*, New York(1936).

<sup>33</sup> Hearnshaw, F.J.C.(Ed.), *The Social and Political Ideas of Some Representative Thinkers of the Age of Reaction and Reconstruction*, London(1932), Ch.3.

<sup>34</sup> Paul Guyer, *The Cambridge Companion to Kant*, Cambridge University Press, USA (1993), p.344.

<sup>35</sup> Julius Stone, *Social Dimensions of Law and Justice*, Tripathi, Bombay(1966), p.407.

The fact is that the working class was as much a product of industrial revolution as the fundamental rights. The economic depression revealed that though the ideology of *laissez faire* triumphed, its end-product has divided society, between privileged and underdogs. The capitalism which once fought against the vested interest of feudalism itself acquired vested interest. President Roosevelt stated: "one third of our population, the overwhelming of which is in industry and agriculture is ill-nourished, ill-cad and ill-housed"<sup>36</sup>.

The state of affairs that followed led to the feeling that *laissez faire* works out hardships and prejudice when men are not equal. No democratic State can tolerate this ignoring state of affairs where the weak were continually driven to wall. A feeling generated that if fundamental rights were to have any meaning to the millions, their content must change. If rights were considered as conditions necessary for the fulfillment of life, then the working class too, should have these rights guaranteed to them. Consequent developments saw the emergence of new species of rights known as "social and economic rights", in which the right to health and public health are included. However, a trend to include those rights as part of Bill of Rights started only in post-world war era. In the Weimer Republican Constitution and in the Constitution of USSR, these rights were recognized as fundamental rights<sup>37</sup>. In modern Constitutions of many States these rights in some form or the other, are also recognized<sup>38</sup>.

The history of almost entire first half of twentieth century is characterized by the prevalence of colonial rule in large parts of the world and the rise of authoritarian governments in many countries. It also witnessed the establishment of fascist, barbarous and aggressive regimes in some countries and the rise of national liberation

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<sup>36</sup> Paras Diwan, *supra*, n.30 at p.7.

<sup>37</sup> *Id.*, p.8.

<sup>38</sup> In Indian and Irish Constitutions, social and economic rights are incorporated within the purview of Directive Principles of State Policy.

movements in the colonies and of movements of democracy and social progress in other countries. The twentieth century also saw the two most devastating wars in the human history and by the time when the Second World War ended in 1945, it made economic insecurity intense and this led to the conceptualization and articulation of human rights<sup>39</sup>.

### **Hohfeld's Right-Duty Relation: Jurisprudential Foundation of Socio-Economic Rights and their Enforceability**

Hohfeld, the American jurist in 1913 modified Salmond's scheme of rights and worked out a table of jural relations with incisive logic<sup>40</sup>. He proceeded on the principle of jural correlatives. According to him, every right in the strict sense implies the existence of a correlative duty<sup>41</sup>. He established that jural correlative of right is duty.

Right was interpreted by Hohfeld as involving the presence of duty<sup>42</sup>. He used 'claim' as a substitute for 'right' and defined 'claim' as a sign that some person ought to behave in a certain way<sup>43</sup>. According to him, 'duty' is a prescriptive pattern of behaviour<sup>44</sup>. He also advocated that conduct is regulated by the imposition of duties<sup>45</sup>. Hohfeld uses right to mean privilege, power and immunity<sup>46</sup>. Of the four classes of rights, rights correlative to duties are the most important as it constitute the principal subject matter of law, while

<sup>39</sup> Arjun Dev *et al.*, *Human Rights: A Source Book*, NCERT(1996), p. (xii).

<sup>40</sup> Hohfeld, "Fundamental Legal Conceptions", in: *Hohfeld Reprinting Essays* 23 Yale L.J. (1913)16 and 26 Yale L.J. (1917) 710.

<sup>41</sup> *Lloyd's Introduction to Jurisprudence*, Lord Lloyd of Hampstead and Freeman, M.D.A., ELBS with Stevens, London (5<sup>th</sup> edn.,1985), p. 443.

<sup>42</sup> *Ibid.*

<sup>43</sup> On the relationship between claims and rights, see White, A.R., *Rights*, Clarendon Press, Oxford (1984),Ch.8; Stewart, M. A.,(Ed.), *Law, Morality and Rights*, Kluwer Academic Publishers, Norwell, USA(1983).

<sup>44</sup> See Dias, R. W. M., *Jurisprudence*, Butterworths, London (5<sup>th</sup> edn., 1985), p.25.

<sup>45</sup> *Id.*, p.27.

<sup>46</sup> Rights are of four kinds, rights in the strict sense, liberties, power and immunities and its correlatives are duties, no-rights, liabilities and disabilities. All rights, whatsoever, correspond to duties, *Id.*, p. 42.

others are merely accessory<sup>47</sup>. Rights have been defined from moral and legal perspectives by other jurists as well<sup>48</sup>.

The importance of Hohfeldian analysis of rights is that it is the most practical theory applicable to social and economic rights<sup>49</sup> such as the right to health and public health. It provides the jurisprudential basis for the enforceability of such rights. Conferment of right to the subjects means a corresponding duty on the State to effectuate the exercise of the right, which in the case of right to health and public health means taking preventive and curative measures by the State. Consequently, State may need to refrain from conduct injurious to the enjoyment of physical and mental health<sup>50</sup> and in other instances, it means that the State may have to take action by preventing pollution, monitoring and controlling noxious emissions, etc. to give realization to the right.

It is a well accepted principle of human rights that economic, social and cultural rights are as important as civil and political rights and that both are indivisible and interdependent<sup>51</sup>. There are situations when breach of the right to work under healthy conditions may infringe upon the right to life. It is for this reason that economic, social and cultural rights are described as positive rights<sup>52</sup>. They are said to be positive rights, because they require an active role on the part of States<sup>53</sup>. It is furthermore for the reason that satisfaction of

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<sup>47</sup> *Ibid.*

<sup>48</sup> Bentham interest theory has brought out a subtle distinction between moral and legal rights. A moral or natural right is an interest recognized and protected by a rule of morality, an interest the violation of which would be moral wrong, and respect for which is a moral duty. A legal right, on the other hand, is an interest recognized and protected by a rule of law, an interest the violation of which would be a legal wrong done to him whose interest it is, and respect for which is a legal duty. According to Bentham, all legal rights are the creation of the law, see Fitzgerald, P.J., *supra*, n.3 at p.40.

<sup>49</sup> *Ibid.*

<sup>50</sup> At the same time, it has to be borne in mind that not everyone can be guaranteed perfect physical and mental health. See Romer, R., *supra*, n. 2 at p.17.

<sup>51</sup> Evelyn A. Ankumah, *The African Commission on Human and Peoples' Rights: Practice and Procedures*, Martinus Nijhoff Publishers, Hague (1996), p.143, Ch.5.

<sup>52</sup> See Note "Right to Adequate Food as a Human Right", Centre for Human Rights, United Nations (1989).

<sup>53</sup> Evelyn A. Ankumah, *supra*, n.51.

the economic, social and cultural rights is a guarantee for the enjoyment of civil and political rights. In respect of positive rights, there is a prevailing minority view that they are justiciable and implementable<sup>54</sup>. But the majority view is that the rights must be achieved progressively<sup>55</sup>.

From this brief historical exposition, it is apparent that the notion of human rights has made a transition from protection of individual from State absolutism to the creation of social and economic conditions calculated to allow the individual to develop to the maximum of his or her potential. It is certainly true that some rights are more difficult to secure than others, and those that are impossible to secure cannot be truly called rights. At the same time, it is equally true that some rights seem to be more important than others. Right to health and public health is one such category of right which is more important than others<sup>56</sup>.

### **From Human Right to Fundamental Right**

The right to life is the most fundamental of all the rights and it is the very core of humanity. It is therefore being considered as the *sanctum sanctorum* of human rights<sup>57</sup>. It is the right from which all other rights stem<sup>58</sup>. Life means the state of being alive as a human being. It also means the qualities, events and experiences of human existence<sup>59</sup>.

<sup>54</sup> See BUSIA, Nana K.A. Jr., and M'Baye, B., "Towards a Framework for the Filing of Communications on Economic and Social Rights under the African Charter—Phase I", *East African Journal of Peace and Human Rights* (1994).

<sup>55</sup> Jhatuala, F., "Human Rights and the Socio-Economic Context", in: Synder, F.E. and Sathirathai (Eds.), *Third World Attitudes Towards International Law*, Dordrecht, Netherlands (1987), pp.293-319.

<sup>56</sup> For further information, see Rajeev, D., "Regulation of Blood Banking Operations and Access to Public Health", [1997] C.U.L.R. 218.

<sup>57</sup> Paramjit S. Jasswal, "Developments in Environmental Law: The Case of India", in: *Proceedings of the Workshop on Development and Planning*, Vol.II, SOAS, the Centre for Asia and Africa, University of London, January 6-18, 1992.

<sup>58</sup> See, *The Preamble to the Hague Declaration on the Environment* 29 I.L.M.(1989)1308.

<sup>59</sup> Hornby, A.S., *Oxford Advanced Learners Dictionary*, Oxford University Press, New York (5<sup>th</sup> edn., 1995), p.680.

Aristotle while explaining the origin and end of State observed that State came into being for fulfillment of bare needs of man and continues in existence for the sake of good life<sup>60</sup>. Hobbes justified man's natural right to life by asserting that nobody wants to die a violent death, or to suffer an injury. The desire to stay alive is man's paramount wish, and the one that demands from others their most unflinching respect. Hobbes's 'social contract' formulation strengthened the concept of right to life in a politically organized society, i.e. State<sup>61</sup>. In fact, Hobbes's *Leviathan* came into being due to this contract whereby State undertakes to protect the right of the people.

Locke also recognized the right to life and emphasized on its protection by State. Locke's theory was that, in the original state of nature, man was governed by the law of nature, but for the sake of safety he joined in a political society by means of a 'social contract' for the mutual preservation of life, liberty and property. The distinct contribution of Locke to the philosophy of fundamental rights was that he asserted that both government and society exist to preserve the individual's rights and indefensibility of such rights is a limitation on the authority of both<sup>62</sup>. Equally important was that Locke also acknowledged that "life, liberty and estate" of one person can be limited only to make effective the equally valid claims of another person to the same right<sup>63</sup>. Thus, he recognized restrictions on the enjoyment of fundamental rights.

In slight difference, Rousseau, another architect of social contract, also glorified natural rights, but at the same time maintained that there is distinction between the rights of the citizens and of the sovereign and also with regard to the duties the citizens

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<sup>60</sup> Barker, E., *The Political Thought of Plato and Aristotle*, Dover Publications, New York(1959), p. 281.

<sup>61</sup> Howard Warrender, *The Political Philosophy of Hobbes: His Theory of Obligation*, Oxford(1957); Watkins, J.W.N., *Hobbes's System of Ideas*, Gower Publishing Co., London(1989).

<sup>62</sup> George H. Sabine, *A History of Political Theory*, Oxford and JBH Publishing Co., Delhi(1961), pp.525-526.

<sup>63</sup> *Ibid.*

have to discharge as subjects. Emphasizing on the role of the State, he justified the existence of the State for protecting the rights of the subjects, the most important of which being the right to life.<sup>64</sup> Right to life does not connote mere animal existence of continued drudgery in life<sup>65</sup> or can there be any reason why practice of violent extinguishment of life alone should be brought within its purview<sup>66</sup>. It is the heart of all fundamental rights and has received expanded meaning from time to time at national and international levels.

### **Right to Health and Public Health: Evolution from International Instruments**

Health is a fundamental human right indispensable for the exercise of other human rights<sup>67</sup>. It is one of the goods of life to which man has a right<sup>68</sup>. It is the condition of being sound in body, mind or spirit, especially freedom from physical disease or pain<sup>69</sup>. The conditions necessary for good health are essential for allowing people to live with human dignity<sup>70</sup>. According to World Health Organization, health is a condition or quality of the human organism expressing the adequate functioning of the organism in given conditions, genetic and

<sup>64</sup> Chaturvedi, R.G., *State and Rights of Men*, Metropolitan Book Co. Pvt. Ltd., Delhi(1971), p.148.

<sup>65</sup> *Consumer Education and Research Centre v. Union of India*, (1995) 3 S.C.C. 42, per A.M.Ahmadi, C.J. and M.M.Punchhi and K.Ramaswamy, JJ. In this case Court held that right to health is an integral facet of meaningful right to life, to have not only meaningful existence but also robust health and vigour, without which life would be a misery. Court further added that disease occurs primarily due to exposure to toxic and carcinogenic agents. *Id.*, p.70.

<sup>66</sup> *T. Damodhar Rao v. S.O. Municipal Corporation, Hyderabad*, A.I.R.1987 A.P.171 at p.181. In this case, Justice P.A.Choudary of the Andhra Pradesh High Court also held that slow poisoning by the polluted atmosphere caused by environmental pollution and spoliation amount to violation of the right under Article 21.

<sup>67</sup> Mann, "Defining the Right to Adequate Health, Economic and Social Rights and the Right to Health", 17 *Am. J.L and Med.* 29 (1996); see also Lekshmi, G.R., "Access to Health Care: Problems and Prospects" [2007]C.U.L.R.268.

<sup>68</sup> Ravi Duggal, "Operationalising the Right to Healthcare in India", available at <http://www.cehct.org/rth/paper.htmr>, visited on February 20, 2008.

<sup>69</sup> Webster's Dictionary. According to Oxford English Dictionary health means "soundness of body or mind; that condition in which its functions are duly and efficiently discharged".

<sup>70</sup> Allyn Lisa Taylor, "Making the World Health Organization Work: A Legal Framework for Universal Access to the Conditions for Health", 18 *Am. J. L and Med.* (1992)301 at p.324; see also Alicia Ely Yamin, "Defining Questions: Situating Issue of Power in the Formulation of Right to Health Under International Law", 18 *Human Rights Quarterly* (1996)398 at p.401.



environmental<sup>71</sup>. The term “public health” came into general use around 1840 from the need to protect the public from the spread of communicable diseases and the enactment of the Public Health Act, 1948 in England crystallized the efforts of the society to protect, promote and restore the people’s health and it has made much headway towards recognizing the right of every individual to a standard of living adequate for the maintenance of health and towards ensuring a socially and economically productive life<sup>72</sup>. As such, right to health includes certain components which are legally enforceable and drawn from complementary approaches, such as formulation of health policies and adoption of specific legal instruments at the International level.

Right to health and public health has gained significant strength from international documents which now forms part of the customary international law. The United Nations Declaration, 1942<sup>73</sup> put on record that complete victory over the enemies is essential to defend life, liberty and independence and to preserve human rights and justice in their own land as well as in other land. The then big three which included United States, Soviet Union and Great Britain endorsed the above Declaration in their Conference of March 3, 1943<sup>74</sup>. This was followed by the *Philadelphia Declaration* of the *International Labour Organization’s* (I.L.O) 26<sup>th</sup> Session, which lay down as hereunder:

“All human beings, irrespective of trade, creed or sex, have the right to pursue both their material well-being and their spiritual development in conditions of freedom and dignity of economic security and equal opportunity”<sup>75</sup>.

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<sup>71</sup> WHO(1978), *Health for All*, Sr.No.1. Health is also regarded as a *modus vivendi* enabling imperfect men to achieve a rewarding and not too painful existence while they cope with an imperfect world. See Dubos, R., *Man, Medicine and Environment*, Harmondsworth, Pelican(1968).

<sup>72</sup> WHO (1952), Techn. Rep. Ser., No. 55; See also Holland W.W *et al.*, (Eds.) *Oxford Textbook of Public Health*, Vol. 1, Oxford University Press.

<sup>73</sup> Declaration of January 1, 1942.

<sup>74</sup> Paras Diwan, *supra*, n.30 at p.24.

<sup>75</sup> *Ibid.*

The *Dumbarton Oaks Conference* of 1944 among the four Big Powers led to the first tentative draft of a new world organization<sup>76</sup>. At *Yalta Conference* of 1945, the Great Powers issued a declaration of liberated Europe where principles of Atlantic Charter and Declaration of United Nations were affirmed.

It was after all these developments that on April 25, 1945 the *San Francisco Conference of the United Nations* was convened and it gave birth to the *Charter of United Nations*<sup>77</sup> which reaffirmed faith in fundamental human rights of men and women and of nations large and small, and to establish conditions under which justice and respect for the obligations arising from treaties and other sources of international law can be maintained, and to promote social progress and better standard of life in larger freedom<sup>78</sup>.

During the nineteenth and twentieth centuries, the concept of natural rights was transformed into the idea of human rights. This change reflected an expansion of the scope and range of rights to include within its ambit two claims, namely, negative claims which limit the power of the government to protect people's rights against its power and positive claims which are intended to enhance the power of the government to do something for a person to enable him in some way. Thus, the late twentieth century idea of human rights, which incorporates both the positive and negative types, means that "certain things ought not to be done to any human being and certain other things ought to be done for every human being".

Right to health has emerged primarily from economic dislocations of industrial revolution, which inspired many philosophers, including Karl Marx, to conclude that human beings have the right to economic security. However, notions of positive right to health had its origin in the sanitary revolution of the nineteenth

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<sup>76</sup> *Ibid.*

<sup>77</sup> *Ibid.*

<sup>78</sup> Arjun Dev, *supra*, n.39 at p.(xiii).

century when public health reformers, troubled by economic dislocations of industrial revolution and empowered with scientific advances such as *germ theory of disease*<sup>79</sup>, pressed for State-sponsored public health reforms. World War-II and the establishment of the U.N. are watershed events in the evolution of modern corpus of international human rights law and the current international human rights system. In due course of time, the international treaties of the U.N. became the major source of right to health.

Within the framework of United Nations, the *Universal Declaration of Human Rights*(U.D.H.R) embraces both civil and political rights and economic, social and cultural rights. Right to social security which is a facet of right to health finds a place in Article 22 of the Universal Declaration of Human Rights, 1948<sup>80</sup> which reads thus:

“Everyone as a member of society, has the right to social security and is entitled to realization, through national effort and international co-operation and in accordance with the organization and resources of each State, of the economic, social and cultural rights indispensable for his dignity and the free development of his personality”.

A different facet of the right to health finds a place in Article 25(1) of the Universal Declaration, which states:

“Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control”.

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<sup>79</sup> According to this theory developed by Louis Pasteur in the 19<sup>th</sup> century, the cause of disease was microbes referred to as a one-to-one relationship between causal agent and disease. See Park, K., *Preventive and Social Medicine*, Banarsidas Bhanot Publishers, Jabalpur (16<sup>th</sup> edn., 2000), p.27.

<sup>80</sup> For the text of the Universal Declaration of Human Rights, see UN DOCA/811 at pp. 21-27; see also Ian Brownlie *et al.*, *Basic Documents on Human Rights*, Oxford University Press, Oxford (2002), pp.21-22.

Article 25(2) of the Universal Declaration emphasizes on the protection of motherhood and childhood by declaring that motherhood and childhood are entitled to special care and assistance. It is further stated that all children whether born in and out of wedlock, shall enjoy the same social protection.

It is interesting to note that Article 25 of Universal Declaration of Human Rights recognizes that persons entitled to rights should have sufficiency of necessary means for the right to life, liberty and security as explicitly recognized in Article 3<sup>81</sup>. However, the Declaration does not make holders of rights alone responsible for the quality of life, since it explicitly recognizes in Article 22 the right to social security, thereby constituting a responsibility vis-à-vis the society of which the holder of rights is a member.

The Preamble to the Constitution of *World Health Organization*<sup>82</sup>(W.H.O), which was drafted more or less during the same time as that of the Universal Declaration states that enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political, economic or social condition. It is probably because of the difficulty of reaching sufficient consensus on the specific concept of right to health that the declaration has tackled it in a more diffused manner.<sup>83</sup> However, adoption of the *International Covenant on Economic, Social and Cultural Rights*, 1966<sup>84</sup>(ICESCR) rendered obsolete the debate on cause and consequences of the absence of the formal inclusion of right to health in the UDHR.

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<sup>81</sup>Article 3 of the Universal Declaration states that everyone has the right to life, liberty and security of persons.

<sup>82</sup>WHO Constitution came into force on 7<sup>th</sup> April, 1948 and it is available at [www.who.in](http://www.who.in). and accessed on January 10, 2009; see also WHO: *Constitution of the WHO*, Geneva(1964).

<sup>83</sup>Bakshi, P.M., *Health Law and Ethics: An Introduction* (2002 TILEM), p. 28.

<sup>84</sup>UN Doc A/811 at p.118; See also Gauri Shanker,V., "Human Rights Accountability of Transnational Corporations" in : Saksena, K.P., *Human Rights: Perspective and Challenges*, Institute for World Congress on Human Rights (NCHR), New Delhi (1994), p.186.

Article 12 of the ICESCR forms the international base for the emergence of the right to health. It recognized explicitly the right of everyone to enjoy the highest attainable standards of physical and mental health. Article 12(1) of ICESCR reads:

“The States Parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health.”

It also enumerates four steps to be followed by the State so that everyone can realize the right to health. Firstly, it states that States must act to enhance the welfare of children in general, such as reduction in stillbirth rate and infant mortality and health development of the child<sup>85</sup>. Secondly, it states that States must take measures to improve environment and industrial hygiene. Thirdly, it obligates the State to prevent and treat epidemic, endemic, occupational and other diseases. Lastly, it calls upon the State to strive to optimize health service, assuring to all medical service and medical attention in the event of sickness. Thus, a multi-faceted approach to health is carved out in the covenant. Similarly, the *Charter on Environmental Rights and Obligations*<sup>86</sup> proclaims that every one has the right to an environment adequate for the general health and wellbeing. As a result of the above international approach, right to health is now seen as a means of attaining full development of the right to life and integrity of human person, a means of recognizing right of each individual to what the community owes him, and a means of creating duties under State responsibility to contribute to the satisfaction of the individual aspirations of citizens.

With this, the application of human rights in the realm of environmental jurisprudence gathered momentum and legal

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<sup>85</sup> Article 12(2) of ICESCR reads: “The steps to be taken by the States Parties to the present Covenant to achieve the full realization of this right shall include those necessary for (a) the provision for the reduction of the stillbirth rate and of infant mortality and for the healthy development of the child”.

<sup>86</sup> Charter on Environmental Rights and Obligations (Draft), 21(2) *Environmental Policy and Law*, 81 at p.91.

obligations owed by States to individuals were also recognised<sup>87</sup>. A close scrutiny of the measures that the States has to undertake in the field of health necessitates considerable financial resources. However, States cannot easily escape from this basic social responsibility for the reason that human rights treaties are of a law-making character as opposed to contracting treaty, they purport to give fuller effectiveness to their guarantee and hence it is essential that wide ranging and socially evolving matters affecting health be encompassed within Article 12<sup>88</sup>. In the General Comment No.14, the Committee on Economic, Social and Cultural Rights has enunciated that States Parties' obligations enumerated in Article 12(2) are illustrative and non-exhaustive examples<sup>89</sup>.

The theoretical division between civil and political rights on the one hand and economic, social and cultural rights on the other have obviously an impact on the nature of right to health. 'Social rights' or basic entitlements refer to those rights that protect the basic necessities of life or rights that provide for the foundation of an adequate quality of life<sup>90</sup>. It may be pointed out that in contrast to International Covenant on Civil and Political Rights (ICCPR), the ICESCR is not immediately binding and it is subordinated to the principle of progressive realization. Article 2(1) of ICESCR reads:

"Each State party to the present covenant undertakes to take steps individually and through international assistance and co-operation, especially economic and technical, to the maximum of its available resources with a view of achieving progressively the full realization of the rights recognized in the present covenant by all appropriate means, including particularly the adoption of legislative measures".

<sup>87</sup> Jennings, "An International Lawyer Takes Stock" 39 I.C.L.Q. (1990)513.

<sup>88</sup> Robyn Martin and Liada Johnson, *Law and the Public Dimension of Health*, Routledge-Cavendish (1<sup>st</sup> edn., 2001), p.148.

<sup>88</sup> Committee on Economic, Social and Cultural Rights, *General Comment No.14*, 22<sup>nd</sup> Session, 2000, UNDOCEC 12/2000/43 (2001) 8 IHRR, para. 7.

<sup>88</sup> Gopal Subramaniam, "Contribution of Indian Judiciary to Social Justice Principles Underlying the Universal Declaration of Human Rights" 50 J.I.L.I.(2008)593 at p.594.

Thus, it is clear that treaty provisions acquire full realization of right only progressively to the extent of its available resources. Viewed from the above perspective, it can be stated that realization of the right to health depends upon the resources of the State. This in turn would act as a shield and justification for the State to evade responsibilities in ensuring right to health, as the language used in the Article is a favorable source of interpretation for the States showing indifference in responding to people's health problems. However, it has been cautioned by the Committee on Economic, Social and Cultural Rights that realization of right to health overtime or progressively should not be misinterpreted as depriving the State obligation of its meaningful content. On the other hand, the phrase must be read in the light of the overall objectives of the Covenant, which is to establish clear obligation on the State Parties for the full realization of the right to health<sup>91</sup>.

ICESCR has other inherent weaknesses as well, traceable with reference to the nature of the language used. While ICCPR provisions are formulated in an affirmative and unconditional way such as "everyone shall have the right"<sup>92</sup> ICESCR provisions state only that "State parties recognize or undertake to ensure"<sup>93</sup>. The terms like 'recognize', 'undertake to ensure' were chosen deliberately to lessen the operative force of the provisions and to confer on States broader level of discretion<sup>94</sup>.

Yet again, another important deficiency of ICESCR is that as compared to the general clause in Article 2 of ICCPR, there is no explicit reference to judicial or other forms of remedy. Article 2(3) of ICCPR reads:

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<sup>91</sup> For details, see General Comment No.3(1990), *The Nature of State Parties Obligations of the Covenant*, Committee on Economic, Social and Cultural Rights, 5<sup>th</sup> Session, Economic and Social Council, Official Records (1991) Supplement No.3 Annex III Para 9 E/19191/23, E/C 12/1990/ 8.

<sup>92</sup> See for instance, Article 9 of ICCPR which reads: "Everyone has the right to liberty and security of the person..."

<sup>93</sup> Article 9 of ICESCR reads: "The State parties to the present covenant recognize the right of everyone to social security including social insurance".

<sup>94</sup> General Comment No.3(1990), see *supra*, n. 91.

“Each State Party to the present Covenant undertakes, (a) to ensure that any person whose rights or freedoms as herein recognized are violated shall have an effective remedy, notwithstanding that the violation has been committed by persons acting in an official capacity; (b) to ensure that any person claiming such a remedy shall have his right thereto determined by competent judiciary, administrative or legislative authorities, or by any other competent authority provided for by the legal system of the State, and to develop the possibilities of judicial remedy; (c) to ensure that the competent authorities shall enforce such remedies when granted ”.

There is no individual or inter-State complaint mechanism envisaged in ICESCR, as with the operative clause under the ICCPR and its First Optional Protocol<sup>95</sup>. The State parties to the ICESCR are only required to submit reports to the Committee on Economic, Social and Cultural Rights on any national legislative and other measures taken to give fuller effect to the right guaranteed in ICESCR. Thus, the net effect of the language of the ICESCR leads to the conclusion that right to health falls within socio-economic rights and that the realization of the same depends upon the resources of the State.

*The Convention on the Rights of the Child*<sup>96</sup> assure in Article 24(1) that State parties to the covenant recognize the right of the child to the enjoyment of the highest attainable standard of health and to facilities for treatment of illness and rehabilitation of health. The Convention also requires the State parties to strive to ensure that no child is deprived of his or her right of access to such health care services<sup>97</sup>. *The African Charter on Human and Peoples’ Rights*<sup>98</sup>

<sup>95</sup> See *First Optional Protocol to the International Covenant on Civil and Political Rights* (1966).

<sup>96</sup> *Convention on the Rights of the Child* A/RES/44/25 November, 1989. For text of the Convention, see the *United Nations and Human Rights* (1945-1995), The United Nations Blue Book Series, Vol. VII (1995), p.334; See Rebecca Wallace, *International Human Rights: Text and Materials*, Sweet & Maxwell, London(2<sup>nd</sup> edn., 2001), p.69; Also see Malcolm D. Evans, *Blackstone’s International Law Documents*, Universal Law Publishing Co. Pvt. Ltd., Delhi (4th edn.,2000), p.359.

<sup>97</sup> Article 24(2) of the *Convention on the Rights of the Child*, 1989 at the same time urges States to implement appropriate measures for realization of the right to health, which include measures to diminish infant and child mortality; ensure provision of necessary medical assistance and healthcare to all children with emphasis on development of primary care; combat disease and malnutrition; include within the framework of primary healthcare, inter alia, the application of readily available technology to ensure adequate nutritious food and clean drinking water, taking into consideration the dangers and risks of environmental pollution; ensure appropriate pre-natal and post-natal health



declares in Article 16 that every individual shall have the right to enjoy the best attainable state of physical and mental health. Article 16(2) also assures that State parties shall take necessary measures to protect health of their people and to ensure that they receive medical attention when they are sick<sup>99</sup>. *Vienna Declaration and Programme of Action* of 1993 is another international legal instrument that lays focus on issues relating to health.

A breakthrough in the pursuit of human right to health emerged with the *Alma Ata Declaration* of 1978, which declared as follows:

“The Conference strongly reaffirms that health, is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity, is a fundamental human right and that the attainment of the highest possible level of health is a most important world wide social goal whose realization requires the action of many other social and economic sectors in addition to the health sector”<sup>100</sup>.

Closely on its heels, in May, 1981 at the 34<sup>th</sup> World Health Assembly, 156 member States gathered in Geneva endorsed the statistics to impel the world towards the goal of health for all by the year 2000. On the aforesaid occasion, Mrs.Indira Gandhi representing India in her speech opined;

“Life is not mere living but living in health. The health of the individual, as of nations is of primary concern to us all. Health is not absence of illness but a glowing vitality, a

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care for mothers; ensure that all segments of society, in particular parents and children are informed, have access to education and are supported in the use of basic knowledge of child health and nutrition, the advantages of breast feeding, hygiene and environmental sanitation and the prevention of accidents; and develop preventive health care, guidance for family planning, education and services. See also *U.N.Committee on the Rights of the Child, Concluding Observations on Jordan*, U.N.Doc.CRC/C/15/Add.125 at para.50 (2000).

<sup>98</sup> *The African Charter on Human and Peoples' Rights* was adopted on 27 June 1981 in Nairobi, Kenya by the Organization of African Unity (OAU). It entered into force on 21 October 1986. Till date 50 out of the 53 OAU member States have ratified the Charter. For text of the African Charter, see 21 I.L.M.(1982) 58; for further information see, Evelyn A. Ankumah, *supra*, n.51 at p.111.

<sup>99</sup> Awasthi, S.K. and Kataria, R.K., *Law Relating to Protection of Human Rights*, Delhi Law House, (2<sup>nd</sup> edn., 2007), pp.1542-1547.

<sup>100</sup> *Declaration 1 of Alma Ata*, adopted by the International Conference on Primary Health Care, World Health Organization, Geneva, September 12, 1978.

feeling of wholeness with a capacity for continuous intellectual and spiritual growth...”

She underlined the need for primary health care to be within the reach of all people, in terms of distance as well as money and for health to go to homes instead of larger number of people gravitating towards centralized hospitals. She also stated that a country's progress is generally judged in terms of its GNP. But surely the health of the people is also a significant yardstick. That is why we must stress the need for a health revolution in developing countries, not only to wipe out disease and make available specialized treatment, but what is equally essential is to provide basic health.

Thus, it may be seen that the Declaration not only advocated universal coverage of basic health services, but also assures that all people should have a standard of living conditions conducive to health. But mere declarations would not bring result, unless accompanied by public participation, as strong popular participation is needed to choose greater equity in meeting health needs<sup>101</sup>.

The Additional Protocol of the *American Convention on Human Rights* in the area of economic, social and cultural rights uses the precise phrase right to health. Article 10 which is titled 'right to health' reads:

“...everyone shall have the right to health, understood to mean the enjoyment of the highest level of physical mental and social wellbeing in order to ensure the exercise of the right to health.”

Article 10(2) assures that in order to ensure the exercise of right to health, the State parties agree to recognize health as a public good. The above Article also narrates certain measures to be adopted

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<sup>101</sup> Dhillon, H.S. *et al.*, *Health Promotion and Community Actions for Health in Developing Countries*, WHO(1994), p. 2.

to ensure the right to health<sup>102</sup>. Similar language is also contained in the *American Declaration of the Rights and Duties of Man*. Article XI of the above Declaration reads:

“Every person has the right to the protection of his health through sanitary and social measures relating to food, clothing, housing and medical care to the extent permitted by public and community resources”.

In the international sphere, there are also legal instruments, which assure the right to health of juveniles, shipwrecked persons and prisoners<sup>103</sup>. Declarations, guidelines, conventions codified by UNO are being implemented by the member states in their own countries through the medium of national laws.

The study and analysis of the above international documents reveal that human right in relation to health is anchored in a number of international conventions, the most elaborate being in Article 12 of ICESCR. The result of these initiatives is that it has fairly laid the foundation for building right to health in the category of economic, social and cultural rights.

### **States' Obligation in the Context of Public Health**

On a scrutiny of international conventions one can identify two essential components of the right to health, i.e. the right to healthcare, and the right to underlying health conditions. Right to healthcare embraces right to health services in relation to disease prevention, health promotion, therapeutic services and rehabilitation, while right to underlying health conditions can be regarded as those

<sup>102</sup>Those measures include primary health care, extension of the benefits of health services to all individuals, universal immunization against the principal infectious diseases, prevention and treatment of endemic, occupational and other diseases, education of the population on the prevention and treatment of health problems, and satisfaction of the health needs of the highest risk groups and of those whose poverty makes them the most vulnerable.

<sup>103</sup>R.22(1) of *Standard Minimum Rules for the Treatment of Prisoners* adopted by the First UN Congress on the Prevention of Crime and the Treatment of Offenders, held at Geneva in 1955, and approved by the Economic and Social Council Resolution 663 C(XXIV) of July 31, 1957 and Resolution 2076 (LXII) of May 13, 1977 which envisages the services of at least one qualified medical officer having some knowledge of psychiatry in every prison.

encompassing health issues such as clean air, water, adequate sanitation, sufficient access to nutritious food, environmental health, occupational health, access to health related information and harmful traditional practices. Taking together both these aspects, health basically entails four essential elements, namely, availability, accessibility, acceptability and quality of health facilities<sup>104</sup>. It is thus clear that State has certain specific obligations to fulfill in reference to the right to health which are in the nature of obligations to respect, protect and fulfill.

The obligation to respect runs with the traditional conceptualization of civil and political rights, suggesting that States should abstain from interfering directly or indirectly with the enjoyment of right to health. It also enjoins the State to abstain from unlawfully polluting air, water and soil through sources such as industrial waste from State owned facilities, from testing or using nuclear, biological or chemical weapons releasing substances harmful to human health and from impeding access to health services as a punitive measure during armed conflict<sup>105</sup>.

The obligation to protect means that States are required to take action to prevent third parties from interfering with the Article 12 guarantee. This includes a responsibility to ensure that harmful or traditional practices do not impinge on the healthy development of women. The obligation to fulfill requires States to adopt appropriate legislative, administrative, budgetary, judicial, promotional and other measures to realize fully the right to health. The obligation consists of three specific elements, namely, the obligation to adopt positive measures capable of assuring individuals and communities to enjoy fully the right to health; the obligation to provide a specific right guaranteed in the ICESCR; and the obligation to promote, calling on

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<sup>104</sup> The Committee on Economic, Social and Cultural Rights General Comment No. 14, 22<sup>nd</sup> Session, 2000 UNDOCE/C 12/2000/4 (2001) 8 IHRRI, para 11.

<sup>105</sup> *Id.* at paras 33-34.

States to undertake action that create, maintain and restore the health of citizens. Such obligations also find a place in the national laws dealing with health<sup>106</sup>. Therefore, it could be said that in the matter of environmental protection, international law in the form of binding customary rules has also expanded and come to be perceived as a dynamic human artefact which changes and may be consciously developed over time<sup>107</sup>.

### **Tackling Violations of Right to Health: Role of European Human Rights Bodies—Case Study**

International jurisprudence reveals that claims on violation of civil and political rights with respect to health issues in general and the impact of pollution and other forms of environmental damage to human health are being successfully fought. Such an approach is discernible from the decision of the European Human Rights Court in *Lopez-Ostra*<sup>108</sup>, wherein the Court held the view that severe environmental pollution may affect individuals' well-being and prevent them enjoying their homes in such a way as to affect their private and family life adversely, without, however, seriously endangering their health. Apart from the principle laid down, the approach of the Court in the above case is significant for the reason that it kept the gate opened for the applicants to approach the Court directly, without relegating them to exhaust the administrative remedies to challenge the operation of the plant under the relevant environmental protection laws. Such a stand was adopted by the

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<sup>106</sup> For instance, S.1(1) of the National Health Act, 1977 having its application in England and Wales reads thus: "It is the Secretary of State's duty to continue the promotion in England and Wales, of a comprehensive health service designed to secure improvement: (a) in the physical and mental health of the people in those countries; and (b) in the prevention, diagnosis and treatment of illness".

<sup>107</sup> Dunworth, "The Rising Tide of Customary International Law, Will New Zealand Sink or Swim?" 35 *Public Law Review*(2004)36; Michael Byers, *Custom, Power And the Power of Rules: International Relations and Customary International Law*, Cambridge University Press, Cambridge(1999).

<sup>108</sup> European Court of Human Rights in *Lopez Ostra v. Spain*, Judgment of 9 December, 1994, AC 303. In this case, the applicant and his daughter complained of severe health problems as a result of fumes from a waste treatment plant which operated alongside the apartment building where they lived. The plant was established without license and when it began its operations, it released gas fumes and toxic contaminants, causing health problems and nuisance to the neighbourhood.

Court considering that environmental poisoning in any form is a grave public health hazard involving violation of basic human rights.

The approach of the European Human Rights Court in *Lopez-Ostra* was again followed in *Anna Maria Guerra and 39 others against Italy*<sup>109</sup>. In this case, applicants complained of pollution resulting from operation of the chemical factory 'ENICHEM Agricoltura', situated near the town of Manfredonia. There was potential risk of accidents at the plant and the applicants alleged that there was no regulation from the part of public authorities. They asserted their right under Article 10 of the European Convention on Human Rights and contended that the government violated the guarantee by failing to perform its duties to inform the public of the risks and the measures to be taken in case of a major accident. The Grand Chamber of the European Court of Human Rights which finally heard the matter, though concluded that there was no violation of the right under Article 10 involved, yet unanimously found that the case constituted violation of Article 8, the right to family, home and private life. The Court followed the law laid down in *Lopez Ostra* and held that severe environmental pollution may affect individuals' well-being and prevent them from enjoying their homes in such a way as to affect their private and family life<sup>110</sup>.

The European Human Rights Court has taken the view that right to a judicial remedy prescribed by Article 6 extends to compensation for pollution, though Article 6 does not encompass a right to judicial review of legislative enactments. Such activist course of interpretation is seen adopted in *Zimmerman and Steiner*

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<sup>109</sup> *Anna Maria Guerra v. Italy*, Case 14967/89, E.C.H.R. (1998), Judgment of 19 February, 1998.

<sup>110</sup> It may be pointed out that Court had an opportunity to bring the case within the limit of Article 2 guarantee on right to life, but missed the opportunity by indulging in a narrow and one-sided interpretation construing the case only under Article 8. The Court also failed to pass a clean-up order, the relief which the applicants had sought, by pointing out that it lacked the power to issue such orders. Perhaps, this may be due to the fact that law had not then developed to such levels of judicial activism.

*v. Switzerland*<sup>111</sup>, wherein the grievance related to noise and air pollution from a nearby airport.

Yet another significant contribution made by the European Court of Human Rights in the realm of environmental issues involving violation of human rights is that it has legitimized environmental restrictions on the use of private property. This trend is seen projected in *Pine Valley Developments Limited and Others v. Ireland*<sup>112</sup>, wherein the Court located violation of Article 14 taken in conjunction with the right to peaceful enjoyment of possessions. The Court held that preventing construction for the further development of agriculture for maintaining a green belt for preservation of air quality must be regarded as a proper way if not the only way of achieving that aim. The case thus demonstrates how environmental and air quality concerns are brought within the human rights spectrum. Life means qualitative life, which is possible only in an environment of quality. Where, on account of human intervention, the quality of air and the environment are threatened or affected, Court should adopt suitable approaches to safeguard and enforce right to life in public interest, which in a limited fashion is seen reflected in the decisions of the European Court of Human Rights concerning environmental issues.

It is also striking that the absence of a supervisory mechanism to monitor the guarantee of right to health have been tackled in Europe to an extent by individuals and NGOs by relying on the complaint system of civil and political right treaties. At the same time, supervisory bodies such as European Court of Human Rights and United Nations Human Rights Commission have started to uphold the health related claims on the basis of civil and political

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<sup>111</sup> *Zimmerman and Steiner v. Switzerland*, E.C.H.R.(1983), Series A, No.66.

<sup>112</sup> *Pine Valley Developments Limited & Ors. v. Ireland*, E.C.H.R.(1991), Ser. A No. 222. In this case, the applicants challenged the action of the local planning authorities denying permission to construct commercial buildings on their land. Permission was denied because the area was zoned as a green belt.

rights. As part of the above strategy, European Court of Human Rights has stressed that the expressions right to life and health cannot be interpreted in an isolated manner, but rather requires the States to assume positive obligations for adopting steps to curb infant mortality, increase life expectancy, eliminate epidemics and to improve the quality of life.

### **Right to Healthy and Balanced Environment**

The right to health is closely related to and dependent upon the realization of other human rights, such as right to human dignity, life, food and nutrition, healthy environment, access to information, etc. These and other rights and freedoms address integral components of the right to health. In drafting Article 12 of the *International Covenant on Economic, Social and Cultural Rights*, 1966, the Third Committee of the United Nations General Assembly did not adopt the definition of health contained in the Preamble to the Constitution of WHO, which conceptualizes health as “a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity”. However, the reference in Article 12.1 of the Covenant to “the highest attainable standards of physical and mental health” is not confined to the right to healthcare. On the contrary, the drafting history and the express wording of Article 12.2 acknowledge that the right to health embraces a wide range of socio-economic factors that promote conditions in which people can lead a healthy life, and extends to the underlying determinants of health, such as food, nutrition, housing, clean air, access to safe and potable water and adequate sanitation, safe and healthy environment.

It is the innate and cherished desire of everyone to live in a healthy environment, which is a basic human right or necessity. International law recognizes the human right to decent, viable or



healthy environment<sup>113</sup>. Right to healthy and balanced environment is part of the third generation of human rights and is also called as solidarity rights<sup>114</sup>. Air is essential for living beings. In 1968 the UN General Assembly passed a Resolution identifying the relationship between the quality of human environment and the enjoyment of basic rights. This was followed by the landmark *Stockholm Declaration* in June 1972<sup>115</sup> to which India was a party, and which is called the *magna carta* of human environment, which stated that "...both aspects of man's environment, the natural and man-made are essential to the well-being and to the enjoyment of basic rights even the right to life itself"<sup>116</sup>, and that man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of quality that permits a life of dignity and well being..."<sup>117</sup> Stockholm Declaration has the tacit support of many State Governments and the principles contained in the Declaration constitute customary International Law<sup>118</sup>. Just like Stockholm and Rio Declarations, the *Hague Declaration* has also emphasized on protection of the right to life as the paramount duty of all States through out the world<sup>119</sup>.

The *African Charter* provides that all peoples have the right to a general satisfactory environment favourable to their development<sup>120</sup>. But the term 'satisfactory environment' is vague and varies from people to people. The right to environment is unique, because it has the characteristics of civil and political rights in so far as it requires the States to refrain from activities which are harmful to the

<sup>113</sup> Michael Bothe, "Trends in Environmental Policy and Law", 76(2) *The American Journal of International Law*(1982), pp.456-457.

<sup>114</sup> Robertson, A.H., *Human Rights in the World*, Manchester University Press, Manchester (1972), p.77.

<sup>115</sup> Stockholm Declaration on Human Environment, 1972, *Report of the United Nations Conference on the Human Environment*, UN DOC A/ CONF.48/14/Rev.1, Sec.1(1972), reprinted in 11 I.L.M. (1972)1416.

<sup>116</sup> See Proclamation 1 of the *Stockholm Conference on Human Environment*, 1972.

<sup>117</sup> Principle 1, *Ibid*.

<sup>118</sup> Anand, R.P., "Development and Environment: The Case of Developing Country", 20 J.I.L.I.(1980)8.

<sup>119</sup> *Declaration of the Hague*, 28 I.L.M. (1989)1308, Preamble.

<sup>120</sup> Article 24 of the African Charter, see, *supra*. n.98.

environment<sup>121</sup> and has also the features of economic, social and cultural rights in that it requires States to adopt measures to promote conservation and improvement of the environment.

Though the concept of a healthy environment has been frequently discussed in international fora, linkage between a healthy environment and human rights is quite recent<sup>122</sup>. The attempt to link the same was made by Reuce Cassim<sup>123</sup>, when he stated that human rights protection should be extended to include the right to a healthy and decent environment, i.e. freedom from pollution and the corresponding right to pure air. The connection between a healthy environment and human right is logical as a polluted environment infringes upon the enjoyment of fundamental rights such as the right to life and the right to enjoyment of physical and mental health.

Polluted environment affects a large portion of the human community than infringement of other fundamental rights<sup>124</sup>. It was only in 1988 after toxic waste dumping in Africa was discovered for the first time that environmental matters became the real concern to African States. One commentator has described the dumping of the industrial world's waste on African soil as a re-echoing of "what Europe has always thought of Africa—a wasteland and the people who live there waste beings"<sup>125</sup>. In 1988 the *Organization of African Unity* (OAU) adopted the 'African Convention on the Ban on the

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<sup>121</sup> Cullet, P., "Definition of an Environmental Right in a Human Rights Context" 1 *Netherlands Quarterly on Human Rights*(1995), p.28.

<sup>122</sup> Gutto, S., "Environmental Rights Litigation, Human Rights and the Role of Non-Governmental and Peoples' Organizations in Africa", 2 *South-African Journal of Environmental Law and Policy* (1995)1-4.

<sup>123</sup> Cassim, R., *Introduction to the International Law of Human Rights*, Vol. 144, Recueils des Cours, (1974).

<sup>124</sup> Peter, Ch. M., "Taking the Environment Seriously: the African Charter on Human and Peoples' Rights and the Environment", in: *Review of the African Commission on Human and Peoples' Rights* (1995), pp. 49-50.

<sup>125</sup> The Statement of Omatseye, S. is cited in O'Keefe, P., "Toxic Terrorism", 42 *Review of African Political Economy* (1988), p.87.

Import of All Forms of Hazardous Waste into Africa and the Control of Transboundary Movements of such Wastes Generated in Africa'<sup>126</sup>.

The *World Commission on Environment and Development* (WCED) acknowledged that every human being has the right to life and to a decent life and basing on this premise evolved the principle of sustainable development<sup>127</sup>. However, the Commission did not clarify whether these are individual rights or collective rights.

The inter-dependence between health and environment was stressed again in 1990 by the UN General Assembly which declared that “all individuals are entitled to live in an environment adequate for their health and well-being”. The United Nations Commission on Human Rights also adopted a Resolution in 1990, entitled “Human Rights and the Environment”, which again reaffirmed the relationship between preservation of environment and the promotion of human rights. Eventually, in 1992, the Rio Declaration related the rights issue to the broader issue of sustainable development. This is expressed in Principle 1 of the Rio Declaration and it stated that: “human beings are at the centre of concern for sustainable development. They are entitled to healthy and productive life in harmony with nature”<sup>128</sup>. International legal framework on climate change has also linked environment and human rights by regarding it as mutually compatible and powerfully reinforcing each other<sup>129</sup>.

### **Indian Judicial Role**

In early 1980, the Indian judicial system witnessed emergence of “jurisprudence of masses”, which altered radically the litigation

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<sup>126</sup> Peter, Ch. M., “Taking the Environment Seriously: The African Charter on Human and Peoples’ Rights and the Environment”, in: *Review of the African Commission on Human and Peoples’ Rights* Vol. 3 (1993) pts. 1& 2, p.41.

<sup>127</sup> World Commission on Environment and Development, *Our Common Future* (1987), p.41.

<sup>128</sup> *Rio Declaration on Environment and Development* (June 14,1992) UN DOC A/CONF. 151/5/REV, Reprinted in 31 I.L.M. (1992)874.

<sup>129</sup> Henry J. Steiner *et al.*, *International Human Rights in Context*, Oxford University Press, Oxford (3<sup>rd</sup> edn., 2007), p.1460.

landscape in India<sup>130</sup>. The above mechanism was greatly influenced by the public interest litigation movements in the United States<sup>131</sup>. The movement was called as 'Social Action Litigation' in its application in India by some experts.<sup>132</sup> The Supreme Court thereby opened a path of processual justice, in order to reap the benefits of substantive environmental entitlements without enslaving itself to the procedural compulsions<sup>133</sup>. It has also opened upstairs for affirmative action and it may not be an exaggeration to say that the active period of the Indian judiciary is overwhelmingly focused in rendering environmental justice<sup>134</sup>. The historic decision of the Supreme Court in *Maneka Gandhi's* case<sup>135</sup> triggered a new liberal approach in widening the meaning and content of right to life under Article 21 of the Constitution, by which it means the right to a meaningful life and such a meaningful life can only happen for all people if the right to health is guaranteed to all<sup>136</sup>. Thus, it has now come to be recognized that Article 21 is not only negative, but has even a positive content<sup>137</sup>. In *Kharak Singh v. State of U.P.*<sup>138</sup>, K.Subha Rao, J. quoted with approval the observations of Field, J. in *Munn v. Illinois*<sup>139</sup> that "life means something more than mere animal existence. The inhibition

<sup>130</sup> Kailash Thakur, *Environment Protection Law and Policy in India*, Deep & Deep Publications, New Delhi (1999), p.307.

<sup>131</sup> By mid 1970, Public Interest Litigation in US embraced issues such as environmental protection, healthcare, occupational health and safety, etc. But the movement gradually declined in the US during the 1980s. For details, see Cunningham, "Public Interest Litigation in Indian Supreme Court: A Study in the light of American Experience", 29 J.I.L.I.(1987)494.

<sup>132</sup> Upendra Baxi, "Taking Suffering Seriously: SAL in Supreme Court of India", 8, 9 DLR(1979-1980)91.

<sup>133</sup> Leelakrishnan, P., *Environmental Law in India*, Eastern Book Company Ltd., Lucknow(2000), p. 140; see also Kailash Thakur and Hans Raj Jhingta, "Emerging Perspectives of Public Interest Litigation in Environmental Protection", [2006] C.U.L.R.450 at p.472.

<sup>134</sup> Abraham P. Meachinkara, "Evolving Environmental Jurisprudence in India" [2004] C.U.L.R.245 at p. 253.

<sup>135</sup> *Maneka Gandhi v. Union of India*, A.I.R.1978 S.C.597, per M.H.Beg, C.J. and Chandrachud, Bhagwati, Krishna Iyer, Untwalia, Fazal Ali, Kailasam, JJ. For an analytical account of this case, See Rajeev, D., "Impact of Maneka Decision: Growing Dimensions of Indian Constitutional Law", [1983] C.U.L.R.393.

<sup>136</sup> Amita Dhanda, "Disability, Health And Human Rights", II ILS.L.R.(2009)15 at p.16.

<sup>137</sup> *Unnikrishnan v. State of A.P.*(1993)1 S.C.C. 645, per L.M.Sharma, C.J. and Pandian, Mohan, Jeevan Reddy and Bharucha, JJ.; See also *P. Rathinam v. Union of India*,(1994) 3 S.C.C. 394.

<sup>138</sup> A.I.R. 1963 S.C.1295.

<sup>139</sup> (1877) 94 U.S.113.

against its deprivation extends to all those limbs and faculties by which life is enjoyed”<sup>140</sup>.

While evolving new remedies when the traditional statutory remedies failed, the Court has pro-actively and vigorously taken up the cause of social justice and has gone to the extent of articulating newer social rights such as right to health<sup>141</sup>. The crowning glory of *Vincent Panikulangara* decision was that health was seen by the Court as part and parcel of life<sup>142</sup>. The activist attitude shown by the court in *Consumer Education Research Centre* case<sup>143</sup> should be exalted, but at the very same time a question is often posed, did the Court treat right to health as a right of the specific group? Instead of mere declaration of the right to health as part of the fundamental right under Article 21, the Court could have passed a general order fixing responsibility on the State and its agencies like the local bodies who are in charge of health to take measures necessary to protect the health of the general public<sup>144</sup>. The above course finds support on the reasoning that if health is made a fundamental right, everyone should get the benefit of that right. Although the judgment imposed an obligation upon the State to protect the health of workers, these observations could not have been effectively implemented according

<sup>140</sup> *Supra*, n.138 at p.1302.

<sup>141</sup> Followed by the decision in *Consumer Education and Research Centre case*, *supra*, n.64, the Supreme Court in *M.C. Mehta v. Union of India*, (1999) 6 S.C.C.9 at p.10, *per* Anand, C.J. & Kirpal and Khare, JJ. while interpreting right to life held that it includes right to good health and therefore chronic exposure to polluted air violates Article 21. In *Murli S. Deora v. Union of India*, (2001) 8 S.C.C.765 at p.767, Justice M.B.Shah and R.P.Sethi declared that compelling non-smokers to be helpless victims of air pollution infringes their constitutional guarantee under Article 21. The Judgment of Justice Rajendra Babu of the Supreme Court in *Mr. X v. Hospital Z*, (2003) 1 S.C.C. 500 and of Ranganath Misra & G.L.Oza, JJ., in *Parmanand Katara v. Union of India*, (1989) 4 S.C.C. 286 at p.293 also casts a clear and positive obligation on the State to preserve the life of its subjects under Article 21.

<sup>142</sup> *Vincent Panikulangara v. Union of India*, 1987 (1) SCALE 490 at p.495, *per* Ranganath Misra & M.M.Dutt, JJ. In this case court observed that a healthy body is the very foundation for all human activities and therefore, it is the obligation of the State to ensure the creation and the sustaining of conditions congenial to good health. In subsequent cases also, we can find the court trying to develop a strong jurisprudential base for right to health. For such an approach, see the decision in *CEESC Ltd. v. Subhas Chandra Bose*, (1992) 1 S.C.C. 441 at p.463, *per* K.Ramaswamy, J. In this case court held that health does not mean absence of sickness, but complete physical, mental and social well-being.

<sup>143</sup> (1995) 3 S.C.C. 42.

<sup>144</sup> Sheeraz Latif Ahamadkhan, “Right to Health”, (1995) 1 S.C.J. 29.

to letter and spirit<sup>145</sup>. Despite all its flaws, it has to be admitted that by recognizing right to health as a fundamental right and by issuing suitable directions to the authorities for discharging their duties, the Court definitely played a decisive role in sketching the contours of the right to health<sup>146</sup>.

Judiciary acknowledged that a vibrant constitutional synthesis exists between social justice and individual freedom and in that course, it elevated right to health to the status of fundamental right<sup>147</sup>. In the process, it has articulated access to public health also as part of Article 21<sup>148</sup>. For other reasons also, it is the duty of national courts to verify that violations of human rights recognized by customary international law are not committed by the executive<sup>149</sup>.

The expanded meaning of right to life is wholly justified, as without health of a person being protected and his wellbeing looked after, it would be impossible for him to enjoy other fundamental rights in a positive manner<sup>150</sup>. Thus, the Supreme Court provided a meaningful and just interpretation to the concept of right to life and referred to the duties of a welfare state<sup>151</sup>. It is worth noticing that international environmental principles in this regard have also gone a long way in sparking the environmental enthusiasm of the Courts

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<sup>145</sup> Manickam, C. and Sajith, S., "Right to Health and Access to Medical Treatment under the Indian Constitution", A.I.R. 1997 (Jour.)105.

<sup>146</sup> Lakshmi Devi, M.L., "Role of the Indian Judiciary in Health", 15(6) *Lawyers Collective* (2000)16.

<sup>147</sup> Verma, G.P., "The New Dimension of Indian Constitution, Achievement of Justice Through Abracadabra of Social Economic Engineering", (1978) 11 S.C.J.15; See also Upendra Baxi, "The Little Done, The Vast Undone: Some Reflections on Reading Glanville Austin", 9 J.I.L.I.(1967)323; Jagat Narain, "Judicial Law Making and the Place of Directive Principles in Indian Constitution", 27 J.I.L.I.(1985)198.

<sup>148</sup> See for details, *Common Cause v. Union of India*, A.I.R.1996 S.C.929; Rajeev, D., "Regulation of Blood Banking Operations and Access to Public Health", [1997] C.U.L.R. 218.

<sup>149</sup> Benedetto Conforti and Francesco Francioni, *Enforcing International Human Rights in Domestic Courts*, Martinus Nijhoff Publishers, Hague (1997), p.3.

<sup>150</sup> See Joga Rao, S.V., "Law on Public Health; Sonorous in Substance, but Serene in Effect" 1991(1)S.C.J.(Jour.)14.

<sup>151</sup> Chandani, R.K.S., "Human Right: Role of Courts in Realization of the Rights", in *Law Shop on Doctor, Patient and The Law* (TILEM), p. 65.

and spreading the waves of environmental protection along the length and breadth of India<sup>152</sup>.

### **Jurisprudential Paradigm for Judicial Activism in Public Health**

The jurisprudential paradigm for judicial activism and supremacy as a legal proposition is to be located in Dworkin's theory of 'constructive interpretation' of legal practice. Dworkin summarizes his theory in this way:

“Judges should decide hard cases by interpreting the political structure of their community in the following, perhaps special way: by trying to find the best justification they can find, in principles of political morality, for the structure as a whole, from the most profound constitutional rules and arrangements to the details of, for example, the private law of tort or contract”<sup>153</sup>.

Thus, according to Dworkin, the moral and political justifications for rules are the principles of political mortality rather than the rules themselves<sup>154</sup>. Supremacists adhere to Dworkin's theory of legal reasoning on the principle that:

“...the legal distribution of public power consists ultimately in a dynamic settlement..... In the end, it is not a matter of what is, but of what ought to be. The journey to find it is a search for principle, not the unfolding of a rule book”<sup>155</sup>.

If Dworkin's account of legal reasoning is correct, judges are under a duty to give legal effect to rights and duties based on persuasive political and moral theory and principles. The above approach is seen discernible in the decisions of the Indian courts relating to air quality.

<sup>152</sup> Valsamma Paul, “International Environmental Principles-Changing Dimensions” 4 J.I.L.T.(2006) 163 at p.173.

<sup>153</sup> Dworkin, R., “Natural Law' Revisited” in John Arthur and William Shaw(Eds.), *Readings in the Philosophy of Law*, Prentice Hall Inc, New Jersey(3<sup>rd</sup> edn., 2001), 170 at p.171.(emphasis in original)

<sup>154</sup> Richard Ekins, “Judicial Supremacy and The Rule of Law” 119 L.Q.R. (2003)127 at p.130.

<sup>155</sup> Sir John Laws, “Judicial Review and the Meaning of Law” in Christopher Forsyth (Ed.), *Judicial Review and the Constitution*, Hart Publishing, Oxford (2000),173 at p.178.

## **Clean Air as part of Right to Health and Public Health**

Right to health now includes certain components which are legally enforceable. Clean and unpolluted air is a part of right to health. In any country, industries are mainly responsible for polluting the air quality. Industrialists consider air as if their common property. This is also a case of human right violation and the reflection of an immature and imbalanced human mind. This attitude can be changed only by formulating policies for industries, effective monitoring and mechanism for punishing defaulters. Unfortunately, even international standards have not provided any tangible measures to combat the situation. There is little incentive for complying with international standards, when non-compliance is perceived as better serving national interests. Recently, the US Supreme Court has rendered a trendsetting judgment in *Massachusetts v. EPA*<sup>156</sup> widening the ambit of the Federal Clean Air Act by holding that carbon dioxide emissions, largely a by-product of energy production and use, constitutes an air pollutant<sup>157</sup>. The trend now continuing is to bring every air pollutant within the ambit of regulatory control.

In the wake of deteriorating air quality, the requirement of the time warrants different cross-sections of the society to voice their concern on the issue at different national and International forums. Some of the major players involved in the process are elected representatives, bureaucrats, technocrats, NGOs and the judiciary. Elected representatives are only concerned about developmental projects, and they exert pressure on bureaucrats as well as on public. Technocrats who strive for air quality protection and Pollution Control Board authorities who act in accordance with letter and spirit of law are branded as anti-development functionaries. For realization

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<sup>156</sup> 549 US.497(2007).

<sup>157</sup> Scientists believe that Carbon dioxide emissions account for the largest share of green house gases, which are associated with global warming.



of rights, needless to say, public awareness is a must. The awareness regarding health and environment inculcated by the Rio-Declaration<sup>158</sup> should be used to place health at the centre of development and for sustainable development. For this, education should be used as an instrument to change the rules relating to the game of life. Educated persons develop physically, economically, mentally, emotionally, morally and socially. Therefore, such persons can map their world, their environment and live a more meaningful and qualitative life. In the attempt to preserve the quality of air, besides the jurisprudential values, we should also follow the moral values drawn from Indian culture to make living environment clean and pure, to allow peace and prosperity to prevail over mankind.

### **Conclusion**

A cursory examination of right to health and public health reveals that it has both positive and negative dimensions. Negative aspects include the obligation of States to prevent any action inimical to health and welfare. Similarly, States are also obliged to refrain from withholding information vital to the health and well-being of the population. This can be termed as forming part of civil and political rights and hence, calls upon the State not to evade the fulfillment of the above obligation. The international documents also bring into limelight that right to health is a composite right which means right to highest attainable standard of physical and mental health, human right to equal access to adequate healthcare and health related services, human right to access to safe drinking water and sanitation, human right to a safe and healthy environment, human right to safe and healthy workplace, human right of the child to an appropriate environment for physical and mental development, etc. The vagueness as to the remedial aspects and the ambiguity as far as the obligation imposed on the State reflected in the decisions are the main drawbacks of assertion of the right to health. However, the

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<sup>158</sup> *United Nations Conference on Environment and Development*, A/CONF.151/126(Vol.1)12 August, 1992.

judiciary has succeeded in projecting that there is right to health, though its endeavours have not conferred a right in its true fundamental sense<sup>159</sup>. In fact, the voyage from Stockholm to the Johannesburg Summit has led to the recognition that human beings are entitled to healthy and productive life in harmony with nature.

With the right to health treated as fundamental right at least in limited sense, it raises the issue of the role of the State in enforcing right to health. The emerging indication, thus, is that the availability of resources is sometimes a ground but need not be always so. It is not easy to demarcate areas to which resources could be a defense and areas to which it is not a ground<sup>160</sup>. It is a question of fixing the priorities. In the absence of large scale international aid or of rapid domestic economic growth, the government's hands are often tied and little can be expected of it in response to its obligations under the Covenants<sup>161</sup>. One cannot expect a Government to simply command the resources that would guarantee each citizen an adequate standard of living<sup>162</sup>.

However, just because right to health lacks a fixed content, to deprive it the status of 'right' no longer hold good. The dilemma projected by the issue still continues with nations contradicting each other, giving weight to their national problems<sup>163</sup> and priorities. The prevailing view is that State should undertake to fulfill the essential obligations relating to right to health and public health at least to the extent its resources permit<sup>164</sup>. The realization of the right to health becomes meaningful only when individuals are provided with the means to identify and realize aspirations, satisfy needs and cope with their environment.

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<sup>159</sup> Bismi Gopalakrishnan, "Constitutional Perspective of Right to Health: A Comparative Overview", 30 Ac. L.R. (2006)159 at p.186.

<sup>160</sup> Pramodan, M.C., "Access to Health Care: The Rights and Obligations" NUALS L.J.[2] (2008)72 at p.90.

<sup>161</sup> Henry J. Steiner *et al.*, *supra*, n.129 at p.295.

<sup>162</sup> "Human Rights: Real and Supposed", in Raphael, D.D.(Ed.), *Political Theory and the Rights of Man*, Macmillan, London (1967), p.51.

<sup>163</sup> Anand, R.P., *supra*, n.118 at p.8.

<sup>164</sup> Bismi Gopalakrishnan, "Right to Health and Resultant Obligations", 29 Ac.L.R.(2005)219.

## *Chapter -3*

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

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1. Earlier Legislative Attempts
2. Constitutional Scheme on Public Health and Air Quality
3. Directive Principles of State Policy
4. Constitutional Amendments
5. Role of Five-Year Plans and Air Quality Management
6. Pitamber Pant and Tiwari Committees
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## 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<sup>1</sup> of each individual to protect nature<sup>2</sup>. 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<sup>3</sup> were regarded as divine incarnations. Natural resources management including air quality management was given a prime importance in ancient India<sup>4</sup>.

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<sup>5</sup>. Earth has been held to be a heavenly home for all creatures<sup>6</sup>. All lives, human and non-human, were considered to be of equal value and have the same right to existence<sup>7</sup>. Further, it was

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<sup>1</sup> The sanskrit word *dharma* means 'righteousness'.

<sup>2</sup> Manu VIII, p. 282.

<sup>3</sup> It refers to the "five elements" of nature, viz., earth, air, water, fire, and ether.

<sup>4</sup> Pushpakumar, L., "Efficacy of Environmental Law in India: An Appraisal", 2 J.I.L.T(2004)116 at p.118.

<sup>5</sup> Shweta Deshpande, "Protection of Environment: The Religious Perspectives", 5 J.I.L.T(2007)90 at p.91.

<sup>6</sup> Justice Ashok Desai, *Environmental Jurisprudence*, Vikas Publishing House Pvt. Ltd., New Delhi (1998), p.5.

<sup>7</sup> 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 parlance<sup>8</sup>.

### **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 landscapes<sup>9</sup>. The traditional conception was that the surroundings that humans inhabit are for human benefit and must be regulated accordingly<sup>10</sup>.

The Indian Penal Code, 1860 enacted during the British regime contains an exclusive chapter<sup>11</sup>, which deals with offences affecting public health, safety, convenience, decency and morality. Section 278 has a direct bearing on the air environment<sup>12</sup>. 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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<sup>8</sup>Ghosh, G.K., *Environment: A Spiritual Dimension*, Ashish Publishing House, New Delhi (1991), p. 18.

<sup>9</sup>David Hughes *et al.*, *Environmental Law*, Butterworths, London (4<sup>th</sup> edn., 2002), Ch.I.

<sup>10</sup>For an analysis of the traditional thinking about the environment and its philosophical roots, see Coyle, S. and Morrow, K., *The Philosophical Foundations of Environmental Law: Property, Rights and Nature*, Hart Publishing, Oxford (2004).

<sup>11</sup>Ch. XIV.

<sup>12</sup>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 extent 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<sup>13</sup> 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<sup>14</sup>.

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<sup>13</sup> 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.

<sup>14</sup> Pushpakumar, L., *supra*, n.4 at p.121.

### **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<sup>15</sup>. 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-I<sup>16</sup> and List-II<sup>17</sup> of the seventh schedule respectively. List-III<sup>18</sup> is the

<sup>15</sup> For details, see the legal position developed by Justice Saghir Ahmad in *M.C. Mehta v. Kamal Nath*, (2000) 6 S.C.C. 213.

<sup>16</sup> 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.

<sup>17</sup> 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<sup>19</sup>. The Parliament can also make laws on the residual power<sup>20</sup>, in the national interest<sup>21</sup>, on any State subject based on the consent of the State legislatures<sup>22</sup>, or to give effect to treaties and international agreements<sup>23</sup>.

Public health is listed as a State subject<sup>24</sup> 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<sup>25</sup> 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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Entry 15- Preservation, protection and improvement of stock and prevention of animal diseases; Entry 18-Land, colonization, etc.; Entry 21-Fisheries; Entry 23-Regulation of mines and mineral development subject to the provisions of List I; Entry 24-Industries subject to the provisions of List I.

<sup>18</sup> 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 .

<sup>19</sup> Article 254 of the Constitution of India.

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

<sup>21</sup> Article 249.

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

<sup>23</sup> 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.

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

<sup>25</sup> 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<sup>26</sup> 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<sup>27</sup> 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<sup>28</sup>.

### **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)<sup>29</sup>, 47<sup>30</sup>, 48<sup>31</sup>, and 49<sup>32</sup> it made a feeling of reference to environment, but only indirectly<sup>33</sup>. The characteristic feature of the Directive Principles of State Policy is that they are “fundamental in the governance of the country”<sup>34</sup> and thus, it is the

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<sup>26</sup> The 42<sup>nd</sup> Amendment Act of 1976 included the word ‘socialism’ in the preamble to the Constitution of India.

<sup>27</sup> 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.

<sup>28</sup> Mehta, S. *et al.*, “Controlling Pollution: Incentives and Regulation”, *Sage*(1997)1993, New Delhi.

<sup>29</sup> 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”

<sup>30</sup> 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”.

<sup>31</sup> It deals with organization of agriculture and animal husbandry.

<sup>32</sup> 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.

<sup>33</sup> It invited staunch criticism from constitutional commentators, like Upendra Baxi who expressed the view that Constitution of India was “environmentally blind”.

<sup>34</sup> 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<sup>35</sup>.

These Directive Principles<sup>36</sup>, 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<sup>37</sup> 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<sup>38</sup> 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<sup>39</sup>. This duty to protect and improve the environment is based on the “doctrine of public trust”<sup>40</sup>.

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<sup>35</sup> *Central Inland Water Transport Corporation v. Brojo Nath*, A.I.R. 1986 S.C. 1571 at p.1587.

<sup>36</sup> Framers of the Indian Constitution borrowed the idea of incorporating Directive Principles of State Policy from Article 45 of the Irish Constitution.

<sup>37</sup> The Constitution (Forty Second Amendment) Act, 1976 which came into force with effect from January 3, 1977.

<sup>38</sup> 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(4<sup>th</sup> edn.,1993), pp.1932-1945.

<sup>39</sup> 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 42<sup>nd</sup> Amendment Act, 1976 also inserted a new entry "population control and family planning"<sup>41</sup> into the concurrent list, while "forests"<sup>42</sup> and "protection of wild animals and birds"<sup>43</sup> 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 73<sup>rd</sup> and 74<sup>th</sup> Constitutional Amendments in 1992 to give constitutional sanction to democracy at the grassroot levels through Panchayats<sup>44</sup> and Municipalities<sup>45</sup>. 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

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countries have incorporated provisions similar to Articles 48 A and 51A(g) in their respective Constitutions.

<sup>40</sup> For a reference on the doctrine, see Ch.IV *infra*.

<sup>41</sup> Concurrent List, Entry 20-A.

<sup>42</sup> *Id.* Entry 17-A.

<sup>43</sup> *Id.* Entry 17-B.

<sup>44</sup> Constitution of India, Articles 243, 243-A to 243-O.

<sup>45</sup> *Id.* Articles 243-P to 243-ZG.

constitutional sanction<sup>46</sup> for such an innovative step. With the 73<sup>rd</sup> and 74<sup>th</sup> 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<sup>47</sup>. 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<sup>48</sup>.

### **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<sup>49</sup>. By that time, the deterioration in the external environment had continuously shown a consistently rising tendency<sup>50</sup>. The Fifth Plan (1974-79) stressed the need for

<sup>46</sup> 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".

<sup>47</sup> Bhaskar Kumar Chakravarty, "Environmentalism: Indian Constitution and Judiciary", 48 J.I.L.I. (2006)99 at p.103.

<sup>48</sup> *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.

<sup>49</sup> 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.

<sup>50</sup> 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*

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<sup>51</sup>. 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<sup>52</sup>. The responsibility for enforcing environmental laws is proposed to be shared with States to broadbase the enforcement effort. There is also proposal to strengthen the enforcement strategy based on polluter-pays principle<sup>53</sup>. Indian Five Year Plans have also stressed goals such as balanced regional development.

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*Bank, World Development Report, Washington D.C., (1989); Chakravarthy, S., Development Planning: The Indian Experience, Clarendon Press, Oxford (1987), p.91.*

<sup>51</sup> 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.

<sup>52</sup> 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.

<sup>53</sup> *Ibid.*

### 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<sup>54</sup> 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<sup>55</sup>. Unfortunately, even after three decades have passed by, the above laudable suggestions are yet to see the light of the day<sup>56</sup>. 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

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<sup>54</sup> 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.

<sup>55</sup> *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.

<sup>56</sup> 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.

neglected the preventive measures<sup>57</sup>. 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 watershed 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<sup>58</sup>. 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.<sup>59</sup> However, the earlier legislative attempts towards environment protection and management were piecemeal and inadequate<sup>60</sup>. 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<sup>61</sup>. But after Stockholm, Indian

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<sup>57</sup> Lalvani, G.H., "Law and Pollution Control" in Bandopadhyaya, J. et al., (Eds.) *India's Environment, Concerns, Crisis and Responses*, Nataraj Publishers, Dehradun(1987), 285 at p.286.

<sup>58</sup> See Principle 1 of *Stockholm Declaration of the Human Environment*, 1972.

<sup>59</sup> Michael R. Anderson, "Individual Rights to Environmental Protection in India" in Alan E. Boyle and Michael R. Anderson (Eds.), *Human Rights Approaches to Environment Protection*, Clarendon Press, New Delhi(1996), pp.199-200.

<sup>60</sup> Shyam Divan and Armin Rosencranz, *Environmental Law and Policy in India*, Oxford University Press, New Delhi(2001),p.31.

<sup>61</sup> See Tiwari Committee Report, *supra*, n. 55 at pp.19-24.

Parliament began to enact comprehensive environmental laws<sup>62</sup> 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;
- d) The Biological Diversity Act, 2002.

#### **(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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<sup>62</sup> See for example, The Wildlife (Protection) Act, 1972; The Water (Prevention and Control of Pollution) Act, 1974; The Forest (Conservation) Act, 1980; The Air (Prevention and Control of Pollution) Act, 1981; The Bhopal Gas Leak Disaster (Processing of Claims) Act, 1985; The Environment (Protection) Act, 1986; The Public Liability Insurance Act, 1991; The National Environment Tribunal Act, 1995 and the National Environment Appellate Authority Act, 1997. See also Motor Vehicles Act, 1988 and the Motor Vehicles Rules, 1989.



**(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<sup>63</sup>. However, the ramifications of the law on local farming communities and their relationship with plant genetic resources are yet to be fully fathomed<sup>64</sup>. 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<sup>65</sup>. 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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<sup>63</sup> Pratibha Brahma *et al.*, "The Protection of Plant Varieties and Farmers' Rights Act of India, 86(3) *Current Science*, Feb.2004, p.393.

<sup>64</sup> Shalini Bhutani and Kanchi Kohli, "Protection of Plant Varieties and Farmers' Rights Act, 2001- Just Leave the Seed Alone" *Business Line*, March 12, 2004; see also Philippe Cullet and Radhika Kolaru, " Plant Variety Protection and Farmers' Rights: Towards a Broader Understanding" 24 D.L.R.(2002)41.

<sup>65</sup>Pratibha Brahma *et al.*, "The Biological Diversity Act of India and Agro-Biodiversity Management", 86(5) *Current Science*, March 2004, p.659.

**(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<sup>66</sup>. 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<sup>67</sup>. Consent of the State Pollution Control Board is required to establish or operate any industry in an air pollution control area<sup>68</sup>. 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<sup>69</sup>. The emerging position even after the Air Act Amendment is that provisions could be manipulated to the advantage of the polluters<sup>70</sup>.

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<sup>66</sup> The Air (Prevention and Control) of Pollution Act, 1981, Ss. 3 and 4.

<sup>67</sup> *Id.* S.19.

<sup>68</sup> *Id.* S.21.

<sup>69</sup> *Id.* S.43.

<sup>70</sup> Chandrasekharan Pillai, K.N., "Criminal Sanctions and Enforcement of Environmental

**(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<sup>71</sup>. It is a comprehensive legislation covering not only industrial pollution, but all aspects of environmental degradation including degradation to the air environment<sup>72</sup>. 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<sup>73</sup> 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<sup>74</sup> and to lay down standards for emission or discharge of environmental pollutants from various sources<sup>75</sup>.

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

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Legislation”, in Leelakrishnan, P.(Ed.), *Law and Environment*, Eastern Book Co., Lucknow, p.179.

<sup>71</sup> Sanjay Upadhyay and Videsh Upadhyay, *Environment Protection, Land and Energy Laws*, Vol. 3, Lexis-Nexis Butterworths, New Delhi (2002), p.17.

<sup>72</sup> As per the definition given to “Environment” under Section 2(a) of the Act, it includes air and the interrelationship which exists among and between air, water and land, and human beings, other living creatures, plants, micro-organism and property.

<sup>73</sup> See Environment (Protection) Act, 1986, S.3.

<sup>74</sup> *Id.* S. 3 (2)(iii).

<sup>75</sup> *Id.* S. 3(2)(iv).

manuals, codes and guides relating to prevention, control and abatement of pollution, etc<sup>76</sup>.

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<sup>77</sup>. 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<sup>78</sup>. 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<sup>79</sup>; 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<sup>80</sup>; Municipal Solid Waste (Management and Handling) Rules, 2000<sup>81</sup> 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,

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<sup>76</sup> *Id.* S.3(2)(v) to 3(2)(xv).

<sup>77</sup> *Id.* S.3(3).

<sup>78</sup> *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.

<sup>79</sup> For detailed discussion of the Rules, see Jariwala, C.M., "The Bio-Medical Waste Rules: Direction of Law and Justice", 41 J.I.L.I.(1999)368.

<sup>80</sup> It came into force on February 14, 2000.

<sup>81</sup> See Notification No. S.O.908(E) dated September 25, 2000 and published in Gazette of India, Extra., Part II, S.3(ii), dated October 3, 2000.

sound and nuclear radiation or even pollution caused by deforestation and unrestricted development<sup>82</sup>. 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, micro-organism and property<sup>83</sup>.

### **(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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<sup>82</sup> Khan, A.U., "Environmental Regulation", in Debroy, B. and Shah, P.,(Eds.), *Agenda for Change*, Centre for Civil Society and Rajiv Gandhi Institute of Contemporary Studies, New Delhi (1998), p.48.

<sup>83</sup> Padia, R.G., "Global Concern for Environmental Hazards and Remedial Measures", in Singh, R. B., and Misra, S.(Eds.), *Environmental Law in India: Issues and Responses*, Concept Publishing House, New Delhi(1996), p.303.

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.

#### **(e) 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<sup>84</sup>.

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,

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<sup>84</sup> See for details, The Wildlife Conservation Strategy, 2002.

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<sup>85</sup>. The Policy envisages 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*<sup>86</sup> shows how an activist court can transform a seemingly dull legislation into a powerful mandate to protect environment<sup>87</sup>. 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<sup>88</sup>.

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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<sup>85</sup> National Environment Policy, 2006 available at [www.envfor.ni.in](http://www.envfor.ni.in) and visited on 20-02-2009.

<sup>86</sup> *Municipal Council, Ratlam v. Vardichand*, A.I.R. 1980 S.C. 1622.

<sup>87</sup> Shyam Divan and Armin Rosencranz, *Environmental Law and Policy in India*, Oxford University Press, New Delhi(2001), p.119.

<sup>88</sup> Leelakrishnan, P. , *Environmental Law in India*, Butterworths India, New Delhi(1999), p.111.



be seen as an attempt to reinforce the character of a welfare state<sup>89</sup>. Courts have taken the consistent view that life, health and ecology have greater importance for the people<sup>90</sup> 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<sup>91</sup>. Supreme Court has used several strategies to eradicate pollution, and thus provide the citizens with a healthy environment<sup>92</sup>. 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<sup>93</sup>. 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<sup>94</sup>. 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<sup>95</sup>.

<sup>89</sup> Raghunath Patnaik, “Public Interest Litigation-A Trend Setter for Social Justice”, A.I.R. 1994 (Jour.) 187.

<sup>90</sup> *M.C.Mehta v. Union of India*, (1987) 4 S.C.C. 463.

<sup>91</sup> *T.Damodhar Rao v. S.O. Municipal Corporation, Hyderabad*, A.I.R. 1987 A.P.171.

<sup>92</sup> Lakshman Marasinghe, “PIL and the Indian Experience: Its Relevance to Sri Lanka”, 15 Sri Lanka J.I.L.(2003)51 at p.61.

<sup>93</sup> *L.K.Koolwal v. State*, A.I.R. 1988 Raj.2 at p.4.

<sup>94</sup> Deshpande, S., “Role of Judiciary in the Modern Context, The Need of Logical and Functional Interpretation for Socio-Legal Problems”, A.I.R. 2003 ( Jour.) 280.

<sup>95</sup> 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<sup>96</sup>. 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"<sup>97</sup>. 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<sup>98</sup> and this right has been extended to the neighborhood also<sup>99</sup>. The concept of expanding the reach and ambit of fundamental rights by judicial interpretation<sup>100</sup> 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<sup>101</sup>. This

<sup>96</sup> *Air India Statutory Corporation v. United India Labour Union*, (1997) 9 S.C.C. 377 at p. 416.

<sup>97</sup> *Shri Sachidanand Pandey v. State of West Bengal*, A.I.R. 1987 S.C.1109; *Dahnu Taluka Environment Protection Group v. Bombay Suburban Electricity Supply Co.Ltd.*, (1991) 2 S.C.C. 539 at p.541.

<sup>98</sup> *Rural Litigation and Entitlement Kendra, Dehradun v State of U.P.*, A.I.R. 1985 S.C.1259; *T. Damodhar Rao*, *supra*, n.91 at p.181; *M.C. Mehta v. Union of India*, A.I.R. 1987 S.C.1086. For the jurisprudential and historical exposition of the right to public health and healthy environment, see Ch.II *supra*.

<sup>99</sup> *Reliance Industries Ltd. v. The Commissioner of Land Revenue*, 2007(2) K.H.C.346, *per* Thottathil B.Radhakrishnan, J.

<sup>100</sup> *Maneka Gandhi v. Union of India* A.I.R. 1978 S.C. 597.

<sup>101</sup> *Durga Das Basu, Shorter Constitution of India*, Wadhwa & Co.Ltd., Nagpur(2001), p.460.

means that for all purposes the directives contained in Article 48A have been raised to the status of fundamental right<sup>102</sup> 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<sup>103</sup>. 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<sup>104</sup>.

Much of the activism under the garb of PIL took its wings under Article 21 of the Constitution. The precursor was *Maneka*<sup>105</sup>, 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<sup>106</sup>. 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<sup>107</sup>, and it also means the right to live in a clean and healthy environment<sup>108</sup>.

<sup>102</sup> Durga Das Basu, *Human Rights in Constitutional Law*, Wadhwa & Co.Ltd., Nagpur(2005), p.297.

<sup>103</sup> Judicial creativity led to waiving of procedural formalities, relaxing locus standi, and anybody with pro bono publico could move it.

<sup>104</sup> Bhagwati, P.N., "Judicial Activism and Public Interest Litigation", 23 Columbia Journal of Trans National Law(1985)651.

<sup>105</sup> 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.

<sup>106</sup> *Francis Coralie v. Union Territory of Delhi*, A.I.R. 1978 S.C.597; *Peoples' Union for Democratic Rights v. Union of India*, A.I.R. 1982 S.C. 1473.

<sup>107</sup> Shantha Kumar, S., *Environmental Law*, Surya Publications, Chennai (2001), p.101.

<sup>108</sup> *Rural Litigation and Entitlement Kendra, Dehradun v.State of U.P.*, A.I.R. 1985 S.C. 652; *M.C. Mehta v. Union of India*, A.I.R. 1988 S.C.1037.

The late 80s and 90s were the golden era for environmental litigations encouraged by Public Interest Litigations to redress environmental injustice. In *Subhash Kumar*<sup>109</sup>, 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*<sup>110</sup>.

In *Taj Mahal case*<sup>111</sup> 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 Kuldeep 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*<sup>112</sup>, 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*<sup>113</sup>, 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

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<sup>109</sup> *Subhash Kumar, supra*, n.48.

<sup>110</sup> *Chhetriya Pardhushan Mukti Sangharsh Samiti v. State of U.P.*, (1990) 4 S.C.C. 449 at 452.

<sup>111</sup> *M.C. Mehta v. Union of India*, A.I.R. 1997 S.C.734.

<sup>112</sup> *M.C.Mehta v. Union of India*, A.I.R. 1999 S.C. 291.

<sup>113</sup> *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*<sup>114</sup>, Supreme Court held that with regard to land that forms part of reserve forest, tribals could claim rights<sup>115</sup>.

In *Damodhar Rao*<sup>116</sup>, Court held that protection of the environment is not only the duty of the citizens but also the obligation of the State. In *Lakshmiopathy*<sup>117</sup> and *Attakoya*<sup>118</sup> 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*<sup>119</sup> 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<sup>120</sup>, public trust<sup>121</sup>, absolute liability<sup>122</sup>, and inter-generational equity<sup>123</sup>.

The judicial response to almost all public health litigations has been very positive in India. In *R.R. Delavai v The Indian Overseas Bank*<sup>124</sup>, 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

<sup>114</sup> *Banwasi Seva Ashram v. State of U.P.*, (1987) 3 S.C.C. 304.

<sup>115</sup> The question involved in the case was as to whether Adivasis living within the forest area had any claim over the land.

<sup>116</sup> *T. Damodhar Rao*, *supra*, n.91.

<sup>117</sup> *V. Lakshmiopathy v. State of Karnataka*, A.I.R. 1992 Kant.57 at p.66.

<sup>118</sup> *Attakoya Thangal v. Union of India*, 1990 K.L.T. 580.

<sup>119</sup> *L.K. Koolwal v. State*, A.I.R. 1988 Raj.2.

<sup>120</sup> *Vellore Citizens Welfare Forum v. Union of India*, (1996) 5 S.C.C. 647.

<sup>121</sup> *M.C. Mehta v. Kamal Nath*, (1997) 1 S.C.C. 388.

<sup>122</sup> *M.C. Mehta v. Union of India*, A.I.R. 1987 S.C. 1086.

<sup>123</sup> *State of H.P. v. Ganesh Wood Products*, (1995) 3 S.C.C. 363.

<sup>124</sup> 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 Litigations<sup>125</sup>.

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

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<sup>125</sup> 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<sup>126</sup>. 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<sup>127</sup>.

### **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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<sup>126</sup> *Vineet Kumar Mathur v. Union of India*, (1996)7 S.C.C. 714; see also *Vineet Kumar Mathur v. Union of India*, (1996)11 S.C.C. 119.

<sup>127</sup> See *M.C.Mehta v. Union of India*, A.I.R.1987 S.C. 965.

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<sup>128</sup>, policy maker<sup>129</sup>, and even super administrator<sup>130</sup>.

### **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<sup>131</sup>, Industries, and a very marginal extent of representation from agriculture and fisheries<sup>132</sup>. 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<sup>133</sup>.

Under the Environment (Protection) Act, 1986, the Central Government has assumed to itself very comprehensive and sweeping

<sup>128</sup> *M.C.Mehta v. Union of India*, A.I.R. 1992 S.C. 382.

<sup>129</sup> *S. Jagannath v. Union of India*, (1997) 2 S.C.C. 87; *M.C.Mehta v. Union of India*, 1996 (2) SCALE 92.

<sup>130</sup> *T.N.Godavarman Thirumulpad v. Union of India*, (2001) 10 S.C.C. 645.

<sup>131</sup> Central, States and Union Territories.

<sup>132</sup> The Air(Prevention and Control of Pollution) Act, 1981, Ch. II, Ss. 3-15.

<sup>133</sup> *Id.* Ch.III, Ss. 16-18.

powers<sup>134</sup>. Provisions similar to Section 3(1) conferring such sweeping power is perhaps found only in wartime regulations<sup>135</sup> which conveys the legislative intention and places an obligation on the Central Government to take up environmental protection measures on a war footing<sup>136</sup>.

### **(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<sup>137</sup>. 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<sup>138</sup>.

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

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<sup>134</sup> 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".

<sup>135</sup> The Essential Commodities Act, 1955, S. 3 giving such power is an illustration of a peace-time legislation.

<sup>136</sup> S. 3(2).

<sup>137</sup> See Air (Prevention and Control of Pollution)Act, S.43, as introduced by the Amending Act of 1988.

<sup>138</sup> *Id.* S.43(2).

seldom punish the offending industry or authority for not providing the information to the empowered citizen<sup>139</sup>.

### (c) Sampling Provision

Another instance of mere show of empowered citizen and providing nothing in substance is the sampling provision<sup>140</sup>. 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<sup>141</sup>. 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<sup>142</sup>. 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

<sup>139</sup> Shyam Diwan and Armin Rosencranz, *supra*, n.60.

<sup>140</sup> The Air (Prevention and Control of Pollution) Act, 1981, S.26.

<sup>141</sup> The procedure of taking the sample is specified in sub-sections (3)& (4) of S. 26.

<sup>142</sup> *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<sup>143</sup>. 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<sup>144</sup> 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<sup>145</sup>. 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<sup>146</sup>. These

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<sup>143</sup> *Id.* S.21.

<sup>144</sup> S.O.318 (E) dated 10 April 1997.

<sup>145</sup> S.O. 85 (E) dated 29 January 1992.

<sup>146</sup> 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<sup>147</sup>. 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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<sup>147</sup>*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<sup>148</sup>. 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<sup>149</sup>. There are also problems in the determination of and enforcement of the source-specific standards, which also requires to be focused.

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<sup>148</sup> Mehta, S. *et al.*, "Controlling Pollution; Incentives and Regulation", Sage, New Delhi(1993)1997.

<sup>149</sup> *Id.*, pp.1-2.

## **Determination of Ambient Air Quality Standards—Prevailing Conflicts**

What purports to be an 'environmental quality standard'<sup>150</sup>, 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<sup>151</sup>. 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<sup>152</sup>.

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<sup>153</sup>.

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<sup>150</sup> '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.

<sup>151</sup> William Howarth, "The Progression Towards Ecological Quality Standards", 18 *Journal of Environmental Law* (2006)3 at p. 5.

<sup>152</sup> 32 I.L.M.(1993)1069; see also the information available at OSPAR website, <http://www.ospar.org>, accessed on March 11, 2009.

<sup>153</sup> 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/nm<sup>3</sup>. 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<sup>154</sup> 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

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<sup>154</sup> *Id.* R.5.



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<sup>155</sup>. 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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<sup>155</sup> Cropper, M.L. and Oates, W.E., "Environmental Economics: A Survey", 30 *Journal of Economic Literature* (1992) pp. 675-740; see also Coase, R. H., "The Problem of Social Cost", 3 *Journal of Law and Economics* (1960), pp.1-44.; Opschoor, J.B. and Vos H.B., *Economic Instruments for Environmental Protection*, Organisation for Economic Co-operation and Development, Paris (1989), p.18.

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<sup>156</sup>.

### **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

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<sup>156</sup> 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<sup>157</sup>.

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<sup>158</sup>. 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.

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<sup>157</sup> 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.

<sup>158</sup> According to the *Annual Report of the Ministry of Environment and Forests, 1997-98*, out of the total number of 1551 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<sup>159</sup>.

### **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<sup>160</sup>. 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.

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<sup>159</sup> 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.

<sup>160</sup> Agenda 21 produced at the United Nations Conference on Environment and Development held at Rio de Janeiro, Brazil, in June 1992.

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<sup>161</sup> 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.

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<sup>161</sup> Dasgupta Partha, "Poverty and the Environmental Resource Base" in: *An Inquiry into Well-being and Destitution*, Clarendon Press, New Delhi(1993),Ch.10.

## *Chapter - 4*

# **CONTROL OF INDUSTRIAL AIR POLLUTION: GOVERNMENTAL MEASURES AND JUDICIAL APPROACHES**

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1. Industrial Air Pollutants and Impact on Health
2. Ozone Depletion and Green House effect
3. Acid Rain
4. Global Warming
5. Air Polluting Industries
6. Pollution from Thermal Power Plants
7. Pollution from Coal-fired Stations
8. European Union law on Industrial Air Quality
9. Governmental Measures in India
10. State of Industrial Air Pollutant Emission Load
11. Sustainable Industrial Development
12. Judicial Contributions in Protecting Air Quality
13. Industrial Air Pollution Control Measures
14. Conclusion

chemical plants and cement works<sup>6</sup>. India has made rapid strides in industrialization and it is one of the ten most industrialized nations of the world. However, it has aggravated the problem of air pollution<sup>7</sup>. In such a situation, unless there is effective regulatory control, industrialization which is the hallmark of development, will also result in pollution of air<sup>8</sup>. In view of the above scenario, the theme of law and industrialization is becoming central to the most profound challenges within air quality law today<sup>9</sup>.

### **Industrial Air Pollutants and Impact on Health**

Industries have great impact on the air environment, starting from the stage of siting of an industrial location to the disposal of waste<sup>10</sup>. Industries that are primarily responsible for pollution are many and pollutants emitted by it are of different types<sup>11</sup>. Scientifically speaking, air pollution can be classified as primary and secondary, based on its nature<sup>12</sup>. Among these two categories, secondary air pollutants produced by photochemical reactions amongst the pollutants are more toxic and harmful to human beings than the primary form<sup>13</sup>.

The air pollutants need not be strictly gaseous in state. It also includes fine particles that will remain in the air for some time and then get deposited on various surface<sup>14</sup> or some time become liquid

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<sup>6</sup> Chaatwal, G.S. *et al.*, *Encyclopaedia of Environmental Pollution and its Control*, Vol.1, Anmol Publications, New Delhi (1989), pp. 82-113.

<sup>7</sup> Murthy, S., "Economic Expansion, Environmental Pollution and Its Management", in Anju Kohli *et al.*, (Eds.), *Management of Environmental Pollution*, Book Enclave, Jaipur (2003), p.89.

<sup>8</sup> Oberoi, G.S., "Development and Management of Environment through Topographical Maps", in Sapru, R.K., (Ed.), *Environment Management in India*, Vol.1, Ashish Publishing House, New Delhi, (1987), 10 at p.11.

<sup>9</sup> Ben Pontin, "Integrated Pollution Control in Victorian Britain: Rethinking Progress within the History of Environmental Law", 19 *Journal of Environmental Law* (2007) 173 at p.199.

<sup>10</sup> *Our Common Future*, *supra*, n.1.

<sup>11</sup> Yogendra N. Srivastava, *Environmental Pollution*, APH Publishing Corporation, New Delhi (1989), p.10.

<sup>12</sup> Sathish Chandra, "Some Issues of Air Pollution in India", in Sapru, R.K. (Ed.), *Environment Management in India*, *supra*, n.8 at p.140.

<sup>13</sup> Oberoi, *supra*, n.8 at p.14.

<sup>14</sup> Sankaran Nair, R., *Atmospheric Pollution in the Fertilizer Industry*, Paper presented in the National Seminar on Environment Pollution, May 6-8, 1976, Kochi, p.264.



combining with water vapour to be carried away by wind and come down at far away places<sup>15</sup>. The consequences of air pollution are far reaching than any other form of pollution, as it has the potential of becoming transboundary and transnational<sup>16</sup>. Some air pollutants are also passive in their toxicity but their actions result in environmental changes by affecting the atmosphere, causing temperature rise, penetrating ultra-violet rays into the lower levels of stratosphere and depleting of the ozone layer<sup>17</sup>.

Deterioration of the quality of environment by various industrial pollutants has proved to have significant impact on health, eco-system and atmosphere<sup>18</sup>. The effect of air pollution on health is of three types, viz., short term, acute and chronic<sup>19</sup>. One of the common ailments caused by air pollutants is respiratory problems like chronic bronchitis, primary lung cancer, and hypertension<sup>20</sup>. Though public are generally affected, workers are the class more prone to health hazards than any other since they are exposed to high concentration for extended period during working hours<sup>21</sup>. They often encounter health risks on the job<sup>22</sup>. The absence of correct data to prove the link between an injury or disability or death of a worker and the occupational hazard involved in it is always a hurdle in establishing the range of effect of such hazards on workers<sup>23</sup>. It is also found that metal industries discharge nitrosamines in environment, leading to development of cancer. They are also formed

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<sup>15</sup> Pramod Singh, *Environmental Pollution and Management*, Chugh Publishing Co, Allahabad(1985), pp.72-73.

<sup>16</sup> *Id.*, pp.77-78.

<sup>17</sup> Abhinav Tandon and Agarwal, M., "Urban Heat Island: The Heat of Urbanization", 5 (3)*Our Earth*, September 2008 at p.19; see also Sharma, R.C., *Environmental Education*, Kalyani Publishers, New Delhi(2006), p.10.

<sup>18</sup> The World Bank, *World Development Report 1992, Development and the Environment*, Oxford University Press (1992), p.4.

<sup>19</sup> Salini, S.S., "Air Pollution and Legal Control" [1980] C.U.L.R. 348 at p.351.

<sup>20</sup> Raghavan, M., "Effect of Environmental Pollution on Human Health", Paper presented in the National Seminar on Environment Pollution, *supra*, n.14, at p.114.

<sup>21</sup> Kumar, R., *Environmental Pollution and Health Hazards in India*, Ashish Publishing House, New Delhi (1987), p.106.

<sup>22</sup> The World Bank, *World Development Report 1993*, p.95.

<sup>23</sup> Dunu Roy, "When the Grind Tells on You", in : *The Hindu Survey of Environment*, 1993, p.76.

in air of highly polluted areas by the reaction of gaseous dimethyleamine with gaseous nitrous acid<sup>24</sup>.

According to a World Bank study<sup>25</sup>, respiratory infections contribute to 10.9% of the total burden of diseases, which may be both due to presence of communicable diseases as well as high air pollution levels<sup>26</sup>. The prevalence of cancer is about 4.1% amongst all the diseases indicating that the effects of air pollution are visualized on the urban population<sup>27</sup>. Ministry of Environment and Forests had initiated environmental epidemiological studies in 7 critically polluted areas in India<sup>28</sup>. The details of epidemiological studies undertaken indicate that the incidence of symptomatic morbidity, which includes eye irritation, respiratory problem, and skin lesion, is high in areas of industrial activity<sup>29</sup>.

### **Ozone Depletion and Green House effect**

Two serious consequences of industrial air pollution are ozone depletion and green house effect. Industries are responsible to a great extent for the drastic atmospheric changes induced by pollutants like carbons, halons and nitrous oxide let into the air<sup>30</sup>. Scientists in 1985 alerted national and international policy makers to the growing

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<sup>24</sup> Samina Hasan and Manju Agarwal, "Nitrosamines in Environment: It's Possible Association with the Development of Cancer", 5(3)*Our Earth*, September 2008, p.22.

<sup>25</sup> The World Bank, *World Development Report: Investing in Health*, Oxford University Press, Washington, DC, p.329.

<sup>26</sup> A WHO study has also compared standardized prevalence of respiratory diseases in different areas of Mumbai, classified according to ambient average concentrations of sulphur dioxide. The study revealed a relatively higher prevalence of most respiratory diseases in polluted urban areas than in the rural control area. See Basil Blackwell, *Urban Air Pollution in Megacities of the World*, World Health Organization/United Nations Environment Programme, Oxford (1992). Similarly, a 1998 study by TERI estimated the incidence of mortality and morbidity in different groups in India due to exposure to particulate matter and translated these impacts into economic values. The results indicated 2.5 million premature deaths and total morbidity and mortality costs of Rs.885 billion to Rs.4250 billion annually.

<sup>27</sup> Note, "Air Quality Status and Trends in India", *National Ambient Air Quality Monitoring Series*, NAAQMS/14/1999-2000, Central Pollution Control Board, New Delhi.

<sup>28</sup> The areas referred to for study are Vapi, Angul-Talcher, Chembur, Cochin, Kanpur, Mandi-Govindgarh, Najafgarh drain basin, and Pune.

<sup>29</sup> Personal Communication from Pandey, G.K., Director, Ministry of Environment and Forests, New Delhi.

<sup>30</sup> Cynthia Pollock Shea, "Protecting the Ozone Layer", *State of the World* (1989)77 at p.78; see also Ross, R.D., *supra*, n.5 at p.11.

danger of the phenomenon of ozone depletion, by which atmospheric protecting blanket of ozone (O<sub>3</sub>) is being thinned or even torn totally to allow the ultra-violet rays to penetrate easily.

Depletion of ozone, the gas that absorbs much of the ultra-violet radiation from the sun adversely affects not only human beings, but also animals and plants. It promotes skin cancers, cataracts and depresses human immune system. It also reduces crop yields, deplete marine fisheries, cause material damage and increase smog<sup>31</sup>.

The phenomenon known as 'green house effect' is another devastating consequence of industrial air pollution. Atmosphere consists of a mixture of different gases. It is the natural gases that keep the earth warm and life possible on earth<sup>32</sup>. When the composition of these gases gets altered by any external force, it will be beyond the regenerative capacity of nature and will affect the whole balance, resulting in consequence like green house effect<sup>33</sup>.

Carbon dioxide is the significant agent for causing green house effect and increased CO<sub>2</sub> traps more of earth's heat, gradually warming the global climate. Over heating of the earth will result in the melting of the polar ice caps and also alter world climate zones. This global warming is today a threat to the world community<sup>34</sup> and it can produce serious environmental and economic problems<sup>35</sup>. It is also found that air pollutants in the atmosphere also cause

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<sup>31</sup> Studies point out that nitrous oxide emissions into the atmosphere from fertilizer industries leads to ozone layer depletion. See Ashok Kumar *et. al.*, "Fertilizer Use and Environmental Quality", 5(2)*Our Earth*, June 2008 at p.18.

<sup>32</sup> Pramanik, M.A.H. and Anwar Ali, "Impact of the Green House Effect on Bangladesh", *UNDRO NEWS*, May/June 1990, p.21.

<sup>33</sup> In a green house, the glass panels allow the solar radiation to enter in but prevent the emitted radiations from going out, thereby raising the temperature inside.

<sup>34</sup> Suzanne C. Messey, "Global Warming - International Environmental Agreement", 22 *G.A.J.INT'L & COMPL.*(1992)175.

<sup>35</sup> Joel D. Scheroga, *Combating Global Warming*, US Environmental Protection Agency(1990), p.170.

immediate climatic effects such as extra rainfall, fog, violent weather like thunderstorms and hail storms<sup>36</sup>.

### Acid Rain

The phenomenon of 'acid rain' was discovered in the 19<sup>th</sup> century in the vicinity of industrial facilities<sup>37</sup>. By the end of 20<sup>th</sup> century it was discovered that prevailing winds and atmospheric conditions could carry sulphur and other industrial air emissions over thousands of miles and fall as acid rain over other countries<sup>38</sup>. The problem required international response and led eventually to the Convention on Long-Range Transboundary Air Pollution<sup>39</sup>, under the auspices of United Nations Economic Commission for Europe (UNECE). It is supplemented by various protocols on the reduction of specific pollutants, latest being 1999 Gothenburg Protocol adopted on 30 November 1999 and entered into force on 17 May 2005<sup>40</sup>.

Acid rain means the presence of excessive acids in rainwater, having the effects of air pollution. Clean rain is naturally acidic due to the presence of carbon dioxide in the atmosphere forming carbonic acid with water. Acid rain originates from sulphur dioxides and oxides of nitrogen particles<sup>41</sup>.

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<sup>36</sup> "Haze Phenomenon Due to Pollution", *Times of India*, 16 October 2008; see also Ross, R.D., *supra*, n.5.

<sup>37</sup> The term 'acid rain' was coined by the chemist, Robert Angus Smith, whose findings were published in *Air and Rain, the Beginnings of a Chemical Climatology*, Longmans, Green & Co., London (1872).

<sup>38</sup> The phenomenon of forest death and the poisoning of lakes in Scandinavia and Germany were partially attributed to emissions from coal-fired power stations in UK and Europe. See Cowling, E.B., "Acid Precipitation in Historical Perspective" 16 (2) *Environmental Science and Technology*(1982) 110A-123A.

<sup>39</sup> Adopted on 13<sup>th</sup> November 1979 and entered into force on 16<sup>th</sup> March 1983.

<sup>40</sup> United Nations Doc. EB. AIR/1999. *Gothenburg Protocol* seeks to reduce emissions of sulphur, NOx, ammonia and volatile organic compounds. Art.3(6) of the Protocol establishes an overreaching requirement to employ BAT in reducing emissions. In addition, a number of emission limit values are established for certain pollutants and activities. The European Union has incorporated these obligations in the LCP and the National Emissions Ceiling Directives.

<sup>41</sup> Once these particles are emitted in the air they form sulphate and nitrate particles and they can travel a long distance along with wind currents. By combining with water vapour, they form acids which fall on the earth as acid rain. Sulphur dioxide is emitted primarily by coal burning power plants, high temperature combustion processes, etc.

In the near future, India will have to cope up with the problem of acid rain<sup>42</sup>. In India first report of acid rain came from Mumbai in 1974<sup>43</sup>. Adverse implications of acid rain are numerous and it increases acidity in the soil; threatens human and aquatic life; destroys forests and crops; corrodes buildings, monuments; and above all creates a serious threat to human health by contaminating the breathing air. It can also play havoc with the human nervous systems by causing neurological diseases<sup>44</sup>.

### Global Warming

Scientists believe that global warming began in the 18<sup>th</sup> century<sup>45</sup>. Global warming is not merely a rise in temperature. It is accompanied by changes in climate<sup>46</sup>, cloud cover, precipitation, wind patterns and the duration of seasons, the effects of which are likely to be significant and disruptive affecting the lives and livelihoods of the people<sup>47</sup>. Growing economics and changing lifestyles of mankind causes environmental changes to such an extent that the most

<sup>42</sup> Delhi, Nagpur, Pune, Mumbai, Kolkata are the sensitive areas. Control measures are possible only by converting the pollutants to innocuous products before their release into the atmosphere by the method of oxidation of air and by reducing burning of fossil fuels and avoiding the use of crude fuels.

<sup>43</sup> Prior to that there was report of occurrence of Acid rain in Europe in 1958 and in Netherlands in 1962. Acid rain was also reported in Sweden in 1979. The fall out of Acid rain ranges from respiratory disease, skin irritation and eye irritation. People from Kanto in Japan experienced severe eye and skin irritation since 1970. For further information, see Mrinal K. Ghose and Anupam Naik, "Energy Security in The Indian Context, Emitted Gas-Liquid Interaction Causing Acid Rain and its Impact on Environment", 5(2)*Our Earth*, June 2008, p.1; Ghose, M.K. and Majee, S.R., "Air Pollution Caused by Opencast Coal Mining and its Abatement Measures in India", 63(2) *Journal of Environmental Management* (2001), pp.51-61; Baum, R., "Wintertime Reflections of Global Warming", *Chemical and Engineering News*, Jan. 25, 1999, p.45; Barney, G.O., *The Global 2000 Report to the President*, 2 Vols., Washington, D.C., US Government Printing Office (1980); Banerjee, S.P., "Social Dimensions of the Mining Sector", *Journal of the Institutions of Engineers (India) Mining Engineering*, August.2003, pp.5-10; Anon, Ministry of Coal and Mines, Government of India (2003-2004); Anon, *The World Resources 1988-89*, Basic Books, New York (1988); Ghose, M.K., "Environmentally Sustainable Supplies of Energy in Indian Context", 2 *Journal of Institution of Public Health Engineers* (2002), pp. 51-56.

<sup>44</sup> This happens as acids produce highly toxic compounds which contaminate the potable water and enter the body.

<sup>45</sup> This is the opinion of the Researchers from the Wadia Institute of Himalayan Geology in Dehradun. For detailed analysis, see Archita Bhatta, "19,742 Years Off the Mark", *Down To Earth*, May 1-15, 2009, p.38.

<sup>46</sup> Studies reveal that moderate rains are decreasing at the rate of 2.3 incidents per year. For further information, see "Rain Shocked" *Down To Earth*, March 1-15, 2009, p.24.

<sup>47</sup> *Id.*, p.69.

pressing challenge of the 21<sup>st</sup> century is global warming. In UNDP report, it is presumed that 60% of the world population will live in urban area by 2030 and will be responsible for further global warming. It is high time to share the responsibilities of preventing the hazardous future by corrective actions<sup>48</sup>. The 4<sup>th</sup> Assessment Report of Inter-Governmental Panel on Climate Change, 2007 indicates the probability that natural climatic process causes global warming is less than 5% only, while the probability that emission of green house gases due to anthropogenic activities is causing global warming is more than 90%.

Urbanization, which is the fallout of Industrialization, is yet another reason paving the way for global warming. In the United States, 64% of the people live within less than 2% of the US land area. Study of the United Nations, 2003 points out that by 2025, 80% of the population will live in cities which lead to change in climatic conditions<sup>49</sup>. Effect of urbanization in India could be far worse than expected<sup>50</sup>. Latest projections indicate that after 2050, temperatures would rise by 3-4 degrees over current levels and rainfall would become heavier and less regular<sup>51</sup>. Urban heat Islands would be formed with abnormally high heat levels. Inadequate power supply for industrial and commercial units also aggravate the problem, as a result of which the entrepreneurs have to use diesel-based captive power generation units emitting high levels of nitrogen dioxide (NO<sub>x</sub>) and sulphur dioxide (SO<sub>x</sub>). In addition, waste burning and construction activities associated with industrial processes also increases the propensity of air pollution.

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<sup>48</sup> Sashi Rana *et al.*, "Consequences of Global Warming" 5(3)*Our Earth*, September 2008, p.13.

<sup>49</sup> Very recently, as an ambitious measure to address the threat of global warming, California decided to cut environment emissions by 30 percent by 2016. See "New US View on Global Warming", *SPAN*, March/April 2009, p.7.

<sup>50</sup> It is pointed out that carbon stock in Indian forest is projected to increase from 8.79 Gtc in 2006 to 9.75 Gtc by 2030. For details, see Ravindranath, M.H. *et al.*, "Carbon Vs Climate Impact Inspected" *Kerala Calling*, May 2009, pp.44-45.

<sup>51</sup> It is pointed out that of the 12 hottest years on record, 11 have occurred since 1995 i.e. in the last 12 years only. Temperatures have risen by 0.74 degrees over the past century. See Manoj Kumar Nigi, "Global Warming – A Warning", *Environment*, 2008 Mar-May, p.49.

The impact of global warming on health is devastating<sup>52</sup>. There is evidence that Dengue would spread rapidly and diarrhoea disease would make a strong comeback across India as changes in temperature make it conducive for mosquitoes to thrive. Malnutrition would spell doom for the country. Diarrhoeal diseases associated with floods and droughts could go up. Warmer ocean temperatures would lead to bleaching and destroy vast tracts of India's coral reefs with erratic rainfall and decrease in precipitation levels. India's forests would deplete rapidly<sup>53</sup>. The country's biodiversity would decline due to rising sea levels. Risk of Global warming is arguably comparable to nuclear war in terms of its potential to destroy the earth planet<sup>54</sup>. Measures to avert it are necessary aiming towards encouragement of renewable energy sources, green building, switching to wind power and bio-fuels, growing more trees, and above all, educating on global environment<sup>55</sup>.

### **Air Polluting Industries**

According to the identification made by the Central Pollution Control Board in the industrial sector, there are 17 categories of industries (large and medium scale) which are significantly polluting<sup>56</sup> and the list includes highly air polluting industries such as integrated iron and steel, thermal power plants, copper/zinc/aluminium smelters, cement, oil refineries, petrochemicals, pesticides and fertilizer units<sup>57</sup>. The status of air pollution control with reference to these industries as on 30 June 2000 shows that out of 1551 such industries, 1324 have only so far provided the necessary pollution

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<sup>52</sup> En-Lai Yeoh, *Global Warming Could Wipe Out Decades of Progress* (2007), available at [www.bloomberg.com](http://www.bloomberg.com), accessed on January 23, 2009.

<sup>53</sup> Louisiana State University, "Helping India Prepare for Impact of Global Warming", *Science Daily*, April 15, 2007.

<sup>54</sup> Trenberth K.E., "Warmer Oceans, Stronger Hurricanes", *Scientific American*, July 26-31, 2007.

<sup>55</sup> "Climate Change, the Scientific Basis", 4<sup>th</sup> Assessment Report of the Inter-Governmental Panel on Climate Change, Cambridge University Press (2007).

<sup>56</sup> Most of these industries are found in the States of Maharashtra, Uttar Pradesh, Gujarat, Andhra Pradesh and Tamil Nadu.

<sup>57</sup> For details, see 5(2)*Our Earth*, June 2008, p.41.

control devices and facilities. Out of the remaining, 165 industries have been closed down and 62 industries are defaulters<sup>58</sup>.

Small scale industries are a special feature of the Indian economy. But, they play an important role in augmenting air pollution. India has over 3 million small scale units accounting for over 40% of the total industrial output in the country<sup>59</sup>. In general, the Indian small scale industries lack pollution control mechanisms. While the larger industries are better organized to adopt pollution control measures, the small scale sector is poorly equipped both financially and technically to handle the problem of air pollution. These industries have very high aggregate air pollution potential. Also, they are located in densely populated areas, thereby affecting a large number of people.

### **Pollution from Thermal Power Plants**

Since 1950-51, the electricity generation capacity in India has multiplied 55 times from a meager 1.7 thousand MW to 93.3 thousand MW<sup>60</sup>. The generating capacity in India comprises a mix of hydro, thermal, and nuclear plants. Since the early seventies, the hydro-thermal capacity mix has changed significantly with the share of hydro in total capacity declining from 43% in 1970-71 to 24% in 1998-99. Thermal power constitutes about 74% of the total installed power generation capacity. However, increasing reliance on this source of energy has led to many environmental problems, the most acute of which is air pollution. It is found that thermal power plants belong to the categories of highly polluting industries<sup>61</sup>.

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<sup>58</sup> Note, "Polluting Industries", *Parivesh Newsletter*, Central Pollution Control Board, New Delhi (2000).

<sup>59</sup> *India: An Emerging Environmental Market-A Handbook for Trade and Business Opportunities*, Confederation of Indian Industry and Sanders International, Inc. (1996), p.78.

<sup>60</sup> *Economic Survey 1999-2000*, Economic Division, Ministry of Finance, New Delhi.

<sup>61</sup> It is found that as on 30 June 2000, out of the 97 pre-1991 thermal power plants, 20 plants have not yet provided the requisite air pollution control facilities.



India's coal is very high in ash content, of about 24% to 45%. The increased dependence of the power sector on an inferior quality coal has been associated with emissions from power plants in the form of particulate matter, toxic elements, fly ash, oxides of nitrogen, sulphur and carbon, and ash which requires vast stretches of land for disposal. During 1998-99, the power stations consumed 208 million tonnes of coal, which in turn produced 80 million tonnes of ash causing a major health problem for its disposal<sup>62</sup>.

### **Pollution from Coal-fired Stations**

As major emitters of carbon dioxide, the principal direct greenhouse gas, coal-fired stations are regarded as making a significant contribution to global warming<sup>63</sup>. The Kyoto Protocol<sup>64</sup> requires the European Union<sup>65</sup> to achieve short term reductions in greenhouse gases of 8% by 2012 at the latest<sup>66</sup>. Although the adoption of the Protocol has been bedeviled by political difficulties from the outset<sup>67</sup>, the European Union has gone ahead with a two pronged strategy to achieve reductions, namely, energy saving programmes and new emissions trading scheme. Energy saving programmes seek to reduce the demand for energy,<sup>68</sup> while the new

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<sup>62</sup> Note, "Polluting Industries", *supra*, n.58.

<sup>63</sup> See Mark Wilde, "Best Available Techniques and Coal-Fired Stations: Can the Energy Gap be Plugged without Increasing Emissions?", 20 (1) *Journal of Environmental Law*(2008), pp.87-114; Pelzer, N., "Focus on the Future of Nuclear Liability Law", 17 *Journal of Environmental Law* (1999), 332; DEFRA, "The UK Climate Change Programme" (n7), pp.32-33.

<sup>64</sup> Protocol to the United Nations Framework Convention on Climate Change adopted on 11 December 1997 and entered into force on 16 February 2005, 37 I.L.M.(1998)22.

<sup>65</sup> The European Union is a signatory of the Framework Convention and Protocol.

<sup>66</sup> Article 3(1) of the Kyoto Protocol.

<sup>67</sup> Under Article 25 of the Protocol the instrument could only come into force once signed by States accounting for 55% of global carbon dioxide emissions in 1990. This was severely delayed by the withdrawal of the United States under the Bush Administration and hesitation in joining on the part of Russia.

<sup>68</sup> Council Directive (EC) 93/76 to limit carbon dioxide emissions by improving energy efficiency, [1993] OJL 237/28.

emissions trading scheme provides an economic incentive to reduce use amongst industrial users<sup>69</sup>.

Although natural gas provided a cleaner burning alternative to fossil fuel by reducing sulphur dioxide (SO<sub>2</sub>) emissions<sup>70</sup>, still in UK, the report on the Energy Review<sup>71</sup> and subsequent White Paper<sup>72</sup> shows that natural gas can no longer provide a reliable alternative to nuclear technology and fossil fuels and therefore European States are once again considering the respective merits of coal and nuclear technology as sources of energy<sup>73</sup>. In India too, coal-fired stations are responsible to a large extent in increasing carbon dioxide emissions.

### **European Union law on Industrial Air Quality**

In Europe, after post-war nationalization, the Central Electricity Generating Board (CEGB) adopted the dispersal method and pursued a programme of building tall smokestacks<sup>74</sup>. In UK, sulphur emissions were regulated by the Alkali and Clean Air Inspectorate renamed as the Industrial Air Pollution Inspectorate in 1982 using the powers stemming from the Alkali and Works Regulation Act, 1906<sup>75</sup>.

In Europe, the modern phase of regulation to combat air pollution from industrial plants was ushered in with the introduction of Integrated Pollution Control (IPC) administered by the Environment

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<sup>69</sup>Facilitated by Article 17 of the Kyoto Protocol. The European Union's trading scheme began in January 2005 pursuant to European Parliament and Council Directive (EC) 2003/87 on establishing a scheme for greenhouse gas emission allowance trading within the community [2003] OJ L 275/32.

<sup>70</sup> Gas-fired power stations also produce approximately half as much carbon dioxide as coal-fired plants. See IEA, "CO<sub>2</sub> Emissions from Fuel Combustion 1971-2004" (2006); Helm, D., *Energy, the State, and the Market*, Oxford University Press, Oxford(2004).

<sup>71</sup> DTI, "The Energy Challenge: Report on the Energy Review", Cm 6887 (2006).

<sup>72</sup> Energy White Paper (n 4).

<sup>73</sup> According to International Energy Agency, coal still contributes 40% of world electricity supply, IEA, "Key World Energy Statistics 2007" (2007), p.24.

<sup>74</sup> Bell, S. and McGillivray, D., *Environmental Law*, Oxford University Press, Oxford (6th edn., 2006), P.632.

<sup>75</sup> The Act was later amended by the Health and Safety at Work Act, 1974 and the Control of Pollution Act 1974 and it was repealed in its entirety by the Environmental Protection Act, 1990, S.162, Sch.16.

Agency and by a series of Council Directives<sup>76</sup>. European Union later adopted the elements of Integrated Pollution Control system (IPC) and included them in its own Integrated Pollution Preservation and Control Directive, which replaces Integrated Pollution Control in respect of thermal power stations<sup>77</sup>. More recently, obligations stemming from European Union and International law have placed environmental concerns at the heart of energy policy and are forcing the reduction on emission limits.

Besides the above measures, Council Directive 84/360/EEC<sup>78</sup> was framed envisaging prior authorization procedures for specified plants<sup>79</sup>. Power stations were subsequently included in a specialist regime established by the first Large Combustion Plant (LCP) Directive<sup>80</sup>, which introduced emission limit values in respect of duct, gases and certain other elements. The significant aspect of European laws on air quality is that acceptable levels are predominantly calculated considering the impact of air quality on human health

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<sup>76</sup> EU regulations on air quality include limit values, target values and alert thresholds, related to atmospheric pollutants such as sulphur and nitrogen oxides, ozone, lead, benzene and particles. These rules come from Council Directive 96/62 and its four daughter Directives which relate to the evaluation and improvement of ambient air quality. A 'limit value' is a level fixed with the aim of avoiding, preventing or reducing harmful effects on human health and/ or the environment as a whole, to be attained within a given period and not to be exceeded once attained. For certain pollutants, limits values are fixed for 2005 (notably PM<sub>10</sub>) or 2010 (notably NO<sub>2</sub>). A 'target value' is a level fixed with the aim of avoiding more long-term harmful effects on human health and/or the environment as a whole, to be attained where possible over a given period. Ozone is subject to a target value only. An 'alert threshold' is a level beyond which there is a risk to human health from brief exposure and at which immediate steps shall be taken. See Council Directive (EC) 96/62 of 27 September 1996 on Ambient Air Quality Assessment and Management [1996] OJ L 296/55; Council Directive (EC) 1990/30 of 22 April 1999 relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air [1999] OJ L 163/41; Council and European Parliament Directive (EC) 2000/69 of 16 November 2000 relating to limit values for benzene and carbon monoxide in ambient air [2000] OJ L 313/12; Council and European Parliament Directive (EC) 2002/3 of 12 February 2002 relating to ozone in ambient air [2002] OJ L 67/14; Council and European Parliament Directive (EC) 2004/107 of 15 December 2004 relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air [2004] OJ L 23/3.

<sup>77</sup> Directive 96/61 (n 14).

<sup>78</sup> [1984] OJ L 188/20.

<sup>79</sup> Including thermal power plants.

<sup>80</sup> Council Directive 88/609 on the limitation of emission from certain pollutants into air by large combustion plants [1988] OJ L 336/1.

although some values relate to protection of vegetation and ecosystems<sup>81</sup>.

### Governmental Measures in India

In India, the Government has piloted number of legislations, policies and programmes for protecting the environment from the hazards of industrial emissions. India has adopted the Male Declaration on Control and Prevention of Air Pollution and its likely transboundary effects for South Asia in April 1998. In tune with the above Declaration and based on the statutory obligations arising under the Air (Prevention and Control of pollution) Act, 1981 and the Environment (Protection) Act, 1986, ambient air quality standards (both short-term, i.e., 24 hourly, and long-term, i.e., annual) have been laid down for industrial areas with respect to pollutants such as sulphur dioxide, nitrogen dioxide, suspended particulate matter, respirable suspended particulate matter (respirable dust), carbon monoxide, nitrogen oxide<sup>82</sup>.

Similarly, guidelines for siting industries are prescribed so that the possible adverse effects on the environment and the quality of life can be minimized. The sensitive response of natural life-sustaining systems and specific land-uses has been taken into account while specifying the minimum prescribed distance for siting an industry.

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<sup>81</sup> Environmental quality standards have been criticized on the ground that they are overly anthropocentric in their concentration upon threats to human health rather than ecological damage; See Howarth, W., "The Progression Towards Ecological Quality Standards" 18 *Journal of Environmental Law* (2006)3.

<sup>82</sup> According to the National Air Quality Standards, the annual average of sulphur dioxide and oxides of nitrogen emissions in industrial areas is 80  $\mu\text{g}/\text{m}^3$ ; suspended particulate matter 360  $\mu\text{g}/\text{m}^3$ , respirable particulate matter 120  $\mu\text{g}/\text{m}^3$ ; carbon monoxide 8 hours average is 5.0  $\text{mg}/\text{m}^3$ . In residential, rural and other areas, it is 60  $\mu\text{g}/\text{m}^3$  for sulphur dioxide and oxides of nitrogen; 140  $\mu\text{g}/\text{m}^3$  for suspended particulate matter; 60  $\mu\text{g}/\text{m}^3$  for respirable particulate matter; 0.75  $\mu\text{g}/\text{m}^3$  for lead, 0.1  $\text{mg}/\text{m}^3$  for ammonia, 2.0  $\text{mg}/\text{m}^3$  for carbon monoxide 8 hours average. In sensitive areas, it is 15  $\mu\text{g}/\text{m}^3$  for sulphur dioxide and oxides of nitrogen, 70  $\mu\text{g}/\text{m}^3$  for suspended particulate matter; 50  $\mu\text{g}/\text{m}^3$  for respirable particulate matter; .50  $\mu\text{g}/\text{m}^3$  for lead; 0.1  $\text{mg}/\text{m}^3$  for ammonia; and 0.1  $\text{mg}/\text{m}^3$  for carbon monoxide 8 hours average. See *Pollution Control Acts, Rules and Notification*, Central Pollution Control Board, September 2001, p.381.

**i) Environmental Audit**

Submission of an environmental statement by polluting units to the concerned State Pollution Control Board has been made mandatory in India under the Environment (Protection) Act, 1986. This helps to have a full understanding of the level of industrial emission and its impact<sup>83</sup>.

The policy statement by the government for abatement of pollution has mandated for the submission of environmental statement by all industries in the form of environmental audit. Environmental audit has now emerged as a new element in business strategy. The Department of Company Affairs has stipulated that environmental compliance be included as part of the annual report of a Company to be submitted by its directors. Since the audit would form part of the Company's environmental report, which is circulated amongst its shareholders, the expectation is that it would generate public pressure on the Companies to become more environment conscious. It would also make Companies accountable for the use of natural resources and help in reducing emissions.

**ii) Zoning Atlas for Siting Industries**

In order to delineate the areas that are suitable for industrial siting, a district-wise zoning atlas project has been taken up by the Central Pollution Control Board that zones and classifies the environment in a District. The industrial zones are identified based on the sensitivity and pollution-receiving potential of the district<sup>84</sup>.

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<sup>83</sup> The goal of audit is to understand the type and amount of resources used by a Company, product line or facility, and the types of emissions generated. Companies may also try to quantify this data in monetary terms to understand the bottom-line impact. This helps to set-up priorities as to how a Company can get the greatest return on its efforts. With the introduction of eco-label for some products in India, which assess not only the product but also the production process before an award is made the need for environmental audit has become more important.

<sup>84</sup> *Annual Report 1999-2000*, Ministry of Environment and Forests, New Delhi, available at <http://envfor.nic.in/report>, June 2000 and accessed on December 20, 2008.

**iii) Development of Pollution Prevention Technologies**

Industries are encouraged to use cleaner and low waste or no waste technologies to reduce waste generation and the emission of pollutants. Various pollution prevention technologies are being developed and promoted at the initiative and support of the Government<sup>85</sup>. In spite of the same, a good scope exists for the demonstration and application of cleaner technologies in clusters of small-scale industries such as foundry, pottery and glass.

**iv) Beneficiated Coal**

The Ministry of Environment and Forests has made it mandatory for thermal power plants located beyond 1000 km from the coal pithead, or in urban, ecologically sensitive or critically-polluted areas, to use beneficiated/blended coal containing ash not more than 34%, with effect from June 2001. The power plants using Fluidized Bed Combustion(FBC) and Integrated Gasification Combined Cycle(IGCC) combustion technologies are, however, exempted to use beneficiated coal irrespective of their locations<sup>86</sup>.

**v) Action Plan for Pollution Control in Problem Areas**

Twenty-four problem areas have been identified in the country for pollution control through concerted efforts involving all the concerned agencies/industries. Action plans also have been prepared and are being implemented<sup>87</sup>.

**vi) Emission Standards for Industries**

The Central Pollution Control Board has laid down the maximum permissible limits for different pollutants for many categories of industries that contribute to air pollution. The standards

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<sup>85</sup> Note, "Air Quality Status and Trends in India", *supra*, n.27.

<sup>86</sup> Note, "Polluting Industries", *supra*, n.58.

<sup>87</sup> *Annual Report 1999-2000*, *supra*, n. 84.

have been notified by the Ministry of Environment and Forests under the Environment (Protection) Act, 1986.

### vii) Requirement of Environmental Impact Assessment

The requirement of Environmental Impact Assessment, though an administrative measure, actually stems from the 'precautionary principle' which requires that anticipatory action has to be taken to prevent harm<sup>88</sup>. This is seen well explained by the Supreme Court in *Andhra Pradesh Pollution Control Board v. M.V. Nayadu*<sup>89</sup>, wherein Court stated as follows:

"The principle of precaution involves the anticipation of environmental harm and taking measures to avoid it or to choose the least environmentally harmful activity. It is based on the scientific uncertainty. Environmental pollution should not only aim at protecting health, property and economic interests but also protect the environment for its own sake. The precautionary duties must not only be triggered by the suspicion of concrete danger but also by way of (justified) concern or risk potential".

The importance of Environmental Impact Assessment before starting developmental projects was also highlighted by *Barucha, J.* in his dissenting opinion in the *Narmada Bachao Andolan v. Union of India*,<sup>90</sup> by holding that Environmental Impact Assessment should not be on the discretion of administration because it derives its strength from the law itself<sup>91</sup>. He also judged that construction of the dam should cease in the absence of proof showing that Environmental Impact Assessment has been made prior to the commencement of the project.

In India, the requirement of Environmental Impact Assessment for development projects was introduced for the first time by the

<sup>88</sup> *M.C. Mehta v. Union of India*, A.I.R. 2004 S.C. 4016.

<sup>89</sup> A.I.R. 1999 S.C. 812 at pp.820-821, per S.B.Majumdar and M.Jagannatha Rao, JJ.

<sup>90</sup> A.I.R. 2000 S.C. 3751.

<sup>91</sup> Vernika Tomar, "Corporate Responsibility and Environment Impact Assessment", 50 J.I.L.I.(2008) 230 at p.235.

Central Government through the Environment Impact Assessment Notification, 1994 issued on 27-01-1994, which was subsequently amended on 10-04-1997. The Notification has envisaged certain requirements and procedures for seeking environmental clearance for projects newly undertaken or for the expansion or modernization of the existing industry or projects listed in schedule-1<sup>92</sup>. The application for such environmental clearance of projects should be accompanied by a project report which shall include *inter alia* an environmental impact assessment report.

The 1994 Environment Impact Assessment Notification was replaced in 2006 by the Ministry of Environment and Forests by the new Notification issued on September 14, 2006. The major outcome of the 2006 Notification is to decentralize power to the State Government<sup>93</sup>. Another object of the new Notification was to reduce the time required for project clearance. But the above reasons are not proper justifications for delegation of power to the State Governments, as the same would affect efficiency and transparency of the clearance process itself.

As of now, Environmental Impact Assessment is made mandatory for 29 specific industrial activities/projects and also for activities to be taken up in identified areas such as Doon Valley. The procedure for examining the impact of different activities also include holding of public hearing and examination by duly constituted expert committee<sup>94</sup>. The Ministry of Environment and Forests has now taken up carrying capacity-based regional planning studies in certain selected areas of the country. Despite all such measures, the dictum

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<sup>92</sup> Schedule 1 contains a list of 29 projects requiring environment clearance from the Central Government and it includes projects related to nuclear power, river valley, ports, chemical fertilizers, petroleum refineries, synthetic rubber, asbestos, thermal power plants, mining, distilleries, pulp, dyes, cement, foundries, electroplating etc.

<sup>93</sup> The new Notification provides for the constitution of State Environmental Appraisal Committee (SEAC) at State levels and Central Environmental Appraisal Committee at the Central level. The State Committee considers the project on the basis of the information provided by the project proponent. It is pointed out that handing over power to the State Government without sufficient checks and balances is unacceptable.

<sup>94</sup> *Annual Report 1998-99*, Ministry of Environment and Forests, New Delhi.



'prevention is better than cure' is yet to be recognized and preventive measures such as Environmental Impact Assessment and emergency powers are still foreign<sup>95</sup>.

Public participation is significant in the environmental impact analysis process, which, in turn, affects the quality of the decision about a project<sup>96</sup>. Environmental Impact Assessment facilitates democratic decision making and consensus building regarding new development<sup>97</sup>. Often it is found that Industries go for hearing only after their projects become functional, thus diluting the legal provisions<sup>98</sup>.

An analysis of the Environment Impact Assessment procedure in India shows that it remains half-heated. The main flaw is that Ministry of Environment and Forests has an inadequate machinery to monitor whether or not the conditions are met. Due to weak provisions, there is little or no credence attributable to the principle. In the above circumstances, the first step is to amend the project screening criteria to ensure that Environment Impact Assessment is not limited to activities, which will affect the environment 'to a significant extent', as is the common practice. Further, Environment Impact Assessment process should be triggered where there is uncertainty regarding the possibility of serious environmental impact.

In a democracy, it is better to have the reasoned examination of the contending views in the factually informed context of Environment Impact Assessment than to ignore them or treat them exclusively as political views<sup>99</sup>. Therefore, Environment Impact

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<sup>95</sup> Chandrasekharan, N.S., "Structure and Functioning of Environment Protection Agency: A Fresh Look" in Leelakrishnan, P., (Ed.), *Law and Environment*, Eastern Book Co., Lucknow(1992),153 at p.159.

<sup>96</sup> William A. Tilleman, "Public Participation in the Environment Impact Assessment Process-A Comparative Study of Impact Assessment in Canada, The US And The European Community" 33 *Columbia Journal of Transnational Law Asscn.*(1995)337.

<sup>97</sup> Nicholas A. Robinson, "International Trends in Environment Impact Assessment", 19 *Boston College Environmental Affairs Law Review* (Spring 1992)591.

<sup>98</sup> "How Public are 'Public Hearings' ?" *The Times India*, Ahmedabad, January 30, 2002.

<sup>99</sup> Nicholas A. Robinson, *supra*, n.97 at p.592.

Assessment should be made an effective mechanism for making the corporate responsible to its environment obligations<sup>100</sup>. The combination of strong legislative mandates, an activist judiciary, aggressive public interest litigators, and a proliferation of highly committed essential NGOs means that India is no longer the haven it once was for industries indifferent to environmental values<sup>101</sup>.

### **State of Industrial Air Pollutant Emission Load**

Air quality in an area gets deteriorated on account of increase in the emission load of various pollutants. In India, there is no systematic data available in relation to air pollutant emission loads and trends. In the Industrial sector, the total estimated emissions of suspended particulate matter (SPM) from the 7 critical industries, namely, iron and steel, cement, sugar, fertilizers, paper and paper board, copper and aluminium increased from 0.2 million tonnes in 1947 to 3 million tonnes in 1997<sup>102</sup>.

The World Bank study<sup>103</sup> shows that pollution is concentrated among a few industrial sub-sectors and that sector's contribution to pollution is often disproportionate to its contribution to industrial output. In respect of petroleum refineries, textiles, pulp and paper, and industrial chemicals, they produce 27% of the industrial output, but contribute 87% of sulphur emissions and 70% of nitrogen emissions from the industrial sector. Likewise, iron and steel, and non-metallic mineral products, produce about 16% of the industrial output, but account for 55% of the particulate emissions.

It is true that Government has taken a number of measures such as legislation, fixation of emission standards for industries,

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<sup>100</sup> Vernika Tomar, "Corporate Responsibility And Environment Impact Assessment" 50 J.I.L.I.(2008) 230 at p.243.

<sup>101</sup> Armin Rosencranz and Kathleen D. Yurchak, "Progress on the Environmental Front: The Regulation of Industry and Development in India" 19 *Hastings International and Comparative Law Review* (Spring 1996) 489.

<sup>102</sup> Note, "Air Quality Status and Trends in India", *supra*, n.27.

<sup>103</sup> *The World Bank Study Report, 1996*, Washington, D.C.

guidelines for siting of industries, environmental audit, environmental impact assessment, pollution prevention technologies, action plan for industrial zones/problem areas, development of environmental standards and promotion of environmental awareness, still the fact remains that air pollution from industrial activities continue unabated and there is extensive use of fossil fuel in industrial activities. It is true that there has been bit success in the matter of reduction of ambient lead levels, however, industrial emissions still continue in the same propensity making the air environment impure.

### **Sustainable Industrial Development**

Unprecedented industrial growth has led to disasters<sup>104</sup>, which awakened the conscience of mankind to the need for reducing environmental problems and promoting sustainable development. This means use of regulatory measures and incentives as well as development of technologies to reduce pollution.

Sustainable development was mooted for the first time in the Maltese Proposal of 1967 presented in the UN General Assembly and it revolves around moderate exploitation of natural resources by the present generation for the benefit of future generations. Thereafter, it appeared prominently in the Brundtland Commission Report, 1987<sup>105</sup>, Rio Declaration and the Johannesburg Conference, 2002.

The concept of sustainable development is not fixed, but an evolving concept<sup>106</sup>. The word 'sustainability' originates from the latin word 'sustinere', which means 'to hold up', 'to endure'<sup>107</sup>. Sustainable development means "economic growth without destroying the resource base and involves a new approach of integration of

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<sup>104</sup> Such incidents include Los Angolos smoke, death of Lake Erie and Minamata incident.

<sup>105</sup> *Our Common Future*, *supra*, n.1.

<sup>106</sup> "Sustainable Development and International Law", 24 (5)*Environmental Policy and Law*(1994) 218 at p.219.

<sup>107</sup> Santhanam, M.L., "Community Participation For Sustainable Development" 39(3) *Indian Journal of Public Administration* (1992)414.

production with resource conservation and enhancement providing adequate livelihood and equitable access to resources”<sup>108</sup>. It therefore demands conservation of natural resources including air<sup>109</sup> in all its purity. Sustainability in industrial activities also requires the same. The need for protecting and improving the environment for present and future generations is also stressed by such other measures like halting and preventing pollution<sup>110</sup>; ensuring healthy living and working environment<sup>111</sup>; assisting developing countries technologically and financially to attain certain standards<sup>112</sup>; proper planning and management of resources; reconciling development with environment; human settlement and urbanization, etc.<sup>113</sup> It is also regarded as a task of the community<sup>114</sup>. The concept received momentum with Rio<sup>115</sup> providing a timely forum for balancing sustainability with the short-term priorities of Government and interest of Companies.<sup>116</sup> Rio further put-forward ‘Agenda 21’ programme of action towards sustainable development for the 21<sup>st</sup> century<sup>117</sup>.

The economic disparities between the developed and the developing countries accelerated the need for action to combat environmental pollution at the global level and put forward new challenges to the doctrine of sustainable development<sup>118</sup>. The above perceptions leads to the requirement that industrial development

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<sup>108</sup> Leelakrishnan, P., “Law and Sustainable Development” 9 *Journal of Energy and Natural Resources Law* (1991)193.

<sup>109</sup> *The Stockholm Declaration on Human Environment, 1972*, Principle 2.

<sup>110</sup> *Id.* Principle 6.

<sup>111</sup> *Id.* Principle 7.

<sup>112</sup> *Id.* Principles 9, 10, 11 & 12.

<sup>113</sup> *Id.* Principles 13-16.

<sup>114</sup> Article 2 of the European Commission Treaty explicitly sets out Sustainable Development as a task of the community.

<sup>115</sup> Rio Conference on Environment and Development, 22(2)*Environmental Policy and Law*(1992) 204.

<sup>116</sup> Ayesha Diaz, “UNCED: Permanent Sovereignty over Natural Resources”, 24(4)*Environmental Policy and Law* (1994)157 at p.158.

<sup>117</sup> Agenda-21, Rio Conference on Environment and Development, 22(2)*Environmental Policy and Law*(1992), pp.208-223.

<sup>118</sup> Rao, R.J., “Environment for Sustainable Development”, 1 *Andhra University Law Journal* (1993) 54.

should be sustainable and that regulation of the use of natural resources for industrial purposes and pollution of natural resources in the course of manufacturing should be controlled through adequate measures<sup>119</sup>. The Brundtland Report engendered faith in legal, institutional and policy reforms as the principal means of implementing sustainable development<sup>120</sup>. But strategies can promote sustainable industrial development only if the political will at the national and international level is environmentally friendly<sup>121</sup>. Whatever it is, the concept of sustainable industrial development is today the 'mandra' of modernization<sup>122</sup>. Human survival and well-being depends on the success in elevating sustainable industrial development to a global ethic<sup>123</sup>. Economic growth cannot sensibly be treated as an end in itself. Development has to be more concerned with enhancing the lives we lead and the freedom we enjoy<sup>124</sup>.

While protecting environmental interests, one cannot ignore the legitimate developmental interests of the population as right to development is also a cherished human right<sup>125</sup>. On the one hand, a clean and unpolluted air environment is necessary. On the other hand, industrial development should also continue. These conflicting interests need to be harmonized in a delicate manner beneficial to the mankind<sup>126</sup>. People not only in present but in future also have a right to live in healthy environment and have a productive life in harmony with nature<sup>127</sup> and this forms the edifice of the principle of sustainable industrial development. Courts have also demonstrated a willingness to accept sustainable development as a material

<sup>119</sup> Adede, A.O., "International Environmental Law from Stockholm to Rio: An Overview of Past Lesson and Future Challenges", 22(2)*Environmental Policy and Law* (1992) 88 at p.101.

<sup>120</sup> Philippa England, "Problems and Prospectus for the Implementation of Sustainable Development in Developing Countries: A Critique of the Brundtland Report" 2 G.L.R. (1993)147.

<sup>121</sup> UN/GA 49<sup>th</sup> Section First Part. UN Activities, 25(1)*Environmental Policy and Law* (1995)2 at p.9.

<sup>122</sup> Seshadri, B., "The Doctrine of Sustainable Development", *The Hindu*, June 20, 1992, p.12.

<sup>123</sup> *Our Common Future, supra*, n.1 at p.308.

<sup>124</sup> Amartya Sen, *Development as Freedom*, Oxford University Press, UK(1999), p.14.

<sup>125</sup> Vijay Oak, "Sustainable Development in Developing Countries and its Legal Principles", 32 *Indian Bar Review*(2005)265.

<sup>126</sup> *Id.*, p.266.

<sup>127</sup> Shekhawat, S.P.S., "Sustainable Development and Environment" 38 *Journal of the Legal Studies*, University of Rajasthan, Jaipur (2007-08)285 at p.289.

consideration in judicial decisions<sup>128</sup>. Despite the same, the position with reference to sustainable development is worrying even in developed countries<sup>129</sup>. The problem lies in the fact that governmental policy is not aimed at putting sustainable development at the heart of Government. Therefore, the requirement of the time is to evolve a governmental policy which is clear, contained, internally consistent, and capable of implementation<sup>130</sup>.

### **Judicial Contributions in Protecting Air Quality**

Man is acknowledged to be the creator and moulder of his environment and hence his conduct has to be regulated through the limb of law. Environment is so fastly changing that in order to keep the law on the same wave-length, law has to be amended frequently to meet the new challenges or that it should receive a progressive judicial interpretation giving new direction and showing new ways as legitimate substitute for legislative vacuum.

The judiciary in India has played a cardinal role in protecting the air quality and in that process it has zealously applied the principle of sustainable development<sup>131</sup>. The activism depicted by the courts in the industrial sector is discernible particularly in the areas of quarrying, mining, stone crushing and also in the case of hazardous and heavy industries, wherein the courts have shown their anxiety about the situation arising from industrial growth and

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<sup>128</sup> Andrea Ross, "Why Legislate for Sustainable Development? An Examination of Sustainable Development Provisions in UK and Scottish Statutes", 20 *Journal of Environmental Law* (2008) 35 at p.67.

<sup>129</sup> A recent Commission Report on Sustainable Development with reference to European Union states as follows: "The European Union is not yet on the path of sustainable environmental development. There has only been limited progress with the fundamental issues of integrating environmental concerns into other policy areas and improving the enforcement of European Union legislation. Many environmental pressures are actually increasing: global emissions of greenhouse gases are rising, the loss of bio-diversity is accelerating, pollution still has a major effect on public health, the amount of waste produced inside the European Union continues to increase and our ecological footprint is steadily growing, COM (2007) 225, as cited in Ludwig Kramer "The Environment and the Ten Commandments", 20 *Journal of Environmental Law* (2008)5.

<sup>130</sup> Andrea Ross, "The UK Approach to Delivering Sustainable Development in Government: A Case Study in Joined-Up Working", 17 *Journal of Environmental Law* (2005) 27 at p.49.

<sup>131</sup> Leelakrishnan, P., *Environmental Law in India*, LexisNexis Butterworths, Delhi (2005), p.248.

pollution and in that process have applied the principle of sustainable industrial development.

1. *Quarrying—blending of intergenerational equity and polluter pays principles*

Quarrying of natural resources is an important factor that creates considerable environmental and pollution problems<sup>132</sup>. People have responded positively and timely to the air quality crisis caused by indiscriminate and unscrupulous quarrying activities near their dwelling areas or near the highways, fully realizing that it leads to environmental degradation. Quarrying and mining has proved to be very much hazardous to the workers also who are generally affected by polluted dust<sup>133</sup>. In areas where mining, smelting operation etc. are in progress, pollutants show their effects on the surrounding vegetation. Pollutants also corrode historical monuments by affecting their aesthetic beauty, quality, etc<sup>134</sup>. The effect of air pollutants emitted on account of mining activity on the forest is also no more disputed<sup>135</sup>.

The earliest judicial response in this area is traceable to *Doon Valley case*<sup>136</sup>. In this case, mining had denuded the Mussoorie Hills of trees and forest cover and thereby brought environmental and ecological imbalance in the area. The Supreme Court appointed an expert committee and based on its report, it ordered closure of several limestone quarries of the area. The Court was fully conscious of the serious consequences of the order which rendered workers unemployed after the closure and caused hardships to the lessees. The Court thus observed:

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<sup>132</sup> Lodha, R.M. et al., *Mining and Environmental Stress*, Himanshu Publications, New Delhi(1995), p.202.

<sup>133</sup> Arun Kumar Bhat, "Dangerous Work", in : *The Hindu Survey of the Environment*, 1993, p.84.

<sup>134</sup> Darryl D' Monte, *Temples or Tombs: Industry Versus Environment: Three Controversies*, Centre for Science and Environment, New Delhi (1985), p.91.

<sup>135</sup> "Pollution Threatens Eco-System" 25(1)*Environmental Policy and Law*(1995)17.

<sup>136</sup> *Rural Litigation and Entitlement Kendra, Dehradun v. State of U.P.*, A.I.R.1985 S.C.652 per P.N.Bhagwati, A.N.Sen and Ranganath Misra; See also *Rural Litigation and Entitlement Kendra, Dehradun v. State of U.P.*, A.I.R. 1985 S.C.1259.

“...this would undoubtedly cause hardship to them, but it is a price that has to be paid for protecting and safeguarding the right of the people to live in healthy environment with minimum disturbance of ecological balance and without avoidable hazard to them and to their cattle, homes and agricultural land and unviewed affectation of air, water and environment....”<sup>137</sup>

This was a case wherein conflict was apparently brought between development and conservation and the court emphasized the need for reconciling the two in the larger interest of the country. It is submitted that the decision of the Court has rightly reaffirmed that development is not antithetical to environment. However, thoughtless development can cause avoidable harm. The Supreme Court was cautious in its approach when it pointed out that it is for the Government and the nation and not for the Court, to decide whether the deposits should be exploited at the cost of ecology and in environmental considerations or the industrial requirements should be otherwise satisfied.<sup>138</sup> However, the concern of the Court towards ecological balance was evident when it observed:

“We are not oblivious of the fact that natural resources have got to be adopted for the purposes of the social development but one cannot forget at the same time that tapping of resources have to be done with requisite attention and care so that ecology and environment may not be affected in any serious way...”<sup>139</sup>.

It is submitted that from the above observations of the Supreme Court, the concern for sustainable development is self

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<sup>137</sup> *Id.* at p.656 (Emphasis supplied). For critical analysis of the case, see Alice Jacob, “Responsible Development and Ecological Balance”, 27 J.I.L.I.(1986)483; Nishtha Jaswal, “Comments of Rural Litigation and Entitlement Kendra v. State of U.P”, (1986) 4 S.C.C. (Jour.)23; Ramamoorthy, M.K., “Environment as a Public Interest Cause: The Case of Doon Valley” in : Bandopadhyaya, J. *et al.*,(Eds.) *India's Environment: Concerns, Crisis and Responses*, Nataraj Publishers, Dehradun (1985), pp. 241-244.

<sup>138</sup> *Rural Litigation and Entitlement Kendra, Dehradun v. State of U.P.*, A.I.R. 1987 S.C. 359 at p. 363, *per* P.N.Bhagwati, C.J. and Ranganath Misra, J.

<sup>139</sup> *Id.*, p.364. See also *Kinkri Devi v. State*, A.I.R. 1988 H.P.4 at pp.8-9, *per* P.D.Desai, C.J. and R.S.Thakur, J.; *General Public of Saproon Valley v. State*, A.I.R. 1993 H.P.52; *Mukti Sangarsh Movement v. State of Maharashtra*, (1990) Suppl. S.C.C. 37, *per* V.K.Mehrotra and Bhavani Singh, JJ.



evident. The Court also recorded a sounding note that preservation of the environment and keeping the ecological balance unaffected is a task which not only government but also every citizen must undertake. This outlook is in consonance with the theory of intergenerational equity, the central tenet of which is the right of each generation of human beings to benefit from the cultural and natural inheritance from past generations as well as the obligation to preserve such heritage for future generations<sup>140</sup>.

The Supreme Court again in the next round of *Rural Litigation and Entitlement Kendra case*<sup>141</sup> reminded the citizens of their solemn constitutional duty and obligation to protect the environment and ecology. The Court observed thus:

“The preservation of the environment and keeping the ecological balance unaffected is a task which not only the Government but every citizen must also undertake. It is a social obligation and let every citizen be reminded that it is his “fundamental duty” as enshrined in Article 51A of the Constitution”<sup>142</sup>.

However, a different approach was taken by the Court in the subsequent *Rural Litigation and Entitlement Kendra case*<sup>143</sup>, wherein the Court took note of the fact that mining activity has to be permitted to the extent it is necessary in the economic and defence interests of the country as also for safeguarding of the foreign exchange position. The Court accordingly directed the government to file affidavit of responsible authority as to whether keeping the principles of ecology, environmental protection and safeguards and anti-pollution measures, it is in the interest of the society that the economic and defence requirements should be met by import or by

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<sup>140</sup> See Note, “Goa Guidelines on Intergenerational Equity”, 27 I.L.M.(1988)1108.

<sup>141</sup> A.I.R. 1987 S.C.359, *per* Ranganath Misra, J.

<sup>142</sup> *Id.*, p.364.

<sup>143</sup> A.I.R.1987 S.C.2426.

tapping other alternate indigenous sources or mining activity in the area should be permitted to a limited extent<sup>144</sup>.

In yet another class action initiated by *Rural Litigation and Entitlement Kendra*<sup>145</sup>, the Supreme Court directed to totally stop forthwith the operation of mining in certain area on the ground of environment protection.

In the latest *Rural Litigation and Entitlement Kendra quarrying case*<sup>146</sup>, the Supreme Court allowed a mine to operate until the expiry of lease as exceptional case on undertaking by the lessee that land taken on lease would be subjected to afforestation by him. Consequently, when it was brought to the notice of the Court that he had made a breach of the undertaking and mining was done in most unscientific and uncontrolled manner causing damage to the area and air environment, the Court directed the lessee to pay rupees three lacs to the fund of the monitoring committee which had been constituted earlier by the Court to supervise the afforestation programme to be undertaken by the lessee.

It is submitted that the order of the Court is based on the principle of “polluter pays” which is one of the essential principle of sustainable development. This is an economic instrument to check pollution and has its jurisprudential base in Principle 16 of the Rio Declaration of 1992, which provides that national authorities should endeavour to promote the internalization of environmental cost of pollution by forcing the polluter to pay for the pollution.

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<sup>144</sup> *Id.*, p.2428. See also *Ambika Quarry Works v. State of Gujarat*, A.I.R. 1987 S.C.1073 where the court dealt with the question as to “how to strike balance between the need of exploitation of the mineral resources lying hidden in the forests and the preservation of the ecological balance and to arrest the growing environmental deterioration”.

<sup>145</sup> *Rural Litigation and Entitlement Kendra V. State of U.P.* A.I.R. 1988 S.C.2187, per Ranganath Misra and M.M.Dutt, JJ.; see also *Rural Litigation and Entitlement Kendra v. State of U.P.*, A.I.R. 1989 S.C. 594, per Ranganath Misra and M.N.Venkatachaliah, JJ.

<sup>146</sup> A.I.R. 1991 S.C. 2216.

In *Kinkri Devi v. State*<sup>147</sup>, public interest litigation was filed in which it was alleged that the unscientific and uncontrolled quarrying of the limestone has caused damage to the Shivalik Hills and was posing danger to the ecology, environment and inhabitants of the area. The Himachal Pradesh High Court relied on *Doon Valley case* and pointed out that if a just balance is not struck between development and environment by proper tapping of natural resources, there will be violation of Articles 14, 21, 48-A and 51A(g) of the Constitution. The Court rightly observed that natural resources have got to be tapped for the purpose of social development but the tapping has to be done with extreme care so that ecology and environment may not be affected in any serious way. The natural resources are permanent assets of mankind and are not intended to be exhausted in one generation. If the industrial growth sought to be achieved by reckless mining results in loss of life, loss of property, and loss of amenities and creation of ecological imbalance there may ultimately be no real economic growth and no real prosperity. The Court issued an interim direction to the State Government to set up a Committee to examine the issue of proper granting of mining lease and the necessity of granting lease keeping in view the protection of environment.

It is submitted that in this case also the concern of the Court for “sustainable development” is glaringly present. The court was guided by Principle 15 of the Rio Declaration which mandates that in order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities and that efforts must be taken to anticipate, prevent and attack the causes of pollution. It also evolved the standard that whenever an activity is challenged, the onus of proof lies on the developer/industrialist to show that his activity is environmentally benign.

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<sup>147</sup> A.I.R. 1988 H.P.4, per P.D.Desai, C.J. and R.S.Thakur, J.

In *A.R.C. Cement Ltd. v. State of U.P.*<sup>148</sup>, the Supreme Court did not permit the cement factory to be run in the Doon Valley area where the mining operation had been stopped. In order to restore the Doon Valley to its original character, Court directed the authorities to declare the aforesaid area as non-industrial. However, the government was asked to provide an alternate site to the petitioner for shifting the cement factory.

## 2. Mining—adopting precautionary principle

India is endowed with rich mineral resources. It is estimated that there are a total of 9,340 mining leases (excluding coal, lignite and minor minerals), covering an area of about 6,70,000 hectares. India produces 84 minerals worth of Rs.320 billion which contributes to 4% of GDP.<sup>149</sup> While this is the economics of mining, it is equally noticeable that industries engaged in mining, brick manufacturing, etc. causes air pollution and land pollution in the area<sup>150</sup>. Most of the mining activities in the country are carried out in forest or close to forest regions and it is now regarded as an industrial activity. The mineral dust emitted during the active mining phase is a chronic air pollutant which causes serious biological effects. Mining activities are also associated with the drilling, blasting, crushing, grinding, loading, unloading and transportation, which thereby release considerable quantity of suspended particulate matter and dust into the atmosphere. In mining operation, there is massive use of explosives for blasting, which involves the release of several harmful gases into the atmosphere, particularly oxides of nitrogen, sulphur and carbon. It is estimated that 1 ton of an explosive produces 40-50 m<sup>3</sup> of

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<sup>148</sup> 1993 Suppl.(1) S.C.C. 57, per Ranganath Misra, M.H.Kania and Kuldip Singh, JJ.; see also *A.R.C.Cement Ltd. v. State of U.P.*, 1993 Suppl. (1) S.C.C. 426,

<sup>149</sup> Purohit, G.S., *Environment Protection and Community Development-A Need for Mining Sector*, Paper presented at the National Seminar on Mining, Environment and Society, Udaipur, 2001, pp. 128-131.

<sup>150</sup> "Eating into their Lungs", in *The Hindu Survey of the Environment, 1993*, p.81.

Nitrogen oxides<sup>151</sup>. Judiciary's concern on mining has to be evaluated in the above background of facts.

Forests constitute a very important component of the ecological system. Certain areas are declared to be 'reserve forest' so as to protect the flora and fauna of that area and no such activity should be carried on there which is detrimental to the flora and fauna. Mining activity is one such activity which adversely affects the reserved forest. Whenever any case has been brought before the Court regarding the operation of mining in the reserved forest, courts have always directed to stop it. *Tarun Bharat Sangh cases*<sup>152</sup> projects such an approach. In this case, the petitioner through a public interest litigation brought to the notice of the Supreme Court that the State of Rajasthan, though proclaiming to protect the environment by means of the notifications and declarations, itself is permitting the degradation of the environment by authorizing mining operations in the area declared as 'reserve forest'. In order to protect the environment and wildlife within the protected area, the Supreme Court issued directions that no mining operation of whatever nature shall be carried on within the protected area.

In *State of M.P. v. Krishnadas Tikaram*,<sup>153</sup> the respondent was initially granted mining lease to extract limestone from forest area in the year 1966. Subsequently, in 1980 when the Forest (Conservation) Act came into force, Section 2 mandated that for any activity in the forest area, prior approval of the Central Government is necessary. However, in the instant case, the State Government renewed the lease for 20 years in favour of the respondent in terms of the original lease, without obtaining the prior approval of the Central Government. In the above circumstances, the order of renewal was

<sup>151</sup> Dashbandu, *Environmental Management*, Nataraj Publishers, Dehradun (1981), p.24.

<sup>152</sup> *Tarun Bharat Sang v. Union of India*, 1992 Suppl.(2) S.C.C. 448; See also *Tarun Bharat Sang v. Union of India*, 1993 Suppl.(1) S.C.C.4, per M.N.Venkatachaliah and K.Jayachandra Reddy, JJ.; *Tarun Bharat Sang v. Union of India*, 1993 Suppl.(3) S.C.C.115, per B.P.Jeevan Reddy and N.Venkatachaliah, JJ.; *Tarun Bharat Sang v. Union of India*, 1994 Suppl.(2) S.C.C. 342.

<sup>153</sup> 1995 Suppl. (1) S.C.C.587; See also *State of Bihar v. Banshi Ram Modi*, A.I.R.1985 S.C. 814.

cancelled before it came into effect by registering and the same was held as valid by the Supreme Court.

*State of A.P. v. Anupama Minerals*<sup>154</sup> was yet another case which considered the effect of Forest (Conservation) Act, 1980 on the mining activities within the reserved forest area. The authorities prior to the Act had the power to grant renewal of the mining lease as per the terms of the lease. However, after the coming into operation of the Act, the mining lease fell within the reserved forest area and hence the authorities refused to grant the renewal of the lease. It was held that the refusal by the authorities was proper because the exercise of power by the public authority is coupled with the duty to fulfil the conditions for such exercise.

The mining activities in the vicinity of tourist resorts of Badkal Lake and Suraj Kund in Haryana resulting in air pollution and environmental degradation was the theme of controversy raised in *M.C. Mehta v. Union of India*<sup>155</sup>. Petitioner in the instant case sought directions to stop the mining activities carried out in the above places. The Haryana Pollution Control Board recommended that mining activities within a radius of 5 km. from the tourist resorts should be stopped. Similar recommendations were also made by the National Environmental Engineering Research Institute (NEERI). Taking into account the opinion of two expert bodies, the Court held that mining activities in the vicinity of tourist resorts were bound to cause severe impact on the local ecology and therefore, held that mining activities should be stopped within 3 kms of such tourist resorts.

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<sup>154</sup> 1995 Suppl.(2) S.C.C.117; see also *Divisional Forest Officer v. S. Nageswaramma*, (1996) 6 S.C.C. 442, per K.Ramaswamy and G.B.Pattanaik, JJ.; *State of Bihar v. M/s RMC Mill and Co. (P) Ltd.*, A.I.R. 1998 Pat. 20, per Nagendra Rai and M.Y.Eqbal, JJ.

<sup>155</sup> (1996) 8 S.C.C. 462; see also *M.C. Mehta v. Union of India*, (1997) 3 S.C.C.715.

### 3. Stone Crushing—evolving ‘clean air jurisprudence’

Industrial air pollution is also caused by the stone-crushers and thus affects the right of the citizens to clean and fresh air and to live in pollution-free environment.

*M.C. Mehta case*<sup>156</sup> reveals the strict approach taken by the Supreme Court in abating the menace of air pollution resulting from stone-crushing activities. In this case, the Supreme Court issued directions for stopping mechanical stone crushing activities in and around Delhi, Faridabad and Ballabgarh complexes. However, keeping in view the sustainable development, Court issued directions for allotment of alternate sites in the new ‘crushing zone’ set up at Village Pali in the State of Haryana to the stone crushers who were directed to stop their activities in Delhi, Faridabad and Ballabgarh Complexes. Similar approaches were taken by the Supreme Court in *Surindra Kumar Singh*<sup>157</sup> and other related batch of *Mehta cases*<sup>158</sup>.

The above approach of the Supreme Court was relied upon and followed by the Punjab and Haryana High Court in *Ishwar Singh v. State of Haryana*<sup>159</sup>. The High Court in this case issued directions for closing down the stone-crushing business of those which were not situated within the identified zone. The Court further directed that those who wanted to carry on the business of stone-crushing, should shift to the identified zones. One of the classical directions given by the High Court was regarding the claim of compensation for those persons who had suffered illness due to the pollution caused by stone-crusher owners. Court directed that stone-crusher owners were liable to compensate the victims of air pollution hazards who have suffered illness and fixed a time limit of two months for meeting their claims, failing which, it ordered that their license to carry on the

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<sup>156</sup> *M.C Mehta v. Union of India*, (1992) 3 S.C.C.256, per Kuldip Singh and K.Ramaswamy, JJ.

<sup>157</sup> *Surindra Kumar Singh v. State of Bihar*, 1991 Suppl.(2) S.C.C. 628.

<sup>158</sup> *M.C Mehta v. Union of India*, 1992 Suppl.(2)S.C.C.85; *M.C Mehta v. Union of India*, 1992 Suppl. (2) S.C.C. 86; and *M.C. Mehta v. Union of India*, (1996) 8 S.C.C. 462.

<sup>159</sup> A.I.R. 1996 P & H 30, per R.P.Sethi and S.S.Sudhalkar, JJ.

business of stone-crushing was to be cancelled. Shortly thereafter, in *Deepak Grit Udyog v. State of Haryana*<sup>160</sup>, the Court again ordered the closure and shifting of stone-crushing units to the demarcated areas, thus thwarting the attempt of influential and wealthy owners of stone-crushing units.

From the above approaches it becomes abundantly clear that the courts always stood for ensuring clean air, at the same time promoting sustainable development. The orders of the court directing re-location in the demarcated zones was definitely intended to promote sustainable development. In the above approach the courts have nicely balanced the right to pollution-free air against the general right of the citizens to carry on trade, business and occupation. However, it is submitted that the direction of the court in ordering re-location in the demarcated zone seems to have been taken without considering the safety of the zone and without recourse to environmental impact assessment and peoples' responses.

#### *4. Hazardous/Dangerous industrial activities—tailoring the principles of absolute liability and clean up costs*

In India, there has been increasing awareness about pollution and environmental degradation and the people as well as the courts have shown their anxiety in dealing with the situation arising out of haphazard industrial growth. The monumental judgment delivered by the Supreme Court in the wake of Bhopal catastrophe made the people conscious about their rights and motivated the courts in moulding relives in cases of environmental injury in tune with the demands of the situation. It also cut opened the way for floodgate of litigations in respect of potential industrial hazards.

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<sup>160</sup> A.I.R. 1996 P&H 177, per R.P.Sethi and K.S.Kumaran, JJ.



In *M.C. Mehta*<sup>161</sup>, the apex Court approached the legal issues from a wider perspective by considering Bhopal catastrophe as only a manifestation of the potential hazards of all chemical industries in India, none of which were amenable and subjected to effective regulation. Bhopal disaster affected large number of persons including workers and the public. At the outset, the question before the Court was whether the plant could be allowed to operate in the then state and condition and if not what measures were required to be adopted against the hazards of possibility of leaks, explosion, pollution of air etc. The Court gave priority to this issue for three reasons. Firstly, because about 4000 workmen were thrown out of employment due to the closure of the plant<sup>162</sup>, secondly, the short supply of chlorine which was being produced by the said plant could have affected many activities in Delhi, and thirdly, the production of down stream products would have also been seriously affected resulting to some extent short supply of such products.

The Supreme Court appointed an expert committee to suggest measures to remove the existing defects in the plant. After the above process and when the court was satisfied that all control and safety measures had been complied with by the management in a satisfactory manner, it was held that pending consideration of the issue of relocation or shifting of the plant to some other place, the plant should be allowed to be restarted subject to stringent conditions and due observation of the provisions of the Air and Water Acts.

It is submitted that the above approach of the Court was in parity with environment protection and sustainable development. The issue as to whether private enterprises carrying on inherently

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<sup>161</sup> *M.C. Mehta v. Union of India*, A.I.R. 1987 S.C.965, per P.N.Bhagwati, C.J. and D.P.Madon, G.L.Oza, JJ.; see also *M.C. Mehta v. Union of India*, A.I.R. 1987 S.C. 982, per P.N.Bhagwati, C.J. and D.P.Madon, G.L.Oza, JJ. ; *M.C. Mehta v. Union of India*, A.I.R. 1987 S.C. 1086 (popularly known as *Oleum Gas Leakage Case*), per Bhagwati, C.J. and Ranganath Misra, G.L.Oza, M.M.Dutt, K.N.Singh, JJ.

<sup>162</sup> *Id.*, p.973.

dangerous and hazardous activities could be considered 'State' within the meaning of Article 12 so as to allow public interest litigation under the writ jurisdiction though deliberated upon was not answered. Nevertheless, by allowing the writ petition filed under Article 32, it impliedly treated the private enterprises like 'Shriram Chemicals' as 'State'. The Court also suggested the government to set up 'Ecological Science Group' for the dissemination of information and the need to set up 'Environmental Courts' to deal with environmental cases.

On the liability of an enterprise engaged in hazardous or inherently dangerous industry to make the workers and neighbourhood safe and harm-free, the Court observed:

"We are of the view that an enterprise which is engaged in a hazardous or inherently dangerous industry which poses a potential threat to the health and safety of the persons working in the factory and residing in the surrounding areas owes an absolute and non-delegable duty to the community to ensure that no harm results to anyone on account of hazardous or inherently dangerous nature of the activity which it has undertaken".<sup>163</sup>

Commending on the liability of the enterprise to compensate for environmental harm, the Court observed:

"The enterprise must be held to be under an obligation to provide that the hazardous or inherently dangerous activity in which it is engaged must be conducted with the highest standards of safety and if any harm results on account of such activity, the enterprise must be absolutely liable to compensate for such harm and it should be no answer to the enterprise to say that it had taken all reasonable care and that the harm occurred without any negligence on its part".<sup>164</sup>

On the question of measurement of the quantum of compensation, Court came out openly by holding that it must be

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<sup>163</sup> *M.C. Mehta, (Oleum Gas Leakage Case) supra*, n.161 at p.1099.

<sup>164</sup> *Ibid.*

correlated to the magnitude and capacity of the enterprise because such compensation must have a deterrent effect<sup>165</sup>.

It is submitted that the Supreme Court has rightly rejected the century old archaic principle of 'strict liability' involved in *Rylands v. Fletcher*<sup>166</sup> and tailored a new principle of liability, i.e., the principle of 'absolute liability' which is not subject to any exceptions. The enunciation of the new principle of absolute liability is justified on three counts: Firstly, if the enterprise is permitted to carry on the hazardous or inherently dangerous activity for its profit, then the law presumes that such permission is conditional only on the enterprise absorbing the cost of any accident arising out of such activity. Secondly, persons who are harmed as a result of such hazardous or inherently dangerous activity 'would not be in a position to isolate the process of operation from the hazardous operation of the substance or any other related element that caused the harm'. Thirdly, the enterprise alone 'has the resource to discover and guard against such hazards and dangers and to provide warning against potential hazards'<sup>167</sup>.

However, it may be submitted that the approach of the Supreme Court has opened a controversy making the industrialists to presume that they can do anything they like so long as they have the capacity to compensate the people for their losses<sup>168</sup>. This will only add to the pollution load and make the lives of the common man more miserable by being exposed to the hazards of industrial air pollution. Ignoring these objections, the approach of the Court seems to have revolved on the larger principle of sustainable industrial development.

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<sup>165</sup> *Ibid.*

<sup>166</sup> (1968) LR 3 HL330.

<sup>167</sup> *Union Carbide Corporation v. Union of India*, (1991) 4 S.C.C.584 at pp.605,608-609; *Union Carbide Corporation v. Union of India*, A.I.R.1990 S.C. 273.

<sup>168</sup> Goodin, R.E., "Theories of Compensation", *Oxford Journal of Legal Studies* (1989)57.

In *Charan Lal Sahu v. Union of India*<sup>169</sup>, the Supreme Court while deciding the question of constitutional validity of Bhopal Gas Leak Disaster (Processing of Claims) Act, 1985, held that the said Act was valid but at the same time directed the interim compensation or maintenance to be paid and further suggested for taking 'precautionary measures' and for effectively dealing with such industrial disasters in future.

A practical approach leaning towards sustainable development is seen taken by the Supreme Court in the wake of a controversy that arose in relation to the question of continuance of a thermal power plant at a place near Bombay in *Dahanu Taluka Environment Protection Group v. Bombay Suburban Electricity Supply Co.*<sup>170</sup>. The Government's clearance to the proposal of the respondent committee for the construction of thermal power plant had ignited public controversy on the ground that it posed threat to the ecology. The Court found that there is no flaw in the decision of the government in giving clearance and that the decision was taken after considering all relevant facts including environmental pollution. Therefore, the Court refused to interfere and concurred with the decision taken by the government. At the same time, directions were issued to ensure strict compliance with the safeguards provided in the Environment (Protection) Rules, 1986.

It is submitted that serious air pollution and health problems are associated with the working of thermal plants. People have a right to revolt against the setting up of such plants. Their objections cannot be seen lightly and simply brushed aside, especially when project clearance is given without public enquiry and public hearing and no proper Environmental Impact Assessment is seen made. The over enthusiasm and undue vigour shown towards sustainable development made the Court to close its eyes to the other vital

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<sup>169</sup> (1990) 1 S.C.C. 613 at pp.707-708.

<sup>170</sup> (1991) 2 S.C.C. 539.

environmental issues which otherwise should have been subjected to serious consideration. This approach appears to be in departure from the rigid stand taken by the Court earlier in *Mehta case*<sup>171</sup> against air polluting industries when it directed such industries either to install air pollution control system or face closure.

In *State of H.P. v. Ganesh Wood Products*<sup>172</sup>, the Supreme Court held that the right to establish forest based industries, such as Katha industries, is not absolute. Though such industries are important for the purposes of development, yet the laws of ecology and forest protection are applicable to such industries as well.

The decision of the Supreme Court in the *H-Acid case*<sup>173</sup>, is a monumental judgment on air quality protection and sustainable development. The case originated out of public interest litigation filed alleging environmental pollution caused by private industrial units and sought the relief against governments and State Pollution Control Board to compel them to perform their statutory duties on the ground that their failure violated the right to life of the citizens under Article 21 of the Constitution. The industrial units were located in Bichhri Village in Udaipur(Rajasthan) and they were producing chemicals like oleum(concentrated form of sulphuric acid) and H-Acid etc., without obtaining necessary clearances/licenses/consents and without installing air pollution control devices and other treatment facilities. Consequently, diseases spread bringing death and disaster in the village and in the surrounding areas.

The Court expressed the view that the 'polluter pays' principle can be enforced by the Government even under Section 3 of the Environment (Protection) Act,1986<sup>174</sup>. The role of the Central Government in taking pollution abatement measures was stressed by

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<sup>171</sup> *M.C. Mehta v. Union of India*, 1994 Supp (3) S.C.C. 717.

<sup>172</sup> (1995) 6 S.C.C. 363.

<sup>173</sup> *Indian Council for Enviro-Legal Action v. Union of India* (1996) 3 S.C.C. 212.

<sup>174</sup> S. 3 empower the Central Government to take all such measures as it deem necessary or expedient for the purpose of protecting and improving the quality of environment.

the Court by pointing out that Section 5 of the Act clothes the Central Government with the power to issue directions for achieving the objects of the Act<sup>175</sup>.

Thus, the Court directed the closure of all such industries and held that the Central Government shall determine the amount required for carrying out the remedial measures and the same shall be paid by the respondent industries. The villages could claim damages for the loss suffered by them by instituting appropriate suits. It was further noted that in future all chemical industries were to be established after taking into consideration all environmental aspects, because the ultimate idea is to integrate and balance the concern for environment with the need for industrialization and technological progress<sup>176</sup>.

*Taj Mahal case*<sup>177</sup> is yet another fine attempt on the part of the judiciary to uphold the principle of sustainable development by applying 'precautionary principle'. In this case, public interest litigation was filed alleging that air pollution is resulting in the corrosion of Taj Mahal, a monument of international repute. According to the opinion of the expert committees, the use of coke/coal by industries situated within the Taj Trapezium Zone (TTZ) were emitting pollution and causing damage to the Taj and to the people living in the area.

It was held that the Taj, apart from being a cultural heritage, is also an industry by itself and, therefore, pollution must be stopped while the development of the industry must go on and it must be encouraged. The Court followed the path of sustainable development and applied the 'precautionary principle' by holding that the environmental measures must *anticipate, prevent and attack* the causes of environmental degradation. Thus, it directed that all the

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<sup>175</sup> *Indian Council for Enviro-Legal Action, supra*, n.173 at p. 243.

<sup>176</sup> *Id.*, pp. 250-252.

<sup>177</sup> *M.C. Mehta v. Union of India*, (1997) 2 S.C.C. 353, *per* Kuldeep Singh and Faizanuddin, JJ.

industries operating in TTZ must use natural gas as industrial fuel instead of coke/coal. The industries which are not in a position to obtain the natural gas connections for any reason must stop functioning in the TTZ and must relocate themselves as per directions of the Court. However, Court also protected the interest of the shifting industries by ordering that on relocation in the new industrial estates, they were to be given the incentives<sup>178</sup>.

It is submitted that in the 21<sup>st</sup> century, of course, courts cannot adopt negative approach towards development process. At the same time, it cannot remain unconcerned about environment. The society shall have to prosper, but it cannot be at the cost of the environment and similarly, the environment shall have to be protected but not at the cost of development of the society. Thus, sustainable development is the only answer and administrative actions ought to proceed in accordance therewith and not d'hors the same<sup>179</sup>. As aptly pointed out by Justice Chettur Sankaran Nair in *Mathew Lukose v. Kerala State Pollution Control Board*<sup>180</sup>, to eliminate pollution, industries cannot be eliminated. Industry and life must co-exist. The competing claims, must balance at the point, where the outer limit of pollution touches the tolerance levels or safety limits. If it crosses that point, it crosses the rubicon and the activity generating pollution is liable to be interdicted. When the degree of pollution crosses the tolerance limits, it invades the right under Article 21 and it cannot pass the mustering might of the Constitution.

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<sup>178</sup> *Id.*, pp.384-385.

<sup>179</sup> See *People United for Better Living in Calcutta v. State of West Bengal*, A.I.R. 1993 Cal. 215 at p. 217.

<sup>180</sup> 1990(2) K.L.J.717 at p.725. In this case, air pollution in disastrous proportions was alleged by the residents in a locality where a Company (Travancore Electro-Chemicals Industries) was running a factory where calcium carbide and acetylene black were produced in large quantities. The raw material used in the production process included calcium carbonite in the form of coal, charcoal, carbonized lignite, coke etc. Considering the serious repercussions emerging from the activity in question on the air environment, Court came out with series of directions to the statutory authorities for strict monitoring.

The problem of air quality degradation is a social problem<sup>181</sup>. Law courts have a social duty since it is a part of the society and as such, must always function having regard to the problems the present day society faces. Rio Declaration of 1992 also specifically provides for “effective access to judicial and administrative proceedings, including redress and remedy”<sup>182</sup>. Socio-economic conditions cannot be ignored by the courts, because the benefit of the society ought to be the prime consideration of the courts. Therefore, the approach of the courts must be to strike a balance between development and ecology and there should be no compromise with each other<sup>183</sup>.

#### 5. *Shifting/relocation of hazardous and noxious industries—contributing sustainable urban development*

Industries are necessary for development. But at the same time they are seen as source of pollution. In order to minimize the harm of environmental pollution to the people, the courts have consistently taken the view that the industries must not be situated in the populated area or near the residential area. Whenever, industries were found causing disturbance to the air environment, courts have interfered by issuing directions for the shifting/relocation of such industries to a separate zone demarcated for the purpose.

In *M.C. Mehta*<sup>184</sup>, the Court has held that in order to reduce the element of risk to the community from industrial hazards, the Government of India should evolve a national policy for location of chemical and other hazardous industries in areas where population

<sup>181</sup> *Calcutta Youth Front v. State of West Bengal*, 1986(2) C.L.J. 26.

<sup>182</sup> *The Rio Declaration on Environment and Development*, 1992, Principle 10.

<sup>183</sup> In *Tehri Bandh Virodhi Sangarsh Samiti v. State of U.P.*, 1992 Supp(1) S.C.C. 44, a public interest litigation was filed challenging the construction and implementation of Tehri Hydro Power Project and Tehri Dam on the ground of non-application of mind by Government with regard to the safety and ecological aspects, the site being within the earth-quake prone zone. But the facts did show that the project was considered by Environmental Appraisal Committee of Ministry of Environment and Forests and by other renowned experts of international repute. Hence, the Supreme Court refused to interfere on the ground that it does not possess the requisite expertise to render any final opinion on the view expressed by the experts.

<sup>184</sup> *Supra*, n.161, per Bhagwati, C.J.



is scarce and there is little hazard or risk to the community, and when hazardous industries are located in such areas, every care must be taken to see that large human habitation does not grow around them. The Court also held that there should preferably be a green belt of 1-5 km. width around such hazardous industries<sup>185</sup>.

In *V.Lakshmiopathy*<sup>186</sup>, Justice H.G.Balakrishna of the Karnataka High Court in a public interest litigation directed the Municipal Corporation to stop the industries set up in the residential area and further observed that the land which is earmarked for residential purposes should not be used for setting up the industries.

The disturbance and imbalance caused to the quality of ambient air in Delhi arising from the operation of hazardous industries invited the attention of the Supreme Court in *Mehta* case<sup>187</sup>. In fact Delhi has the dubious distinction of one of the most polluted cities in the world. The quality of ambient air is so hazardous that lung and respiratory diseases were on the increase. The city was a vast and unmanageable conglomeration of commercial, industrial and unauthorized colonies. There are virtually no 'lung spaces' in the city. In the above circumstances, the petitioner pleaded that the most vital community need at present is the conservation of the environment and reversal of the environmental degradation. The Supreme Court issued suitable directions in regard to the use of land which would become available on account of shifting of hazardous and noxious industries from the city of Delhi. It was directed that such land should be used in accordance with the Master Plan of Delhi. The land must be used for community need. After leaving a part of the land with the owner for developing the same in accordance with the permissible land use under the Master

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<sup>185</sup> *Id.*, p.981.

<sup>186</sup> *V.Lakshmiopathy v. State*, A.I.R. 1992 Kant.57; see also *Law Society of India v. Fertilizers and Chemicals Travancore Ltd.*, A.I.R.1994 Ker.308, *per* Varghese Kalliath and K.L.Joseph, JJ.; *Mahabir Soap and Gudakhu Factory v. Union of India*, A.I.R. 1995 Ori. 218.

<sup>187</sup> *M.C.Mehta v. Union of India*, (1996) 4 S.C.C.351; see also *M.C. Mehta v. Union of India*, (1998) 9 S.C.C. 149.

Plan, the remaining should be surrendered to the Delhi Development Authority for developing 'lung spaces', that is, green belts and open spaces, the same being a pressing community need.

From the above catena of decisions, it is clear that the view of the Court has been that the industrial development must continue, but not at the cost of environment. This approach of the Court is in consonance with the principle of sustainable development.

### **Industrial Air Pollution Control Measures**

Industrial air pollution is posing a grave public health hazard. Under the National Ambient Air Quality Monitoring (NAAQM) network, 3 types of air pollutants, namely suspended particulate matter, sulphur dioxide and nitrogen dioxide have been identified for regular monitoring at all the 290 stations spread across the country. The findings of the monitoring undertaken reveals that the most prevalent form of air pollution is suspended particulate matter, although it was found that there were many stations at which sulphur dioxide and nitrogen dioxide levels exceed the permissible limits<sup>188</sup>. Industrial development and poor enforcement mechanism have chiefly led to the above situation. To meet the same, legislative, executive and judicial activism is necessary. The intensity and enormity of the pollution load also requires urgent review, by adopting a multi-linked approach. The following are some of the priority areas:

1. *Strengthening of emission standards*:- The first and most important measure would be to strengthen the emission standards for various categories of industries. The present approach requires a shift from pollution control to pollution prevention. As part of the above strategy, rules related to load

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<sup>188</sup> Note, "Polluting Industries", *supra*, n.58.

based standards instead of concentration based standards should be evolved and enforced.

2. *Database on clean technology:-* Database on available technologies, their performance, sources, investment required etc. should be created, regularly updated and widely disseminated.
3. *Thrust for cleaner technologies:-*The emphasis should be waste minimization involving process stage, raw-material substitution, improved house keeping, etc. Waste utilization technologies should concentrate on reclamation and use of wastes as secondary raw-material. Further, measures like flue gas desulphurization, combustion modification for nitrogen oxide reduction, incentives for development and adoption of clean technology and emission reduction should also be thought of as desirable. Air quality standards should be based on local dose-response relationships for which appropriate environmental epidemiological studies should also be undertaken.
4. *Appropriate siting of high pollution potential industries/projects:-* Such a measure is necessary for its monitoring at every stage of its functioning.
5. *Fiscal measures for pollution prevention and control:-* It should encourage a shift from curative to preventive measures, internalization of the cost of environmental degradation and conservation of resources. The revenue so generated may be used for enforcement, collection, treatment facilities, and research and development. Incentives should also be provided to industries for environmentally benign substitutes,

technologies and energy conservation in the form of customs duty and tax concessions, rebate in cess etc.

6. *Strengthening of monitoring network*:-The monitoring network requires a massive quality control programme and expansion of its operation to cover new stations as well as more pollutants like respirable particulate matter, carbon monoxide, hydrocarbons such as benzene and PAHs on a regular basis. Smaller centers should also be covered so that preventive measures could be taken before the pollution problem becomes acute.
7. *Urban Air quality management strategy*:- A comprehensive urban air quality management strategy should be formulated that includes information related to urban planning, ambient air quality, emission inventory and air quality dispersion models. Further, effectiveness of Environmental Impact Assessment as a tool and environmental audit needs to be critically assessed. Still further, systematically planned emission load mapping studies should be undertaken at regular intervals and development of emission factors for Indian conditions should be taken up. The concept of 'Green Village' should also be developed as a measure to provide healthy environment<sup>189</sup>.
8. *Information dissemination/mass awareness/training*:- State-of-the-art technologies should be used for wider dissemination of environmental information. For that purpose, transparency and access to the data should be improved. Measures such as publication of pollution bulletins and air pollution forecasts should be started on a regular basis. Massive thrust should be provided to mass awareness campaigns involving community organizations such as residents association,

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<sup>189</sup> Mohanasundaram, M., "Green Village", *Environment*, 2008 June-August, p.62.

students, voluntary bodies and NGOs. Strategic action plan for implementation of policies in letter and spirit should be devised. Supportive measures such as training and education for the industry, governmental agencies, and public, as well as greater co-ordination among institutions, are other necessities considered to be important.

9. *Development of management policy for industries:-* The introduction of suitable management policy or reformulation of existing policy and standards for industries that includes environmental strategy, regulation, institutional capacity-building, corporate social responsibility<sup>190</sup>, economic incentives and penalties should be evolved, regulating air pollution arising from industrial activities. Such a policy should insist that industrial area should be outside the city and that the location of industries should be as per environmental guidelines. Industries should strictly obey the standards for emissions. The Pollution Control Boards must enforce the environmental legislations in various types of industrial units depending on their process, technology and pollution potential in letter and spirit. Particular attention must be paid to highly polluting industries. The problem of pollution load can be reduced by introducing emission tax and resources cess for industries and implantation of standards based on resources. Experience of industrialized countries has shown that industries react to popular pressure. To generate such pressure, citizens should be given the right to information, so that they could know who

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<sup>190</sup> Corporate Social Responsibility is the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families, as well as the local community and society at large. For details, see Ashok G Matani, "Corporate Social Responsibility", *Environment*, June-August 2008 at p.4; Furqan Ahmad, "Environmental Awareness and Enforcement" [2007]C.U.L.R.191 at p.205; Leelakrishnan, P., *Environmental Law Case Book*, Butterworths, Delhi (2004), p.298; The World Bank, *Report of the World Business Council for Sustainable Development, 2002*.

is polluting their air and how much. Therefore, environment quality management through social pressure can be an effective solution. Constant monitoring and auditing of industries can also be considered as steps towards control of air pollution in the industrial sector.

10. *Green initiatives*: - Green cover should be increased through appropriate design of green belts/barriers and proper selection of plant species. Companies both private<sup>191</sup> and public should be encouraged to have green procurement and green products and every Company should have an Environmental Management Division comprising of experts who should evolve and implement green initiatives for the industry.

11. *Best Available Techniques (BAT)*: - The problem of reducing the volume of pollutants released into the atmosphere is an issue requiring practical engineering. The concept of BAT<sup>192</sup> represents an attempt to formulate a legally enforceable standard to which methods of pollution abatement must adhere. It must ensure that the most effective pollution abatement methods are deployed. Operators must achieve this standard in production processes and regulators must be guided by it when considering permit conditions. In *Rockware Glass v Chester CC*,<sup>193</sup> Buxton L.J. held that the obligation to utilize BAT does not end when an ecological quality standard has been attained. Thus, emission limits for individual plants must be set in accordance with the BAT standard irrespective

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<sup>191</sup> The Environment Strategy of the World Bank, 2002 indicates that the private sector is becoming a decisive factor in influencing environmental performance and long-term environmental sustainability.

<sup>192</sup> BAT is transposed into English law by the Pollution Prevention and Control Act, 1999 and the Pollution Prevention and Control Regulations. The definition of "Best" in Reg.(3)(1)(a) which defines 'BAT' means, in relation to techniques, the most effective in achieving a high general level of protection of the environment as a whole.

<sup>193</sup> [2007] Env.L.R.3.

of whether this is necessary to meet the ecological quality standard. Environment Agency Guidance Notes make it clear that permit must include conditions on dealing with new 'waste streams' created by techniques designed to reduce atmospheric emissions<sup>194</sup>. Clearly, the best technique is the method that achieves the greatest overall reduction in emissions and there is the need for adopting BAT in India also.

12. *Sulphur dioxide and nitrogen oxide abatement measures*:- Flue gas desulphurization (FGD) is widely opted as the principal means of achieving SO<sub>2</sub> reductions. FGD processes take various forms; however, they all rely upon inducing a chemical reaction whereby the acidic sulphur emissions are neutralized by interaction with alkaline limestone<sup>195</sup>. The latest Environment Agency Guidance Note dated 8 May 2007 and EC BAT Reference Document<sup>196</sup> still regard FGD as fulfilling the BAT standard<sup>197</sup>. This method deal even more effectively with nitrogen oxide emissions. A relative advantage of this method is that it does not consume huge amounts of raw materials and produce less by way of process waste.

13. *Carbon dioxide emission abatement techniques*:-Carbon dioxide forms the most significant direct greenhouse gas produced by power industries and the best abatement practice to reduce

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<sup>194</sup> See Environment Agency, "Guidance Note S2 1.01: Large Boilers and Furnaces" (1995); Environment Agency, "Supplementary Guidance Note S3 1.01: Combustion Processes" (2000); International Energy Agency (IEA) Working Party on Fossil Fuels, "Control and Minimization of Coal-fired Power Plant Emission" [2003] (Report).

<sup>195</sup> For a comprehensive overview of FGD technology, see DTI, "FGD Technologies" (March 2000) (Report). FGD process produces gypsum as a byproduct, which is used as a principal ingredient in plaster board and can also be used in road building.

<sup>196</sup> July 2006.

<sup>197</sup> However, it is not the best technology. More advanced techniques exist in the form of Electron Beam Dry Scrubbing (EBDS) in which the chemical reaction is induced by electrons rather than limestone and Integrated Gasification Combined Cycle (IGCC), a clean coal technology, whereby the coal is converted into a clean burning gas (syngas—a form of hydrogen); see *International Energy Agency Report* (n 108).

carbon dioxide emission is to burn less fossil fuel and stick to fuel economy measures. The technology to arrest carbon dioxide emissions at source also exists in the form of 'carbon capture' which entails capturing the emissions at source, containing them in underground or undersea reservoirs or even dispersing them in sea water<sup>198</sup>. Though, it raises a host of alternative environmental problems like marine pollution, it is proved effective in reducing the emissions discharged especially from power industries. The European Union Commission has also favoured to use the emissions trading scheme to increase the costs of carbon to a level, whereby it is cheaper to invest in carbon capture rather than purchase sufficient carbon credits to maintain polluting plant<sup>199</sup>.

14. *Need to recognize common but differentiated responsibility*: -At the international level, all nations have a common responsibility with regard to global environmental problems such as climate change or ozone layer depletion. But richer nations are technologically and financially better equipped than poorer nations to shoulder the responsibility<sup>200</sup>. So the responsibility of the richer nations should be differentiated from that of the poorer in proportion to their technological and financial capacity<sup>201</sup> by applying the principle of common but differentiated responsibility.

<sup>198</sup> For further information, see "World's First Green Coal Power Plant", *Times of India*, 28 September, 2008.

<sup>199</sup> EC, "Sustainable Power Generation from Fossil Fuels: Aiming for Near Zero Emissions from Coal After 2020" SEC (2006)1723, 10 Jan. 2007 (Communication).

<sup>200</sup> Recently, Ad hoc Working Group on Kyoto Protocol locked up negotiations to discuss targets for emission reduction in June 2009, since developing nations demanded that the aggregate as well as individual emission reduction targets of rich and industrialized countries be specified and put into the negotiating text. See Kushal Pal Singh Yadav, "Breach of Protocol", *Down To Earth*, April 16-30, 2009 at p.9.

<sup>201</sup> Rio Declaration, *supra*, n.115, Principles 6 and 7; see also *United Nations Framework Convention on Climate Change, 1992*, Art.3(1); Shyam Divan and Armin Rosencranz, *Environmental Law and Policy in India*, Oxford University Press, New Delhi(2004) p.586.



**Conclusion**

The trend of industrialization today demands more sustained measures for saving the fragile air environment<sup>202</sup>. As environmental threats to health are associated with development itself, it does not mean that development needs should be cut down or hold back. But it should be matched with the parallel need to conserve the environmental and natural resources. In future, as the economic growth in the industrialized countries and economic activities of the economies in transition increase, there will be rise in energy demand. There is likely to be many emissions of greenhouse gases resulting into more and severe health hazards. Many of these exposures and their adverse effects should be prevented through governmental actions at the local, national or international level<sup>203</sup>, the focus of which should be to improve the quality of life of the people. Judiciary should also continue with the present approach demonstrating and applying sustainable development as a measure for improving the air quality. Industrial entrepreneurs should understand that the public is no longer willing to accept pollution as the necessary cost for production generating employment and facilitating trade.

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<sup>202</sup>Varkey, A.M., "Industrialization and Environmental Problems", [1984]C.U.L.R.83; see also *Report of the Preparatory Committee for the UN Conference on Human Environment*, UN DOC A CONF.48/PC/13 (1971), pp. 13-27.

<sup>203</sup> At the international level, Global Environment Facility (GEF) was established in 1990 with the joint efforts of IMF, UNDP and UNEP to provide funds and help in bringing up the projects for conservation of global environment.

## *Chapter -5*

# **CONTROL OF INDOOR AND PERSONAL AIR POLLUTION**

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1. Indoor Air Pollution – Causes and Consequences
2. Burning of Bio-fuels
3. Indian Scenario on Bio-fuel Burning
4. Alternate Fuels for the Rural Areas
5. Kerala Law Reforms Commission Proposals on Alternative Sources of Energy
6. Changing Priorities: Cooking with Kerosene
7. Uncontrolled Burning of Solid Waste
8. Incineration
9. Tobacco Smoking: A Silent Killer
10. Impact of 'Second hand' Smoking/Passive Smoking
11. Legislative Control over Tobacco Consumption
12. Other Governmental Measures
13. Smoking – Judiciary's Public Health Concerns
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19. Section 133 – Repository of Regulatory Powers
20. Emissions of Dust Particles – Nuisance
21. Apex Court Resolves Conflict of Jurisdiction
22. Control of Personal and Indoor Air Pollution-Some Suggestions
23. Conclusion

# CONTROL OF INDOOR AND PERSONAL AIR POLLUTION

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Clean breathing air is valuable and a basic human necessity<sup>1</sup>. It was once an unlimited and free natural resource. But now humans pollute it personally and through indoor sources. Tobacco smoking is the most common form of personal air pollution and the smoke contains a wide variety of deleterious gases and particles, which are capable of causing chronic non-specific respiratory diseases, lung cancer, coronary artery disease and peripheral vascular disease<sup>2</sup>.

Emissions of household burning, incineration, toxic fumes, dust etc. arising from indoor human activities are the sources of indoor air pollution. The fumes from household chimneys poison the atmosphere with sulphur dioxide and other noxious chemicals, causing chronic bronchitis and add to the risk of lung cancer. It thereby leads to increase in the levels of carbon dioxide and other greenhouse gases, leading to the rise of global temperature<sup>3</sup>. India's annual per capita carbon dioxide emission in 2004 was 0.3 tonne carbon and it was ranked amongst the lowest in the world<sup>4</sup>. However, India's future emission trends and apprehensions are expressed that the country with its immense population, rising economic growth,

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<sup>1</sup> It is estimated that a human being can live 5 weeks without food, for 5 days without water but survive only 5 minutes without air. Breathing is an essential feature of living as it supplies the body with oxygen without which cells cannot live. If brain cells are deprived of oxygen for more than 3 minutes, irreparable damage is done. See Chhabra, K.K., "Environment and its Impact on Human Life" in Anju Kohli *et al.*, (Eds.) *Management of Environmental Pollution*, Book Enclave, Jaipur (2003), pp.77-78.

<sup>2</sup> Jindal, S.K., "Environment and the Lungs" in Kumar, R.(Ed.) *Environmental Pollution and Health Hazards in India*, Ashish Publishing House, New Delhi (1987), p.105.

<sup>3</sup> "Global Warming Vs Climate Change", *Environment*, June-August 2008, p.34; see also Lakshman Prasad, "Are We Really Concerned About the Climate Change?", *Environment*, September-November 2006, p.20.

<sup>4</sup> Shukla P.R., "India's Green House Gas Emission Scenarios: Aligning Development and Stabilizing Paths", 90(3) *Current Science*, February 2006, pp.384-395; Garg, A. and Shukla, P.R., *Emissions Inventory of India*, Tata McGraw Hill, New Delhi(2002),p.18.

vast coal resources and lifestyles would emit alarming amounts of green house gas<sup>5</sup>.

Significance of indoor air quality is one of the major anxieties of human health. People, especially aged, women and children spend more than 90% of day time in indoors<sup>6</sup>. Indoor air quality is a term used to describe how the air gets polluted inside a confined space, like air inside buildings and affected by temperature, humidity and odours<sup>7</sup>. Indoor air pollutants include microbial contaminants, chemicals, allergens that can affect the health of the people and animals. There is evidence that indoor air can be polluted 10 times more than outdoor air. It is believed that the upcoming millennium will face the foremost environmental problems due to health hazards and indoor air quality, if the present trends are continued<sup>8</sup>.

There are no effective laws or policies to control the problem of air pollution from indoor and personal sources. In the above circumstances, it is a matter of paramount importance to analyze and outline the extent and causes of air pollution resulting from indoor and personal sources and its health and other consequences faced by women, children and the society in general. It is of equal importance also to outline the legal, institutional, management and technological approaches necessary to reduce or at least contain the problem and also the need for consultation with stakeholders and people's participation in air quality management in the above arenas.

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<sup>5</sup> Garg, A. *et al.*, *Future Green House Gas and Local Emissions for India: Policy Links and Disjoints*, Vol.8(1), Kluwer Academic Publishers, Dordrecht (2003),pp.71-92; Rupa Kumar *et al.*, "High Resolution Climate Change Scenarios for India for the 21<sup>st</sup> Century", 90(3)*Current Science*, 10 February 2006, pp.334-345; Fulekar, M.H., "Climate Change Impacts", *Environment*, 2007-08 Dec- Feb., pp.37-44.

<sup>6</sup> Central Pollution Control Board, *Air pollution and Human Health*, Ministry of Environment and Forests (2001), pp.22-23.

<sup>7</sup> OSHA:Occupational Safety and Health Administration, *Carbon Monoxide in Workplace Atmospheres*, Salt Lake Technical Center,VS DOC/OSHA-SCTC (1991).

<sup>8</sup> Peter Bellin and John D. Spengler, "Indoor and Outdoor Carbon Monoxide Measurements at an Airport", 30 *Journal of Air pollution Control Association* (1980)392 at p.393.

### Indoor Air Pollution—Causes and Consequences

Indoor air pollution occurs primarily in developing countries, as a result of burning solid fuels in indoor stoves with little or no ventilation<sup>9</sup>. Other practices like cooking in kitchen, open air burning of refuse and leaves, open air heating, home furnaces also discharge toxic emissions like nitrogen dioxide, carbon monoxide<sup>10</sup> to the indoor atmosphere<sup>11</sup>. Lifestyles are primarily responsible for this<sup>12</sup>, and such sort of lifestyles can be regarded as harmful lifestyles<sup>13</sup>. It mainly affects health of women and children and so it is seen as a complex and multi-faceted problem<sup>14</sup>. Chronic obstructive lung disease and chronic respiratory failure has been attributed to women cooking over open fires. They had three times more chronic lung diseases compared to those cooking in other fashions<sup>15</sup>. Studies undertaken by the Pollution Control Boards in India also point out that residential and commercial zones in India which were once considered to be less polluted than industrial areas are now actually contributing maximum to air pollution<sup>16</sup>, due to harmful lifestyles pursued.

<sup>9</sup> Bjorn Larsen *et al.*, *The Challenge Paper*, WHO.

<sup>10</sup> In indoor air quality, allowable limit of carbon monoxide concentration is 35 ppm for short term average of one hour and 9 ppm for long term average of 8hrs.

<sup>11</sup> Chhabra, K.K., *supra*, n.1 at p.77.

<sup>12</sup> Lifestyle means the way people live, reflecting whole range of social values, attitudes. It is composed of cultural and behavioral patterns and life long personal habits developed through processes of socialization. For details on life style and its impact on health, see WHO, Techn. Rep. Ser., No. 731(1986); Park, K., *Preventive and Social Medicine*, Banarsidas Bhanot Publishers, Jabalpur (16<sup>th</sup> edn., 2000), p.17.

<sup>13</sup> Not all lifestyle patterns are harmful and it is for this reason it is stated that health is both a consequence of an individual's lifestyle and a factor in determining it. See WHO Techn. Rep. Ser., No. 713 (1984).

<sup>14</sup> Ole W. Pedersen, "Benefits and Costs of the Environment: Copenhagen Consensus 2008", 20 *Journal of Environmental Law*(2008)465 at p.469; See also Jeffrey D' Sachs, "Seeking a Global Solution: The Copenhagen Consensus Neglects the Need to Tackle Global Climate Change" 430 *Nature*(2004), pp.725-27.

<sup>15</sup> Padmavati, S. and Joshi, B., "Incidence and Aetiology of Chronic cor Pulmonale in Delhi-A Necropsy Study", 46 *Dis. of the Chest*(1964)457; Pandey, M.R., "Domestic Smoke Pollution and Chronic Bronchitis in a Rural Community of the Hill Region of Nepal", 39 *Thorax* (1984)337.

<sup>16</sup> "Kanpur has Unusual Pollution Levels", *The Times of India*, Lucknow, May 20, 2008. The news item cites the report of the U.P. Pollution Control Board which based its studies in respect of Kanpur and it is reported that average atmospheric pollution, including suspended particulate matter, respirable particulate matter and sulphur dioxide have shown an increase in residential and commercial areas as compared to industrial areas. According to UP Pollution Control Board Report,

The earth's surface and the environment surrounding it are important to human health<sup>17</sup>. Cold, dusty and smoky environment is bad for the individuals. The open burning of paddy husk or household garbage in the fields makes the environment generally smoky. The cloudy atmosphere which keeps out the sunshine deprives people of sun-made vitamin D, thus accounting for rickets. Both chronic bronchitis and carcinoma of the lung are, in some measure due to atmospheric conditions, which hold down the smoke and turn mist into smog. Rheumatism has for long been related to dampness and cold<sup>18</sup>. In strong sunshine, fair skins with little pigmentation have an added liability to skin cancer. Seasonal changes in the severity of asthmatic episodes are largely due to environmental alterations. The raise of dust content in the air is the major cause of asthma, as these are highly allergenic. This is the reason why the onset of winter becomes alarming especially for a patient with lung disease like asthma and chronic bronchitis.

With the air becoming increasingly polluted due to indoor sources, it has placed tremendous impact on the health and quality of life of the population. It has also cast heavy burden on health costs<sup>19</sup>. According to a study undertaken in United States, air pollution have accounted for 40,350 premature deaths, 19,805 hospital admissions, and 1,201 million minor illnesses in 1995. The Study also reported that the number of premature deaths have

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the respirable particulate matter(RPM) level in Kidwai Nagar and Sharda Nagar coming under residential zone category, were found to be 171 and 187.47 milligrams per cubic metre respectively against the permissible limit of 150. Increased human activities arising from disposal of domestic waste, open sewage system, decomposing organic matter are found to be the prime reasons for the rise in the atmospheric pollution.

<sup>17</sup> Kumar, R., (Ed.) *Environmental Pollution and Health Hazards in India*, Ashish Publishing House, New Delhi (1987), p.1.

<sup>18</sup> *Id.*, p.2.

<sup>19</sup> Kawin Smitha, "Impact of Indoor Air Quality on Humans", *Environment*, September-November 2007, pp.1-5.

increased by 28% and the number of sickness and hospital admissions by 30%<sup>20</sup>.

### **Burning of Bio-fuels**

The burning of bio-fuels in rural households has led to a rapid deterioration of indoor air quality. The bio-mass combustion produces high amounts of particulates, hydrocarbons and carbon monoxide. The suspended particulate matter is below 3 microns in diameter and thus respirable, i.e., penetrate and get deposited deep in the lung<sup>21</sup>. The mega cities face acute air pollution problems with the average levels of suspended particulate matter levels exceeding much higher than the prescribed standards. It is found that 4,10,000 to 5,70,000 women and young children die prematurely every year because of indoor air pollution caused by the burning of bio-fuels in poorly ventilated homes<sup>22</sup>. Some 82% of the sulphur dioxide emissions and 39% of nitrogen dioxide emissions are produced within the home. Similarly, about 96% of the particulate matter emissions in the country also come from the household sector<sup>23</sup>. However, this indoor air pollution particularly in rural households has been neglected so far<sup>24</sup>.

Over half of the world's population uses the bio-mass fuels as the only source of domestic energy for cooking and heating. Although in terms of total energy content the bio-mass fuels supply a relatively small fraction (10%) of global energy requirements, they provide the largest fraction of energy in terms of the number of people using

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<sup>20</sup>Arden Pope, C. *et al.*, "Particulate Air Pollution as a Predictor of Mortality in a Prospective Study of U.S. Adults", 151(3) *American Journal of Respiratory and Critical Care Medicine*(1995)669 at p.674.

<sup>21</sup>Bertollini, R. *et al.*, *Environment and Health: Overview and Main European Issues*, WHO Regional Publications, European Series, No.68, World Health Organization, Copenhagen (1996), pp.34-38.

<sup>22</sup>Fulekar, M.H., "Biomass-A Sustainable Energy Source", 5(2)*Journal of Current Sciences*(2004)6.

<sup>23</sup>Eric Chivian *et al.*, (Eds.) *Human Health and the Environment*, MIT Press, Cambridge, Massachusetts (1993), pp.74-77.

<sup>24</sup>Dietrich Schwela, *Public Health Implication of Urban Air Pollution in Developing Countries*, Paper presented at the 10<sup>th</sup> World Clean Air Congress, Erjos, Finland, May 28-June 2, 1995, p.1.

them<sup>25</sup>. The bio-mass fuels include a wide range of materials such as crop-residues like straw, coconut husk, cotton stalks; dried dung from cattle, buffalo and camels; scrub plants, weeds etc. The most important among them is fuel wood-logs, branches, bark, twigs and leaves. It is the fact that incomplete combustion increases the pollutant emissions dramatically.

The acute effects of bio-mass smoke inhalation are largely due to asphyxiation and carbon monoxide. It could be life threatening causing rapid death. Chronic exposure produces irritative and inflammatory action. The emissions may also damage the respiratory tract mucous lining and the cilia thereby lowering the local defences and making more susceptible to infections. Acute infective bronchitis, bronchiolitis and pneumonias are common in those exposed to the fuels chronically, especially the children<sup>26</sup>. On a study conducted on 2,180 adult women in Chandigarh, 66(3%) had symptoms of chronic bronchitis, the highest number being in those who used chulla for cooking<sup>27</sup>. In northern and central India, heart failure due to chronic lung disease accounts for 10-30% of hospital admissions and the male: female ratio is equal in contrast to other populations where M:F ratio are 5:1. Since women in this area do not generally smoke, domestic air pollution is thought to be an important cause<sup>28</sup>.

Several ingredients of bio-mass combustion emissions are potentially carcinogenic as well. The average benzazo cine exposures found during cooking period in four villages in Western India were found to be 4000 ng/m<sup>3</sup>, which in terms of inhalation would be

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<sup>25</sup> Smith, K.R. *et al.*, *Biomass Combustion, Air Pollution and Health: A Global Review*, East-west Resource Systems Institute, Honolulu, HI (1984); Master, K.M., "Air Pollution in New Guinea: Cause of Chronic Pulmonary Disease Among Stone Age Natives in the Highlands", 228 *Journal of American Medical Association* (1974)1653.

<sup>26</sup> Peters, A. *et al.*, "Acute Effects of Exposure to High Levels of Air Pollution in Eastern Europe", 144(6) *American Journal of Epidemiology*(1996)570.

<sup>27</sup> Malik, S.K., "Exposure to Domestic Cooking Fuels and Chronic Bronchitis", 27 *Ind. J. Chest Dis & Alli Sci.*,(1985)171.

<sup>28</sup> W.H.O, "Prevention and Control of Pulmonary Hypertension", *Report of an Inter-Country Seminar*, WHO/SEA/CVD/26, 20 May, New Delhi(1960).



equivalent to smoking about 20 packs of cigarettes per day<sup>29</sup>. These levels establish a relationship with respiratory system cancers<sup>30</sup>. Carcinoma of the nasopharynx has been shown to be commoner in high lands in Kenya where cooking is done indoors<sup>31</sup>.

### **Indian Scenario on Bio-fuel Burning**

Despite the adverse health consequences, about 75% of Indian households still rely on bio-fuels such as cow-dung, fuel-wood, and crop residues. Mineral coal is also used in a few households. Pollutants released from it at indoors are far more dangerous than those released outdoors due to their proximity to humans and women and children are forced to breathe this polluted air, which are as much as 20 times the acceptable limits set by the Central Pollution Control Board. Consequently, it affects the economic prosperity, reduces agricultural productivity, damages property and causes economical changes that increase the risk of environmental disasters. It also leads to formation of smog<sup>32</sup>.

According to a survey conducted by the Calcutta Metropolitan Development Authority with the help of National Environmental Engineering Research Institute (NEERI), it has been found that in Kolkata, the most irritant of the particulates is the smoke emitted by

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<sup>29</sup> Smith, K.R. *et al.*, "Air Pollution and Rural Biomass Fuels in Developing Countries: A Pilot Village Study in India and Implications for Research and Policy", 17 *Atmospheric Environment* (1983)2343.

<sup>30</sup> Jindal, S.K. *et al.*, "Bronchogenic Carcinoma in Northern India" 37*Thorax* (1982)343.

<sup>31</sup> Clifford, P., "Carcinoma of the Nasopharynx in Kenya", 42 *East African Medical Journal* (1965) 373.

<sup>32</sup> A 2-years study conducted by the US National Aeronautics Space Administration (NASA) and the Associated Landscape Contractors of America(ALCA) shows that some common plants help reduce the rising levels of indoor air pollution and combat the "sick building syndrome" by absorbing harmful gases and cleaning the air indoors. It is found that plants can clean up to 87% of indoor air pollutants, balance the humidity and act as air conditioner. The plants absorb the chemicals through tiny holes in their leaves, and bacteria in the roots breakdown the pollutants. They purify and renew our stale indoor air by filtering out toxins, pollutants and the carbon dioxide we exhale, replacing them with oxygen. NASA has ranked high 10 such plants which are Aloe Vera, Money plant, Spider plant, Rubber plant, Peace Lily, Chrysanthemum, Snake plant, Chinese Evergreen, Geebera Daisy and Dumb Cane. "Grow Indoor Plants for Fresh Air", *INSIGHT- The Consumer Magazine*, March-April 2005, p.40.

about 1 lakh domestic ovens using wood, coal and other fuels<sup>33</sup>. This points to the need for investigating this problem and to promote the use of clean stoves and clean fuels<sup>34</sup>.

### **Alternate Fuels for the Rural Areas**

Rural indoor air pollution can be reduced only by increasing the availability of clean fuels such as biogas, solar stoves, kerosene, liquefied petroleum gas or electricity. However, these fuels are not easily accessible either due to supply constraints or a host of problems involved in their use. To tide over the crisis, design of biogas plants needs to be further improved to make them sustainable with just a few cattle or buffalo. More work is needed to develop reliable and cost effective community designs and evolve effective institutional arrangements to operate them.

Improved designs are needed in solar cookers to reduce cost and to make them more convenient and widely acceptable. Since LPG, propane and butane are in limited supply and involve movement of heavy cylinders; their use is restricted in rural and remote areas. They also require expensive stoves. Electricity is also not reliably and economically available in rural areas. Kerosene is the best preferred cooking fuel that is reasonably clean, convenient, controllable and transportable<sup>35</sup>.

### **Kerala Law Reforms Commission Proposals on Alternative Sources of Energy**

Recently, Kerala Law Reforms Commission<sup>36</sup> has recommended to the Government of Kerala to introduce amendment to the Kerala

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<sup>33</sup> Francis Cherunilam, *Urbanization in Developing Countries*, Himalaya Publishing House, Bombay(1984), p.148.

<sup>34</sup> Smith, K.R., "Indoor Air Pollution in India: National Health Impacts and Cost Effectiveness of Interventions", *Report Prepared for Capacity 21 Project of India* (1998).

<sup>35</sup> Parikh Jyoti *et al.*, "Indoor Air Pollution: A Reflection of Gender Bias", *Economic and Political Weekly*, Vol. XXXIV, No.9 (1999).

<sup>36</sup> Kerala Law Reforms Commission Report, 2008.

Municipality Act, 1994 to include a provision making it compulsory, to provide for installation of appropriate systems for generating energy from alternative sources of energy like biomass, hydropower, wind, solar, waves, tidal and waste in all plans submitted to Municipality for putting up all kinds of buildings residential or otherwise<sup>37</sup>. It is further required that completion certificate shall be issued only on installation of such units or systems as indicated in the plan submitted<sup>38</sup>. Another notable suggestion of the Kerala Law Reforms Commission in this regard is that in the draft amendment suggested to the Kerala Municipality Act, 1994, it has proposed a mandatory provision requiring vermicompost production or biogas production with every residential building, to be included as a condition precedent for issuing building permit to any person<sup>39</sup>. These recommendations have been made as a measure to reduce the harmful effects of indoor air pollutants arising from bio-fuel burning.

### **Changing Priorities: Cooking with Kerosene**

Kerosene is the most suitable fuel for household use. An average person uses about 12 liters of kerosene per year, but if all the cooking were done with kerosene stoves, some 50 litres per year would be required per person. If 50% of the households were to switch to kerosene from bio-fuels, some 10 million tonnes of kerosene would be additionally required. But today adequate kerosene is not available even to the households that can afford to use it.

Over the last decades, substantive commitments of fuel have been made in other sectors such as power and transport. However, the share of kerosene in the total import of petroleum products

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<sup>37</sup> For further details, see The Kerala Municipality (Amendment) Bill, 2008, Draft amendment to Section 387 proposed by the Kerala Law Reforms Commission as Section 387-A.

<sup>38</sup> The object of such provision is to encourage the use of energy produced from alternative sources and to avoid dependence on one source of energy alone. For details, see the Draft Statement of Objects and Reasons to the Kerala Municipality (Amendment) Bill, 2008 proposed by the Kerala Law Reforms Commission.

<sup>39</sup> See the draft Section 332(3) proposed by the Kerala Law Reforms Commission to Kerala Municipality Act, 1994.

continues to decline. Diesel imports on the other hand continue to increase to meet the demand of 'productive uses' that generate revenue. At least some of the rural population would be in a position to pay for kerosene, if it is made available. However, subsidies of kerosene, in fact do not increase its availability. As profit margins on kerosene are low, traders are reluctant to stock it. A reassessment of government's fuel policy is required if health, particularly of women and children, is to be safeguarded and clean fuels are to be promoted.

### **Uncontrolled Burning of Solid Waste**

The uncontrolled burning of solid waste in urban and semi urban areas is a major cause of air pollution<sup>40</sup>. There is also the practice of burning household waste in open spaces posing nuisance to the neighbourhood. An average of 8 pounds of refuse per household are estimated to be produced in the USA today. If industrial wastes and mining spoils are added, the per capita figure reaches 50 pounds daily. New York City alone produces 22,000 tonnes of waste each day and the amount is increasing at the annual rate of 4%<sup>41</sup>. But in India, per capita waste generation in the city areas is estimated to be 1 kg. per day<sup>42</sup>. Out of the solid waste generated within the city limits, a substantial portion of it is bio-medical waste<sup>43</sup>.

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<sup>40</sup> It is estimated that Mumbai city with a resident population of about 10 million people produces more than 5000 tonnes of garbage every day. According to a NEERI case study, both the formal and informal sectors burn 100 tonnes of garbage every day at Deonar in Mumbai. The Study estimates that burning of 1 tonne of garbage produces 0.098 tonnes of suspended particulate matter, 0.072 tonnes of sulphur dioxide, 0.136 tonnes of volatile organic chemicals, 0.018 tonnes of nitrogen dioxide, and 0.38 tonnes of carbon monoxide. If the emissions produced by waste burning in rural areas are also included, total emissions by waste burning would be equivalent to or more than 2 million metric tonnes emitted by the industrial sector in the country in 1995.

<sup>41</sup> In USA, there is a commendable system of waste disposal with the enactment of the Solid Waste Disposal Act, 1988. For details, see *International Digest of Health Legislation*, 1989 and 1990.

<sup>42</sup> Gurbax Singh, *Environmental and Pollution Laws of India*, Dominion Law Depot, Jaipur(1993), p. 27.

<sup>43</sup> According to the *Census of India Report, 1991* on health facilities in Kerala, it is reported that hospitals in Kerala alone generate more than 200 tonnes of infectious wastes every day or 7,30,000 tonnes annually. See "Not a Wasted Effort", *Economic Times*, May 2, 1996. For further information on the extent of hospital waste generated and handled at the international scenario, see Ayliffe, G.A. J. *et al.*, (Eds.) *Hospital Acquired Infection : Principles and Prevention*, Butterworth-Heinemann,

## Incineration

One of the generally adopted methods of management of organic and inorganic wastes is incineration<sup>44</sup>. This method is primarily used for management of municipal solid waste of cities in developed countries<sup>45</sup>. Under this method, the municipal waste which consists of materials which are difficult to decompose like plastics, rubber tyres, and other materials are burnt at high temperatures in specifically designed incinerators<sup>46</sup>. Mass burning of the waste involves minimal processing of the waste before combustion. This process involves the removal of oversize and difficult to burn materials like large metal objects, tree stumps, etc. The heat produced during the burning process is converted into steam, electricity and other usable forms of energy. Incineration is very useful in reducing the volume of refuse which is reduced by 90% by this method.

Even though incineration is relatively advantageous, still the newly developing environmental awareness is hampering the further growth of incineration. The flue gases created during the incineration process contain highly toxic substances, like dioxins, mercury etc. which, on direct release, are very harmful to the environment<sup>47</sup>. Dioxins are generally associated with cancer, causes adverse effect on reproductive and immune system. Mercury is toxic to kidneys and

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London (1999),p.116; Moritz, J.M., "Current Legislation Governing Clinical Waste Disposal", 30 *Journal of Hospital Infection*(1995)521 at p.527; Nelson, S., "Infectious Hospital Waste: A Troublesome Costly Problem", 1987 *Modern Healthcare*, p.17; Tailor, L.J., "Segregation, Collection and Disposal of Hospital Laundry and Waste", 23 *Journal of Hospital Infection*(1988)57.

<sup>44</sup> Jariwala,C.M., "The Bio-Medical Waste Rules: Direction of Law and Justice", 41 *J.I.L.I.* (1999)368; see also Schedule I of the Bio-Medical Waste (Management and Handling) Rules, 1989 which *inter alia* prescribes incineration as a method for disposal of bio-medical waste and Schedule IV of the Municipal Solid Wastes(Management and Handling) Rules, 2000 which has prescribed standards for incineration of municipal solid waste .

<sup>45</sup> Courts in India have also considered incineration as a safe method of disposal of solid and other forms of bio-medical waste, see *B.L.Wadhwa v. Union of India*, A.I.R.1996 S.C.2696.

<sup>46</sup> Chhabra, K.K., "Management Options of Municipal Solid Waste of Indian Cities" in *supra*, n.1 at p.164.

<sup>47</sup> Ayliffe, G.A.J. *et al.*, *supra*, n.43 at p.116; Gurpreet K.Pannu, " Law Relating to Bio-Medical Waste Management in India-An Analysis", 36 *Journal of the Legal Studies* (2005-06)92.

nervous system and interferes with normal brain development<sup>48</sup>. Under such circumstances, it requires implementation of strict emission standards so that the hazardous gases are not released directly into the environment, failing which it may cause disasters in the form of poisonous fog formation<sup>49</sup>.

In *V.S. Damodaran Nair v. State of Kerala*,<sup>50</sup> a writ petition was filed before the Kerala High Court seeking a direction to the State Government to constitute a committee of experts to study the reasons for the poisonous fog formation in the city of Kochi and to suggest remedial measures. The Court entrusted the study to National Environmental Engineering and Research Institute (NEERI). NEERI and the State Pollution Control Board submitted reports and the same were accepted by the High Court and consequential directions were issued to the State Pollution Control Board to implement the recommendations of the NEERI. The High Court in this case deprecated the failure of the Municipal Corporation and the State Government to take effective steps to control air pollution and directed the State Government to implement the recommendations of the NEERI for the prevention of air pollution by providing green belt barriers between residential sectors and industrial zone without delay.

### **Tobacco Smoking: A Silent Killer**

Tobacco smoking has now become a lifestyle. The smoke contains a wide variety of gases and particles which are deleterious<sup>51</sup>. In fact, tobacco is the most important preventable cause of disease

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<sup>48</sup> National Environmental Engineering Research Institute, Nagpur, *Technical Digest No.17*(March 1999).

<sup>49</sup>Suman Singh and Meeta Mathur, "Organic Waste Management through Conventional Vermicomposting: A Comparative Assessment" in Anju Kohli *et al.*, *supra*, n.1 at p.110. The judiciary has alerted the Pollution Control Board of its responsibility to check periodically the disposal of bio-medical waste. For such approach, see *Maitress Sansad v. State of Orissa*, A.I.R.2007 Ori.451(NOC).

<sup>50</sup> 1996 K.H.C. 538.

<sup>51</sup>Jindal, S.K., "Environment and the Lungs", in Kumar, R., *supra*, n.17 at p.105.

burden and death all over the world<sup>52</sup>. Nevertheless, no one is concerned about the ill-effects of smoking on health. Unfortunately, tobacco smoking is on the rise in several developing countries including India. Tobacco companies which face strict governmental regulations on anti-smoking measures in the Western World, have increased their attention to and investment in the developing world that is being used as a dumping ground<sup>53</sup>. Today, of the 1.1 billion people who smoke worldwide, 182 million (16.6%) live in India. An estimated 65% of all men and 33% of all women in India use tobacco. The prevalence of smoking among men and women differs substantially, 35% of men and 3% of women smoke cigarettes in India<sup>54</sup>.

Manufactured cigarettes account for a comparatively small percentage of the tobacco consumed in India, about 20% over all, while the majority of tobacco about 53%, is used in the form of bidi<sup>55</sup>. Tobacco consumption continues to grow in India at 2-3% per annum and by 2020 it is predicted that it will account for 13% of all deaths in India<sup>56</sup>. Due to the impact of modernization, the youth has become most vulnerable group to smoking in the society and most endangered in terms of its ill effects<sup>57</sup>.

Tobacco smoke contains 4000 chemicals, 60 of which including arsenic, methanol are known carcinogens. Other harmful ingredients are nicotine and carbon monoxide<sup>58</sup>. Tobacco use kills over 2200 people everyday in India. Smokers have 20-25 times higher risk of developing lung cancer, 2-3 times higher risk of sudden deaths. Two

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<sup>52</sup> "Quantifying Selected Major Risks to Health", *World Health Report*, 2002.

<sup>53</sup> Yach, D. and Bettcher, D., "Globalization of Tobacco Industry Influence and New Global Responses", 9 *Tobacco Control* (2000)206 at p. 216.

<sup>54</sup> *Tobacco or Health: A Global Status Report*, World Health Organization, Geneva (1997).

<sup>55</sup> Reddy, K.S. and Gupta, P.C., (Eds.), *Report on Tobacco Control in India*, Ministry of Health and Family Welfare, Government of India(2004).

<sup>56</sup> Kumar, S., "India Steps up Anti-Tobacco Measures", *Lancet*(2000)856.

<sup>57</sup> Sarvdeep Kohli, "Use of Tobacco Products and Legal Control", XI *M.D.U. Law Journal*(2006)221 at p.222.

<sup>58</sup> Bedi, H.S., "Quit Smoking, Boost Your Heart Health", *The Tribune*, New Delhi, June 7, 2006.

lakh smokers contact tuberculosis per year. Annual oral cancer incidents in India is estimated to be as high as 10 per one lakh among males<sup>59</sup>.

Smoking whether it is done in the traditional or contemporary form is considered as a silent killer of human beings. Every cigarette takes away five minutes of one's life. One in 10 persons addicted to smoking dies from it. By 2030 this ratio is likely to be one in six. The fact that smoking is injurious to health is a medically established phenomenon and it has emerged as a social, legal, ethical and primary problem in the society. People indulge in it despite agreeing that smoking is injurious to health.

Cigarette smoking is the major preventable cause of death in America, contributing to an estimated 3,50,000 deaths annually. Epidemiologic and experimental evidence has identified cigarette smoking as the primary cause of lung cancer and chronic obstructive pulmonary diseases (COPD) and as a major risk factor for coronary heart disease. Smoking has been associated with other cancers, cerebro vascular and peripheral vascular diseases, and peptic ulcer disease. Smokers also suffer more acute respiratory illness<sup>60</sup>.

Cigarette smoke, consisting of particles dispersed in a gas phase, is a complex mixture of thousands of compounds produced by the incomplete combustion of the tobacco leaf<sup>61</sup>. Smokers have a 70 per cent higher mortality rate than non-smokers. The risk of dying increases with the amount and duration of smoking and is higher in smokers who inhale<sup>62</sup>. Life expectancy is significantly shortened by

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<sup>59</sup> Moore, S.R. *et al.*, "The Epidemiology of Mouth Cancer: A Review of Global Incidence", 6 *Oral Cancer*(2000)65 at p.71.

<sup>60</sup> Samet, S. *et al.*, "Research for Effective Global Tobacco Control in the 21<sup>st</sup> Century", *Report of the Working Group convened during the 10<sup>th</sup> World Conference on Tobacco Control*, Vol.7 (March 1998), pp.72-77.

<sup>61</sup> Studies reveal that smoke constituents strongly implicated in causing disease are nicotine and tar in the particulate phase and carbon monoxide in the gas phase.

<sup>62</sup> Jouathan M. Samet and Heather Wipfli, "Building Tobacco Control Training Capacity in India", 96 *Current Science*(25 May 2009)1315 at p.1318.



smoking cigarettes. Tobacco smoke also gets dissolved in the saliva and if swallowed, it exposes the upper gastrointestinal tract to carcinogens<sup>63</sup>.

Cigarette smoking is also identified as the primary cause of pulmonary diseases and smokers who develop acute respiratory infections have longer and more severe courses, with a more prolonged cough<sup>64</sup>. Lung cancer has been the leading cause of cancer death in men since the 1950s, and it surpassed breast cancer as a leading cause of cancer death in women in 1985. Male smokers have a tenfold higher risk of developing lung cancer, and the risk increases with the number of cigarettes smoked. There is also strong evidence that smoking is a major cause of cancers of the larynx, oral cavity and esophagus. The risk of these cancers goes with the intensity of exposures to cigarette smoke either active or passive. Epidemiological studies demonstrate an association between smoking and cancers of the bladder, pancreas, stomach, and uterine cervix<sup>65</sup>. Smokers under the age of 65 have a higher risk of dying from cerebrovascular disease and women who smoke have a greater risk of subarachnoid haemorrhage, especially if they also use oral contraceptives<sup>66</sup>.

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<sup>63</sup> Reddy, K.S. and Gupta, P.C., *supra*, n.55.

<sup>64</sup> Studies of pulmonary function indicate that impairment exists in asymptomatic as well as symptomatic smokers. For details see P.T. Shah, "Cigarette Smoking", *Environment*, September-November 2006, p.73.

<sup>65</sup> Gupta, P. and Asma, S.(Eds.), *Bidi Smoking and Public Health*, Ministry of Health & Family Welfare, Government of India, New Delhi (2008). It is also pointed out that cigarette smoking is a major independent risk factor for coronary artery disease. Retrospective and prospective epidemiologic studies have demonstrated a strong relationship between smoking and coronary morbidity and mortality in both men and women. The coronary disease death rate in smokers is 70% higher than in non-smokers, and the risk increases with the amount of cigarette exposure. The risk of sudden death is two to four times higher in smokers. Smoking is also a risk factor for cardiac arrest and severe malignant arrhythmias. In addition to increased coronary mortality, smokers have a higher risk of non-fatal myocardial infarction or unstable angina. Patients with angina lower their exercise tolerance if they smoke. Women who smoke and use oral contraceptives or post-menopausal estrogen replacement greatly increase their risk of myocardial infarction.

<sup>66</sup> Wipfli, H. *et al.*, "Achieving the Framework Convention on Tobacco Control's Potential by Investing in National Capacity", 13 *Tobacco Control* (2004)433 at p.437.

### Impact of 'Second hand' Smoking/Passive Smoking

Passive smoking is a phenomenon whereby non-smokers involuntarily inhale the smoke of nearby smokers<sup>67</sup>. Wives, children and friends of smokers fall under this group. Inhalation of side stream smoke<sup>68</sup> by a non-smoker is more harmful to him than to the actual smoker, as he inhales more toxins<sup>69</sup>. Since tobacco smoking is rather common and mostly uninhibited even at public places, it affects the health of all who are exposed to this environment<sup>70</sup>. Passive smoking arising from smoking by their fathers could lead to severe complications in babies aged below two. It is pointed out that in India hospital admission rates are 28% higher among the children of smokers. These children have acute lower respiratory infection, decreased lung function, increased eczema and asthma, increased cot deaths. Similarly, children of heavy smokers tend to be shorter.

It is being increasingly recognized that tobacco smoke not only affects the smoker, but also those who live in the company of the smoker. This is due to the 'side stream' smoke released from the lightened end of cigarette/bidi when not being smoked<sup>71</sup>. Respiratory infections are much more frequent in children of parents who smoke<sup>72</sup>. Lung functions of these children are also low as compared

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<sup>67</sup>Passive smoking is defined by WHO as "Involuntary inhalation of smoke in indoor and confined places". This inhalation is not willingly sought and hence called as involuntary or passive smoking. Smokers risk is not only for them but also affect all the passive smokers adversely. 2/3<sup>rd</sup> of adults have shown involuntary smoke exposure. For details, see WHO: *Protection from Exposure to Second-hand Tobacco Smoke Policy Recommendations* (2007).

<sup>68</sup> Sidestream smoke is the smoke discharged from the burning end of a cigarette/bidi between puffs and mainstream smoke is the smoke drawn through tobacco when cigarette or cigar or bidi is smoked.

<sup>69</sup> It is found that sidestream smoke contains 3 times more nicotine, 3 times more tar and about 50 times more ammonia. Exposure of non-smokers to environmental tobacco smoke is known as passive smoking.

<sup>70</sup> Parkes, W.R., *Occupational Lung Disorders*, Butterworth, London(1981).

<sup>71</sup> Reddy, K.S. and Gupta, P.C., *supra*, n.55 at pp.7-18.

<sup>72</sup> Colley, J.R.T. *et al.*, "Influence of Passive Smoking and Parental Phlegm on Pneumonia and Bronchitis in Early Childhood", 2 *Lancet*(1974),1031.

to the children of non-smokers<sup>73</sup>. Exposure to side stream smoke can cause cough and breathlessness in non-smoking subjects specially the patients of asthma, chronic bronchitis and emphysema<sup>74</sup>.

Passive smoking is associated with coronary ailments. There is 23% increase in the risk of coronary heart disease among men and women who had never smoked. It is estimated that 3,50,000 to 4,00,000 non-smokers deaths in the United States in each year can be attributed to passive smoking<sup>75</sup>. This underscores the need to eliminate passive smoking as an important strategy to reduce the societal burden of coronary heart disease. The UN Health Agency noted that passive smoking caused lung cancer and that an environmental tobacco smoke poses a positive health hazard. Research on the subject has found an estimated 16% increase in the risk of developing lung cancer among non-smoking spouses of smokers and an estimated 17% rise in risk for workplace exposure. The public is left high and dry over the risks of second hand smoke<sup>76</sup>.

Maternal smoking or mothers exposed to smoking during pregnancy increases risks to foetus by contributing to foetal growth retardation and other health hazards. Infants born to mothers who smoke weigh an average of 200 gm. less. This is because carbon monoxide in smoke decreases oxygen availability to the foetus and account for the growth retardation. Smoking during pregnancy has also been linked with higher rates of spontaneous abortion, foetal death, and neo-natal death<sup>77</sup>.

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<sup>73</sup> Yarnell J.W.G. *et al.*, "Respiratory Illness, Maternal Smoking Habit and Lung Function in Children", 73 Brit J Dis of Chest (1979),230.

<sup>74</sup> Royal College of Physicians, *Smoking on Health*, Pitman Medical, Tunbridge Wells (1977), p.14.

<sup>75</sup> American Heart Association, *Smoking to Heart* (March 1998), p.1.

<sup>76</sup> *Reuter- World*, 10<sup>th</sup> March, 1998.

<sup>77</sup> Nancy A. Rigotti, *Reducing the Health Consequences of Smoking: 25 Years of Progress: A Report of the Surgeon General*, 1989 Executive Summary, DHHS Publication No.(CDC) 89-8411, pp.601-625.

There are several studies which have convincingly shown an association of lung cancer and passive smoking<sup>78</sup>. There are reports that side stream smoke actually contains even higher concentrations of noxious substances than the main stream smoke<sup>79</sup>. There are reports that cigarette smoke contains radio-active polonium<sup>80</sup> derived from phosphate fertilizer which account for carcinogenic risk to both the smokers and non-smokers<sup>81</sup>.

### **Legislative Control over Tobacco Consumption**

Pro-tobacco legislation in India dates back to Tobacco Board Act, 1975 introduced to develop the tobacco industry and the Tobacco Cess Act, 1975 enacted to collect duty on tobacco for the development of tobacco industry<sup>82</sup>. The first anti-tobacco legislation in India was the Cigarette Act, 1975, which mandated health warning on cigarette packet and on cigarette advertisements. The Act prescribed all packages to carry the warning 'cigarette smoking is injurious to health' in the same language used in the brand name on the package<sup>83</sup>.

In the years that followed, there were other single-faceted national attempts to control smoking. The Air(Prevention and Control of Pollution) Act, 1981 included smoke fume also within the definition of air pollutant. The Motor Vehicles Act, 1988 made it illegal to smoke in a public vehicle. Lastly, the Cable Television Networks Amendment Act, 2000 prohibited on-screen smoking and the transmission of tobacco commercials on cable television across the country.

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<sup>78</sup> Hirayama, T., "Non-Smoking Wives of Heavy Smokers Have a Higher Risk of Lung Cancer: A Study from Japan" 1 *Brit Med J.*, (1981)183; Trichopoulos *et al.*, "Lung Cancer and Passive Smoking", 1 *Inter. J Cancer*(1981)27; Correa, P., *et al.*, "Passive Smoking and Lung Cancer", 2 *Lancet* (1983)595.

<sup>79</sup> W.H.O., *Expert Committee on Smoking Control, Controlling the Smoking Epidemic*, World Health Organization. Tech. Report Series, Geneva(1979).

<sup>80</sup> Kirkpatrick, C.H. *et al.* (Eds.), *Immunologic and Infections in the Lung*, MerceL Dekker, New York (1976), p.23.

<sup>81</sup> Winters, T. *et al.*, "Radioactivity in Cigarette Smoke", 306 *New Eng J Med.*, (1982)364.

<sup>82</sup> Mudur, G., "Finalises Tobacco Control Legislation", *BMJ* (2001)322-386.

<sup>83</sup> Carray, M.A. *et al.*, (Eds.), *Tobacco Control Counting Problems*, American Cancer Society, Atlanta (2000), p.6.

Many State Governments in India have also enacted local legislations prohibiting smoking in public places. Delhi Government was the first to impose ban on smoking in public places, with the Delhi Prohibition of Smoking and Non-smokers Health Protection Act, 1996. In addition to prohibiting the sale of cigarettes to minors and prohibiting sale of tobacco products within 100 metres of a school building, the Act allowed its enforcement in public places and public transport by police and medical professionals. A first time offender is fined 100 rupees and briefed by police or medical officer about the law and the negative health consequences of smoking. Following Delhi, Goa introduced the anti-smoking legislation in 1999, which also banned smoking in public places. States of Tamil Nadu and Andhra Pradesh have also gone in for similar legislation regulating tobacco consumption. In Kerala, even though smoke ban came into force from November 12, 1999, still it is not tobacco-free or smoke free and smoke nuisance continues in public places like bus stands, railway stations etc.

### **The Cigarettes and other Tobacco Products Act, 2003**

The Government of India, in May 2003, enacted 'The Cigarettes and other Tobacco Products (Publication of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003' to protect public health by prohibiting smoking in public places, banning advertisement of tobacco products, banning the sale of tobacco products to minors below 18 years, and near educational institutions, prescribing strong health warnings including pictorial depiction on tobacco products, and regulating tar and nicotine contents of tobacco products. The Act also prohibits tobacco Companies from advertising and sponsoring sports and cultural events. The Act replaced the Cigarette Act, 1975. The new Act covers not only cigarettes, but also cigars, bidis, pipe tobacco etc. The consequences of violating the mandate of the Act are far

more stringent than the 1975 Act and it includes heavy fine and imprisonment up to three years.

### **Other Governmental Measures**

In 2008, the Union Health Ministry has issued revised rules by way of a Notification dated May 30, 2008<sup>84</sup> issued under the Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003 by which smoking is banned in shopping malls, cinema halls, public/private work places, hotels, banquet halls, discotheques, canteens, coffee houses, pubs, bars, airport lounges and railway stations. Though Indian Tobacco Companies moved the Supreme Court seeking stay of implementation of the revised Rules, the Court rejected the same and further added that no court in the country shall pass any order in derogation of the above order of the Supreme Court<sup>85</sup>, thus forbidding the courts in the country from passing any order staying the implementation of the Rules.

Rules, as revised, have been made applicable to public and private offices and public places. But it is pointed out that the definition of public places in the rules is ambiguous, as it does not make a distinction between public space and private space<sup>86</sup>. It is true that the 2006 Amendment of the Union Government has specified public place. Even then the definition is unsatisfactory, as it does not cover places like jails. Rules have not specified the implementing agencies. Again it is pointed out that the Rules will pave the way for *Police Raj*. Though smoking in the prohibited places attracts a fine of Rs.200/-, notification is silent on the manner of utilization of the fund collected from the offenders as fine. Union

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<sup>84</sup>The revised rules came into force on October 2, 2008.

<sup>85</sup> See "SC Declines to Stay Ban on Smoking" *The New Indian Express*, Kochi, September 30, 2008, p.7

<sup>86</sup> Public place is a place where people come as part of their duty or for nothing. A place having 35% of built up area cannot be considered as an open space.

Health Ministry has clarified the confusion by making it clear that it can either be utilized by the States for tobacco control programmes or deposited in State Treasury in line with the fine amounts collected for traffic violations<sup>87</sup>. Apart from the regulatory measures, the Ministry of Health is also assisting the States in the implementation of Tobacco control programmes<sup>88</sup>. In the event of strict implementation of the Rules, hoteliers have thought of constructing separate smoking room in their premises to keep the customers fond of smoking comfortable.

### **Smoking—Judiciary’s Public Health Concerns**

Smoking is considered as a potential threat to clean air directly affecting the lives and sustenance of the human beings. It is estimated that one million Indians die every year from tobacco-related diseases. This is more than the number of deaths due to motor accidents, AIDS, alcohol and drug abuse put together, according to the study conducted by the Indian Medical Association and the Indian Academy of Pediatrics<sup>89</sup>. So much so, it has become an area of deep concern for the Indian judiciary.

The deleterious impact of smoking on the health of smokers and passive smokers was the focus of attention in the judgment of Justice A.R.Lakshmanan and Justice K.Narayana Kurup of the Kerala High Court in *Ramakrishnan v. State of Kerala*<sup>90</sup>. It was a case for the first time, a court in India, considered the public health dangers arising from passive smoking. The petitioner contended that tobacco smoking contains harmful contents including nicotine, tar, carbon monoxide, potential carcinogens and that smoke particles are

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<sup>87</sup> Meanwhile, some States like Meghalaya have expressed their inability to extend smoke ban in their territories on account of practical difficulties.

<sup>88</sup> Jonuthan M. Samet and Heather Wipfli, “The Looming Challenge of the Mixed Market Place for Tobacco Products”, 96(10) *Current Science*, May 25, 2009, p.1314.

<sup>89</sup> See “Smoking Kill 10 Lakhs Indians a Year” *The Hindu*, Thiruvananthapuram, October 31, 1998.

<sup>90</sup> 1999(2)K.L.T.725. The judgment of the High Court is a reflection of the transition from sociological philosophy to ‘progressive positive jurisprudence’ which utilizes the scientific discoveries of the laws of social development for the forward movement of man. See Markanday Katju, “The Crisis in Jurisprudence”, A.I.R. 1993 (Jour.) 88.

the causes of many diseases including cancer. He quoted reports from different sources including WHO to highlight that millions of people are dying every year due to tobacco related illness. Relying on expert bodies and reports and after examining the objects that induced legislative initiatives,<sup>91</sup> the Division Bench realized the gravity of the adverse effect of smoking on smokers and passive smokers, and prohibited smoking in public places<sup>92</sup>. Coming to the necessity of protection of the passive smokers, the Court declared that a person is entitled to protection of law from being exposed to hazards of passive smoking under Article 21 of the Constitution. The Court held that the sweep of 'right to life' conferred by Article 21 of the Constitution is so wide and far-reaching so as to bring within its scope the right to pollution-free air and the 'right to decent environment'. The Constitution through various Articles in Part III and Part IV guarantees the dignity of the individual and also right to life which if permitted to trample upon will result in negation of the said right and dignity of human personality. The Court further held that maintenance of health and environment falls within the purview of Article 21 of the Constitution. Court observed that passive smoking adversely affects the life of the citizens by slow and insidious poisoning thereby reducing the very lifespan itself.

Apart from creatively finding that smoking in public places causes public nuisance under Section 268 of the Indian Penal Code, the significance of the judgment lies in the fact that the Court used medical literature for arriving at the conclusion that smoking tobacco is a nuisance. The approach of the Court towards scientific findings and the manner of infusing scientific data into judicial verdicts is a creative way of looking at the problem. Such an approach of

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<sup>91</sup> The object of the Cigarettes Act, 1975 was to impose strict control on smoking of cigarettes. Similarly, in the statement of objects and reasons of the new Cigarettes and Other Tobacco Products Bill, 2001 also, it was stated that tobacco, a major health hazard, is the cause of about eight lakh deaths annually in the country.

<sup>92</sup> Leelakrishnan, P., *Environmental Law in India*, LexisNexis Butterworths, New Delhi (2<sup>nd</sup> edn., 2005), p.166.



employing science for public betterment by using law as the medium is commendable. As a follow up of the case, the Kerala High Court again in *Nebu John v. Babu*<sup>93</sup> ruled that 'action of the authorities in not enforcing the ban order on smoking is a serious challenge to rule of law and orderly life'.

Responding on similar lines, the Supreme Court in *Murli S. Deora v. Union of India & Ors.*,<sup>94</sup> considered the plight of passive smokers and held that passive smoking is indirect deprivation of life without any process of law and hence non-smokers cannot be compelled to become helpless victims of pollution caused by cigarette smoke<sup>95</sup>. Reiterating the above principle, the Court prohibited smoking in public places, namely, auditoriums, hospital buildings, health institutions, educational institutions, libraries, court buildings, public places and public conveyances including railways through out India. The above declaration was made as a health care measure to protect life, the guaranteed right under Article 21 of the Constitution.

### **Needed Policies and Measures**

Scientific evidence has firmly established that there is no safe level of exposure to second hand tobacco smoke, a pollutant that causes serious illness in adults and children. There is also indisputable evidence that implementing 100% smoke-free environment is the only effective way to protect the population from the harmful effects of exposure to second hand smoking. Solution lies in legislation that mandates smoke-free environments (and not voluntary policies) necessary to protect public health. Such legislation should be simple, clear, enforceable and comprehensive. It should anticipate and respond to tobacco industry's opposition and

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<sup>93</sup> 2000(1) K.L.T.238, *per* A.R.Lakshmanan and K.Narayana Kurup, JJ.

<sup>94</sup> (2001) 8 S.C.C. 765, *per* M.B.Shah and R.P.Sethi, JJ.

<sup>95</sup> Unfortunately, the judgment of the Kerala High Court in *Ramakrishnan's case* escaped the attention of the Supreme Court.

involve civil society<sup>96</sup>. Education and consultation are also necessary to ensure smooth implementation of the law. Government should evolve an implementation and enforcement plan and provide infrastructure for its enforcement. Implementation of smoke-free environments must be monitored and ideally, their impact measured and experiences documented. Legislation should cover both indoor workplaces and public places and make such places 100% smoke-free environments. Governmental measures must also be directed to implement educational strategies to reduce second hand smoking exposure in the home.

Fiscal strategies of the Government requires to be reviewed by adopting country specific evidence and that it should cover bidi sales also<sup>97</sup>. Incidence of taxation should be high on tobacco products to have deterrent effect on its consumption. There should also be effective warning labels as well as tailored communication campaigns to reduce tobacco consumption<sup>98</sup>.

### **Legal Control of Indoor Air Pollution**

Apart from administrative and technological measures, legislative measures are equally important to address the problem of air pollution arising from indoor sources. It is true that legislative control received an impetus with the enactment of the Air (Prevention and Control of Pollution) Act, 1981, which is an exclusive legislation intended to meet air pollution and which has included 'gaseous substance' present in the atmosphere injurious to human beings and the environment within the definition of 'air pollutant'<sup>99</sup>. The Act has also provided for an administrative mechanism by creating Central and State Pollution Control Boards which through different ways

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<sup>96</sup> Role of civil society groups as key partners and benefactors in the anti-tobacco campaign was recognized by the *Bloomberg Initiative to Reduce Tobacco Use*.

<sup>97</sup> *The Framework Convention on Tobacco Control*, Arts.9-11.

<sup>98</sup> WHO, *The Scientific Basis of Tobacco Product Regulation*, WHO, Geneva (2007).

<sup>99</sup> See The Air (Prevention and Control of Pollution) Act, 1981, S.2(a).

exercise control over activities resulting in toxic emissions<sup>100</sup>. The Boards also make assessments on pollution load and quality of ambient air in the problem areas.

Apart from the Air Act, there are few other statutory attempts to control or regulate gaseous emissions, toxic fumes, smoke, vapours, dust, etc. which also envisage ad hoc provisions and provide for different mechanisms for the control of such emissions. But they have only little application for controlling air pollution. They are the following:

#### **i) The Oriental Gas Company Act, 1857**

The Oriental Gas Company Act, 1857 contained provisions for the regulation of emissions of the Oriental Gas Company during its course of operation and eventually resulting in pollution of air. Section 16 of the Act read as follows:

“Whenever, any gas shall escape from any pipe laid down or set up or belonging to the said Company they shall, immediately after receiving notice thereof in writing prevent such gas from escaping, and in case the said Company does not, within twenty-four hours next after service of such notice, effectively prevent the gas from escaping, and wholly remove the cause of complaint, they shall for every such offence forfeit the sum of fifty rupees for each day during which the gas shall be suffered to escape, after the expiration of twenty-four hours from the service of such notice”.

However, the Act had application limited only to the escape of gas from the Company’s gas pipes. It did not have any application with regard to the air pollution from other sources.

#### **ii) Indian Penal Code, 1860**

The adoption of Indian Penal Code in 1860 was the first novel attempt in the direction of State control over the air pollution

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<sup>100</sup> The methods include system of consent order, monitoring activities, enforcement through fines and criminal prosecutions.

problem. The provisions of the Code undoubtedly has attempted to encompass wide area of common law of torts relating to acts of negligence and nuisance and render them criminal offences leaving, however, the common law remedies untouched. Chapter XIV of the Code deals with offences affecting public health, safety, etc. Section 278 of the Code specifically deals with making atmosphere noxious to health and prescribes penal consequences for the same. It reads:

“Whoever voluntarily vitiates the atmosphere in any place so as to make it noxious to health of persons in general dwelling or carrying on business in the neighbourhood or passing along a public highway shall be punished with fine which may extend to five hundred rupees.”

The above Section covers activities producing noxious and offensive smells in the proximity of a populated locality. The vitiating of the atmosphere is always actionable as public nuisance and such situation also arise from gaseous emissions, toxic fumes, dust, vapour, etc contributed by indoor sources. At the same time, Section lacks sufficient teeth as the penalty provided in it is far less to create any deterrent effect on the offenders<sup>101</sup>.

### **iii) The Explosives Act, 1884**

The Explosives Act, 1884<sup>102</sup> regulates the manufacture, possession, use, sale, transport, import and export of explosive substances<sup>103</sup>. The Act prohibits manufacturing, possession, use, sale, transportation etc. of explosive substances except as under rules relating to licensing, sale, transportation, import and export etc.<sup>104</sup> The prohibition may either be absolute or subject to certain

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<sup>101</sup> The punishment prescribed for the offence of making atmosphere noxious to health under Section 278 of the Indian Penal Code is only fine extending up to rupees 500.

<sup>102</sup> The Act has been amended by Amendment Act 32 of 1978.

<sup>103</sup> The Explosives Act, 1884, S. 4.

<sup>104</sup> Under Section 5 of the Explosives Act, 1884, Central Government is empowered to make rules in connection with manufacturing etc. of explosive substances. In pursuance to the powers so conferred, Explosive Rules, 1914 were framed which were later replaced by Explosive Rules, 1940.

conditions.<sup>105</sup> The Central Government may absolutely ban the use or manufacturing, etc. of any explosive which is dangerous in its opinion for public safety by issuing a notification to this effect<sup>106</sup>. Section 17 of the Act empowers Central Government to extend the definition of explosives “to cover other explosive substances” and declare any substance as explosives for the purpose of the Act which appears to it as specifically dangerous to life and property by reason of its explosive properties or any process in the manufacturing liable to explosion. Enforcement machinery for implementation of the provisions of the Act is also provided for. Under Section 7 of the Act any officer may be authorized by Central Government by rules to exercise powers relating to inspection, search, seizure, detention and removal of explosives from any place, aircraft carriage or vessel in which explosive is manufactured, possessed or used or sold or transported. Failure to comply with the provisions of the Act entails imprisonment, which may extend up to 3 years and a fine which may extend up to five thousand rupees or both<sup>107</sup>. The penal consequences apply to Companies also<sup>108</sup>.

#### **iv) Indian Boiler’s Act, 1923**

Boiler regulations in India are governed by the Indian Boiler’s Act, 1923. The Act envisages provisions relating to construction of boilers, pressure useable, registration and inspection<sup>109</sup>. The Act provides for Certified Boiler Attendants and Central Boiler Board<sup>110</sup>. The Central Boiler’s Board can also make regulations with regard to design of the boiler, the maximum pressure to be used, and on matters relating to registration, inspection and safety provisions<sup>111</sup>.

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<sup>105</sup> *Id.* S.6.

<sup>106</sup> *Ibid.*

<sup>107</sup> *Id.* S. 9-B.

<sup>108</sup> *Id.* S. 9-C.

<sup>109</sup> Indian Boiler’s Act, 1923, S.2(b) defines ‘boiler’ to mean any closed vessel exceeding five gallons in capacity which is used expressly for generating steam under pressure and includes any mounting or other fitting attached to such vessel, which is wholly or partly under pressure when steam is shut off.

<sup>110</sup> *Id.* S. 27-A.

<sup>111</sup> *Id.* S. 28.

To ensure maintenance and safe working, the Act provides for appointment of Inspectors who can examine the boilers to determine the maximum pressure, steam emissions, and offer advice to the owners as to the proper functioning and maintenance of boilers<sup>112</sup>. Registration of boilers is granted only after inspection and after being satisfied of the statutory requirements on fitness<sup>113</sup>. Use of uncertified boilers or working of boilers at a high pressure than that allowed has been made punishable under the Act<sup>114</sup>.

#### **v) Indian Petroleum Act, 1934**

Special provisions for the carriage and storage of petroleum which though not explosive but equally dangerous, are made in the Indian Petroleum Act of 1934. The Act authorizes the Central Government to make rules with respect to regulation of import, transportation, storage of petroleum<sup>115</sup> and conditions for the requirement of license, etc.<sup>116</sup> No person is authorized to import, transport or store any petroleum except in accordance with the provisions of the Act or the rules made thereunder<sup>117</sup>. Section 23 of the Act imposes penalties for the contravention of rules made under Sections 4 and 5 which shall be punishable with simple imprisonment that may extend to one month or with fine which may extend to one thousand rupees or with both. For subsequent offence the punishment is simple imprisonment which may extend to three months or with fine which may extend to five thousand rupees or with both.

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<sup>112</sup> *Id.* Ss. 5 and 7.

<sup>113</sup> *Id.* S.7(4) and 7(5).

<sup>114</sup> *Id.* S. 23. The punishment prescribed for the offence is fine which may extend to five hundred rupees and with additional fine in case of a continuing offence.

<sup>115</sup> Petroleum according to S.2(a) of the Petroleum Act, 1934 means any liquid hydrocarbon or mixture of hydrocarbon and any inflammable mixture (liquid, miscues or solid) containing any liquid hydrocarbon. Kerosene, though not specifically included however falls under the term petroleum. See *K.C. Sachdev v. State* (1976) 2 Cri. L.J. 1208.

<sup>116</sup> *Id.* S.4.

<sup>117</sup> *Id.* S.5.

**vi) The Factories Act, 1948**

The Factories Act, 1948 provides for approval, licensing and registration of factories, and for regulation of dangerous dusts and fumes. The Act requires the occupier to provide for adequate ventilation in work room<sup>118</sup>, to prevent the inhalation and accumulation of dust or fumes injurious to workers<sup>119</sup> to ensure safe working pressure of plants and machineries<sup>120</sup>. The Act prohibits entry into confined spaces where dangerous gas, fume, vapour or dust is present without wearing breathing apparatus<sup>121</sup>. Safety measures are also provided in the Act in respect of explosives or inflammable dust<sup>122</sup>. The Factories Act was amended in 1987 after the Supreme Court's ruling in the *Shriram Gas Leak Case*<sup>123</sup>. The 1987 Amendment incorporated additional provisions relating to disclosure of information on health hazards. The permissible limits of exposure to toxic substances have been prescribed<sup>124</sup>. Safety Committees consisting of workers and managers are required to be convened periodically to review factory's safety measures<sup>125</sup>. Penalty for contravening the provisions dealing with hazardous processes is also provided in the Act<sup>126</sup>.

**viii) State and Municipal legislation**

There is State and Municipal enactments envisaging provisions intended to control and regulate indoor sources of air pollution.

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<sup>118</sup> The Factories Act, 1948, S. 13.

<sup>119</sup> *Id.* S. 14.

<sup>120</sup> *Id.* S.31.

<sup>121</sup> *Id.* S. 36.

<sup>122</sup> *Id.* S. 37.

<sup>123</sup> *M.C. Mehta v. Union of India*, A.I.R. 1987 S.C. 965.

<sup>124</sup> The Factories Act, 1948, S. 41-E and F.

<sup>125</sup> *Id.* S. 41-D.

<sup>126</sup> The penalty prescribed for contravention of the hazardous processes mentioned in Section 41-B, 41-C and 41-H extend to seven years imprisonment and fine extending to two lakh rupees and if contravention continues with an additional fine which may extend to five thousand rupees for each day during which contravention continues. If contravention continues beyond a period of one year after the conviction, the offender shall be punished with imprisonment for a term which may extend to ten years.

However, those State legislations<sup>127</sup> and Municipal Statutes,<sup>128</sup> deal with the matter differently and lightly as cases of nuisance at the local level<sup>129</sup>. That apart, the definition of nuisance is narrow and does not take into account all situations prejudicial to public health. Recently, Kerala Law Reforms Commission has made recommendations to the Government to enact a Public Health Code to meet present day health hazards<sup>130</sup>. The Commission has incorporated a clear definition of nuisance in the draft bill corresponding to Public Health Code<sup>131</sup>. The definition of nuisance suggested includes premises in such a state as to be prejudicial to public health; factory, workshop or workplaces not provided with sufficient means for ventilation or not kept clean and free from noxious effluvia; any fire place or furnace which does not consume the smoke arising from the combustibles used therein; chimneys sending forth smoke in such quantities prejudicial to health; dust, cinders, irritating smell or offensive odor produced by any place which is a nuisance to the neighbourhood. The draft Code authorizes the local authorities to detect nuisance by conducting periodical

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<sup>127</sup> The Bengal Smoke Nuisance Act, 1905 as applicable to Bihar, Bengal and Orissa; The Gujarat Smoke Nuisance Act, 1963; and the Bombay Smoke Nuisance Act, 1912 are the important State enactments which deal with abatement of nuisances arising from smoke of furnaces of fire places and provide for the machinery for the purpose of combating air pollution from these sources. For a critical evaluation of the application of Bengal Smoke Nuisance Act, see Upadhyaya, M.L., "The Extent of Application of Bengal Smoke Nuisance Act: A Case for Revision" in Agarwal, S.L., (Ed.), *Legal Control of Environmental Pollution*, Indian Law Institute, Delhi (1980), pp.142-52.

<sup>128</sup> For Example, Delhi Municipal Corporation Act, 1957, S.481 deals with regulation of smoke in factories, workshops and trade premises. Similarly, Gujarat Municipalities Act, 1963, S.206 empowers the municipalities to deal effectively with smoke nuisance which results in air pollution arising from any furnace employed in any work or building for the purpose of trade or manufacturing. Under this Section, the Municipality could direct by public notice that any furnace be constructed, supplemented or altered so as to consume or burn or reduce as far as may be practicable, the smoke arising from such furnace. The Calcutta Municipal Corporation Act, 1951, S. 436 has empowered the Corporation to refuse the permission of establishment of a factory if the establishment of such factory would be objectionable by reason of the density of the population in the neighborhood or would cause nuisance to the inhabitants. So too, S. 437 (1)(b) of the above Act prohibits the use of any premises for a purpose, which in the opinion of the Corporation is dangerous to life, health or property or is likely to create a nuisance.

<sup>129</sup> For example, Travancore-Cochin Public Health Act, 1955, S.41 defines nuisance which is broad enough to include toxic fumes, dust, gaseous emissions, vapour, etc. and provides for complaint mechanism to deal with such instances of nuisance.

<sup>130</sup> Kerala Law Reforms Commission Report, 2008.

<sup>131</sup> Draft Section 12 of the Kerala Public Health Code under the heading 'Certain things to be nuisances'.



inspection and to take abatement measures<sup>132</sup>. Thus, on examination of the legislative scenario, it is abundantly clear that matters of air pollution have been given only secondary importance.

#### **ix) Civil Procedure Code and Control of Indoor Air Pollution**

Section 91 of the Code of Civil Procedure, 1908 provides the right of action in case of public nuisance. This is a reservoir of class action against environmental violations<sup>133</sup>. It provides that in case of public nuisance or other wrongful act affecting or likely to affect the public, a suit for declaration and injunction or for such other relief as may be appropriate in the circumstances of the case may be instituted by the Advocate General, or with the leave of the Court, by two or more persons, even though no special damage has been caused to such persons by reason of such public nuisance or other wrongful act. The remedy sought can be a declaration, or injunction, or any other relief as may be appropriate in the circumstances of the case. This Section does not limit or affect any other remedy which may exist independently of its provisions.

#### **x) Criminal Procedure Code, 1973**

The provisions of the Criminal Procedure Code, 1973 is equally efficacious to prevent pollution of air arising from indoor sources. Chapter X, Part B enumerating Sections 133 to 143 and Part C dealing with Section 144, provides most effective and speedy remedy for preventing and controlling the public nuisance emanating from air pollution.

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<sup>132</sup> Under the Draft Public Health Code, any person aggrieved by nuisance can make a complaint or give information of the same to the Health Authority of the local area or to the Inspector of the local area and such authority will require the responsible person by issuing notice to abate the same and in case of default, the authority will proceed on its own by taking such steps as necessary. See Draft Sections 14 and 15 of the Draft Kerala Public Health Code proposed by the Kerala Law Reforms Commission.

<sup>133</sup> Leelakrishnan, P., *Environmental Law in India*, LexisNexis Butterworths, New Delhi (2<sup>nd</sup> edn., 2005), p.58.

Under Section 133 of the Cr.P.C., the District Magistrate or Sub Divisional Magistrate or Executive Magistrate, if he is so empowered by the State Government, on receipt of report from the police officer or other information, may make conditional order to remove the public nuisance causing pollution. This provision can be effectively invoked to prevent and control the discharge of toxic substances, gaseous emissions, dust, vapour, etc. The conditional order may be made absolute and if the person fails to carry it out, he can be prosecuted under Section 188 of the IPC. For defying the orders, even the head of the government department or public bodies can be prosecuted. It may be noted that Section 133 Cr.P.C. can be used even against statutory bodies like Municipalities, Corporations and other government bodies if they do any act or omission which causes public nuisance and air pollution.

However, the statutory provisions in the criminal law have its own limitations. The punishment provided for violation of any prohibited act is not much and it does not create any deterrent effect on the wrongdoer. In cases when an action is brought against the statutory bodies like municipalities, they justify their act or omission and take recourse to legal battles and ultimately take the plea of financial inability. But the Indian judiciary has given them new social justice orientation making them remedial weapon of versatile use for the protection of public health and air quality.

### **Smoke Fumes through Chimneys: Judicial Responses**

In *Govind Singh v. Shanti Sarup*<sup>134</sup>, the appellant had been carrying on the occupation of baker and had constructed an oven and a chimney which created public nuisance. The respondent filed an application under Section 133 of Cr. P.C. The Sub-Divisional Magistrate served a conditional Order on the appellant calling upon him to demolish the oven and the chimney, within a period of ten

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<sup>134</sup> A.I.R. 1979 S.C. 143.

days from the date of the order, and to show cause why the order should not be confirmed. After hearing the parties and considering the evidence led by them, the Magistrate directed the appellant to stop carrying on the trade of a baker at the particular site.

The High Court upheld the order of the Magistrate. The appellant then moved the Supreme Court. The Supreme Court expressed the view that in matters of this nature what was involved was not merely the right of a private individual but the health, safety and convenience of the public at large. The Supreme Court also accepted the view of the Magistrate. However, the Supreme Court found the final order of the Magistrate too broad in requiring him to desist from carrying on the trade of a baker at the particular site. Therefore, the Supreme Court directed the appellant to demolish the oven and chimney within a month, but allowed him to practice his trade.

### **Ratlam—Articulation of New Social Justice Orientation**

In *Municipal Council, Ratlam v. Vardichand*<sup>135</sup>, the residents of the Municipality used to suffer from stench and stink caused by open drains, effluents from alcohol plant flowing into streets and poor sanitation including open public excretion by nearby slum-dwellers. The residents moved the Magistrate under Section 133 of Cr. P.C. requiring the Municipality to do its duty towards the members of the public. The Magistrate issued directions to the Municipality to draft a plan for the removal of nuisance within a period of six months. The Municipality instead of complying with the order of the Magistrate, moved in appeal to Sessions Court which reversed the order. In further appeal, the High Court set aside the order of the Sessions Court and approved the Magistrate's order. The Municipality went for further appeal to the Supreme Court. From Trial Court to Supreme

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<sup>135</sup> A.I.R. 1980 S.C. 1622, *per* V.R.Krishna Iyer and O.Chinnappa Reddy, JJ.

Court, it took eight years and the Municipality took the plea of “financial inability” in the Supreme Court.

The Supreme Court, speaking through Justice Krishna Iyer, rejected the plea of the Municipality and held that “the Code of Criminal Procedure operates against the statutory bodies and others regardless of the cash in their coffers”. Justice Krishna Iyer rightly pointed out that had the Municipal Council and its executive officers spent half of the litigative zeal on cleaning up the streets, the rousing people’s need might have been largely met long ago. Accordingly, the Supreme Court directed the Municipality to improve the sanitary conditions.

Although both Indian Panel Code and Criminal Procedure Code, “are of ancient vintage the new social justice orientation imparted to them by the Constitution of India makes them a remedial weapon of versatile use” for the protection of environment<sup>136</sup>.

In *P.C. Cherian v. State of Kerala*<sup>137</sup>, it was alleged that the petitioners, who were owners of rubber factories failed to provide the necessary equipments to prevent the dissemination of carbon black with the result that the excess carbon black got into the atmosphere and settled over the neighbouring area and caused discomfort, injury and nuisance to the people and even prevented them from attending to their avocations. People who used to attend the church for payers found their clothes soiled as a result of the atmospheric pollution.

The Sub-Divisional Magistrate passed the order under section 133 of the Cr. P.C. requiring the petitioner to stop mixing of rubber with carbon within a fixed time. On a detailed enquiry the Magistrate held that there were no precautionary measures taken for preventing carbon black from escaping into the atmosphere and that such

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<sup>136</sup> *Id.*, p.1628.

<sup>137</sup> (1981) K.L.T. 113, *per* Janaki Amma and U.L.Bhat, JJ.; see also *Ram Avtar v. State of U.P.*, A.I.R. 1962 S.C.1794, *per* L. Kapur, K.C.Das Gupta and Raghubar Dayal, JJ.

carbon was found to cause discomfort, injury and nuisance to the people.

On the other hand, it was argued that when there were statutes like the Panchayat Act and the Factories Act, prescribing for the issuance of licence on satisfying the conditions which included absence of health hazard, it was not within the province of the Magistrate to see whether those conditions were satisfied or not.

The Court rejected the above contention on the ground that it was not made out that licences had been issued to the petitioner for carrying on the work of carbon mixing. The Court further held that the Sub-Divisional Magistrate was well within jurisdiction to invoke the provisions of section 133 of Cr.P.C. to abate public nuisance. The deposit of carbon black amounts to public nuisance under section 268 of I.P.C.<sup>138</sup> which can be stopped by issuing appropriate order under Section 133 of Cr. P.C.

### **Krishna Gopal—New Vigour to Section 133 Jurisdiction**

In *Krishna Gopal v. State of M.P.*<sup>139</sup>, a complaint was filed against air pollution caused from the glucose factory situated few feet away from the house of the complainant. It was further complained that the ash from boiler of the factory was causing a great deal of atmospheric pollution resulting in a deleterious effect on the residents of the locality. It was also alleged that the factory was being run round the clock. The factory had been installed in the residential locality under the licence granted by the appropriate authorities.

It was argued before the Madhya Pradesh High Court that inconvenience caused to the inmates of house cannot and should not be considered as a public nuisance as it was essentially private in

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<sup>138</sup> The punishment prescribed for the offence of public nuisance is only rupees 200 under Section 290 of the Indian Penal Code.

<sup>139</sup> (1986) Cri. L.J. 396.

nature for which it was not permissible to invoke Section 133 of Cr. P.C.

Rejecting the above convention, Justice V.D.Gyani observed that it was not the intention of law that the community as a whole or large number of complainants should come forward to lodge their complaint under Section 133 of the Cr.P.C. This provision does not require any particular number of complainants. The jurisdiction of Sub-Divisional Magistrate can be invoked on receiving a report of police officer or other information, and on taking such evidence if any, as he thinks fit. The Court further pointed out that granting a permission for the installation of boiler in a residential locality and running of the factory was itself blatantly violative of the law. The Court expressed the view that if environmental pollution is to be extirpated, firstly, it should not be permitted, must be prevented, and if at all it takes place, should be sternly dealt with. The case is notable for its loud thinking on the menace of environmental crime, which dwarfs other crimes<sup>140</sup>. In this case, the Court observed as follows:

“A vagrant committing a petty theft is punished for years of imprisonment, while a billion dollar price fixing executive or a partner in a concern as such as the petitioner, comfortably escapes the consequences of his environmental crime. The society is shocked when a single murder takes place. However, air, water and atmospheric pollution is merely read as a news without slightest disturbance till people take ill, go blind or die in distress on account of pollutants, that too resulting in the filling of pockets of a few”<sup>141</sup>.

Thus, the Court ordered that the factory from which the nuisance was caused had to be closed. It was further ordered that the factory be immediately removed from the premises without any further loss of time. The effect of the decision is that it has given a

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<sup>140</sup> Leelakrishnan, P., *Environmental Law in India*, supra, n.92 at p.69.

<sup>141</sup> 1986 Cri. L.J 396 at p.400.

new vigour to Section 133 of the Criminal Procedure Code<sup>142</sup>. It is submitted that if toxic fumes and poisonous gases emitted from a factory could amount to public nuisance, there is no reason why such atmospheric pollutants emitted from indoor sources could not be treated so, to make the air environment of the neighbourhood clean.

### **Section 133—Repository of Regulatory Powers**

The power to abate public nuisance conferred by Section 133 of Cr.P.C. was acknowledged to be the repository of regulatory powers of the state in the interest of 'health and physical comfort of the community' by judicial approach, thus widening the scope of the law of nuisance under Cr.P.C. The said approach can be seen reflected in *Madhavi*<sup>143</sup>. The significance of the above proposition is that it would strengthen the hands of the executive in taking up measures to meet environmental maladies including those arising in the form of indoor air pollution. It has a relative advantage over other statutory prescriptions, in so far as Section 133 contains the inherent characteristics of preventive and remedial action which is often found to be befitting and powerful in dealing with air pollution cases. *Madhavi case* arose from an action against nuisance created by an automobile workshop located in a residential area emitting toxic fumes and other hazardous substance dangerous to the health and safety of the neighbourhood. The Kerala High Court made the following observation having far reaching consequences.

"We recognize every man's home to be his castle which cannot be invaded by toxic fumes, or tormenting sounds. This principle expressed through law and culture, consistent with nature's ground rules for existence, has been recognized in 133(1) (b). The conduct of any trade or occupation, or keeping of any goods or merchandise injurious to health or physical

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<sup>142</sup> For a significant analysis of the decision in Krishna Gopal, see Leelakrishnan, P., "Law of Public Nuisance: Tool for Environment Protection", 28 J.I.L.I.(1986)230 at p.231.

<sup>143</sup> *Madhavi v. Thilakan*, 1989 Cri.L.J.499.

comfort of community could be regulated or prohibited under the section.”

### **Emissions of Dust Particles—Nuisance**

In *Ajeet Mehta v. State of Rajasthan*<sup>144</sup>, it was complained by the petitioner that the business involving loading, unloading and stocking of fodder had become serious health hazard to the residents of the locality as the whole atmosphere was polluted due to fine dust particles of the fodder, the inhaling of which caused number of health problems. The City Magistrate passed an order under Section 133 of Cr.P.C. directing to remove the said business within 15 days from that place. The Rajasthan High Court upheld the order of the Magistrate. The stand taken by the Court supports the proposition that public health cannot be allowed to suffer on account of personal interest involved in the business. It also fortifies that the right available to an individual to carry out any trade, business or calling under Article 19 (1)(g) is subject to considerations of public health.

### **Apex Court Resolves Conflict of Jurisdiction**

The remedial measure provided under Section 133 can be invoked notwithstanding the remedy under the Air Act. The apex Court finally resolved the conflict of jurisdiction in *State of M.P. v. Kedia Leather and Liquor Ltd.*<sup>145</sup> after going into the various dimensions of power by holding that the enactment of the Air Act, 1981 did not impliedly overrule Section 133 of the Cr. P.C. as the area of operation of the Cr. P.C. and the pollution laws are different and with wholly different aims. By such innovative approach the court has strengthened the environmental content included in the law on nuisance contained Section 133 of Cr. P.C. The decision is significant for the reason that Court has recognized the remedy under Section 133 as an effective measure to settle the complaints on air

<sup>144</sup> (1990) Cri.L.J. 1596.

<sup>145</sup> 2003 (7) S.C.C. 389, *per* Doraiswamy Raju and Arijit Parayat, JJ.



pollution by treating air pollution issues as public nuisances and thereby enabling the citizens to seek quick reliefs by moving before an Executive Magistrate. The approach of the court also stems from the fact that the remedy under Section 133 has now become more feasible, functional and reachable to the common man<sup>146</sup> and hence can make value additions to tackle the problem of indoor air pollution.

### **Control of Personal and Indoor Air Pollution-Some Suggestions**

Indoor and personal air pollution adversely affects the quality of life and brings discomfort to health and happiness. Improvement of quality of life is necessary to make life more livable for all those who survive<sup>147</sup>. The recent developments, particularly in USA, where the Supreme Court of the United States found that carbon dioxide emissions constitutes an air pollutant for the purposes of the Federal Clean Air Act<sup>148</sup> invites nations to take thoughtful remedial measures to address the growing problem of indoor and personal air pollution. The following are some of the suggestions requiring serious consideration of the policy makers to minimize the problems of indoor and personal air pollution.

#### **a) Need for Educational Drive and Public Awareness Campaign**

Education prescribes the 'do' and 'don'ts' and code of conduct to be followed on the austerity and deference to be observed and practiced in life. Good education also implies environmental education, as it is a way of transforming education for value

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<sup>146</sup> Leelakrishnan, P., *supra*, n.92 at p.76.

<sup>147</sup> Park, K., *supra*, n.12 at p.15; see also Bhatti, S.S., "Environmental Development and Quality of Life" in Kumar, R.(Ed.), *Environmental Pollution and Health Hazards in India*, *supra*, n.17 at p.156.

<sup>148</sup> See *Massachusetts v. EPA* 549 US 497 (2007). The Court ruled that EPA violated the Act by not regulating greenhouse emissions and directed that EPA Administrator must determine whether or not there was scientific evidence to support the supposition that emissions of greenhouse gases endanger public health or welfare. In May 2007, George W.Bush issued an Executive Order proposing regulations on green house gases weaker than those proposed by the EPA itself following the court order.

education<sup>149</sup>, which is necessary to monitor the progress and development of mankind. In India, the National policy on Education, 1986 after 36 years of framing of the Constitution for the first time recognized educational imperatives by stating that “there is a paramount need to create a consciousness of the environment and that it must permeate all the ages and all the sections of the society beginning with the child”. The Supreme Court also stressed on the necessity of value based education as a measure to curb pollution and in that process, it directed NCERT to prepare the module syllabus on environment protection for Class 1 to XII <sup>150</sup>, and further directed every State to adopt the same in their respective Schools<sup>151</sup>. Giving value based education can definitely bring out changes in life style and can motivate individuals to abandon harmful lifestyles and thus free the air environment from the hazards of indoor and community pollutants.

As part of the educational drive, it is equally important that vigorous public awareness campaign should be initiated at the grass root levels by the local bodies with the co-operation of NGOs and other voluntary associations, educating the people on the toxic effects of indoor air pollutants on air quality and stressing on the necessity to reduce gaseous emission levels, do away with the practice of household burning, fuel combustion and smoking which have now become part of the living style to avoid such a critical environment exposure.

### **b) Strengthening of Institutional Mechanisms**

Institutional mechanisms armed with the responsibility to prevent, control and abate air pollution, namely, Central and State

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<sup>149</sup> Gairav Rao, “Environmental Education: A Simple Approach to Value Inculcation”, *5(4)Our Earth*, Dec.2008, p.18; *Environmental Education Hand Book*, CEE, Ahmedabad (2005), P.4; Reghunathan, M., *The Green Teacher-Ideas, Experiences and Learning's in Educating for Environment*, CEE, Ahmedabad (1997); Samalonis, B.L., *Human Relations in and Beyond the School in Methods and Materials for Today's High School*, Van Nostrand Reinhold Co., London(1975), P.15.

<sup>150</sup> Order dated 18 December, 2003.

<sup>151</sup> Order dated 13 July, 2004.

Pollution Control Boards, should be strengthened with trained manpower and monitoring equipments and their powers and functions should be extended to control indoor air pollution also. Local bodies should also function as institutional mechanisms to control indoor air pollution by keeping their eyes open to ensure that emission levels do not exceed the prescribed limits. They have a clear role to play in controlling and abating indoor sources of pollution. For that purpose, the provisions of the Municipality Building Rules should be suitably amended prescribing the size of the chimneys by taking into account variable and current factors and also by incorporating provision for light and ventilation especially in the cooking area as pre-conditions for granting building permit and plan approval and also at the stage of issuance of occupancy certificate. Clearance should be given to commercial undertakings only on being satisfied of the installation of air pollution control devices, air safety standards and also measures for ensuring the safety of the workers engaged therein. They must also act as the nodal agency for the strict enforcement of anti-smoking regulations. They should also build clean technology data banks within the areas of their jurisdiction as part of the clearing the air drive. Institutional mechanisms must encourage individuals to substitute waste burning and household burning with efficient garbage removal and landfill management strategies to harvest methane.

### **c) Regulation of Lifestyles**

It is found that lifestyles prominently and profoundly influences environment, which calls for regulation of harmful lifestyles. However, regulating lifestyles and patterns of consumption of people may bring political repercussions, as indoor dwellers comprise the electorate. The right adaptable strategy, therefore, must be to convince the people that the consumption patterns including that of energy must be reduced for public health and environmental reasons.

This means that lifestyle regulations must be seen as the key objective for the future<sup>152</sup>.

#### **d) Building up Information Base**

It has become increasingly evident that it is virtually impossible for the Government to monitor the activities of individuals and institutions across the country. If the Government is the sole monitoring agency, then corruption and inefficiency are likely to creep into the system. Vigilant stakeholders with strong and technically equipped institutional support can play a very important role in managing the environment. The most important among all air quality management strategies is peoples' participation by involving local people. As part of the same, public should be provided with information on the necessity to contain indoor sources of air pollution for the benefit of the present and future generations. In that pursuit, citizens should be seen as allies and they need to be empowered through a right to information.

#### **Conclusion**

Pollution imposes an enormous burden on people's health. As a citizen, it is our constitutional duty to protect the air environment from contamination and also to maintain and restore the air quality. No doubt, gaseous emissions, toxic fumes, dust, vapour, etc. arising from personal and indoor sources affect the air quality and make the atmosphere noxious to health and safety. Therefore, the need of the hour would be to adopt a comprehensive multi-pronged air quality management strategy involving economic incentives, effective law enforcement and other controls, technological interventions, institutional mechanisms, peoples' participation and above all, by changing harmful lifestyles.

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<sup>152</sup> William Howarth, "Water Pollution: Improving the Legal Controls in Retrospect" 20 *Journal of Environmental Law* (2008)3 at p.5.

## *Chapter -6*

# **VEHICULAR POLLUTION: CONTROLS AND JUDICIAL RESPONSES**

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1. High Density of Vehicles – The Main Cause
2. State of Kerala as an Example
3. Poor Maintenance of Roads and Vehicles: Another Major Reason
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## VEHICULAR POLLUTION: CONTROLS AND JUDICIAL RESPONSES

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The problem of vehicular pollution has become one of the greatest causes of concern to everyone in the present world. It is estimated that vehicles contribute 45% of world's pollution load<sup>1</sup>. However, the proportion of pollutants varies with the type of engine<sup>2</sup>, speed, maintenance and operating efficiency. Vehicles are considered to be the main source of air pollution in India, especially in the urban areas<sup>3</sup>. Substantial rise in the number of vehicles in big cities have made them choked cities<sup>4</sup>. Added to this, road-based passenger transport in India has recorded high growth since 1980<sup>5</sup>. The slow growth of road infrastructure and high growth of transport performance and number of vehicles all imply that Indian roads are fast reaching a saturation point in utilizing the existing capacities<sup>6</sup>. This has opened the way for a major public health hazard in the form of vehicular pollution, which warrants a comprehensive review of the existing regulations and control mechanisms in the arena, so as to make suggestions for the future.

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<sup>1</sup> H.M.Dix, *Environmental Pollution*, John Willey, New York (1981), p.173.

<sup>2</sup> There is evidence that diesel engines are less polluting than petrol engines if its ignition is properly adjusted and maintained. See Khushoo, T.N. (Ed.), "Environment and Transport", in *Environmental Concerns and Strategies*, Ashish Publishing House, New Delhi(1998), p.38.

<sup>3</sup> *Handbook on Transport Statistics in India*, Transport Research Wing, Ministry of Surface Transport, Government of India, New Delhi (1999), p.6.

<sup>4</sup> "Calcutta Air Pollution Alarmingly High" *The Times of India*,. September 9, 2000, p.7.

<sup>5</sup> Roads accounted for 44.8 billion passenger kilometer (PKM) in 1951, which had grown to 251.5 billion passenger kilometer in 1996. In contrast, the total road network increased only 8 times from 0.4 million kms in 1950-1951 to 3.3 million kms in 1995-1996. For details, see *supra*, n. 3 at p.8.

<sup>6</sup> *Ibid*.

## High Density of Vehicles—The Main Cause

High vehicle density is mainly known as the curse of the Indian urban centers. The number of motor vehicles in India has increased from 0.3 million in 1951 to 37.2 million in 1997<sup>7</sup>. Out of these, 32% are concentrated in 22 metropolitan cities. Delhi itself accounts for about 8% of the total registered vehicles and has more registered vehicles than those in the other 3 metros (Mumbai, Calcutta, and Chennai) taken together<sup>8</sup>. At the All India level, the percentage of two wheeled vehicles in the total number of motor vehicles increased from 9% in 1951 to 69% in 1997. Out of the total number of registered vehicles, personal transport vehicles constituted 78.5% of the vehicle population<sup>9</sup>. The drastic increase in the number of vehicles has resulted in significant increase in the emission load of various pollutants<sup>10</sup>, which contaminate the atmosphere and become injurious to human beings and the comfortable enjoyment of life<sup>11</sup>. As a result, the capacity of the atmosphere to dilute the pollutants gets overburdened, leading to air pollution<sup>12</sup>. In areas of high vehicle density, temperature inversion conditions also results in

<sup>7</sup> *India Development Report, 1999-2000*.

<sup>8</sup> *Handbook on Transport Statistics in India, supra*, n.3 at p.10. In Delhi, Automobiles account for 64 per cent of the air pollution. As on March 31, 1982, Delhi had a total number of 5,92,584 vehicles of which 65% were two-wheelers, 3.5% were three-wheelers, 25% cars, jeeps and other medium size vehicles and 1.5% were buses and the remaining 7% were goods carriers. However, in 1999 the vehicular population rose to a whopping figure of 13.5 lakhs, which means that within about 8 years there has been an increase of about 8 lakhs of vehicles in Delhi which would work out to an addition of about 1 lakh every year. Two wheelers and three wheelers contribute 60 per cent of the total emission of carbon monoxide (CO) and about 80 per cent of total hydrocarbons. see also, Report of the Monitoring Committee on ambient and automotive emission levels set up for examining the impact of surface transport on air environment of Delhi, as cited in *M.C. Mehta v. Union of India*, (1991) 2 S.C.C. 353 at pp.356-357.

<sup>9</sup> In Delhi, out of the daily pollution load, the share of the transport sector has increased from 64% in 1991 to 67% in 1997 and during this period the daily pollution load increased from 1450 tonnes to 3000 metric tonnes. For details, see the *White Paper on Pollution in Delhi with An Action Plan*, Ministry of Environment and Forest, Government of India, New Delhi(1998) at p.67.

<sup>10</sup> It is also estimated that carbon monoxide and hydro carbons account for 64% and 23%, respectively, of the total emission load due to vehicles in 12 metropolitan cities. For further information, see "Air Pollution and Its Control", 2(1)*Parivesh Newsletter*, Central Pollution Control Board, New Delhi (June, 1995), p.20.

<sup>11</sup> Bidhi Chand, "Transport Pollution" in Sapru, R.K. and Bharadwaj, S (Eds.), *Air Pollution and Management in The New Environmental Age*, Ashish Publishing House, Delhi( 2006), p.207.

<sup>12</sup> Azad, S.A.K., "Automobile Pollution, Environment and Law", 30 *Indian Bar Review* (2003)303; See also Henry C. Perkins, *Air Pollution*, McGrill Kogakuisha Ltd., Tokyo (1974), p.68.

photochemical smog causing ill-health effects<sup>13</sup>. Among many factors that contribute to air pollution, for these reasons, vehicular pollution is regarded as the primary source and that its impact is widespread.

It is found that slow speed of vehicles five to ten Km/ph during peak hours will increase the emission rate of atmospheric pollution. Vehicular movement also contributes to the total emission load by formation of roadside air borne dust. The level of air quality assessed at traffic intersections in the country reveals alarming rate of respirable particulate matter<sup>14</sup>. Similarly, carbon monoxide levels also remained higher than the prescribed permissible limit in these areas<sup>15</sup>. Older vehicles are predominant in vehicle vintage. There is predominance of two stroke two wheelers, adulteration of fuel and fuel products, improper traffic management system and chaotic road conditions. There is absence of effective mass rapid transport system and intra-city railway networks. High population exodus to urban centers also aggravates the problem. These are the general characteristic features of traffic intersections of any city in India. It is true that advanced manufacturing techniques have considerably reduced emission from automobiles. However, the benefits are upset by the rapid increase in the number of vehicles.

### **State of Kerala as an Example**

The State of Environment Report, Kerala 2005<sup>16</sup> has identified vehicles as mainly responsible for the deterioration of air quality in Kerala. The ever increasing use of fossil fuel in transportation is also found as adversely affecting air quality. It is estimated that there are 25 lakh licensed vehicles on Kerala roads, whereas the length of the

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<sup>13</sup> A Joint Study by the National Cancer Institute and the University of Calcutta has revealed that smog or grossly polluted air of megapolis has caused ailments among school children such as adverse lung reactions and genetic abnormalities in their exposed tissues.

<sup>14</sup> Air quality monitoring conducted at different traffic intersections in Delhi revealed that the respirable particulate matter was excessively high at all the monitoring locations.

<sup>15</sup> *Annual Report -1999-2000*, Ministry of Environment and Forests, Government of India, New Delhi, available at <http://envfor.nic.in/report>, June 2000, accessed on February 10, 2009.

<sup>16</sup> Published by the Kerala State Council for Science, Technology and Environment.



carriage way is 21,347 Km. Kerala recorded an astonishing increase of 2000 per cent in the number of vehicles during the 1975-2002 period. The number of vehicles on Kerala roads rose from 1,19,720 in 1975 to 23,15,372 in 2002. At the same time, the rate of increase in road length was just 44 per cent during this period. The road length only reached 21,347 Km. from 14,870 of 1975. Kochi, Thiruvananthapuram and Kozhikode account for nearly 40 per cent of the vehicles registered in the State. It is found that personal transport vehicles constitute 72 per cent of the vehicle population in the State. Scooters and motorcycles accounted for 77 per cent of the personal transport vehicles. According to the official figures, there are 4,46,959 vehicles in Kochi, followed by 3,50,455 in Thiruvananthapuram and 2,07,117 in Kozhikode. Wayanad has the least number of vehicle population, i.e. 33,550. The Report highlights that the ambient air quality of Ernakulam has been adversely affected by the presence of maximum number of vehicles.

#### **Poor Maintenance of Roads and Vehicles: Another Major Reason**

The problem of air pollution from motor vehicles is posing a serious challenge to the administration, town planners and the enforcement agencies. Among the several causes, improper maintenance of vehicles is a major cause for the alarming rate of pollutant emissions<sup>17</sup>. Very often, it is seen that vehicles are not properly checked by the supervisors on receipt of driver's complaint. The increase in transport demand and the number of vehicles is not balanced equitably against the increase in maintenance facilities. The vehicles use to emit heavy black smoke due to lack of proper maintenance. The poor upkeep of roads results in poor conditions of vehicles leading to high rate of pollutant emission. The anxiety for laying more and more roads has resulted in the accumulation of the deficiencies in the existing network like missing links, missing major

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<sup>17</sup> "Vehicular Pollution in India; Let Polluters Pay", available at [www.ignon.ac.in](http://www.ignon.ac.in), accessed on March 2, 2008.

bridges and absence of sufficient strength of road crust to bear the increasing traffic. Large proportions of over aged vehicles, extensive overloading and increasing traffic jams are also responsible for automobile pollution in India. The vehicles are not generally replaced on their due dates and they continue to be operated. An over aged vehicle need more maintenance and also releases more smoke and noise. The overloading due to the nature of transport demand and frequent traffic jams in cities, have multiplied the problem of automobile pollution, also leading to public annoyance and nuisance.

### **Health Hazards of Vehicular Pollution**

The worst thing about vehicular pollution is that it cannot be avoided as the vehicular emissions are emitted at the near-ground level where one breathes<sup>18</sup>. Particulates emitted by motor vehicles pose serious hazard to the health of human beings, animals and plants and also to the longevity of structures and properties. In the process of combustion of fuel, vehicles discharge into air pollutants such as carbon monoxide, unburnt hydrocarbon, oxides of sulphur, inorganic lead, and particulate matters which have deleterious effects on human beings. These gaseous components cause burning of eye, nose and throat irritation<sup>19</sup>. Chronic pulmonary diseases like bronchitis and asthma are aggravated due to vehicular pollution<sup>20</sup>. Carbon monoxide found in the smoke is toxic due to its ability to react with haemoglobin in blood which in turn forms carbon haemoglobin. Consequently, it results in reduction of the oxygen carrying capacity of blood and thereby causes injury to vital organs in the body. It also increases stress on those suffering from cardiovascular and pulmonary diseases. Policemen, traders, shop

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<sup>18</sup> According to a World Bank Study, the cost of ambient air pollution in Delhi alone is US \$ 100-400 million. For details, see Agarwal, A. *et al.*, *Slow Murder: The Deadly Story of Vehicular Pollution in India*, Centre for Science and Environment, New Delhi(1996); See also, Carter Brandon and Kirsten Homman, *The Cost of Inaction: Valuing the Economy-Wide Cost of Environmental Degradation in India*, World Bank(1995), p.15.

<sup>19</sup> Sangal, P.S., "Air Pollution by Motor Vehicles-A Strategy for Control" in Gerg Biswal and Tiwana(Eds.), *Environmental Pollution and Control*, p.50.

<sup>20</sup> Khushoo, T.N., *supra*, n.2 at p.43.

keepers and others who stay for long periods of time along traffic areas are generally affected. Dizziness, headache, reduced visibility and loss of consciousness are the main symptoms of carbon monoxide<sup>21</sup>. Certain heavy metals like lead, emitted by the motor vehicles may enter the human body through lungs and cause poisoning<sup>22</sup>. The main source of lead in urban atmosphere is the vehicles. Inorganic lead acts as an agent of health disaster and it causes various human health disorders, abnormalities, gastrointestinal damage, liver and kidney damage and infertility. It also affects the mental health of children.

### **Legal Control of Vehicular Pollution in India**

The maiden legislative attempt to control vehicular pollution in India can be found in the Air Act, 1981. This was followed by the Motor Vehicles Act, 1988 and the rules made thereunder.

#### **i) Air (Prevention and Control of Pollution) Act, 1981**

In India, pollution due to vehicles is primarily intended to be controlled through changes in the design and installation of suitable components right at the time of manufacture of the vehicle<sup>23</sup>. Under Section 20 of the Air Act, State Government is under an obligation to give such instructions to the authorities in charge of registration of motor vehicles as are necessary to ensure compliance with the standards fixed by State Pollution Control Board regarding emission of air pollutants from automobiles. The above provision is intended to ensure that no vehicle which does not meet such requirements shall be on the road. In relatively more high polluted and high traffic intensity regions, pollution due to vehicles can be controlled by

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<sup>21</sup> Chhabra, K.K., "Environment and its Impact on Human Life" in Anju Kohli *et al.*(Eds.), *Management of Environmental Pollution*, Book Enclave, Jaipur(2003), p.78.

<sup>22</sup> Gordon Mc Granahan *et al.*, "Air Pollution and Health in Rapidly Developing Countries", *Earthscan* (2005), pp 35-56.

<sup>23</sup> Air (Prevention and Control of Pollution) Act,1981, S.20.

restricting the use of certain types of fuel<sup>24</sup>. Petrol mixed with lead could be banned or in extreme cases a ban on petrol driven or diesel driven vehicles can be imposed within certain area. The Air Act does not envisage compliance of emission standards by an individual automobile or grant of consent or prosecution under the Act in case particular automobile is not meeting the standards except those matters generally covered under Section 22 where essentially all types of emissions are covered<sup>25</sup>. However, the Act authorizes Government in consultation with the Board to instruct the transport authorities for developing expertise by making vehicular pollution survey covering all ramifications.

### **ii) Motor Vehicles Act, 1988**

The Motor Vehicles Act, 1988 prescribes measures for upgrading the quality of motor vehicles and abatement of vehicular pollution. It also contains provisions for emission checking, prosecution steps and action for cancellation of registration as methods to regulate and control air pollution. Under the Act, the critical components of motor vehicles shall conform to the prescribed standards and specifications<sup>26</sup>. Certificate of registration for non-transport vehicles is to be renewed only after the issuance of fitness certificate by the competent authority<sup>27</sup>. The authorized testing stations are to be equipped with modern equipments with a view to ensuring quality of maintenance of motor vehicles and they are also empowered to issue fitness certificate, in addition to the office of transport department<sup>28</sup>. Compulsory inspection of vehicles relating to mechanical defects is required before registration<sup>29</sup>. The authority has power to prescribe the age limit of motor vehicles to eliminate

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<sup>24</sup> *Id.* S.19(3).

<sup>25</sup> Trivedi, P.R. *Encyclopedia of Ecology and Environment*, Vol.6, APH Publishing Corporation, New Delhi(1996), p.227.

<sup>26</sup> Motor Vehicles Act, 1988, S.110.

<sup>27</sup> *Id.* S. 42.

<sup>28</sup> *Id.* S.56.

<sup>29</sup> *Id.* S. 44.

vehicles causing air and noise pollutions<sup>30</sup>. The law further prescribes that the periodicity of fitness of transport vehicles should be uniform through out the country<sup>31</sup>. Quite apart from that, the Central Government reserves the rule making power regarding safety belt, inbuilt safety arrangements, standards of components, standards of emissions of air pollutants and noise and loaded goods vehicles to off-roads the excess goods before proceeding further<sup>32</sup>. The State Government is empowered to frame rules for the upkeep of motor vehicles in its jurisdiction<sup>33</sup>.

### **iii) Motor Vehicles Rules, 1989**

Rules have been incorporated in the Central Motor Vehicles Rules, 1989, taking cue from Section 20 of the Air(Prevention and Control of Pollution) Act, 1981. Rule 115 of the Rules provides for fixation of standards for emission of smoke, vapour etc. from motor vehicles and directs that “every motor vehicle shall be manufactured and maintained in such condition and shall be so driven that smoke, visible vapour, grit, sparks, ashes, cinders or oily substance do not emit therefrom”. Rule 115(2) of the Rules says that on and from the date of commencement of the Rule, every motor vehicle shall comply with the standards laid down therein.

Rule 116 of the Rules provides for adoption of tests for smoke as well as carbon monoxide level emitted from motor vehicles. It also empowers Officers not below the rank of Sub Inspector of Police or Inspectors of motor vehicles to take action against drivers of those vehicles which emit smoke and/or other substances in excess of the emission limit<sup>34</sup>.

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<sup>30</sup> *Id.* S. 59.

<sup>31</sup> *Id.* S. 56.

<sup>32</sup> *Id.* S. 110.

<sup>33</sup> Motor Vehicles Act, 1939, Ss. 20, 21(J), 41, 70, 90.

<sup>34</sup> Central Motor Vehicles Rules, 1989, R.116 reads:

“ 116. *Test for smoke emission level and carbon monoxide level for motor vehicles*-(1) officer not below the rank of a Sub Inspector of Police or an Inspector of motor vehicles, who has reason to

## **Administrative Measures to Control Vehicular Pollution**

Time and again, Government has been taking various measures to mitigate emissions from transport sector. However, much of the concern went focused in laying emission norms, fuel quality, inspection and maintenance, and towards phasing out the old vehicles.

### **1. Stringent Emission Norms**

The mass emission standards for new vehicles had been first notified by the Government of India in the year 1991. Stringent emission norms along with fuel quality specifications were also laid down in 1996 and 2000. Euro-1 norms were made applicable in the country from 1 April 2000 and Euro-II norms from 1 April 2005 all over India<sup>35</sup>.

### **2. Cleaner Fuel Quality**

To conform to the stringent emission norms, it is imperative that both fuel specification and engine technologies go hand in hand. Fuel quality specifications have been laid down by the BIS for gasoline and diesel for the period 2000-2005 for Delhi and beyond 2005 for the country<sup>36</sup>. Considering the increased usage of diesel in

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believe that a motor vehicle is, by virtue of the smoke emitted from it, or other pollutants like carbon monoxide emitted from it, is likely to cause environmental pollution endangering the health or safety of any other user of the road or the public, may direct the driver or any person in charge of the vehicle to submit the vehicle for undergoing a test to measure the standard of black smoke or the standard of any of the other pollutants.

- (2) The driver or any other person in charge of the vehicle shall, upon demand by any officer referred to in sub-rule (1) submit the vehicle for testing for the purpose of measuring the standard of smoke or the levels of other pollutants or both.
- (3) The measurement of standard of smoke shall be done with a smoke meter of a type approved by the State Government and the measurement of other pollutants like carbon monoxide, shall be done with instruments of a type approved by the State Government”.

<sup>35</sup> In September 2001, a few weeks before the extended deadline, the Government appointed a Committee headed by the Council for Scientific and Industrial Research (CSIR) to draft an ‘Auto Fuel Policy’ for India, which embraced economic rather than command and control instruments, and recommended setting stringent vehicular emissions, including Euro-IV norms by 2010, but shied away from specifying the type of fuel or technology to be used. For details, see Executive Summary, *Auto Fuel Policy Report, 2002*. Available at: [http://petroleumnic.in/afp\\_con.htm](http://petroleumnic.in/afp_con.htm), accessed on February 20, 2009.

<sup>36</sup> Gasoline Fuels-Specification, BIS, New Delhi and Diesel Fuel –Specification, BIS, New Delhi.

the country, it was felt expedient and necessary to reduce its sulphur content. For gasoline, lead has been phased out in the entire country with effect from February 1, 2000. Similarly, steps are on the anvil to reduce the benzene content. It has been decided that gasoline with 1% benzene is to be supplied to the whole of the NCT region by 1 October, 2000 and later on the above prescription is to be extended to other parts of the country<sup>37</sup>.

### 3. Inspection and Maintenance

The first and most important regulatory step at the governmental level towards emission control for the large in-use fleet of vehicles was the formulation of an inspection and maintenance system. Estimates show that it is possible to reduce 30-40% pollution loads generated by vehicles through proper periodical inspections and maintenance of vehicles<sup>38</sup>. Inspection and maintenance measures for in-use vehicles are essential compliment to emission standards for new vehicles. But in India, the existing mechanism of inspections and maintenance is inadequate and still remains in the rudimentary form. Thus, there is a great need to conduct effective periodic inspections and maintenance programmes at the governmental level, to serve as an effective channel of regulation on fuel quality and compliance of emission standards<sup>39</sup>.

### 4. Other Measures

There were other measures formulated at administrative level for ensuring clean fuel quality<sup>40</sup>. As part of such attempt, on 1<sup>st</sup> April

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<sup>37</sup> Note, "Air Quality Status and Trends in India", National Ambient Air Quality Monitoring Series: NAAQMS/14/1999-2000, Central Pollution Control Board, New Delhi.

<sup>38</sup> *Ibid.*

<sup>39</sup> "Automobile Emission Controls", available at [www.wikipedia.org](http://www.wikipedia.org), accessed on 12-07-2008.

<sup>40</sup> However, what was lacking is that fuel policies were not accompanied by other policies that ensure that use of public transport did not decrease. The disruptions caused, increased cost of operations, increased fares in public transport appear to have led to shift from bus use to pooled car use and private vans for school children and others. See, D. Mohan, "Transportation Research and Injury Prevention Programme", IIT, Delhi; Mohan, D., "CNG-A Big Mistake?" *Economic Times*, 16 April, 2002.

1999, the specifications for 2T oil became effective. In order to prevent the use of 2T oil in excess of the required quantity, premixed 2T oil dispensers have been installed in all gasoline stations of Delhi. Similarly, measures were taken to impose ban on commercial vehicles of more than 15 years old, ban the registration of new auto-rickshaws with front engine, replacement of all pre-1999 autos and taxis with new vehicles using clean fuels and for the removal of 8 year old buses unless they use CNG or some other clean fuel<sup>41</sup>.

### **Prevailing Issues in Administrative Measures**

There are certain issues confronted by the Government in their administrative attempt to curb the menace of vehicular pollution. These issues make their role meaningless or rather obstruct the diligent performance of their functions. The major noticeable issues exist in the form of policy gaps and information gaps.

#### **(a) Policy Gaps**

There is a need to strengthen prevention based environmental policy. Issues such as cleaner technology and land use planning incorporating environmental considerations need to be given priority. At present there is no system to assess properly the effectiveness and impact of various policy measures. There is notable absence of separate transport policy at national and state levels. Further, there is no well defined policy to promote private participation in public transport. Added to this, there is also lack of co-ordination between various governmental agencies to improve transport services.

#### **(b) Knowledge/Information/Data Gaps**

It is a glaring fact that at present, there is clear absence of monitoring at hotspots/traffic intersections, which points to the need

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<sup>41</sup>Note, "Auto Emissions", 6(1) *Parivesh Newsletter*, Central Pollution Control Board, New Delhi (1999).



for strengthening monitoring works at hotspots/traffic intersections by establishing new stations and by increasing frequency of monitoring<sup>42</sup>. There is also the need for monitoring additional air quality parameters such as ozone, benzene, dry deposition of sulphates and nitrates. For this, private and community participation is also necessary. That apart, emission factor development should be followed for various activities and that emission load mapping should be done at regular intervals in all urban areas. However, unfortunately these factors are lost sight of at the Governmental level. It is also the long felt need that to strengthen the Governmental initiative, information should be made available on the number of vehicles on road, vehicle usage etc.

### **Judicial Responses: Activist Role of the Supreme Court**

Judiciary's attempt to regulate and control vehicular pollution in India is seen manifested in the approach it has taken in public interest litigations<sup>43</sup> that exposed the serious health hazards arising from vehicular pollution. The response of the court in this arena was characterized by a collaborative approach involving procedural flexibility, interim orders envisaging judicial monitoring and forward-looking relief.

### **Mehta Cases: Opening of a new Era of Judicial Activism**

*Mehta cases*<sup>44</sup> are known in the legal landscape for having pioneered the legal battle to protect air environment from degradation

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<sup>42</sup> Jagdish Gandhi, P., "Automobiles and Air Pollution- An Overview", in Juvilesh Kumar Singh (Ed.), *Environmental Economics and Development*, Deep & Deep Publications Pvt. Ltd., New Delhi (2004).

<sup>43</sup> All national and international jurisdictions also point to the need for broader access to justice. For details, see Christian Schall, "PIL Concerning Environmental Matters before Human Rights Courts: A Promising Future Concept?" 20(3) *Journal of Environmental Law* (2008)417; Australian Law Reform Commission Report, "Costs Shifting-Who Pays for Litigation" A.L.R.C.(1995)75; Australian Law Reforms Commission Report, "Managing Justice: A Review of the Federal Civil Justice System" A.L.R.C.(2000)89.

<sup>44</sup> Mr. M.C.Mehta, the famous public interest lawyer and Chairman of the Environment Protection Cell, Delhi has filed series of cases before the Supreme Court aiming at containing vehicular pollution in Delhi and some of which are unreported. For convenience of discussion, the leading *Mehta cases* are chronologically arranged and referred to as *Mehta-I, II, III, IV* etc.

on account of vehicular pollution. In *M.C.Mehta-I*<sup>45</sup>, a public interest litigation was filed in the Supreme Court against the pollution in Delhi<sup>46</sup> caused by increasing number of petrol and diesel driven vehicles. The Supreme Court directed the Delhi Administration to furnish a complete list of prosecution launched against the heavy vehicles, for causing pollution by infringement of various requirements of law. It was also directed to furnish particulars of the vehicles, registration of which was suspended and to further indicate the follow-up action taken after suspension<sup>47</sup>.

### **Mehta II—A Step Forward**

A step forward to combat the growing menace of vehicular pollution of the city of Delhi was seen projected in the approach adopted by the Supreme Court again in *Mehta-II case*<sup>48</sup>. In this case, the petitioner<sup>49</sup> drew the attention of the Court to the problem of air pollution caused by automobiles and its serious health impacts, particularly on children and the chaotic traffic conditions in Delhi, and their impact on the bodily integrity of the citizens of Delhi. The chief argument advanced in the case was that the existing environmental laws obliged the government to take steps to reduce Delhi's air pollution in the interest of public health. The Court was asked to regulate the air pollution caused by automobiles in the area. The Court realized the necessity to pay immediate attention to the issue and found that "present norms for motor vehicle exhausts are

<sup>45</sup> *M.C.Mehta. v. Union of India*, (1991) 2 S.C.C 137.

<sup>46</sup> About 2,000 metric tons of pollutants are released into the atmosphere everyday in Delhi, with vehicular pollution accounting for 64% of the total pollution load. See, *Pollution Statistics, 1993-94*, Central Pollution Control Board, Delhi(1995).

<sup>47</sup> The Court also suggested to the Ministry of Environment that it should carry out experiments with the aid of the device brought out by the National Environment Engineering Research Institute (NEERI), Nagpur, which would reduce the pollution content. If the device is found effective, steps should be taken to ensure that every vehicle manufactured after a particular date, is to have such device as an inbuilt mechanism to reduce the air pollution.

<sup>48</sup> *M.C. Mehta v. Union of India*,(1991) 2 S.C.C.353, per Ranganath Misra, C.J. and M.H.Kania & Kuldeep Singh, JJ.

<sup>49</sup> The petitioner filed this case with the support of NEERI amidst reports that Delhi had the dubious distinction of being the fourth most polluted city in the world.

not adequate so as to achieve the necessary reductions in a rapid space of time”.

The Court pointed out that despite the legal and other restrictions mentioned above, which hamper the towns and cities involved in pursuing effective policies aimed at limiting motor vehicle exhausts, some interesting strategies have been thought of which have either led to improvements in themselves or at least stimulated attitudes towards environmental policies<sup>50</sup>. The Court, therefore, constituted a *High Power Committee* with a retired Supreme Court Judge<sup>51</sup> as Chairman and by including the petitioner also as a member, to make assessment of the technologies available for vehicular pollution control in the world and also the status of technologies available in India for controlling vehicular pollution, to look at the low cost alternatives for operating vehicles at reduced pollution levels in the metropolitan cities of India, to examine the feasibility of measures to reduce/eliminate pollution from motor vehicles both on short-term and long-term basis and to make specific recommendations on the administrative/legal regulations required for implementing the recommendations. The Committee was directed to furnish report once in two months as to the steps taken in the matter and it was further made known that the writ petition shall be deemed to be pending for the purpose of monitoring.

Thus, it can be seen that *Mehta-II* is one of the first fine attempt of the apex Court to embark upon a process of monitoring in relation to vehicular pollution and the judicial dynamism exhibited by the Court went to the extent of holding, even while disposing of the case, that for the purpose of monitoring, the writ petition will be deemed to be pending, which was certainly an attempt to compel the

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<sup>50</sup> Court referred to the relative position in Munich and Berlin which offered positive stimulus for the purchase of vehicles fitted with catalytic converters.

<sup>51</sup> Justice Saikia.

authorities to take honest efforts for implementation of the directions or in the alternative face stern action for non-compliance<sup>52</sup>.

In *Mehta-III*<sup>53</sup> which is also known as *Concert Yanni case*, the Supreme Court was considering the environmental impact on Taj Mahal due to movement of large number of vehicles in the vicinity during a concert programme called “Yani” which involved, *inter alia*, movement of large number of visitors and vehicles in the 500m zone around the Taj Mahal<sup>54</sup>. The Court approved the recommendations of the Monitoring Committee which placed severe restrictions on the movement of polluting vehicles in the area and issued directions to the authorities for its due implementation<sup>55</sup>.

Declining air quality of Delhi arising from vehicular pollution and the chaotic traffic conditions once again drew the attention of the Apex Court in *M.C. Mehta-IV*<sup>56</sup>. The Court recalled that keeping in view the mandate of Articles 47 and 48A of the Constitution of India, it had issued directions from time to time with a view to tackling the problem arising out of chaotic traffic conditions and vehicular pollution in Delhi. Noting that the directions issued by the Court were not complied with by the authorities still, the Court cautioned and expressed its anguish in the following words:

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<sup>52</sup> The decision is criticized for having restricted the growth of a responsible and independent bureaucracy. See Divan, S., “A Mistake of Judgment”, *Down to Earth*, 30 April 1992, p.51. Whatever be the legal debate, it deserves to be noted that people in Delhi could no longer accept ‘billowing black smoke’, a frequent sight, arising from vehicular emissions.

<sup>53</sup> *M.C. Mehta v. Union of India*, (1998) 5 S.C.C. 720; See also *M.C. Mehta v. Union of India*, (1998) 9 S.C.C. 93.

<sup>54</sup> In this case the Committee constituted to monitor the environmental impact on Taj Mahal due to the *Concert Yanni*, recommended that necessary steps should be taken to regulate the vehicular movement in the 500m zone around the Taj. For long term traffic planning of the area, it was recommended that all the tourist buses/cars/taxis should be parked at the Agra Bus stand, from where the shuttle service for mass transportation using non-polluting vehicles should be introduced. Movement of polluting vehicles should be prohibited and only non-pollution vehicles should be allowed in 500m. zone.

<sup>55</sup> Taking similar view, in *Ajay Singh Rawat v. Union of India* (1995) 3 S.C.C.266, the Supreme Court directed that the vehicular traffic on the Mall, Nainital has to be reduced and the plying of heavy vehicles should be stopped so that Nainital could regain unsoiled beauty and attract tourists. (per A.M.Ahmadi, C.J. and Hansania, Sen, JJ.)

<sup>56</sup> *M.C. Mehta v. Union of India*, (1998) 6 S.C.C.60. The Bench consisted of Dr.A.S.Anand, B.N.Kirpal and V.N.Khare, JJ.

“ When this Court gave those directions it treated it as a legal issue and proceeded to examine the impact of the right flowing from Article 21 of the Constitution of India vis-à-vis decline in environmental quality. Law casts an obligation on the State to improve public health and protect and improve the environment...”<sup>57</sup>

The Court was critical of the attitude of the Delhi Administration and Union of India for taking the plea of lack of manpower to deal with the growing menace of chaotic traffic and decline in the environmental quality. To ensure compliance with the directions, being an obligation of the State<sup>58</sup>, the Court considered the desirability of appointing Court Officers to assist the administration to ensure compliance of the court directions, as a supplementary measure for augmenting the efforts of the administration to deal with the acute problem<sup>59</sup>. The Court also expressed its dissatisfaction towards the non-evolution of policy to tackle the problem of vehicular pollution<sup>60</sup>.

*Mehta-V*<sup>61</sup> witnessed the changing role assumed by the court as constitutional governors to meet the problem of vehicular pollution. The case highlighted once again the Delhi pollution issue which compelled the Supreme Court to take certain steps and to implement the same within a time frame<sup>62</sup>. Those steps include restrictions on plying of 15 years old commercial vehicles, restrictions on plying of goods vehicles during the day time, to undertake expansion of

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<sup>57</sup> *Id.*, p.61.

<sup>58</sup> Article 144 of the Constitution provides: “All authorities, civil and judicial, in the territory of India shall, act in aid of the Supreme Court”.

<sup>59</sup> Counsel for the parties were directed to give a list of persons from every colony/area in each of the 9 Police Districts of Delhi for being considered for appointment as court officers entrusted with the task. The Court also directed the Environment Pollution (Prevention and Control) Authority for the National Capital Region (Bhure Lal Committee) to submit report on the action taken for controlling vehicular pollution and further directed the Ministry of Petroleum and Surface Transport to disclose the steps taken for supply of lead-free petrol and the use of catalytic converter on the new and existing vehicles so as to use lead-free petrol throughout the country.

<sup>60</sup> *Supra*, n. 56 at p.63.

<sup>61</sup> *M.C.Mehta v. Union of India*,(1998) 6 S.C.C.63.

<sup>62</sup> The directions were issued taking into account of the fact that in the White Paper published by the Government of India, it was stated that vehicular pollution contributes 70% of the air pollution as compared to 20% in 1970.

premixed oil dispensers and to enforce the ban on the supply of loose 2T oils at petrol stations and service garages. The Court also ordered implementation of the measures proposed by Shri Bhure Lal Committee within the time frame fixed<sup>63</sup>. The directions issued by the Court were essentially in the nature of administrative measures. The Court also cautioned all concerned that failure to abide by any of the aforesaid directions would invite action under the Contempt of Courts Act, 1971 against the defaulters<sup>64</sup>.

However, when it was brought to the notice of the Court by the Delhi Administration that phasing out and banning all commercial vehicles which are more than 15 years' old by 02-10-1998 would lead to great hardships to the owners of those vehicles in particular and to the general public who makes use of those vehicles, the Court relaxed the rigour of the earlier order permitting the Administration to phase out all such vehicles gradually to ease the pollution level in the city<sup>65</sup>. The Court granted extension of time for phasing out old commercial/transport vehicles as a measure to mitigate the hardships caused to the vehicle owners and the general public, even while remaining bold in its stand to control chaotic urban traffic conditions and vehicular pollution. The Court became more practical and realistic in its approach than its earlier position.

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<sup>63</sup> They included augmentation of public transport/stage carriage to 10,000 buses; elimination of leaded petrol from NCT Delhi; supply of only premix petrol in all petrol-filling stations to two-stroke engine vehicles; replacement of all pre-1990 autos and taxis with new vehicles on clean fuels; financial incentives for replacement of all post-1990 autos and taxis with new vehicles on clean fuels; no eight-year old buses to ply except on CNG or other clean fuels; entire city bus fleet to be steadily converted to single-fuel mode on CNG; new ISBTs to be built at entry points in North and South-West to avoid pollution due to entry of inter-State buses; GAIL to expedite and expand from 9 to 80 CNG supply outlets; two independent fuel-testing labs to be established; automated inspection and maintenance facilities to be set up for commercial vehicles in the first phase; immediate comprehensive I/M programme to be started by transport department and private sector; CPCB/DPCC to set up new stations and strengthen existing air-quality monitoring stations for critical pollutants. See, *supra*, n.61 at p.65; Saikia Committee, *4th Bi-Monthly Report, 1991*.

<sup>64</sup> *Id.*, p.66.

<sup>65</sup> *M.C. Mehta v. Union of India*, (1998) 8 S.C.C. 206.

## Quality Control in Fuel and Miscellaneous Measures

*M.C. Mehta-VI*<sup>66</sup> evidences the role played by the apex Court towards ensuring quality control in petrol and diesel. In this case, the Court was confronted with the question of supply of lead-free petrol and reduction of sulphur content in diesel. As a measure to abate the hazards arising from lead component in petrol and sulphur content in diesel, the Court approved the three-phased programme of action for introduction of unleaded petrol in the country and use of four wheelers fitted with catalytic converters. To deal with the issue, Court even suggested for enactment of supportive rule or legislation for taking action against the driver/owner of the vehicle found without a catalytic converter and stressed on the necessity to warn the public against the removal of inbuilt catalytic converters from vehicles through awareness programmes by the use of media, television etc. As regards vehicles run on diesel, the Court also shared the view of the Administration that sulphur content reduction has to be observed for reducing it to 0.5%. At a later stage, the Court also constituted an agency for conducting random inspection regarding the quality of petrol and diesel available at the petrol pumps, oil depots and tanker lorries<sup>67</sup>. It also directed the Governments to check by suitable methods the quality of diesel in the vehicles which are using diesel to ensure that it is with 0.05% sulphur content and directed to take strict action against the defaulters including cancellation of their licence/permits<sup>68</sup>. Still further, it also directed the Environment Pollution (Prevention and Control) Authority (Bhure Lal Committee) to examine the possibility of use of LPG as an alternate fuel, and if feasible, a plan for its introduction; possibility of steps in the short term to contain the adulteration of fuel by use of kerosene or by any

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<sup>66</sup> *M.C. Mehta v. Union of India*, (1998) 8 S.C.C. 648.

<sup>67</sup> *M.C. Mehta v. Union of India*, (2003) 10 S.C.C.564, per B.N.Kirpal, V.N.Khare and Ashok Bhan, JJ.

<sup>68</sup> *M.C. Mehta v. Union of India*, (2003) 10 S.C.C. 567.

other adulterant; time frame for improved diesel and for moving to Euro-III norms<sup>69</sup>.

In *Mehta-VII*<sup>70</sup>, also referred to as *Delhi Transport Department (Re)*, the Supreme Court while showing its deep concern for the air pollution in Delhi, held again that “precautionary principle” which is a part of the concept of the “sustainable development”, has to be followed by the State Government in controlling air pollution. The Court further reminded that State Government is under a constitutional obligation to control and if necessary to anticipate the causes of pollution and curb the same. The Court expressed the view that restrictions on plying of taxis, three wheelers and other vehicles in the city may be necessary in public interest.

Control of vehicular pollution and protection of the environment is primarily the function of the executive. The legitimacy for judicial interference arises in situations of inaction on the part of the executive. The Court highlighted the legitimacy for judicial interference in *Mehta-VIII*<sup>71</sup> as follows:

“To control vehicular pollution and protect the environment is primarily the function of the executive. It is their obligation to device suitable measures and provide machinery for rigid enforcement of such measures as are necessary to curb the menace of chaotic traffic conditions and vehicular pollution with a view to ensure the welfare of the general public. The inaction on the part of the executive, however, impelled the Court to issue certain directions from time to time...”<sup>72</sup>

Proceeding on the above dimension, the Court in this case directed the Delhi and New Delhi Municipal Corporations as well as the Government, PWD and Transport Departments to take steps to ensure that bus-lanes are segregated and road markings are provided on all roads identified for the purpose by the police and transport

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<sup>69</sup> *M.C.Mehta v. Union of India*, (2003) 10 S.C.C. 570.

<sup>70</sup> (1998) 9 S.C.C. 250.

<sup>71</sup> (1999)1 S.C.C. 413.

<sup>72</sup> *Id.*, p.415, per A.S. Anand, C.J.



authorities. It also directed to take steps to construct bus-stops, markings printed and bus-bays built at appropriate places. It also gave series of directions for improving the traffic conditions<sup>73</sup>.

### **Diesel-Not a Safe Fuel**

The adverse health effects of diesel exhaust particles are more than that of the petrol exhaust<sup>74</sup>. Diesel emissions contain nitrogen oxide and respirable particulate matter<sup>75</sup>. This is brought to light by research studies as well<sup>76</sup>. The justification for alternate sources of fuel gains significance in this context and on consideration of the ill-effects of use of diesel as vehicle fuel.

In cities, private vehicles account for major portion of the vehicle population, majority of which are diesel vehicles. Considering the seriousness of the matter, the Supreme Court in *Mehta-IX*<sup>77</sup> issued directions mandating all private non-commercial vehicles to

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<sup>73</sup> They include, fitting of speed control devices in vehicles limiting the speed limit to 40km/ph, obligation to use the vehicle without offending public safety, buses to confine to the bus-lane, buses to halt only at bus stops designated within the marked area, vehicle to carry identity of the driver duly certified by the RTA, buses used by educational institutions to have drivers with a minimum of 5 years of driving experience of heavy vehicles and to be dressed in a distinctive uniform, etc.

<sup>74</sup> This has been aptly described by Central Pollution Control Board, which reads as follows: "The popularity of the diesel engine in heavy duty applications in trucking, railroad, marine transport, DG sets and construction industry is due to both its fuel efficiency and long service relative to the gasoline engine. Compared with gasoline engine, diesel emissions are lower in carbon monoxide, hydrocarbon and carbon dioxide, but higher in oxides of nitrogen and particulate matter. Diesel exhaust is a complex mixture of both particulate and gaseous phase. Diesel exhaust has particulate with mass median diameter of 0.05 to 1.00 micrometre, a size rendering them easily respirable and capable of depositing in the airways and alveoli. The particles consist of a carbonaceous core with a large surface area to which various hydrocarbons are absorbed, including carcinogenic polycyclic aromatic hydrocarbons and nitro—PAHs that have elicited the most concern with respect to human health. The gaseous phase contains various products of combustion and hydrocarbons including some of PAHs present in the particle phase. Once emitted, components of diesel exhaust undergo atmospheric transformation in ways that may be harmful to human health. For example, nitro-PAHs, created by the reaction of directly emitted PAHs with hydroxyl radicals in the atmosphere can be more potent mutagens and carcinogens and more bio-available than their precursors".

<sup>75</sup> Research data reveal that 90% of nitrogen oxide and respirable particulate matter from vehicle exhausts is due to diesel emissions. For details, see *Bhure Lal Committee Report, 1999*.

<sup>76</sup> A Study undertaken by a Swedish Consultancy, Ecotraffic(Peter Ahlvik and Ake Branberg) in 1999 shows that the cancer potency of diesel vehicles is two times more than that of petrol vehicles in India. But if only the most harmful of the exhaust emissions, i.e., particulate emission is considered, the carcinogenic effect of new diesel car is equivalent to 24 petrol cars and 84 new CNG cars on the road. See *Parivesh*, September, 2001, Central Pollution Control Board, New Delhi, as cited in *M.C. Mehta v. Union of India*, (2002) 4 S.C.C. 356 at p.369.

<sup>77</sup> *M.C. Mehta v. Union of India*, (1999) 6 S.C.C.12 at p.13.

conform to Euro norms within a time frame and that new vehicles are registered only if they conform to Euro norms and further that ban on diesel-driven taxis be strictly enforced. The Court once again expressed its concern about the effects of vehicular pollution on the health of citizens and the continuing increase in the pollution level in cities. Court emphatically stated that continuing decline in the quality of the environment shows a failure on the part of the authorities to perform their obligations under the constitutional scheme and the mandate of the Environment (Protection) Act, 1986<sup>78</sup>.

Criticisms have not obstructed the judicial path to provide solace to the common man to abate the public health hazard of vehicular pollution. The Court having found that there is a direct relationship between the quality of fuel and the level of pollution, issued directions for ensuring quality of fuel by reducing the proportion of toxic substance in fuel like sulphur and benzene. Accordingly, the Court directed the Ministry of Petroleum and Natural Gas to provide diesel and petrol with 0.05% sulphur content and petrol with 1% benzene content within a time frame in the national capital region<sup>79</sup>. The Court also called for report on the implementation of the measures mentioned in the White Paper on pollution in Delhi, namely, measures to ban registration of army disposal vehicles, government auctioned vehicles and commercial goods and passenger vehicles used beyond specified lifespan and ban alteration of vehicles by replacing petrol engines with diesel engines.

### **Towards Clean Fuel**

The Supreme Court in *M.C. Mehta-X*<sup>80</sup>, made yet another effort to check the rapid deterioration of air quality in Delhi. The Court while interpreting Section 3 of the Environment (Protection) Act 1986 and Article 21 of Indian Constitution opined that a blanket extension

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<sup>78</sup> The Environment (Protection) Act 1986, Ss. 3 & 5.

<sup>79</sup> *M.C. Mehta v. Union of India*, (2001) 3 S.C.C.767 at p.769.

<sup>80</sup> A.I.R 2001 S.C.1948, per A.S.Anand, C.J. and B.N.Kirpal and V.N.Khare, JJ.

of deadline cannot be given for conversion of CNG engine<sup>81</sup>, as that would amount to putting premium on the lapses and inaction of the administration and private transport operators. The Court expressed its displeasure by saying that orders of the court cannot be treated lightly. They are meant to be complied with in letter and spirit. However, in public interest and with a view to mitigating suffering of the commuter in general and the school children in particular, some exemptions were made. The Court granted time extension up to 31-03-2001 to schools, DTC, contract carriage operators, other bus operators and owners of commercial vehicles for which steps for conversion was taken<sup>82</sup>. It also passed a judgment in rem directing that buses operating in Delhi should not be allowed to ply after 31.03.2001 unless converted into CNG fuel mode<sup>83</sup>.

Regarding the use of ultra low sulphur diesel (ULSD) in the country which is being used in some developed countries, the Court directed the Bhurelal Committee to examine the issue and submit a report indicating which fuel is a "clean fuel" and does not cause pollution or injury to health. Court declared that its directions earlier given meant to govern the issue has an overriding effect over other statutes occupying the field, as the directions were issued to

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<sup>81</sup> In its earlier order, the Court had ordered the conversion of the entire city bus fleet to CNG by 31<sup>st</sup> March, 2001.

<sup>82</sup> CNG is not a complete solution to the problem. Notwithstanding the introduction of CNG programme in Delhi, there is a 21.3% increase in cases of lung disease, and more than 20% increase in asthma attacks. According to Mashelkar Committee Report, although a CNG vehicle emits 80% less particulate matter, 25% less nitrous oxides and 35% less hydrocarbons, the output of carbon monoxide, a precursor to green house gases, is over five times greater than that for diesel. And, a CNG vehicle driven for a mile emits 20% more green house gases than driving a comparable diesel vehicle for a mile. It concludes that from the perspective of global warming, the decision to move from diesel to CNG is a harmful one. Nevertheless, air quality data indicates an increase of 15% in the levels of NO<sub>2</sub> from 2002, which can be attributed in part to the introduction of CNG programme. For further information, see *Leaping Factor: Cleaning the Air in Asian Cities*, Centre for Science and Environment, New Delhi(2006).

<sup>83</sup> It was estimated that the cost of conversion from a diesel to CNG system is Rs.4.5 lakhs, excluding 8% local tax, see TK Rajalakshmi and V. Venkateswaran, "Commuter's Crisis", 18(8) *Frontline*, April 2001, pp.14-27. Although CNG is an inherently safe fuel, bulk/continuous releases from fuel systems can cause fire, and there is an increased likelihood of this occurring in converted and poorly maintained vehicles. In addition to this, since CNG vehicles are heavier, it attain higher temperatures and require more frequent gear changes than vehicles on conventional fuel and consequently it has worsened conditions for drivers, who suffer from musculo-skeletal, respiratory and neurological disorders. See "DTC drivers hit hard by CNG buses", *The Hindu*, 9 January, 2007.

safeguard people's right to health under Article 21. Moreover, the emission norms fixed by the Motor Vehicles Act for diesel vehicles are in addition to and not in derogation of the requirements of Environment (Protection) Act, 1986. For that reason, bus operators complying with the norms fixed by Motor Vehicles Act could not merely for that reason bypass the directions given in the matter by the Court.

This decision is a significant turning point towards protection of public health as it has categorically recognized that directions given by the Court to mitigate the hardships of vehicular pollution have legal sanction, as those directions are given for safeguarding the health of the people, a right provided and protected by Article 21 of the Constitution and therefore, it overrides provisions of every statute. Thus, the Court has articulated two important principles in the above case-(i) right of the public not to be exposed to the hazards of vehicular pollution by treating right to public health as part of the right under Article 21; (ii) orders issued by the Supreme Court for effectuating the right under Article 21 has an overriding effect over every statute. Thus, the Court has accorded supremacy to its directions issued to effectuate fundamental right under Article 21, over statutory legislation. This is an area wherein Supreme Court has utilized the opportunity to emerge as the watchdog of the Constitution and the protector of fundamental rights of the common man<sup>84</sup>. By such innovative approach, it has even eschewed the possibility of legislative interference to bypass judicial interdictions<sup>85</sup>. Though it may appear to be disturbing the theory of separation of

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<sup>84</sup>Justice Chandrachud in *State of Rajasthan v. Union of India*, (1977) 3 S.C.C. 592 at p.648 noted: "...it is an accepted fact of constitutional interpretation that the content of justiciability changes according to how the Judge's value preferences and respond to the multi-dimensional problems of the day...." The limits of the value preferences are largely self-imposed also.

<sup>85</sup> It is pointed out that the decision made court registry to be reduced to perform the duties of a 'Regional Transport Office'. It is also claimed by some that political, social and economic questions are decided as a matter of course by the Indian Supreme Court. See Gadbois, G.H. Jr., "The Supreme Court of India as a Political Institution", in Rajeev Dhavan *et al.*, (Ed.), *Judges and Judicial Power*, N.M.Tripathi, Bombay( 1985), 250 at p.257.

powers<sup>86</sup>, attempt has to be justified as permissible constitutional encroachment without distorting the source of judicial power. There have been some situations when the activism displayed by the court in arresting vehicular pollution was not seen positively by the Administration, enforcement agencies and the interested parties<sup>87</sup>.

### **Precautionary Approach Enforced as Divine Proclamations**

Judicial process of interpretation has gone to the extent of considering that Articles 39(e), 47 & 48A of the Constitution by themselves and collectively cast a duty on the State to secure the health of the people, improve public health and protect and improve the environment. It was due to the lack of effort on the part of the enforcement agencies, notwithstanding adequate laws being in place that the Supreme Court had been concerned with the problem of vehicular pollution. The quality of air was steadily decreasing and no effective steps were taken by the Administration to redress the malady which compelled the court to interfere in *Mehta-XI*<sup>88</sup> for determining priority to transport sector in allocating CNG.

In the above case, the Court was considering the desirability to give priority to transport sector including private vehicles for allocation of CNG. Taking a positive outlook in the matter the Court reiterated that orders and directions of the court cannot be nullified, modified or altered in any manner by administrative action. Taking

<sup>86</sup> It is pointed out that there is a persuasive distinction between principle that involves moral rights against the State and policy which involves utilitarian conclusions of public good. The former is the legislative domain of judges and the latter of the legislature and its agents. Therefore, judiciary should exercise caution while entering into policy making area. Dworkin, R., *Taking Rights Seriously*, Harvard University Press, Cambridge (1977), p.22.

<sup>87</sup> Concerned by the defiant attitude taken by the Delhi Administration in complying with the court order insisting CNG or other clean fuel mode, emotional response was made in the Supreme Court by K.N. Ravel, the then Additional Solicitor General appearing in the case. He said: "As a law officer of the country, I will no longer appear for the Government of Delhi which has decided to act contrary to the orders of the highest court of the land. I will, however, continue to represent the Union of India". See *M.C. Mehta v. Union of India*, (2001) 3 S.C.C.763 at p.765.

<sup>88</sup> *M.C. Mehta v. Union of India*, (2002) 4 S.C.C.356 at p.362. Justifying the necessity for interference, the Court in this case observed: "...The concern of the Supreme Court in passing various orders since 1986 has only been one; namely, protect the health of the people of Delhi. It is only with these objectives in mind that directions had been issued in an effort to persuade the governmental authorities to take such steps as would reduce the air pollution...."

the view that sustainable development is one of the underlying principles of environmental law, Court held that two essential features of such development are the precautionary principle and the polluter pays principle<sup>89</sup>. The Court applied the precautionary principle to curb vehicular pollution and held that permission to use vehicles has environmental implications and thus any 'auto policy' framed by the Government must, therefore, of necessity conform to the constitutional principle as well as overriding statutory duties cast upon the Government under the Environment (Protection) Act.

It was also held that the 'auto policy' must, therefore, focus upon measures to anticipate, prevent and attack the cause of environmental degradation in the field; in the absence of adequate information, lean in favour of environmental protection by refusing rather than permitting activities likely to be detrimental; adopt the 'precautionary principle' and thereby ensure that unless an activity is proved to be environmentally benign in real and practical terms, it is to be presumed to be environmentally harmful; make informed recommendations which balance the needs of transportation with the need to protect the environment and reverse the large-scale degradation that has resulted over the years, priority being given to the environment over economic issues<sup>90</sup>.

Court felt that the emission norms stipulated by the Government have failed to check air pollution, which has grown to dangerous levels across the country. Therefore, to recommend that the role of the Government be limited to specifying norms is a clear abdication of the constitutional and statutory duty cast upon the Government to protect and preserve the environment, and is in the

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<sup>89</sup> Also see *Vellore Citizens' Welfare Forum v. Union of India*, (1996) 5 S.C.C.647, per Kuldip Singh, Faizanuddin and K.Venkataswami, JJ. wherein the Court explained 'precautionary principle' as meaning that State Government and the statutory authorities must anticipate, prevent and attack the causes of environmental degradation; where there are threats of serious and irreversible damage, lack of scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation; and that the 'onus of proof' is on the actor or the developer to show that his action is environmentally benign.

<sup>90</sup> *Supra*, n.88 at p.365.

teeth of the “precautionary principle”. Justifying the necessity for a precautionary approach, the court took stock of the prevailing statistics speaking in volumes of the potential health hazards arising from vehicular pollution<sup>91</sup>, and pinpointing the culprit as pollution in the ambient air. In the midst of above circumstances, the precautionary principle enshrined in the concept of sustainable development expects the Government and the health authorities to take appropriate action and arrest the growing air pollution. Expressing concern for the urban children exposed to the hazards of vehicular pollution, the Court observed:

“...children do not agitate or hold rallies and therefore, their sound is not heard and the only concern of the Government appears to be is to protect the financial health of the polluters, including the oil companies who by present international desirable standards produce low quality petrol and diesel at the cost of public health....”<sup>92</sup>

The Court opined that under these circumstances, it becomes the duty of the Court to direct such steps to be taken as are necessary for cleaning the air so that the future generations do not suffer from ill health. In taking the above stand, it was conscious of the fact that vehicular pollution is only one of the causes of air pollution, but at least in metropolitan towns, it is the major source of pollution. Accordingly, the Court directed the Union of India to give priority to the transport sector including private vehicles of the

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<sup>91</sup> According to World Bank estimate, the annual health cost to India was up to Rs.5550 crores due to ambient air pollution. The increase in respiratory diseases especially amongst the children should normally be a cause of concern for any responsible Government. A Study conducted on children in Bangalore shows that the incidents of asthma in children rose from 9% in 1979 to 29.5% in 1999 and during the above period, corresponding increase in vehicles was 1.46 lakhs to 12.23 lakhs. Similarly, a Study by Chittaranjan Cancer Institute and Environmental Biological Laboratory of the Department of Zoology of Kolkatta University done between November 1997 and May 1999, found that about 43% of the children in Kolkatta are suffering from respiratory disorders compared to 14% among the rural children. Alarminglly 94-96% of the children were found producing sputum which would usually be reflective of habitual smokers though only 5.5% of the children were found to be smoking and that too occasionally. For details, see the *Indian Journal of Medical Research*, July 2000.

<sup>92</sup> *Supra*, n.88 at p.368.

country in the matter of allocation of CNG<sup>93</sup>. In addition to dealing with CNG supply problems, the court is also considering issues related to the pricing of CNG<sup>94</sup> the next generation of reforms in air pollution control, safety<sup>95</sup>, inspection and maintenance<sup>96</sup> of CNG vehicles and parking policy in Delhi<sup>97</sup> and is also monitoring implementation of the CNG policy in other critically polluted cities in India<sup>98</sup>.

An analysis of the decisions rendered by the Supreme Court in the matter of vehicular pollution, against the benchmarks of participation, equity, effectiveness and sustainability of the outcome/solutions devised makes it palpably evident that the Indian judiciary has made a remarkable contribution by keeping its ear open for the good and noble cause of controlling vehicular pollution. As a result of the intervention by courts, measures have been seen taken in lowering of sulphur content in diesel, first to 0.50% and then to 0.05%; ensuring supply of only lead-free petrol; requiring the fitting of catalytic converters; directing the supply of pre-mix 2T oil for lubrication of engines of two-wheelers and three-wheelers; directing the phasing out of grossly polluting old vehicles; directing the lowering of the benzene content in petrol and in ensuring that new vehicles, petrol and diesel, meet Euro standards. It considered CNG, a fuel that could not be adulterated, as the best option for India<sup>99</sup>. These measures have succeeded in controlling pollution at least to some extent. These were areas wherein legislative standards were absent. Courts have supplemented and augmented and in certain situations substituted for the legislative role. What could be achieved

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<sup>93</sup> It also diverted CNG allocated to the industrial sector to the transport sector, for making all diesel city buses to get converted to CNG by the end of 2002, see Order dated 05-04-2002.

<sup>94</sup> Order dated 09-05-02.

<sup>95</sup> Order dated 11-03-05.

<sup>96</sup> Orders dated 05-05-2006 and 29-04-05.

<sup>97</sup> Order dated 05-05-06.

<sup>98</sup> However, it requires to be pointed out that today, the gains from the court-ordered conversion to CNG are being offset by the increase in the number of private vehicles in Delhi as well as the increase in the dieselization of the private car fleet, leading to other problems like steady rise in nitrogen dioxide emissions.

<sup>99</sup> Since fuel adulteration is rampant in India, but often difficult to detect.



through legislation in western countries to curb vehicular pollution have been achieved in our country through judicial contribution or rather by the magical wand of judicial activism by way of public interest litigation mostly through *Mehta cases*. Courts have also not allowed the statutory authorities to abdicate their functions and went after them through continuous monitoring to ensure discharge of the statutory duties. In a way the approach of the judiciary has been commendable and it has filled the gaps in the existing legislation. It is submitted that from the analysis of the above cases it becomes evident that the courts in India are not functioning merely as the agents of justice but also they are alive to the new socio-economic problems like vehicular pollution. The courts in India have been playing a pivotal role by chiseling new strategies towards development and environment planning and for protecting public health and they have been functioning on the guiding principle of sustainable development.

### **Law Alone Cannot Offer Lasting Solutions**

Even though the monitoring task adverted to by the Court appears to be laudable, Court failed to consider that law alone cannot help in restoring a balance in the biospheric disturbance arising from vehicular pollution. For that matter, funds also cannot help effectively. The situation requires a clear perception and imaginative planning. It also requires sustained effort and result oriented strategic action<sup>100</sup>. Campaign for general awakening of the people using vehicles of different classifications and among the people inhabiting the city regions is the indispensable preliminary. All persons using vehicles should have a fair knowledge of the baneful effect it produces on the community on account of the emission from such vehicles. Until that is done in an effective way the appropriate attitude would not develop and co-operation for reducing pollution

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<sup>100</sup> Kieran Donaghy, Stefan, P.P., *Social Dimensions of Sustainable Transport: Trans Atlantic Perspectives*, Ashgate Publishing Ltd., U.K. Hampshire (2005), p.7.

would not emerge<sup>101</sup>. However, unfortunately nothing was included in the judgments rendered in vehicular pollution cases for the governance of the authorities drawing the need for evolving a clear perception and imaginative planning striking a balance in the biosphere on the use of the vehicles and for creating awareness among the public of the hazardous effect of automobile exhausts on urban life. Considering the obligation arising from the Stockholm Declaration and the statutory provisions in force to control vehicular emissions, such a course should have been adopted by the Supreme Court to make its approach meaningful and effective and to solicit public co-operation for enforcement of statutory prescriptions.

### **High Courts Also Take Activist Role**

The Kerala High Court in *Murali Purushothaman v. Union of India*<sup>102</sup> appears to have responded to the clarion call of the people to be protected from the hazards of vehicular pollution. Court strikingly observed that vehicles are one of the chief sources of air pollution in the country. Vehicles pump out billows of carbon monoxide, hydrocarbons, and nitrogen oxides into the air by burning gasoline. Pointing out that the problem of air pollution through vehicles plying on the roads in Kerala has been gradually snowballing into a dimension of threat to life, the Court observed:

“Human life is far more important than vehicular traffic. The prestine adage that “Rules are for men and not men are for rules” assumes contemporary relevance particularly in the area of environmental cleanliness. No authority, not even the State can be permitted to bide time without enforcing whatever provision is available and without exercising whatever power is commandable to protect human life”<sup>103</sup>.

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<sup>101</sup> Satyanarayana, Y., *Vehicular Pollution in Indian Cities: Measures to Control Emissions*, Bookwell Publication, New Delhi(2007), p.391.

<sup>102</sup> A.I.R. 1993 Ker. 297.

<sup>103</sup> *Id.*, p.300, per K.T. Thomas, J.

The High Court directed the authorities to make emission testing of vehicles compulsory for taking suitable action for abatement of air pollution at the earliest. The Court also directed the authorities to take suitable action against the drivers of the offending vehicles under Rule 116 of the Central Motor Vehicles Rules, 1989 without unnecessary delay. For effectively carrying out emission testing assignment, the Court directed the State to provide at least one smoke meter and gas analyzer for each major District Centres. Thus the Court has shown its deep concern in this arena.

In *Madrassa Road Residents Association v. Lt. Governor*,<sup>104</sup> a public interest litigation was filed to stop the traffic of heavy vehicles creating pollution and endangering human life by passing through no entry silence zones, in spite of prohibitory orders. The Delhi High Court suggested that barricades at the appropriate points be put up to prevent the heavy vehicles coming to Madrassa Road. It also suggested putting up of speed breakers to control the speed of vehicles using the roads. The Court warned of stringent action against persons contravening the prohibitory orders.

The problem of air pollution due to vehicular traffic in big cities was also brought before the notice of Madhya Pradesh High Court in *Santosh Kumar Gupta v. Secretary, Ministry of Environment, New Delhi*<sup>105</sup>, and it was brought to the notice of the Court that necessary instructions were issued by the State Government to control air pollution due to vehicular traffic but the same were not being complied with by the concerned authorities and increase in pollution within the city of Gwalior was causing health hazards to its inhabitants. The High Court issued series of directions in the case to bring out reduction in pollution. These directions included the installation of smoke meters and gas analyzer for measuring the carbon monoxide and other pollutants emitted by the automobiles in

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<sup>104</sup> A.I.R. 1995 Del.195, per D.P.Wadhwa and M.K.Sharma, JJ.

<sup>105</sup> A.I.R. 1998 M.P.43.

Gwalior; to provide the latest and the less time consuming instruments for checking the emission of carbon monoxide; instructions to the authorities to comply with the legislative mandate of Section 20 of the Air Pollution Act and Rule 116 of the Motor Vehicles Rules, 1989; and to identify the roads which could be declared one way for public vehicles in order to reduce the traffic load on such roads<sup>106</sup>.

In a monumental judgment in the case of *Namit Kumar v. U.T. Chandigarh*<sup>107</sup>, the Punjab and Haryana High Court has also dealt with, *inter alia*, the problem of environmental pollution resulting from vehicular traffic. The High Court issued various directions to the concerned authorities to comply with the statutory provisions of the Air Act, Motor Vehicles Act and Motor Vehicles Rules so that the air pollution due to vehicular traffic could be reduced and the residents could breathe clean and fresh air.

### **Judicial Adjudication in Vehicular Pollution Cases: Myths and Realities**

In the efforts to find tangible solutions for controlling vehicular pollution, judges in their activist *avatar* have reached out to numerous parties and stake-holders, from fact finding, monitoring or policy-evolution committees, and arrived at constructive solutions to the problems flagged for their attention by public-spirited citizens. Judges have also used their tremendous power to design innovative solutions, direct policy changes, catalyze law-making, reprimand officials and enforce orders on the accepted principle that where there is perceived 'vacuum in governance, it is the duty of the courts to fill it'<sup>108</sup>.

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<sup>106</sup> *Id.*, p.45, *per* Shacheendra Dwivedi and Tripathi, JJ.

<sup>107</sup> C.W.P. No.7639/95 decided on 9<sup>th</sup> July 1998.

<sup>108</sup> Lavanya Rajamani, "Public Interest Environmental Litigation in India: Exploring Issues of Access, Equity, Effectiveness and Sustainability" 19 *Journal of Environmental Law* (2007) 293 at p.294.

The constitutionally protected right under Article 21 has been extended by courts through judicial creativity to cover unarticulated but implicit right such as the right to a wholesome environment, which also means 'right of enjoyment of pollution-free air'<sup>109</sup>.

The right to wholesome environment was recognized as part of the fundamental right under Article 21 and, within an interval of seven years time, the court was faced with PILs and the Court was moved to note, 'at this point of time, the effect of the quality of the environment on the life of the inhabitants is much too obvious to require any emphasis or elaboration'<sup>110</sup>.

The Court has since fleshed out the right to a wholesome environment by integrating into Indian environmental jurisprudence not just established but even nascent principles of international environmental law<sup>111</sup>. This expansive judicial role is welcomed by some as 'chemotherapy for the carcinogenic body politic'<sup>112</sup>. The ability of public spirited individuals to use the court as a fulcrum to leverage public policy is perceived as a testament to the Indian democracy, as judicial intervention has led to changes in policy, rules and discernible improvements in environment. Such an approach is seen discernible in vehicular pollution cases.

However, the role played by the court has raised questions of equity and fairness, effectiveness, sustainability and has put a big question mark on the role of the court as a Policy Evolution Forum. It is the accepted rule that policy making is the exclusive domain of the democratically elected legislature and that it does not fall within the

<sup>109</sup> See, *Subhash Kumar v State of Bihar*, (1991) 1 S.C.C.598, per K.N.Singh and N.D.Ojha, JJ.; *Virender Gaur v State of Haryana*, (1995) 2 S.C.C. 577.

<sup>110</sup> *M.C Mehta v. Union of India* (1998) 9 S.C.C.589 at p.590 (Delhi Vehicular Pollution Case).

<sup>111</sup> Rio Declaration, Principle 3 (Inter-generational Equity); Principle 4 (Sustainable Development); Principle 15 (Precautionary); Principle 16 (Polluter Pays) and the Doctrine of Public Trust. The decisions wherein these principles were applied by the courts have been dealt with in Chapter-IV, *supra*.

<sup>112</sup> Baxi, U., "Preface" in S.P.Sathe(Ed.), *Judicial Activism in India*, Oxford University Press, New Delhi (2<sup>nd</sup> edn., 2002).

province of the judiciary<sup>113</sup>. In fact judicial activism is excessivism when a court undertakes responsibilities normally discharged by other co-ordinate organs of the government<sup>114</sup>. The danger of judiciary dabbling in policy making was stressed time and again by the apex court itself<sup>115</sup>. That being so, court should have directed the central government to use its statutory powers to control air pollution, instead of establishing itself as the protector of government, by continuously issuing orders and directions, which is, 'creeping jurisdiction'<sup>116</sup>. Judiciary resolved polycentric issues<sup>117</sup>, and moved from first generation to second generation reforms in air quality. Some decisions have destabilized institutions, governance and trust in systems<sup>118</sup>. It also failed to invoke its jurisdiction in few deserving situations, though circumstances existed warranting court's intervention<sup>119</sup>. Nevertheless, judicial intervention has

<sup>113</sup> Justice Chandrachud in *Indira Nehru Gandhi v. Raj Narain* (1975) Suppl. S.C.C 1 noted with precision the approach of the Indian courts in the following words: "... the concentration of power in any one of organ may... by upsetting the fine balance between the three organs, destroy the fundamental premises of a democratic government to which we are pledged..."

<sup>114</sup> Sathe, S. P., "Judicial Activism: The Indian Experience" 29 W.U.J.L.P.(2001)40.

<sup>115</sup> In *Bandhua Mukti Morcha v. Union of India*,(1984)3 S.C.C.161, Justice Pathak observed as follows: " In the process of correcting executive error or removing legislative omission, the Court can so easily find itself involved in policy making of a quality and degree characteristic of political authority, and indeed run the risk of being mistaken for one. An excessively political role identifiable with political governance betrays the court into functions alien to its fundamental character, and tends to destroy the delicate balance envisaged in our constitutional system between its three basic institutions". *Id.*, p.232.

<sup>116</sup> Baxi, U., "Taking Suffering Seriously: Social Action Litigation in the Supreme Court of India" in Rajeev Dhavan *et al.*, (Eds.), *Judges and Judicial Power* (1985) 289 at pp.298-300.

<sup>117</sup> 'Polycentric disputes' according to Fuller, involve many affected parties and a somewhat 'fluid state of affairs'. He therefore advocates delimiting adjudication in such cases. For details, see Fuller, L.L., "The Forms and Limits of Adjudication" 92 *Harvard Law Review*(1978)353, 395, 397; see also, Allison, J.W.F., "Fuller's Analysis of Polycentric Disputes and the Limits of Adjudication" 53 *C.L.J.* (1994)367.

<sup>118</sup> On the limits of PIL, Court itself has sounded caution by stating that PIL jurisdiction is ballooning, but the balloon should not be inflated so much that it bursts. See *Narmada Bachao Andolan v. Union of India* (2000) 10 S.C.C. 664 at p.762.

<sup>119</sup> For instance, in *M.C. Mehta v. Union of India*(1998)5 S.C.C.610, the approach taken by the Supreme Court vindicates the neutralized outlook. The case pertained to the shifting of a petrol-filling station located at Karol Bagh, New Delhi, constructed at a site adjacent to, but not part of, Ridge area on one side and abutting on the road on the other. The vehicular traffic using the road was emitting smoke. The Ridge Management Board passed an order to shift the petrol-filling station on the ground that the site was to be developed having attributes of the Ridge, its environment and ecology. In the facts and circumstances of the case, the Supreme Court held that such an order was bad. The Court pointed out that if air pollution can be allowed on the road then why the filling station, which was an adjunct to the road, cannot be allowed to bear the pollution of the vehicles visiting the filling station.

resulted in improved governance, delivery of public services and enhanced the accountability of enforcement authorities to meet the problems arising from vehicular pollution.

### **Control of Vehicular Pollution: A Brief Comparative Outlook**

#### **(a) U.S.A: The Federal Clean Air Act**

Legal measures provide an effective tool in all legal systems to keep vehicular pollution under control. In United States, Clean Air Act describes legislation enacted by Congress to control air pollution on a national level. The first Clean Air Act was the Air Pollution Control Act of 1955, followed by the Clean Air Act of 1963 that resulted in the formation of the Environment Protection Agency which has set some standards for restricting the amount of pollution produced by new vehicles. Each State is given the primary responsibility for assuring that emission sources from within their borders conform to National Air Quality Standard<sup>120</sup>. This was followed by the Air Quality Act of 1967. The Federal Clean Air Amendment Act was passed in 1970 requiring reduction of the carbon monoxide emission. In 1976 United States achieved reduction in carbon monoxide saturation in the air by a substantial degree. Automakers were compelled to install catalytic converters on the exhaust system of new cars for converting gases to harmless carbon dioxide and water. This was later adopted by the European Automakers also. The Clean Air Act of 1963 was further amended in 1977 and 1990. The 1990 Amendment proposed emissions trading for addressing the problems of acid rain, ozone depletion and toxic air pollution and established a national permit programme.

In United States, though there was a recent attempt to introduce Clear Skies Act, 2003, the same was not materialized. The Act was

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<sup>120</sup> Robyn Kenney, "Clean Air Act: United States" available at [www.eoearth.org/article](http://www.eoearth.org/article), visited on January 10, 2009.

intended to amend the Clean Air Act to reduce air pollution through expansion of cap-and-trade programs, to provide an alternative regulatory classification for units subject to the cap and trade programs. The Act was based on Clear Skies Initiative, 2002 which projected the idea that economic growth is key to environmental progress, because it is growth that provides the resources for investment in clean technologies. It is pointed out that the Initiative would reduce the cost and complexity of compliance and the need for litigation. Benefits expected of the Initiative include reduction of respiratory and cardiovascular diseases by dramatically reducing smog, fine particles and regional haze; protecting the health of wildlife, habitat and ecosystem from acid rain, nitrogen and mercury deposition; cutting pollution further, faster and cheaper, and with more certainty with improvements in air quality; encouraging the use of new and cleaner pollution control strategies. Thus, moving beyond the command-and-control mandates of the past, US Clear Skies cap and trade system harnesses the power of technology and innovation to bring about significant reductions in harmful pollutants<sup>121</sup>.

#### **(b) France: The Air and Rational Use of Energy Act, 1996**

French legal system presents a model regulatory mechanism in controlling vehicular pollution. As part of its legal policy, the Air and Rational Use of Energy Act, 1996 has made urban transport plans compulsory for all metros with a population of more than 1,00,000<sup>122</sup> to ensure equilibrium between the needs of mobility and ease of access, and the protection of environment and health. Similar provisions are also included in the Solidarity and Urban Renewal Act, 2000 and in the Domestic Transport Orientation Act.

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<sup>121</sup> Details of the Clear Skies Act, 2003 is available at <http://en.wikipedia.org/>, visited on March 12, 2009.

<sup>122</sup> Article 14 of the Air and Rational Use of Energy Act, 1996 provides: "The urban transport plan is intended to assure a sustainable equilibrium between the needs of mobility and ease of access, and the protection of environment and health. Its objective is the promotion of the least polluting and least energy consuming modes of transportation".



In France, everyone is held responsible to guarantee urban air quality<sup>123</sup>. In order to attain this objective, Environmental Code places responsibility on the police authorities to establish such measures necessary to reduce emissions from sources of atmospheric pollution<sup>124</sup>. The General Code of Local Governments empowers the Mayor to prohibit access to roads or portions of it to protect air quality<sup>125</sup>. Similarly, National Traffic Code envisages incentives in the form of circulation and parking privileges to least polluting types of vehicles<sup>126</sup>. Formulation of atmospheric protection plans have to be compatible with Regional Air Quality plans. These novel provisions show that the responsibilities of urban administration in the fight against atmospheric pollution are quite substantial.

### **(c) European Union: Laws and Policies**

In Europe, the movement of goods in cities is a major contributor to local emissions caused by mobile sources. Trucks are identified as major sources of vehicular pollution adversely affecting the urban air quality<sup>127</sup>. In response to concern over health issues and to European Standards for urban air quality, some European cities have engaged in a more environmentally oriented urban freight strategy reserving access to city centers to new, clean or fully loaded

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<sup>123</sup> Article L 220-1 of the Environmental Code reads: “The State and its public establishments, the local administration and their public establishments, as well as private persons shall contribute, each within the domain of its rights and the limit of its responsibilities, to a policy of which the objective is to put into effect the recognized right of everyone to breathe air which is not damaging to health. This action in the public interest consists of the prevention, surveillance and reduction or elimination of atmospheric pollution, the preservation of air quality and, to this end, the saving and rational use of energy”.

<sup>124</sup> Article L 222-6 of the Environmental Code.

<sup>125</sup> Article L 2213-4 of the General Code of Local Governments states: “The Mayor may prohibit access to certain roads or certain portions of roads to vehicles whose circulation compromises either the public peace, or the air quality, or the protection of animal or plant species”.

<sup>126</sup> Article L 318- 1 of the National Traffic Code.

<sup>127</sup> It is found that trucks emit many pollutants notably NO<sub>x</sub> and particulate matter because they mostly use diesel and because there is a high proportion of old trucks and vans circulating in cities.

trucks<sup>128</sup>. Euro standards<sup>129</sup> are also insisted for vehicles plying through urban centres.

European Commission predicts that in 2020, if the current trend continues, very fine particulate matter will be responsible for '272000 premature deaths' in the European Union, even if current limits are enforced. Hence, new initiatives and policies are evolving to improve the air quality. Clean Air for Europe (CAFÉ), a global programme for long term technical analysis and policy development was launched in 2001 bearing in mind this situation<sup>130</sup>. Shortly thereafter, the European Commission adopted a Thematic Strategy on Air pollution in 2005<sup>131</sup>. This strategy envisages legislation to reduce emissions of new passenger cars and vans and to tighten the emissions from heavy goods vehicles. Commission's Thematic Strategy on the Urban Environment targets sustainable transport as one its four priorities<sup>132</sup>.

For sustainable freight transport in Europe, European Council has proposed 'Freight Transport Logistic Action plan' emphasizing the need for improving the integration of freight into town planning, by setting benchmarks and best practices for urban transport logistics<sup>133</sup>. Apart from the measures already taken, there is also a proposal to simplify legislations by merging all air quality directives into one and to introduce measures related to particulate matter by setting its binding limit value for 2015<sup>134</sup>. However, this is

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<sup>128</sup> Laetitia Dablan, "Urban Goods Movement and Air Quality Policy and Regulation Issues in European Cities", 20 (2) *Journal of Environmental Law*(2008)245.

<sup>129</sup> Euro standards are European Union requirements defining the limits for exhaust emissions of new vehicles sold.

<sup>130</sup> Commission Communication on the Clean Air for Europe (CAFÉ) Programme: "Towards a Thematic Strategy for Air Quality" COM (2001)245; See also Tuinstra, W., "Preparing for the European Thematic Strategy on Air Pollution: At the Interface between Science and Policy" 10 *Environmental Science and Policy*(2007)433 at p.444.

<sup>131</sup> EC: "Thematic Strategy on Air Pollution" COM (2005) 446 final, 21 September 2005.

<sup>132</sup> EC: "Thematic Strategy on the Urban Environment" COM (2005) 718 final, 11 January 2006.

<sup>133</sup> EC: "Freight Transport Logistics Action Plan" COM (2007) 607 final, 18 October 2007.

<sup>134</sup> "Environment: Commission Welcomes, EP Vote on the Air Quality Directive" IP/07/1895, 11 December 2007.

being criticized as timid<sup>135</sup>. The Commission as part of the future strategy also intends to draw guidelines for differentiated charging according to air pollution and to evolve a common framework for designating low emission zones.

In UK, pollution from vehicle emissions is controlled by the use of product standards regulating the emission equipment installed in vehicles. The emission of pollutants is controlled by the Road Traffic Act, 1988 and regulations relating to the construction of use of vehicles and type approval for vehicles. These regulations are altered regularly to take into account EC Directives which impose new limits on carbon monoxide, hydrocarbon and nitrogen oxide for new vehicles and the emission limits differ in relation to the engine size of vehicles<sup>136</sup>.

### **Measures to Control Vehicular Pollution: Some Suggestions**

It is true that vehicular pollution cannot be completely avoided or eliminated, but the injurious effect of vehicular pollution can be controlled by adopting improved technologies, careful planning and thoughtful strategies. Such a management approach should include general, short term and long term measures.

General measures must include requiring the automobile manufactures to adopt advanced technology by which vehicles will be more eco-friendly. Diesel engines can be got rid of by phasing them out. It also requires that roads should be maintained properly, and road congestion to be tackled properly by taking suitable remedial measures. To take an overall view of the problems and the remedies,

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<sup>135</sup> PM2.5 limit values of 25ug/m<sup>3</sup> 20 in urban areas in the new Directive stands far above the WHO recommendations of 10ug/m<sup>3</sup>.

<sup>136</sup> In Britain, all cars are required to be capable of running on unleaded petrol and new models had to comply with the above standard as required by Road Vehicles (Construction and Use) Amendment Regulations, 1988. That apart, new regulations are also timely introduced in Britain to implement various EC Directives on emission limits.

a suitable organization at the central level should be constituted and similar bodies should also be created at the State level. Equally desirable is that public transport system should be made comfortable and punctual for reducing vehicular emission and incentives should be given for good vehicle maintenance and use of public transport. Ensuring unimpeded vehicular movement by way of widening of roads, construction of flyovers and subways and introduction of underground rails are also worth consideration for reducing vehicle emission as part of the general strategies.

Short term measures include phasing out old vehicles from urban areas; use of catalytic converters for vehicles; effective monitoring of vehicular emissions; strict emission testing, replacement of older vehicles, taxing of vehicles for differential pollution; proper maintenance of engines; introducing free environment awareness courses in different cities; schemes of penalty and rewards; people's participation; strict implementation of licensing and pollution control rules; constituting visionary authority with political will to implement relevant measures; promoting walking and cycling and giving preference to bicycles in parking near bus stand, railway station, etc.

Long term measures must include introduction of four stroke engines(both for fuel efficiency and low emissions); improvement of fuel quality; introduction of flow-sulphur fuel; improvement of road quality for smoother flow of traffic; development of intensive plantation to reduce dust, smoke and other pollution; encouraging and grant of incentives for the use of electric, propane, battery operated vehicles or LPG or CNG based transport means<sup>137</sup>, etc.

It is found that diesel particulates are more hazardous and harmful to human beings than petrol emissions. The way out is by

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<sup>137</sup> Singapore has introduced rebates to encourage the use of natural gas (CNG) vehicles from 1999 and the rebate allowed ranges from 5-20% of the vehicle's open market value and the rebate can be used to offset fees and taxes payable on registration. This method can be followed in India also.

creating disincentives for heavier, bigger, and diesel cars. Delhi decided to introduce an Environment Cess on diesel at the rate of 25 paise per litre. With the money collected as cess, the Government intended to set up Environment Cess Fund to help the introduction of clean air policy<sup>138</sup>. Such measures can be adopted by other States as well. To reduce the accumulation of carbon dioxide and other green house gases in the atmosphere, low carbon economy<sup>139</sup> should be introduced by the Government as part of vehicular and transport policy. Compressed air-engine car is an innovative system for low carbon economy<sup>140</sup>. Its advantage is that there are no fossil fuel emissions from this type of vehicles. Such approaches and policies also appear to be consistent with judicial mandate<sup>141</sup>.

A practical strategy should be devised that reduces both emissions and congestion, using a mixed set of instruments, which are dictated by command and control, and also by the market based principles. To contain pollution from auto exhausts, there is the need to assess the vehicular emissions and fuel quality periodically. It is found that pollution load contributed by the city public transport vehicles is higher than the private vehicles, which warrants adoption of strategies to keep pollution load under control.

Entry of goods traffic should be controlled by restricted entry timings and by building by-passes. Similarly, it is as much important that all road side encroachments and activities like hawking, parking, etc., in the entire major net works of roads should be removed, grade separation should be provided at all the crossings of the major roads, traffic signal systems should be synchronized to achieve continuous

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<sup>138</sup> *Down To Earth*, March 1-15, 2009, p.66.

<sup>139</sup> Low carbon economy refers to an economy which has a minimal output of greenhouse gas emissions into the biosphere.

<sup>140</sup> Sunil Datta, "Compressed-Air Engine Car: An Innovative System for Low Carbon Economy", *5(2)Our Earth*, June 2008, p.22.

<sup>141</sup> In *V.S.Damodaran Nair v. State of Kerala*, 1996 K.H.C.538, the State Government was directed by the High Court to take immediate steps to implement the rules regarding automobile exhaust fumes causing air pollution.

greenways for effecting non-stop movement of vehicles along major corridors, along with reduction in idling, stopped time and number and the frequency of speed changes. Strategies should also be evolved to discourage use of private individual vehicles by such ways like levying of parking free, road pricing, restriction on entry during the part or whole of the day depending on the class of vehicles, giving priorities to high occupancy vehicles during peak hours by encouraging the formulation of car pools and constructing bus ways for exclusive operation of buses to increase their productivity and to induce people to change their modes of travel.

### **European Union's Auto Oil Programme**

In Europe, under the European Union's Auto Oil Programme, elaborate studies were undertaken, spread over to several years and which include detailed pollution source inventory surveys, to assess the contribution of each source to the total pollution load and to suggest measures for improvement before finalizing auto emission norms. However, in India, after 1995, no pollution source inventory studies have been undertaken even in major cities. In the absence of such pollution source inventory data, assessment of contribution of different sources to pollution load in different cities is not known. That apart, contribution of different categories of vehicles to the total vehicular pollution load varies from city to city and hence measures taken in this regard must be city-specific. Therefore, it requires identification of the critical pollutants in the city and the polluting sources, assessment of pollution load from various sources and contribution of auto exhaust thereto, contribution of different categories of vehicles- inter-city and intra-city to the pollution load of critical pollutants and cost benefit analysis of the alternative solutions based on different combinations of fuel and vehicle technology options. Based on such analysis, higher emission norms and auto fuel quality should be introduced in cities that have very high vehicle population or ambient air pollutants concentration.

Improvements should be brought in the vehicular emission norms and auto fuel quality throughout the country and in cities that have high vehicular pollution, city-specific measures should be taken to reduce pollution from old in-use vehicles<sup>142</sup>.

### **Need for a Clean Air Act**

With a view to preventing pollution by vehicles and to maintain the health of the people against the hazards generated by the motor vehicles, measures like enactment of legislation in the form of Clean Air Act should also be considered. Such an enactment should confer power on the State Government to issue a notification declaring that all the motor vehicles in use within the State shall use only CNG or Petrol, LPG or electricity as fuel in a phased manner as directed in the notification. Time frame should be fixed in respect of the existing vehicles including State owned buses to convert as to make them fit for using CNG, LPG or electricity. After the above cut off date, no diesel vehicle should be allowed to be used in the State. Persons who act in contravention of the above provision should be punished with imprisonment up to one month or fine up to Rs. 5000/-, apart from recording the punishment in the registration certificate of the vehicle and the driving license of the driver. If the offence is repeated, the user should be punished with imprisonment up to 3 months and fine up to Rs.1,00,000/-

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<sup>142</sup> In this regard, the Government of India had set up an expert body consisting of Central Road Research Institute, National Environmental Engineering Research Institute and Indian Institute of Petroleum as per Letter No.R-29011/63/2001-OR-1 dated 28-12-2001 of the Ministry of Petroleum and Natural Gas, to gather primary data on road traffic in nine major cities. Some of the considerations of the Committee included projections in respect of ambient air quality in future, road map for vehicular emission norms and auto fuel quality, necessity for inspection and maintenance system, introduction of vehicular emission norms of Euro-IV from 2010, status of air quality modeling in India, studies for determining pollution loads from different sources and predication of future ambient air quality, status of goods vehicles passing or entering the cities, impact of road traffic and congestion on air pollution. Even though report was submitted by the expert body so constituted containing concrete proposals, nothing further materialized due to lack of political will for the administrators.

Thus, it is submitted that to keep vehicular pollution under control, it requires combined regulation through legislative, administrative and judicial participation and processes.

### Conclusion

On a comparison with the American, French and European practices to curb vehicular pollution, the progress achieved in India remains by and large poor. One of the reasons is that legislative control in India is only piecemeal and therefore it is unsatisfactory and unsuccessful in meeting the problem of air pollution from vehicular traffic.

Law is a regulator of human conduct, but no law can indeed effectively work unless there is an element of acceptance by the people in society. No law works out smoothly unless the interaction is voluntary. To enforce the laws and to keep pollution under control, it is necessary that the people should be made aware of the vice of the pollution and its evil consequences. The Indian judiciary has made a remarkable contribution in this regard<sup>143</sup>. Consequent upon the directions of the Supreme Court, the subject of environment has been made as a compulsory subject in school, colleges and universities for general growth of awareness.<sup>144</sup> Therefore, pollution control measures should be considered as social responsibility, not only of the concerned departments, but also of all those who have faith in the need for preserving the valuable natural environmental resources for the survival of mankind<sup>145</sup>. There is an increasing tendency nowadays

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<sup>143</sup> See *M.C. Mehta v. Union of India*, (1992) 1 S.C.C. 358.

<sup>144</sup> *Id.*, p.361. In this case the Supreme Court also issued directions to: (a) enforce as a condition of licence on all cinema halls, touring cinemas and video parlours the duty to exhibit free of cost at least two slides/messages on environment in each show undertaken by them; (b) show everyday by cinema halls information films of short duration on environment and pollution; (c) telecast and broadcast interesting programmes of 5 to 7 minutes duration every day and a longer programme once a week by Doordarshan and All India Radio in the matter of environment and pollution.

<sup>145</sup> People and NGOs should show knowledge based activism and confrontational style. Carter Brandon and Kirsten Homman, *The Cost of Inaction: Valuing the Economy-Wide Cost of Environmental Degradation in India*, World Bank(1995), p.15.



by NGOs<sup>146</sup> and public spirited citizens to use courts as the forum for raising the grievances of the community. As the executive is 'not maturing' it is not the appropriate moment for the judiciary to end its involvement with air quality.

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<sup>146</sup> Their role is internationally recognized in the protection of human rights and the environment. They are increasingly adopting an integral role in enforcing the law by taking part in compliance mechanisms and bringing matters to court themselves. The concept of public participation and access to justice in environmental matters was recognized by the Aarhus Convention also, adopted by the United Nations Economic Committee for Europe. For this position, see *1993 Vienna Declaration and Program of Action*, World Conference on Human Rights, A/CONF- 157/23, p.38; Koester, V., "Compliance Review under the Aarhus Convention: A Rather Unique Compliance Mechanism" *2 Journal of European Environmental and Planning Law*(2005)31; McAllister, S., "The Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters" *10 Colorado Journal of International Environmental Law and Policy*(1998) 187; *R v HMIP, Ex P. Greenpeace Ltd.*(no.2) [1994] 4 All E.R.329.

## *Chapter - 7*

### **AIR QUALITY CONTROL: THE NOISE REGUALTIONS**

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1. Natural Right to Quietness
2. Concept of Noise Pollution
3. Actionable Noise
4. Sources of Noise Pollution
5. Effects on Human Beings
6. Effects on Other Living Beings and Non-Living Things
7. Extent of the Problem
8. Noise Hazard in Kochi
9. Statutory Control of Noise Pollution
10. Judicial Contributions
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12. Legislative Measures
13. General Measures
14. Administrative Measures
15. Conclusion

## AIR QUALITY CONTROL: THE NOISE REGULATIONS

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Noise is a type of atmospheric pollution and it is one of the undesirable consequences of technological civilization<sup>1</sup>. It is an unwanted sound without agreeable musical quality<sup>2</sup>. The roar of traffic, the passage of trains and aeroplanes, the bustle of crowds and the working of industry and the public utilities deafen the ears. Even homes are not free from noise. The excessive noise from whatever source it comes from is undoubtedly physiologically and psychologically harmful<sup>3</sup>. It is an insidious form of air pollution as it invades the air environment in dangerous proportions<sup>4</sup>. It also causes annoyance<sup>5</sup>. Noise as a potentially harmful pollutant is also being recognized as a great nuisance these days<sup>6</sup>, affecting the quality of life especially in urban centres<sup>7</sup>.

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<sup>1</sup> Chandra Pal, *Environmental Pollution and Development: Environmental Law, Policy and Role of Judiciary*, Mittal Publications, New Delhi (1999), p.177.

<sup>2</sup> 16 *Encyclopedia Britannica* (1965), p.558; See also Pramod Singh, *Environmental Pollution and Management*, Chugh Publications, Allahabad (1985), p.111.

<sup>3</sup> *Hollywood Silver Fox Farm Ltd. v Emmett* (1936) 2 K.B. 468.

<sup>4</sup> David Hughes, *Environmental Law*, Butterworth, London(1986),p.310; See also "Noise the Invisible Enemy", *Civic Affairs*, February 1980, at p.29.

<sup>5</sup> 20 *Encyclopedia Americana*(2<sup>nd</sup> edn.,1969), p.400.

<sup>6</sup> Environmental noise pollution is not entirely a new phenomenon but rather has become a problem that has grown steadily worse with time. We find early descriptions of noise pollution in the streets of London, noise by grind stone and blacksmith. For an early reference of noise pollution, see Spater, G.A., "Noise and the Law", 63 *Mich. Law Rev.*(1965)1373.

<sup>7</sup> Surveys in many countries reveal that noise is menacingly becoming a threat to the quality of life. In the United States, perceiving the gravity of noise pollution, noise is ranked second only to crime. In West Germany, 45 % of the population considers protection against noise more important than construction of new roads. In Japan, there are more complaints against noise than any other forms of pollution. See Jim and Phyllis Mac Neil, "Towards a Quieter World-Noise Pollution Control in 1980s", *Magazine*,p.29, as cited in Agarwal, N., *Noise Pollution*, National Seminar on Law Towards Environmental Protection, February 10-12, 1984, Chandigarh.

## Natural Right to Quietness

In an organized society, rights are being related with duties towards others including neighbours<sup>8</sup>. According to the natural law theory, every person is entitled to enjoy his natural right to quietness<sup>9</sup>. This implies that there cannot be any interference to quietness by any form including noise pollution. In ancient India, there was great appreciation accorded to silence and it is from this attitude that the concept of *shanti* emerged. The sage who was greatly venerated was a *muni*, a man of solemn silence<sup>10</sup>. The casual connection between silence and *shanti*(quietness) and the spiritual strength and physical powers of the sage was recognized in ancient India. In the earlier days, noise was only associated with war at the international level, and as an expression of anger at the individual level. However, it was only with the dawn of the industrial and technological revolution that the environment lost its natural calmness.

## Concept of Noise Pollution

The word noise is derived from the Latin word 'nausea'<sup>11</sup> and it means an excessive, offensive, persistent<sup>12</sup> or startling sound<sup>13</sup>. The best definition of noise is sound which is undesirable by the

<sup>8</sup> *Church of God (Full Gospel) in India v. KKRMC Welfare Association*, A.I.R. 2000 S.C. 2772 at p. 2774, per M.B.Shah and S.N.Phukan, JJ.

<sup>9</sup> Natural law regarded desire for happiness as the foundation of a stable society. See Charles Grove Haines, *The Revival of Natural Law Concepts*, Cambridge, Mass., (1930), Chs. 1-3.

<sup>10</sup> Joseph Minattur, "Legal Control of Noise Pollution" [1979] C.U.L.R. 103.

<sup>11</sup> Psychologists define the term noise in terms of its psychological effect on human beings. In the words of Harell, "Noise is an unwanted sound which increases fatigue and under some industrial conditions, causes deafness". Blum defines noise as "a distracter and therefore interfering with efficiency". According to Tiffin, J., "Noise is sound which is disagreeable to the individual and which disturbs the normal way of an individual". For Viles, "noise is an unpleasant sound". See Chhatwal *et al*, *Encyclopedia of Environmental Pollution and its Control*, Vol. III (1989), p.2. In scientific sense, noise is described in terms of frequency intensity of sound. The loudest sound that a person can withstand without discomfort is about 80 dB. See Chhatwal *et al*, *Id.*, pp.17-18.

<sup>12</sup> V.D. Kulshreshta, "Noise Pollution Emerging Challenges and Regulation" in Agarwal, S.L.(Ed.) *Legal Control of Environmental Pollution*, Tripathi (1998), p.188.

<sup>13</sup> This definition of noise is given in the Wilson Committee Report on the problem of noise. See, *Report of the Committee on the Problem of Noise*, U.K.(July 1963), Reprinted in 1973, as cited in Nayak, R.K., "Is Noise Pollution Hazardous to the Conservation of Man?" in *Id.*, p.200.

recipient<sup>14</sup>. But this definition is subjective and it differs from the scientific description of noise. An objective definition of noise related to the measurement and assessment techniques is yet to be drawn up by law. Noise becomes pollution when the intensity and frequency of the sound is likely to affect the quality of environment<sup>15</sup>. It is aptly said:

“Noise becomes a pollutant when it contaminates the environment and affects the health of persons, their activities and mental abilities”<sup>16</sup>.

The presence of noise in the open atmosphere or in confined space is generally considered undesirable, except possibly by the person responsible for it. This is because noise pollution does not exist in the space immediately surrounding the person. Thus, noise pollution relates to loudness of the sound becoming irritating or unbearable. A decibel is the standard unit for the measurement of noise. The zero on a decibel scale is at the threshold of hearing, the lowest sound pressure that can be heard. On this scale, 20 dB is whisper, 40 dB is the noise in quiet place, 60 dB is normal conversation, 80 dB in bus, 100 dB in train and 140 dB is the level at which sound becomes physically painful<sup>17</sup>.

### **Actionable Noise**

A legally significant definition of noise is a difficult discern, as noise is not purely a matter of acoustics but of psychology. Subjective factors such as mental attitude, environment, time, place etc. are important in the determination of actionable noise which differs and is hard to qualify. The law cannot take into account every unwanted noise. On the other hand, any sound which becomes excessive, unnecessary or unreasonable has to be put under regulation in order

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<sup>14</sup> Cited in David Hughes, *Environmental Law*, *supra*, n.4 at p.311.

<sup>15</sup> William H. Rodgers, *Handbook on Environmental Law*, St.Paul:West Pub.Co.(1977), p.551.

<sup>16</sup> Air (Prevention and Control of Pollution) Act, 1981, S. 2(a).

<sup>17</sup> This proposition is advanced by Smith, the noted Industrial Psychologist of the 20<sup>th</sup> century. For details, see Chandra Pal, *supra*, n.1 at p.178.

to shield public interest against its undesirable and harmful effect or for its cessation. Scientific methods to that extent may be useful in determining situations where noise steps out from its background and becomes actionable<sup>18</sup>. Noise is more than just a nuisance. It constitutes a real and present danger to people's health. Therefore, noise pollution is now recognized as a kind of air pollution and noise is included as an air pollutant<sup>19</sup> in Section 2(a) of the Air (Prevention and Control of Pollution) Act, 1981<sup>20</sup>.

### **Sources of Noise Pollution**

The sources of noise pollution are numerous but they may be broadly grouped under two classes<sup>21</sup> namely, industrial and non-industrial. The industrial source includes the noise from various industries and big machines working at a very high speed and high noise intensity. Non-industrial source of noise includes the noise created by transport/vehicular traffic, loudspeakers and the neighborhood noise generated by man-made sources such as commercial, social, religious and political activities, and natural sources.

#### **1. Industrial**

Noise is an inescapable by-product of industrial environment which is increasing very fast with the advancement in industrialization. Industrial noise includes noise from various machineries like boilers, foundary, flour mill, cutting machines, lathe machine etc<sup>22</sup>. The workers are the immediate sufferers of the noise hazards of industrial functioning<sup>23</sup>. Industries located in the residential areas, particularly such as printing press, agro-based

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<sup>18</sup> See Chhatwal *et al.*, *supra*, n.11 at p.18.

<sup>19</sup> Inserted by Act 47 of 1987, which came into effect from 1-4-1988.

<sup>20</sup> See Chhatwal *et al.*, *supra*, n.11 at p.66.

<sup>21</sup> There are restrictions on the use of loud speakers and permission has to be obtained from the local administrative authorities for its use.

<sup>22</sup> 9 *Everyman's Encyclopedia*, p.189; 20 *Encyclopedia Americana*, *supra*, n.5 at p.492.

<sup>23</sup> Workmen's Compensation Act, 1923 provides for compensation for absolute deafness.

industries, automobile repairing, grinding mills, general engineering etc. are other industrial sources of noise pollution that continuously affect the public living in the vicinity. People living near to noisy manufacturing plants can be disturbed by sources such as fans, motors, and compressors installed outside the buildings. Interior noise can also be transmitted to the community through open windows and doors, and even through building walls. These interior noise sources have significant impact on industrial workers, among whom noise-induced hearing loss is very common<sup>24</sup>.

## 2. Non-Industrial

The non-industrial sources of noise pollution include loud speakers, automobiles, aircrafts, trains, construction work, and projection of satellites in space. The extensive use of loudspeakers in religious, political and personal functions is the most disturbing source of noise pollution especially to the urban people. Though the use of loud speakers is governed by administrative restrictions and laws, their widespread use continues as the restrictions<sup>25</sup> and the laws<sup>26</sup> are not properly enforced. Noise radiations from automobiles are a major source of noise pollution in the urban areas. Trucks, buses, heavy vehicles<sup>27</sup>, passenger cars, their engine roar due to improper maintenance and ear piercing blow of horns produce undesirable sounds to the annoyance of the people living in residential areas adjacent to the roads. Similarly, the fast growth of air traffic, the invention of supersonic aircrafts<sup>28</sup> and the devices employed to scare birds<sup>29</sup> have contributed to the creation of aircraft

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<sup>24</sup> Available at <http://www.legalserviceindia.com/articles/noip.html>, accessed on 29-11-2008.

<sup>25</sup> The Bihar Control of the Use and Play of Loudspeakers Act, 1955 is one of the Acts regulating the use of loudspeakers.

<sup>26</sup> Heavy vehicles such as trucks and buses generate sound levels exceeding 90 dB.

<sup>27</sup> Jet planes are one of the biggest irritants in today's noisy world.

<sup>28</sup> In order to scare away birds from the air fields, various types of devices for making noise in the form of strong noise stimuli are being used. One among them is the automatic gas cannon which produces loud bangs at regular intervals by exploding propane or acetylene gas. Such devices increase noise pollution at airports. See Chhatwal *et al.*, *supra*, n.11 at p.70.

<sup>29</sup> The intensity of aircraft noise in some of the busy airports range as high as 140 dB during the peak hours. This intensity is quite near to the threshold of pain (140 dB). See David Hughes, *supra*, n.4.

noise. Aircrafts generally generate unbearable roar during take offs and landings. Aircraft noise<sup>30</sup> is obstructive, persistent and unpleasant besides being a serious health hazard for the communities living in areas nearby the airport.

The impact of noise from steam engines, fast trains and railway operations has been reported to be maximum in the residential areas where railway tracks pass through. In view of the increasing speeds and frequencies of the railway services, the community needs protection from the point of noise control. Construction activities are also potential sources of noise pollution especially to the people living near the sites of construction. Construction noise sources include pneumatic hammers, air compressors, bulldozers, loaders, dump trucks and their back-up signals, and pavement breakers. Projection of satellites into space is also now recognized as a new source of air and noise pollution, as the lifting of satellites with the aid of highly explosive rockets produce deafening noise.

### **Effects of Noise Pollution**

Noise is an important health issue that affects more than hearing<sup>31</sup>. The effects of noise pollution is multifaceted and inter-related. It has ill effects not only on human beings but also on other living and non-living things. High noise is proved to cause biochemical changes in man, elevates levels of blood catecholamine, cholesterol white cell counts and lymphocytes fatigue. Shift of threshold limit of hearing leads to loss of hearing, changes in metabolism, and blood circulation. In these circumstances, noise is now being recognized as a serious public health hazard as opposed to a nuisance and the health effects of the hazardous noise exposure are

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<sup>30</sup> Chhatwal *et al*, *supra*, n.11 at p. 69.

<sup>31</sup> Sheela V. Basrur, "Health Effects of Noise", available at [www.toronto.ca/health/hphe/](http://www.toronto.ca/health/hphe/), accessed on March 20, 2008.



now considered to be an increasingly important public health document<sup>32</sup>.

### **Effects on Human Beings**

Human beings are the common receptors of noise pollution. Though it is easy to show that excessive noise could result in the loss of hearing in human beings, it is difficult to show to what extent the effects of noise can prevail on individuals. Noise can produce serious physical and psychological stress on human beings. Impact of noise depends upon the sound's pitch, its frequency, time pattern and length of exposure. Noise has both auditory and non-auditory effects depending upon the intensity and the duration of the noise level. It affects sleep, hearing and communication, mental and physical health. It may even lead to madness in people.

The effects of noise pollution on human beings are generally physiological, and psychological.

#### **(i) Physiological Effects**

It is now medically confirmed that noise disturbs the biological organism of human beings. It is found that noise level in excess of 90 decibels for continuous period can cause loss of hearing. A single exposure of 150 decibels is known to cause permanent injury to the internal mechanism of the ear<sup>33</sup>. Physiological indications such as occupational deafness<sup>34</sup>, noise related diseases such as stomach ulcers, cardiovascular and circulatory disorders, respiratory

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<sup>32</sup> WHO: Fact Sheet NO.258, available at [www.who.int/mediacentre/factsheets/fs258/en/](http://www.who.int/mediacentre/factsheets/fs258/en/), accessed on January 12, 2009.

<sup>33</sup> *Ibid*

<sup>34</sup>Physicists, physicians and psychologists are of the view that continuous exposure to noise level above 80 – 90 dB is unsafe. Numerous studies and surveys have confirmed that prolonged exposure to high noise levels bring about some degree of hearing loss. 50 to 60 % of the workers in a plant with noise level of about 105 dB are reported to be losing hearing capacity. In U.S.A, at least 8 percent of the workers are facing occupational hearing problems due to prolonged exposure to noise. See Agarwal, N., *supra*, n.7.

diseases<sup>35</sup>, dizziness, headache and rise in blood pressure are reported in individuals exposed to different levels of noise. It may lead to abortions and other congenital defects in unborn children<sup>36</sup>. An analysis of more than 2,25,000 births in Los Angeles <sup>37</sup> showed that there were more birth defects among babies whose mothers lived near the international airport than those who lived in quieter areas.

### **(ii) Psychological and Behavioral Effects**

Noise is recognized as a major factor causing tension in the modern age. Psychiatrists and Psychologists have recently noted the connection between excessive noise and physiological disorders. It is now regarded as a slow agent of death<sup>38</sup>.

The psychological and behavioral effects created by excessive noise include annoyance, speech interference, fatigue, psychosomatic disorders, tension related diseases, sleep interference, mental illness,<sup>39</sup> and emotional distress. The psychological and behavioral effects are of far reaching consequences in industry where the ability to communicate by speech is indispensable and its interference may cause disruption of work, inefficiency<sup>40</sup>, accidents, inconvenience and violent behaviour<sup>41</sup>. The increasing noise pollution may have economic implications in that way also. World Health Organization has estimated a loss of 4 billion dollars to the American Industries

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<sup>35</sup> See Bell, *Noise: An Occupational Hazard and Public Nuisance* (1966), p.34 as cited in Kulshreshta, *supra*, n.12 at p.190.

<sup>36</sup> D.K. Dixit, "Noise Pollution", *Mirror*, Sept., 1984, p. 96.

<sup>37</sup> The study was undertaken by Dr. Norwells Jones, Professor of Psychology at the University of California; Also see Bruce L. Welch and Anne Maria (Eds.) *Physiological Effects of Noise*, New York (1970), p.152.

<sup>38</sup> Bailey, "Noise is a Slow Agent of Death", as cited in Nayak, *supra*, n.13 at p.204.

<sup>39</sup> A study conducted at London's Heathrow airport has indicated a higher incidence of mental disorders compared with those outside the range of aircraft din. Similarly, a French Study has indicated that noise is the cause for 70 % of neurosis in Paris. See "Noise Pollution a Serious Risk", *Indian Express*, Chandigarh, June 16, 1987, p.6.

<sup>40</sup> Studies conducted in Russia have also revealed that every decibel above the permissible level reduces labour efficiency by one percent. See Agarwal, N., *supra*, n.7.

<sup>41</sup> The relation between increasing noise and increased rate of crime cannot be overruled.

annually due to reduced working efficiency, absenteeism, accidents and compensation claims arising from noisy working conditions<sup>42</sup>.

Loss of concentration and memory are also other inevitable consequences of noise pollution. Surveys have demonstrated the effect of noise pollution on student's ability to concentrate in their studies<sup>43</sup>. Noise pollution may also bring disturbing consequences on the personality make up of children. Long exposure to noise and the resulting lowered performance level among children may bring lack of confidence in them. It also hampers the personality development of a growing child<sup>44</sup>.

### **Effects on Other Living Beings and Non-Living Things**

The adverse effects of noise pollution are also felt on other living beings. It has been observed that several birds have stopped laying eggs<sup>45</sup> due to noise pollution. Animals subjected to chronic effects of intense noise are found to migrate to other places. It is also found that there is a decrease in the number of migratory birds in a place which is subject to intense noise pollution. The mating environment and tranquility of their habitat is interrupted and the sense of direction-finding is jeopardized<sup>46</sup>. Empirical studies conducted on animals reveal that aircraft noise of an intensity of 120 to 150 dB can cause miscarriage in them. Exposure to 150 to 160 dB noise would be fatal to certain animals. Prolonged and chronic noise can produce high blood pressure, stomach ulcers, and other serious consequences in animals also<sup>47</sup>.

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<sup>42</sup> See Nayak, R.K., *supra*, n.13 at p.200.

<sup>43</sup> A survey conducted by the Society for Clean Environment in Mumbai has revealed that 36 per cent of the population in the city constantly encounter noise pollution. Of them, 76 percent encounter lack of concentration, 69 percent complained of disturbed sleep and 65 percent of restlessness.

<sup>44</sup> For details, see Chhatwal *et al*, *supra*, n.11 at p.63.

<sup>45</sup> Silver foxes in America are reported to have stopped laying eggs in noisy environment.

<sup>46</sup> Mathur, L.N., "Noise Pollution and its Control" in Musharraf Ali, S.(Ed.), *Legal Aspects of Environmental Pollution and its Management*, CBS Publishers, Delhi, p.166.

<sup>47</sup> It is also reported that Sport fish are believed to be sensitive to sound. Guinea pigs exposed to short periods of noise pollution have been found to be affected with damage of the auditory ear hair cells.

The high intensity of noise affects non-living things too. Buildings are affected by it. In India, there are reports about cracks that have developed in ancient monuments due to sonic booms<sup>48</sup>.

### Extent of the Problem

Noise tends to be unpleasant and irritating to the ear<sup>49</sup>. In urban centres it is becoming a serious health menace. This is to a great extent due to increasing industrialization, traffic density, overcrowding due to population explosion and urbanization. The problem of noise is further aggravated by widespread use of loud speakers and exploding of crackers. Metropolitan cities of Delhi, Mumbai, Chennai and Kolkata are among the noisiest cities in the world. It is estimated that in Mumbai noise levels range from 57 to 91 dB<sup>50</sup>. The noise levels in Chennai according to a study report of the Tamil Nadu Pollution Control Board, varied between 52.7 dB to 119.4 dB. In Delhi, it varies from 50 to 120 dB<sup>51</sup>. Kolkata has an average noise level of 87 dB<sup>52</sup>. The noise levels in metros are far more than the national ambient noise standard<sup>53</sup>.

As noise levels are increasing in India both in time and space, noise pollution needs to be curbed. If not, the modern life thriving on the advancement of science and technology in cities would be impossible. Complete cessation of noise is virtually impossible, but avoidable noise could be and must be avoided through legal and extra legal methods<sup>54</sup>. In view of the subjective effects of noise on

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For details, see Balakrishna, H.G., "Noise Pollution Control: A Need of the Day", in Agarwal, S.L. (Ed.), *Legal Control of Environmental Pollution*, Tripathi, Bombay (1980), p.185.

<sup>48</sup> In India, such incident has reported in respect of the Khajuraho temple in Madhya Pradesh.

<sup>49</sup> James L. Hildebrand, "Noise Pollution: An Introduction to the Problem and an Outline for Future Legal Research", 70 *Columbia Law Review*(1970)652 at p.658.

<sup>50</sup> See *The Hindu Survey of the Environment*, 1992, p.62.

<sup>51</sup> See *Annual Report 1989-1990*, Central Pollution Control Board, Delhi, pp. 42-43.

<sup>52</sup> Singh, K.P. and Sinha, S., "Noise Pollution Impacts and Control", in: Musharraf Ali, S., *supra*, n.46 at p.353.

<sup>53</sup> The ambient noise standards for industrial areas are 75 dB for day time and 70 dB for night, for commercial areas 65 and 55 dB, for residential areas 55 and 45 dB and for silence zones, it is 50 and 40 dB during the day and night hours respectively. See *Annual Report 1989-1990*, *supra*, n.51 at p. 37.

<sup>54</sup> Pramod Singh, *supra*, n. 2 at pp.121-122.

individuals and the society, legislative and administrative controls are indispensable. Control mechanism has gained strength to a certain extent with the coming into operation of the Air(Prevention and Control of Pollution) Act, 1981 and the inclusion of noise as a pollutant by the Amendment Act 47 of 1987, thus bringing it within the scope of air pollution. Consequently, the Central and State Pollution Control Boards assumed added role of prevention and control of noise pollution by formulating noise standards for industries, automobiles, domestic appliances and the general ambient noise standards, as well as by conducting surveys as part of monitoring of ambient noise levels.

### **Noise Hazard in Kochi**

Recent studies undertaken in Kochi City<sup>55</sup> reveal that on an average, buses produce noise in excess of 90 decibels with their care-free honking. Even without the blaring of the horns, buses produce noise in excess of 80 decibels. This is when the rules regarding the ambient air quality standards in respect of noise allows just 75 decibels during day even in industrial areas, while in residential areas, it is 55 decibels and in silence zones it is down to 50. The study shows that there is scant concern for silence zones, though areas up to 100 meters from hospitals, educational institutions, courts and the like come under the silence zones. The study concludes by noting that the most vulnerable are the newborns and premature babies in hospitals who may be permanently deafened by such high decibel levels. Another high risk group is the traffic policemen who bear this onslaught for eight hours in a day. On an average, the study revealed that a person like a traffic policeman in continuous proximity to the honking would receive 319 blasts of the horn in two hours. The study suggests educating the drivers and conductors by making them

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<sup>55</sup> Study was undertaken by the Kochi Chapter of the Indian Medical Association and the Association of Oto Laryngology in association with the State Pollution Control Board on September 30, 2008. For details, see the news item under the caption "Honking Makes Hearing Difficult", *The New Indian Express*, October 6, 2008, Kochi Edition, p.3.

aware that they themselves are at a greater risk of hearing loss than others.

### **Statutory Control of Noise Pollution**

The increasing menace of noise pollution is greatly threatening public health. Despite the same, an exclusive Act<sup>56</sup> dealing with the problem of noise and its control is lacking in the Indian legal system, whereas many countries of the world have already enacted specific laws<sup>57</sup> to control the noise menace. Noise in India is actionable mainly under the law of torts. Apart from that there are also some stray legal provisions, scattered in different statutes for the control of noise. They are analyzed briefly to show how efficacious they are in tackling the problem of noise pollution.

#### **1. Noise as a Public Nuisance under the Criminal Law Regime**

The Indian Penal Code, 1860 treats noise as a public nuisance under Section 268<sup>58</sup>. Under this provision, people who run offensive trade and thereby or by any offensive means corrupt the air or cause any loud and continued noise that cause injury or annoyance to the

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<sup>56</sup> It is true that Noise Pollution (Regulation and Control) Rules, 2000 was framed by the Central Government under the provisions of the Environment (Protection) Act, 1986 read with R.5 of the Environment (Protection) Rules, 1986, but still it has not fully addressed the problem of noise pollution.

<sup>57</sup> Model legislations on noise pollution control in other countries are, Noise Abatement Act, 1960 of England and the U.S. Noise Control Act, 1972. The Noise Abatement Act, 1960, S.2 provides that loudspeakers shall not be operated : (a) between the hours of nine in the evening and eight in the following morning for any purposes, (b) at any other time for the purpose of advertising any entertainment, trade or business. Exceptions are, of course, provided in the Act like the use of loudspeakers by the Police, Fire Brigade etc. For details, see *The Control of Acoustic Environment*, Pen.Uni. Press, Walton Hall, Great Britain (1961). The U.S. Noise Control Act, 1972 is an excellent legislative attempt containing policy statements on noise abatement programme, identification of major noise sources and control mechanism. See for text of the Act, *Lal's Commentaries on Water and Air Pollution and Environment (Protection) Law*, Delhi Law House(5<sup>th</sup> edn.,2008), pp.1373–89 and for the reference of the enactments of some other countries, see Kulshreshta, V.D., "Noise Pollution : Emerging Challenges and Regulation" in Agarwal, S.L.(Ed.), *supra*, n.47 at p.188.

<sup>58</sup> Section 268 reads: "A person is guilty of public nuisance who does any act or is guilty of any illegal omission which causes any common injury, danger or annoyance to the public or to the people in general who dwell or occupy property in the vicinity, or which must necessarily cause injury, obstruction, danger or annoyance to persons who may have occasion to use any public right".

health, comfort or convenience of those dwelling in the neighborhood are liable to prosecution for causing public nuisance<sup>59</sup>.

Noise can also be made punishable under Section 290 of the Code by considering it as a public nuisance not provided in the Code, for which the punishment prescribed is fine extending to two hundred rupees. The question of nuisance by noise is one of the major problems and depends upon the circumstances of the concerned case. Neither the right to make noise can be acquired by prescription nor can it be accepted as a defence to a charge of public nuisance<sup>60</sup>.

The Criminal Procedure Code, 1973 under Section 133 empowers an Executive Magistrate to pass conditional order requiring the person causing nuisance including that of noise, to remove such nuisance<sup>61</sup>. This provision can be utilized in case of nuisance of air environment. Under this provision, Executive Magistrate can adopt immediate remedial measures to prevent danger or injury of a serious nature to the public. For prevention of danger to human life, health or safety, the Magistrate can also direct a person to abstain from certain acts<sup>62</sup>. In *Madhavi v. Thilakan*<sup>63</sup>, Justice Chettur Sankaran Nair of the Kerala High Court adopted a positive approach to the problem of noise pollution by holding that running of workshop causing nuisance by air pollution and noise pollution in violation of the order passed under Section 133 of Criminal Procedure Code cannot be justified on the ground that it provides livelihood to some

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<sup>59</sup> For details of actionable noise, see Ratan Lal and Dheeraj Lal, *The Law of Crimes*, Bharat Law House, New Delhi(2007)Ch.XIV.

<sup>60</sup> See 28 *Halsbury's Law of England* (1959)191.

<sup>61</sup> The High Court of Madhya Pradesh in *Krishna Gopal v. State of M.P* 1984 CrL. L.J. 396, has made use of Section 133 of the Cr. P.C as a potent measure for the control of noise pollution. In this case, the High Court, on revision restored the order of the S.D.M for the removal of a glucose factory and a boiler from the locality which boomed round the clock, emitted smoke, ash and disturbed the sleep of a heart patient and others living next door. The Court observed that manufacturing of medicines in a residential locality with the aid of installation of a boiler resulting in the emission of smoke therefrom is undoubtedly injurious to health as well as the physical comfort of the community.

<sup>62</sup> Available at [http://en.wikipedia.org/wiki/Noise\\_control](http://en.wikipedia.org/wiki/Noise_control), visited on 21-11-2008.

<sup>63</sup> 1988 (2) K.L.T. 730.

persons. Thus, the Court has regarded right to a safe air environment free from noise as more important than the right to livelihood.

Even amidst such progressive judicial trends projecting the harmful consequences of noise, nuisance by noise has not been given a serious consideration under the criminal law regime. It is not even considered as a public nuisance under Section 268 of the Indian Penal Code but often relegated to the residuary provision under Section 290, which prescribes just nominal punishment not having any deterrent effect. The provisions in the Indian Penal Code are inadequate to meet the increasing menace of noise pollution, in view of the recent scientific and industrial developments.

The penal provisions also do not lead to uniform application in all criminal cases of noise nuisance. There have been very rare prosecutions for nuisance by noise as the offence of public nuisance under Section 290 is non-cognizable. The indifferent attitude of courts in maintaining such actions is another factor for less prosecution. Courts generally show reluctance to treat nuisance by noise as actionable public nuisance even if it does affect all the residents of a locality<sup>64</sup> or some times regard it as insignificant<sup>65</sup>.

## **2. Noise Control under the Police Act, 1861**

The Police Act, 1861 deals with noise pollution indirectly by envisaging provisions to regulate the conduct of assemblies and processions on public roads<sup>66</sup>. As part of it, the police authorities can prescribe the routes and timings for taking out processions. The police officers can also require by notice for the procurement of license in cases where convening of the assembly or procession is

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<sup>64</sup> See *Dwarika Prasad v. B.K. Roy Choudhary*, A.I.R. 1950 Cal. 349, *per* Sen and K.C.Chunder, JJ.

<sup>65</sup> See *Ivour Hydens v. State of Andhra Pradesh*, 1984 Cr.L.J.16, wherein the Andhra Pradesh High Court in revision quashed the order of conviction of the lower court and held that playing radio loudly was too trivial an act to be taken cognizance of and is to be considered as excusable under Section 95 of the Indian Penal Code.

<sup>66</sup> The Police Act, 1861, S.30 envisages that the District Superintendent or the Assistant District Superintendent of Police are authorized to direct the conduct of all assemblies and processions on public roads or in the public streets.



likely to cause a breach of peace. Police officers are also empowered to regulate music in the streets on the occasion of festivals and ceremonies. The regulatory power extends to stopping, dispersing or declaring the assemblies or processions that are unlawful and also which violate the conditions of license<sup>67</sup>. The Act envisages penalty for violation of the conditions of license with regard to the use of music or the conduct of assemblies or processions<sup>68</sup>.

### 3. Noise Control under the Railways Act, 1890

Railway engines and carriages are a big source of noise in India. But, railway locomotives enjoyed statutory protection under the Railways Act, 1890 against any action for the noise created by it<sup>69</sup>. The Act also did not contain any provision for regulating noise caused by railway locomotives.

The Railway Act, 1890 has been repealed by the Railways Act, 1989, and the new enactment also does not contain any specific provision to control noise pollution resulting from railway locomotives. Railway locomotives are let free from statutory control, probably for the reason that railways constitute the largest means of public transportation in India. But the noise from locomotives has been substantially reduced with the introduction of electrical and diesel engines and with the use of welded tracks for running the trains. However, shunting operations even now continue near residential areas causing a great deal of noise and annoyance to the general public.

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<sup>67</sup> *Id.* S.30-A.

<sup>68</sup> Penalty prescribed extends to a fine not exceeding two hundred rupees. See, *Id.* S.32. Under the Bombay Police Act, Police Inspectors are authorized to allow the use of loudspeakers and they are conferred with wide discretion in the matter suggesting the possibility for its abuse.

<sup>69</sup>The Railways Act, 1890, S.16 gives statutory authority for the use of locomotives to the railway administration.

#### 4. Noise Control under Civil Aviation law

The impact of civil aviation on the environment is evident in the rising public concern regarding noise which it generates. In 1968, at the sixteenth Assembly session of the International Civil Aviation Organization (ICAO) at Buenos Aires, a resolution was adopted requiring ICAO to study the problem of noise pollution from aircrafts. This led to the development of 'International standards and recommended practices' for aircraft noise. These standards require all aircrafts to undergo the process of noise certification by the authorities of the state of registry of the aircraft regarding compliance of the said standards. India is a member state of ICAO and has also accepted the noise specifications<sup>70</sup>.

Under the Indian Aircrafts Act, 1934, causing of willful damage or injury is actionable. Although there is no specific provision relating to control of noise pollution from aircrafts, the Government can make rules to control noise pollution for safeguarding health<sup>71</sup>. This has led to the incorporation of noise restriction regulations and safety regulations<sup>72</sup> in the Aircraft Rules. To enforce the rules, Airfield Enforcement Committees headed by Secretaries of the State Governments with broad based membership from Civil Aviation Department, Municipal Corporations, Health Departments etc. are established at all airports. Though there are regulations, they are not enforced and that no airline has been penalized for infringement of

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<sup>70</sup> An Aeronautical Information Circular was issued by the Civil Aviation Ministry banning the operation of aircrafts which are not noise certified after December 31, 1987.

<sup>71</sup> Rule making powers are conferred by Aircraft Act, 1934, S.8A and the Indian Aircrafts(Public Health) Rules, 1946.

<sup>72</sup> R.81-B is directed at clean air around airports to avoid bird hitting by the aircrafts. Under the rule, slaughtering or flaying animals, depositing or dropping any rubbish, garbage or polluted matter which attracts or may attract birds within a radius of 10 Kms. from the aerodromes is prohibited. Violation of the Rule entails prosecution and a person who is found guilty may be sentenced to imprisonment which may extend up to 2 months or fine or with both. The Rule has been recently amended and the punishments have been made more stringent.

the noise regulations. Apart from that no measures are taken to cut down noise pollution by imposing night curfews<sup>73</sup>.

### 5. Noise Control under the Motor Vehicles Act

The Motor Vehicles Act, 1939<sup>74</sup> empowered the State Government to make rules for regulating equipment and maintenance of motor vehicles and trailers. Section 70 of the Act also authorized the State Government to make rules to reduce noise emission and prohibit carrying of appliances or the use of trailer with motor vehicles, causing annoyance or danger. It also envisaged periodical testing and inspection of vehicles by authorities.

However, the rules made by States did not contain effective control measures to reduce noise pollution except that the use of horns and silencers were regulated<sup>75</sup>. There was inadvertence by States in the implementation of the rules also, which made the judiciary to intervene to implement the letter and spirit of law. Such a trend is seen reflected in *Rabin Mukherjee v. State of West Bengal*<sup>76</sup>, wherein the grievance pertained to nuisance and noise pollution created by the transport operators by indiscriminate installation and

<sup>73</sup>For a critical evaluation of the state of noise pollution at the Indian Airports, see Bhatia, H.S., "Containing Airport Noise", *The Hindustan Times*, New Delhi, April 28, 1988, p.11.

<sup>74</sup>See Motor Vehicles Act, 1939, Ss. 20, 21 J, 41, 68, 68-1, 70, 91 and 111-A.

<sup>75</sup>For example, the following Delhi Motor Vehicles Rules, 1940 are really appreciable and should be incorporated by other States as well. These Rules are as follows: 5.5 *Horn*: -(1) Every motor vehicle shall be fitted with a horn or other approved device available for immediate use by the driver of the vehicle and capable of giving audible and sufficient hearing of the approach or position of the vehicles; (2) No motor vehicle shall be fitted with any multi-toned horn giving a succession of different notes or with any other sound producing device giving an unduly harsh, shrill, loud or alarming noise; (3) Nothing in sub rule (2) shall prevent the use of vehicles used as ambulances or fire fighting or salvage purposes of a vehicle used by police officers in the course of their duties or on other similar vehicles of such sound signals as may be approved by the Provincial Government; (4) Every transport shall be fitted with a bulb horn (taxis and motor cycle rickshaws shall be, however, provided with either two electric horns with two switches or one electric horn and one bulb horn). 5.6 *Silencers*:- (1) Every motor vehicle shall be fitted with a device (hereinafter referred to as a silencer) which, by means of expansion chamber or otherwise reduces, as far as may be, reasonable and practicable, the noise that would otherwise be made by an escape of exhaust gases from the engine. (2) Every motor vehicle shall be so constructed or equipped that the exhaust gases from the engine are discharged downwards so as to impinge on the road surface. 5.9 *Noise*:- Every motor vehicle shall be so constructed and maintained as not to cause undue noise when in motion. Identical provisions have been incorporated in the Punjab Motor Vehicles Rules, 1940 and the Bengal Motor Vehicles Rules, 1940.

<sup>76</sup>A.I.R. 1985 Cal. 222.

use of electric and artificially generated air horns that caused unduly rash shrill, loud and alarming noise<sup>77</sup>.

Justice Bhagabati Prasad Banerjee of the Calcutta High Court, after considering the serious physiological and psychological effects of noise pollution on various aspects of human life, held that it is the duty of the State and its authorities to enforce Rule 114 of the West Bengal Motor Vehicles Rules, 1940 and to punish the violators. The Court further directed the State Government to issue notification forthwith notifying to all transport vehicle operators about the restrictions provided in Rule 114 on the use of electric and other artificially generated air horns and directed the operators to remove such horns forthwith and to use only bulb horns in the State. The court granted 15 days time to the operators to change the electric and air horns and to fit their vehicles with bulb horns with a warning that failure to remove such prohibited horns from their vehicles would entail penal action<sup>78</sup>.

The above approach of the High Court is laudable. High Court has recognized the importance of giving wide publicity to the statutory restrictions as a condition for compliance. Such positive trends are seen reflected in other decisions<sup>79</sup> as well.

The Motor Vehicles Act, 1939 was repealed by the Motor Vehicles Act, 1988 and the new enactment also empowers the Central Government to take steps to control noise pollution<sup>80</sup>. The new Act also envisages penalty for violation of noise pollution standards<sup>81</sup>.

<sup>77</sup> The use of such horns was in violation of R.114 of the West Bengal Motor Vehicles Rules, 1940 which provide that every transport vehicle should be fitted with a bulb horn.

<sup>78</sup> The Court also directed the State Government to notify that no transport vehicle fitted with electric and air horns would be issued with fitness certificate under S.38 of the Motor Vehicles Act.

<sup>79</sup> The decision of the Bombay High Court in *Citizens Action Committee v. Civil Surgeon, Mayo Hospital*, A.I.R. 1986 Bom.136 deserves mentioning in this context, as in the above case, the Court directed the Commissioner of Police, Nagpur city to take steps to declare silence zone around Mayo Hospital and Medical College Hospital within 6 weeks.

<sup>80</sup> See Central Motor Vehicles Act, 1988, S. 110.

<sup>81</sup> Under Section 190(2), any person who drives or causes or allows to be driven, in any public place a motor vehicle which violates the standards prescribed in relation to road safety, control of noise and

Though under this, some measures have been taken towards noise control<sup>82</sup>, power has not been effectively utilized.

### **6. Noise Control under the Factories Act, 1948**

High intensities, high frequencies and intermittency of noise often cause annoyance to the industrial workers. However, Factories Act, 1948 do not envisage measures to meet the above situation, except that it makes it obligatory on the part of occupier of every factory to keep the factory clean and free from any drain, privy or other nuisance<sup>83</sup>. The expression 'nuisance' in Section 11 can be considered to include noise. In the third schedule under Sections 89 and 90 of the Act, noise induced hearing loss is mentioned as a notifiable disease<sup>84</sup>. Noise limits for work zone area have been prescribed in Model Rules framed under the Factories Act, 1948. It is pertinent to note that under Section 35 of the Act, protection to the eyes of the employees is recognized, but protection to ears is nowhere granted<sup>85</sup>.

### **7. Noise Control under the Air (Prevention and Control of pollution) Act, 1981**

Regulation of noise pollution did not fall within the gamut of Air Act, till the 1987 amendment. The amendment recognized noise as an air pollutant by amending Section 2(a)<sup>86</sup>. Thus, noise pollution

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air pollution, shall be punishable for the first offence with a fine of one thousand rupees and for any second or subsequent offence with a fine of two thousand rupees.

<sup>82</sup> Motor Vehicles Rules, 1989, Rules 119 and 120 provide for regulation of fittings and use of horns and silencers respectively.

<sup>83</sup> See The Factories Act, 1948, S.11.

<sup>84</sup> Under Section 89 of the Factories Act, any medical practitioner who detects any notifiable disease, including noise induced hearing loss, in a worker, has to report the case to the Chief Inspector of Factories, along with all other relevant information. Failure to do so is a punishable offence.

<sup>85</sup> However, in the Schedules under Ss.89 and 90 of the Factories Act, noise induced hearing loss is mentioned as a notifiable disease.

<sup>86</sup> The term 'air pollutant' has been defined to mean any solid, liquid or gaseous substance including noise 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.

through the medium of air is also covered under the Act<sup>87</sup>. Resultantly, the provisions of the Act on increased penalties, citizens' suit and the issuance of injunction by Magistrates can be invoked to control noise pollution. The Central and State Boards can also exercise the powers and functions under Sections 16 and 17 of the Air Act for preventing and controlling noise pollution and can also lay down noise standards. Accordingly, noise standards have been prescribed for industries<sup>88</sup>, automobiles<sup>89</sup>, domestic appliances<sup>90</sup> and for other sources<sup>91</sup>. Besides this, ambient noise standards for industrial, commercial, residential areas and silence zones<sup>92</sup> have been laid down both for day time and night time. Other sources covers public address system<sup>93</sup>, aircraft operations<sup>94</sup>, railway operations<sup>95</sup>, construction activities<sup>96</sup> and bursting of crackers<sup>97</sup>.

An evaluation of the various statutory provisions contained in the Air Act shows that it is not adequate enough to prevent and

<sup>87</sup> Sachdev, G.S., "Air (Prevention and Control of Pollution) Act 1981: A Critical Analysis" in Anand, R.P. *et al.*, (Eds.), *Law, Science and Environment*, Lancers, New Delhi (1987) at p.106.

<sup>88</sup> Under the noise standards for industries, exposure to continuous or intermittent noise louder than 115 dB should not be permitted and that exposure to pulse or impact noise should not exceed 140 dB in relation to peak acoustic pressure.

<sup>89</sup> Noise limits prescribed for automobiles relates to manufacturing stage and it covers two wheelers, three wheelers and four wheelers without any distinction between passenger or commercial vehicles.

<sup>90</sup> Noise limits for domestic appliances covers window air conditioners, air coolers and refrigerators.

<sup>91</sup> These standards have been laid down by the Central Pollution Control Board in the reporting year 1989-90 under Section 16 of the Air Act.

<sup>92</sup> Silence Zone includes areas up to 100 metres around certain premises like hospitals, educational institutions, and courts. Honking of vehicle horns, use of loudspeakers, bursting of crackers and hawkers noise are banned in these areas declared as silence zones.

<sup>93</sup> The Code for controlling noise from public address system envisages licensing, ban on use between 9 p.m. and 6 a.m., mode of use and further prohibits the use of public address system for advertisement and commercial activities.

<sup>94</sup> The Code of Practice for controlling noise from aircraft operations prohibit location of aerodrome in cities and also impose conditions on take off, boarding and un-boarding operations, night-time operations, idling period and maintenance and repair of aeroplane works.

<sup>95</sup> The Code of Practice for controlling noise from railway operations obligates erections of caustic barrier, reducing speed and avoiding whistling within municipal and residential limits to the extent possible.

<sup>96</sup> The Code of Practice for controlling noise from construction activities mandates the placement of acoustic barriers, fencing near construction sites and prescribes the maximum noise level as 75 dB in industrial areas and 65 dB in other areas.

<sup>97</sup> The Code of Practice for controlling noise from bursting of crackers bans manufacture and sale of crackers having an impulsive noise of more than 90 dB at five meters distance from the site of bursting, manufacture and bursting of joined crackers, bursting of crackers between 9 p.m. and 6 a.m. It also permits bursting of crackers only during public festivals. See *Annual Report 1989-1990*, *supra*, n.51 at pp.47-48.

control noise pollution. The Act suffers from inherent loopholes. Though standards for control of noise pollution have been prescribed, it remains unimplemented on account of absence of effective control mechanism.

### **8. Noise Control under the Environment (Protection) Act, 1986**

The Environment (Protection) Act, 1986 makes no specific reference to noise as an 'environmental pollutant'<sup>98</sup>. However, noise seems to have been impliedly included in the category of pollutant in view of Section 6(2)(b) of the Act<sup>99</sup>. Moreover, the Act takes a comprehensive view of environment in its totality and therefore, noise pollution cannot be viewed in isolation or apart from it. Thus, in the absence of any exclusive Act dealing with the control of noise pollution, the protection of environment would come within the purview of the Environment (Protection) Act. However, these provisions do not envisage effective ways to control noise pollution.

### **9. Noise Control under Noise Pollution (Regulation and Control) Rules, 2000**

Judicial interdictions and the mounting public pressure for a specific legislation to combat noise pollution eventually led to the framing of the Noise Pollution (Regulation and Control) Rules, 2000<sup>100</sup>. The Rules provide for ambient air quality standards in respect of noise for industrial area, commercial area, residential area and silence zone both during day time and night time<sup>101</sup>. Day time

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<sup>98</sup> Environment (Protection) Act, 1986, S.2(b) defines 'environmental pollutant' as meaning any solid, liquid or gaseous substance present in such concentration as may be, or tend to be, injurious to environment.

<sup>99</sup> Environment (Protection) Act, 1986, S. 6 (2) (b) authorizes the Central Government to make rules providing for the maximum allowable limits of concentration of various environmental pollutants including noise for different areas by issuing notification in the Official Gazette.

<sup>100</sup> It came into force on Feb.14, 2000. The Rules were framed by the Central Government under the provisions of the Environment (Protection) Act, 1986 read with R.5 of the Environment (Protection) Rules, 1986.

<sup>101</sup> The Noise Pollution (Regulation and Control) Rules, 2000, R.3.

standard for industrial area is fixed as 75 dB, for commercial area as 65 dB, for residential area as 55 dB and for silence zone as 50 dB. Night time standard for industrial area is fixed as 70 dB, for commercial area as 55 dB, for residential area as 45 dB and for silence zone as 40 dB<sup>102</sup>. The power to categorize areas to take measures for abatement of noise is vested with the State Government. Rules mandate all development authorities and local authorities to take into consideration all aspects of noise pollution as a parameter of quality of life to avoid noise menace and to achieve the objective of maintaining the ambient air quality standards in respect of noise<sup>103</sup>. Authorities have been designated vested with the responsibility to enforce noise pollution control measures<sup>104</sup>. Restrictions are also imposed on the use of loudspeakers/public address system<sup>105</sup> which envisages licensing and prohibition on its use between 10 p.m. and 6 a.m. subject to relaxation permissible for the State Government upon conditions during night hours between 10 p.m. and 12 midnight during cultural or religious festivals of limited duration not exceeding 15 days in a calendar year<sup>106</sup>. Penalty is also prescribed for activities in violation of the rules in the silence zone<sup>107</sup>. If the noise level exceeds the ambient noise standards prescribed in respect of an area, any person can make a complaint to the competent authority which can proceed against the violator by taking appropriate action<sup>108</sup>, and on failure by the authorities to take abatement measures, the aggrieved party can approach the court after expiry of 60 days and the court can take prosecution steps. There is also power conferred upon the authority to prohibit the continuance of music, sound or noise becoming annoyance,

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<sup>102</sup> Day time is explained to mean from 6 a.m. to 10 p.m. and night time as 10 p.m. to 6 a.m. Silence zone means areas up to 100 meters around hospitals and educational institutions and courts, declared by the competent authority who can also notify mixed categories of areas.

<sup>103</sup> R. 3 (4).

<sup>104</sup> R. 4.

<sup>105</sup> R. 5.

<sup>106</sup> As amended by Gazette Notification dated October 11, 2002.

<sup>107</sup> R.6. Activities include playing music, using sound amplifiers, beating drum or tom-tom, blowing horn, exhibiting mimetic, musical or other performances to attract crowds.

<sup>108</sup> R.7.



disturbance, discomfort or injury to the public<sup>109</sup>. Rules have also been prescribed for air quality standards in respect of noise with regard to domestic appliances, firecrackers and noise limits for industries, automobiles, generator sets, etc.

However, the rules are not free from loopholes. The rules fix different ambient air quality levels for firecrackers and industrial activities when both are of equal damage to health. The rules are silent on noise from stationed vehicles, when the prohibition against the use of multi-toned horns is hardly enforced, though regulated by the Motor Vehicles Act 1988. Police and ambulance sirens are still used in ordinary transport vehicles as horns, and mufflers are disengaged or absent even in Euro certified vehicles.

Despite the same, the rules are clearly a step forward although they do not attempt to create comprehensive legislation on noise pollution, and continue with the piece-meal approach to specific problems encountered over the years. It is found that the legislative vacuum has often forced judges' efforts to create and regulate a fine balance between competing demands—from religion, the environment, public health, law and order etc. As a result, notwithstanding the progress made in understanding and documenting the various negative effects of noise pollution, there is still much that remains undone. In a welfare State, as aptly observed by the Supreme Court, it is the obligation of the State to ensure sustaining conditions congenial to good health<sup>110</sup>.

### **Judicial Contributions**

The evil effects of noise pollution are enormous. It causes various physical and mental ailments. The extent of damage depends upon the duration and the intensity of noise that some times leads to

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<sup>109</sup> R.8.

<sup>110</sup> *Vincent Panikulangara v. Union of India*, (1987) 2 S.C.C. 165.

serious law and order problems<sup>111</sup>. Judiciary in India has been treating noise pollution as amounting to violation of right to life and a form of abuse of freedom of speech and expression, thereby signaling the State of its solemn obligation to protect the citizens from noise pollution. In their efforts, the courts have also elevated freedom from noise pollution to the status of a fundamental right<sup>112</sup>.

### **(i) Judiciary on Industrial Noise**

According to the World Health Organization, noise working environment has resulted into lower efficiency and increased errors<sup>113</sup>. The first verdict on the necessity to curb industrial noise pollution came from the Karnataka High Court which recognized industrial noise pollution as a health hazard in *V.Lakshmiathy v. State of Karnataka*<sup>114</sup>. The Court ordered the closure of industries which were established in the area marked as residential area in the Development Plan of the city. The Court was satisfied from the evidence adduced to prove the existence of air pollution and noise pollution affecting the environment and detrimental to the members of the public who lived in that area. The Court also held that the persistent pollution which is offensive and detrimental to public health is violative of Article 21 of the Constitution.

In *M.C. Mehta v. Union of India*<sup>115</sup> a public interest litigation was filed in the Supreme Court seeking a direction to the Haryana Pollution Control Board to control air and noise pollution caused by stone crushers, pulverizers and mine operators in Faridabad, within a radius of five kms. from the tourist resorts of Badkal lake and Surajkund. It was reported that noise levels in the area were far exceeding the permissible limits and particularly noise levels became

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<sup>111</sup> Leelakrishnan, P., *Environmental Law in India*, Butterworths, New Delhi (2<sup>nd</sup> edn., 2005), p.165.

<sup>112</sup> Seema, P.S. "Noise Pollution – Human Rights and Constitutional Dimensions", [2003] C.U.L.R. 78 at p. 97.

<sup>113</sup> Ateeque Khan, "Legal Control of Noise Pollution in India", in Musharraf Ali, S.(Ed.), *supra*, n.46 at p.175.

<sup>114</sup> A.I.R. 1992 Kant. 57, *per* H.G. Balakrishna, J.

<sup>115</sup> (1996) 8 S.C.C. 462.

unbearable at the time of blasting operations by using explosives. This was having an adverse impact on the local ecology. Besides rock blasting, the movements of heavy vehicles and operation of mining equipment and machinery caused considerable pollution in the form of noise and vibrations. The Court held that to preserve the environment and control pollution within the vicinity of the two tourist resorts, it was necessary to stop mining in the area. Further, the Court instructed to develop a green belt of 200 meters at 1 Km radius all around the boundary of the two lakes and to leave another 800 meters as a cushion to absorb the air and noise pollution. Further, it was directed that trees should be planted on both sides of the roads leading to the mines and lakes to minimize the noise pollution. The Haryana Pollution Control Board also declared this tourist area as a sensitive area, as the ambient air quality standards are more stringent in sensitive areas than in other areas.

In *Citizens Council, Jamshedpur v. State of Bihar*<sup>116</sup> the local residents raised an objection under Article 226 against the permission granted to the Handloom and Khadi Board to organize an exhibition in a public park. Their complaint was mainly based on noise pollution generated from the exhibition. But the complainant failed to produce evidence to show that the exhibition would be a health hazard and would cause noise pollution. In the above circumstances, the High Court declined to grant any relief. This is a case wherein the court has considered noise pollution as insignificant. Instead of asking the organizers to file an undertaking placing on record that the exhibition would not turn to be noisy or a public nuisance, the court simply dismissed the writ petition thus giving free license to the organizers to make the environment noisy. It is submitted that asking the petitioner to place evidence on noise pollution to sustain the writ petition is uncalled for in a writ proceeding, and amounts to punishing the petitioner for having

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<sup>116</sup> A.I.R. 1999 Pat.1, per R.A.Sharma and B.P.Sharma, JJ.

approached the court with clean hands. Such hyper-technical approach of the court has reasonably obstructed the preventive and control measures against noise pollution.

Yet in another case, *Vedkaur Chandel (Smt) v. State of H.P.*,<sup>117</sup> the Division Bench of the Himachal Pradesh High Court considered noise pollution from a tyre retreading unit. In this case, Chief Justice D.Raju and Justice Kamlesh Sharma reminded the Pollution Control Board that it has a heavy responsibility to ensure that before production starts the industry takes necessary precaution not to cause air, water and noise pollution. The Court emphasized that the Industry must fulfill all the conditions of the NOC issued by the Pollution Control Board.

Similarly, in *Shobha Ramasubramanyam v. Member-Secretary, Chennai Metropolitan Development Authority*<sup>118</sup> the Madras High Court declared that noise produced by the use of heavy machinery and heavy iron weight was more than 86 decibel and in excess of the standard and was thus disturbing the peace of the neighbourhood. Therefore, the Court ordered for the closure of the works forthwith. Further, the Court rightly pointed out that environmental rights are 'third generation rights', to be zealously protected by all the organs of the State.

The Supreme Court again in *Sheikh Ikrem Sheikh Ismail v. State of Maharashtra*<sup>119</sup>, took a hard stand against the attitude of manufacturers in commencing manufacturing operation without installing measures to avert noise pollution, and mandated that parties engaged in manufacturing operations should give concrete proposal as to how they intend to adhere to the prescribed norms regarding noise pollution.

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<sup>117</sup> A.I.R. 1999 H.P.59

<sup>118</sup> A.I.R. 2002 Mad.125, per Subhashan Reddy, C.J. and Sivasubramaniam, J.

<sup>119</sup> 2007(4) S.C.C. 217, per Arijit Pasayat and Lokeshwar Singh Panta, JJ.

**(ii) Court Balances Religious Rights with Noise-free Environment**

Noise has adverse impact on the health of the people. That being so, can one be permitted to add to noise pollution or violate noise pollution norms in the name of religion was a significant question that arose for the consideration of the courts in India time and again. The debate gained attention in *Acharya Maharajeshree Narendra Prasadji*<sup>120</sup>, and then passed on to *Om Birangana Religious Society*<sup>121</sup> in which court reiterated the principle in the following words:

“No right in an organized society can be absolute. Enjoyment of one’s right must be consistent with the enjoyment of rights also by others. One fundamental right of a person may have to coexist in harmony with the exercise of another fundamental right by others, also with reasonable and valid exercise of powers by the State in the light of the Directive Principles in the interest of social welfare as a whole”<sup>122</sup>.

In this case, petitioner, a religious organization challenged the order of the Sub-Divisional Magistrate issued under Section 34-A of the Police Act forbidding them from using microphone while performing poojas and other religious ceremonies, which according to the petitioner violated their right under Article 25. The question involved in this case was whether the right to propagate religion includes the right to use loudspeakers and microphones for the purpose of chanting religious tenets or religious texts. Court held that Article 25 is subject to Article 19 (1) (a) and on a proper construction of both the provisions, it cannot be said that a citizen should be coerced to hear anything which he does not like or which he does not require. The Court expressed its strong view in the following words:

“A citizen has a right to leisure, right to sleep, right not to hear and right to remain silent. He has also the right to read and

<sup>120</sup> *Acharya Maharajshri Narendra Prasadji Ananda Prasadji Maharaj v. State of Gujarat*, A.I.R. 1974 S.C. 2098, per A.N.Ray, C.J. and Beg, Alagiriswami, Goswami, Sarkaria, JJ.

<sup>121</sup> *Om Birangana Religious Society v. State*, Cal.L.T.(1996) 2 H.C.474.

<sup>122</sup> Per Bhagwati Prasad Banerjee, J.

... speak with others. Use of microphones certainly takes away the right of the citizens to speak with others, their right to read or to think or the right to go sleep...”<sup>123</sup>

Thus, the Court held that microphones or loudspeakers can be used in a religious place only for the purpose of communicating the speeches or religious teachings to the persons who are attending the function alone and that it cannot be operated in such a manner as to give a reasonable case for annoyance to any person in the vicinity.

Proceeding in the same direction, in *Veerateswaran*<sup>124</sup>, the Madras High Court categorically took the view that in the name of religion, nobody can be permitted to add to noise pollution or violate noise pollution norms. Court held that pollution of all kinds including noise pollution comes within the purview of ‘personal liberty’ guaranteed under Article 21 of the Constitution. Considering the adverse health effects of noise, even if there is a religious practice to use voice amplifiers, it should not adversely affect the rights of others including that of being not disturbed in their activities. The reasoning of the court is guided by the principle that right to religion does not include right to perform religious activities on loudspeaker and electronic goods which produce high velocity of noise.

### **(iii) Religious Practices and Noise Pollution**

In *Noise Pollution(In Re) v. Union of India*<sup>125</sup>, the Supreme Court held that considerations like bursting firecrackers at night on the belief that certain festivals were accompanied customarily by such practices cannot come in the way of the enforcement of fundamental right to live in peace and comfort in an atmosphere free from pollution of any kind, such as caused by noise and foul poisonous gases.

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<sup>123</sup> *Id.*, p.479.

<sup>124</sup> *Veerateswaran v. Deputy Collector*, 2003 (3) K.L.T (SN)13.

<sup>125</sup> (2005) 5 S.C.C. 728, *per* Dr.A.S.Anand, C.J. and Lahoti, Ashok Bhan, JJ.

However, the Court has approached the issue of noise regulation in religious institutions with caution and reverence and most of the decisions have been based on the bare facts of the case without offering any comment by the judiciary about the religious practices themselves.

*Azan and midnight mass*-Azan from the mosques early in the morning or the midnight mass conducted by christian priests argue on the basis of their fundamental rights<sup>126</sup>. It would be worthwhile to examine what these rights are and what limitations are placed by law on the exercise of these rights. It is true that Constitution guarantees to all persons freedom of conscience and the right to profess, practice and propagate religion<sup>127</sup>. It is equally recognized that every religious denomination has the right to manage its own affairs in matters of religion<sup>128</sup>. However, these constitutional entitlements are subject to public order, morality and health. Reasonable restrictions put on the enjoyment of these constitutionally guaranteed freedoms would not be unconstitutional or illegal if such restrictions promote or support public order, morality and health. In this context the observation of Chief Justice Chagla of the Bombay High Court is significant. He stated thus:

“A sharp distinction must be drawn between religious faith and religious practices. What the State protects is religious faith and belief. If religious practices run counter to public order, morality or health, the practices must give way for the good of the people”<sup>129</sup>.

The courts in India have also considered the issue of noise in the form of amplified music from religious buildings on a number of

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<sup>126</sup> Azan is not a form of propagation but it is an essential and integral part of religion to meet at the prayer from a call being made through Azan. Traditionally and according to the religious order, it is to be given by the Imam or the person in charge of the Mosques through their own voice, this is sanctioned under the religious order. See *Moulana Mufti Syed Mohammed Noorur Rehman Barkati v. State of West Bengal*, A.I.R.1999 Cal.15, per Bhagabati Prasad Banerjee and Ronojit Kumar Mitra, JJ.

<sup>127</sup> The Constitution of India, Art.25.

<sup>128</sup> *Id.* Art.26.

<sup>129</sup> Available at <http://www.hvk.org/articles/1201/50.html>, visited on 12-10-2008.

occasions. The Supreme Court in *Church of God (Full Gospel) in India v KRR Majestic Colony Welfare Association*<sup>130</sup>, considered a case involving a complaint on behalf of local residents that the use of loud speakers and musical instruments in the appellant's prayer hall caused excessive noise contrary to the Environment (Protection) Act, 1986. A single judge of the Madras High Court had directed the police to ensure that the church turned their music down. On appeal, the church claimed that its members have right to profess and practice religion and hence the order of the High Court infringed their fundamental right under Article 25.

In this case, the effects of noise pollution on health were closely analyzed by the Supreme Court in the following words:

"In these days the problem of noise pollution has become more serious with the increasing trend towards industrialization, urbanization and modernization and is having many evil effects including danger to health. It may cause interruption of sleep, affect communication, loss of efficiency, hearing loss or deafness, high blood pressure, depression, irritability, fatigue, gastro-intestinal problems, allergy, distraction, mental stress, and annoyance, etc. This also affects animals alike. The extent of damage depends upon the duration and intensity of noise..."<sup>131</sup>

Reacting to the contentions raised placing reliance on Articles 25 and 26, the court affirmed that rights under Articles 25 or 26 of the Constitution were subject to public order, morality and health. No religion prescribed or preached that prayers were required to be performed through voice amplifiers or by beating drums. In any case, if there was practice, it should not adversely affect rights of others including that of being not disturbed in their activities<sup>132</sup>. Further, it was emphasized by the court that reasonable restrictions must be imposed for the use of loudspeakers and voice amplifiers<sup>133</sup>. Thus,

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<sup>130</sup> (2000)7 S.C.C.282.

<sup>131</sup> *Id.*, p.286.

<sup>132</sup> *Id.*, p.290.

<sup>133</sup> *Ibid.*



the court has taken the view that fundamental freedom to religion should not be allowed to cause noise pollution.

In *Pavithran K.V. v The District Superintendent of Police*<sup>134</sup>, a single judge of the Kerala High Court while interpreting Rule 5 (2) of the Noise Pollution (Regulation and Control) Rules, 2000 held that the use of loud speakers cannot be allowed beyond 12 p.m. even in religious or cultural functions.

#### **(iv) Passive Approach**

A neutral approach was shown by the court in noise pollution case, though the issues involved therein required serious consideration. In *Chairman, Guruvayur Devaswom Managing Committee, Guruvayur v. Supdt. of Police*<sup>135</sup>, the Kerala High Court permitted the use of loud speakers which were put at the height of 3 meters in the temple premises as per the expert opinion given by the Pollution Control Board and their assurance that the audibility of the devotional songs was limited within the temple premises and will not cause noise pollution.

Similarly, a Bench of the Supreme Court<sup>136</sup> validated the power of State Government to permit use of loudspeakers or public address system during night hours and during cultural or religious occasions on specific conditions, however holding that this power is limited by the message that it should be exercised with due care and caution and in public interest and the power could not be further delegated and that it shall be exercised by reference to the State as a unit and not by reference to Districts<sup>137</sup>.

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<sup>134</sup>2005 (1) K.L.T. 650, per K.M. Joseph, J.

<sup>135</sup> A.I.R. 1998 Ker.122, per U.P.Singh, C.J. and Sankarasubban, J.

<sup>136</sup> Per R.C.Lahoti and Ahok Bhan, JJ.

<sup>137</sup> *Forum for the Prevention of Environment and Sound Pollution v. Union of India*, 2005(4) K.L.T. 824(SC).

Following this, in *Forum for the Prevention of Environmental and Sound Pollution v. Union of India*,<sup>138</sup> a Division Bench of the Kerala High Court also took similar view of the matter and held that Rule 5 of the Noise Pollution (Regulation and Control) Rules, 2000 which empowers the State Government to permit use of loud speakers or public address system during night hours between 10.p.m. and 12 mid night and during cultural or religious occasions on certain specified conditions is legal and valid. In the instant case, Court upheld the action of the State Government in granting such permission as it was in strict conformity with the stipulation contained in Cl.(3) of Rule 5. At the same time the Court drew the attention on the absence of any provision in the Rules giving opportunity to the citizens to raise their objections in the matter of grant of permission. In the light of the view thus expressed, court should have treated the writ petition filed in the representative capacity as the vindication of citizens' objections against the grant of permission to use loudspeakers.

#### **(v) Strict Enforcement Approach**

Courts have often canvassed for the strict enforcement of noise regulations, treating noise pollution as a grave public health hazard. In *Anand Parthasarathy v. Revenue Divisional Officer*<sup>139</sup>, the Kerala High Court directed the Government of India to enforce strictly the prescribed standards regarding noise in letter and spirit. The Court issued several guidelines for the guidance of the implementing agencies in dealing with noise pollution cases, which *inter alia* include, separate court for dealing with noise pollution cases. The Court also held that all District Magistrates and Sub Divisional Magistrates should be empowered to issue prohibitory orders under Section 144 of Cr.P.C limiting the hours of use of loudspeakers or public address system in religious places and for other special

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<sup>138</sup> 2004 (1) K.L.T. 134, *per* Jawaharlal Gupta, C.J. and Kurian Joseph, J.

<sup>139</sup> 2000 (1) K.L.T. 566.

gatherings and functions<sup>140</sup>. According to the Court, pollution causes material injury to a man and hence noise is a pollutant, as it is of contaminating nature, causing nuisance and detrimental to the health of a person. Thus, court held that noise pollution results in violation of Article 21 of the Constitution.

In *Ahmed Koya v. Rajan*<sup>141</sup> a Division Bench of the Kerala High Court took the view that as the State Government is yet to implement Rule 3 of the Noise Pollution (Regulation and Control) Rules, 2000, which provides for identification of various zones for the purpose of regulation and control of noise pollution, there is no justification for granting permission to the petitioners to use loud speakers for commercial and advertisement purposes. It also held that loud speakers or public address systems should not be generally used, but only used as an exception, in extreme cases of necessity.

Similarly in *Aravindakhan v. Superintendent of Police*<sup>142</sup>, a single judge of the Kerala High Court<sup>143</sup> held that whatever be the justification or necessity for playing devotional songs in the early morning and at dusk or at any time it has to be in conformity with rules that are in force. The Court further made it clear that the purpose of the Noise pollution (Regulation and Control) Rules, 2000 notified by the Ministry of Environment and Forests, Government of India is to regulate and control noise producing and generating source stations. The State Government had been obliged under Rule 3 to take necessary steps for notification of the zones/areas into industrial, commercial, residential or silent zones for the purpose of implementation of noise standards applicable to different areas. Therefore, the court reiterated that the standards prescribed in the Rules with regard to the use of loudspeakers equally applies to all religious functions performed in places of worship and prayer,

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<sup>140</sup> Per K.S. Radhakrishnan, J.

<sup>141</sup> 2002 (2) K.L.T.335, per R. Rajendra Babu and C.N Ramachndran Nair, JJ.

<sup>142</sup> 2002 (3) K.L.T. 860.

<sup>143</sup> M. Ramachandran, J.

including devotional songs. Thus, the court stood for strict implementation of the rules in letter and spirit.

Yet again in *Neelakandan Namboodiri v. State of Kerala*<sup>144</sup>, Justice A.K. Basheer of the Kerala High Court directed the State Government to take appropriate necessary action to implement Noise Pollution (Regulation and Control) Rules, 2000. In this case, the petitioner contended that the Police/Transport authorities are not entitled or empowered to take action against the use of air horns as there is no specific reference to air horn in the Central Motor Vehicles Act, 1989 and the rules made thereunder as well as under the Noise Pollution (Regulation and Control) Rules, 2000. Negating the said contention, the Court held that Rule 119(2) of the Central Motor Vehicles Rules, 1989 mandates that no motor vehicle shall be fitted with any multi toned horns giving a succession of different notes or with any other sound producing device giving an unduly harsh, shrill, loud or alarming noise. Further, Rule 120(2) specifies the maximum permissible noise level for different categories of vehicles, which ranges between 80 dB (A) and 91 dB (A). The Court therefore held that the Government is empowered to take action to regulate noise pollution and to maintain air quality standards in respect of noise.

In *Trichur District Private Bus Owners Association v. State of Kerala*<sup>145</sup>, the Kerala High Court again held that prohibition of use of air horns in motor vehicles is justified by the provisions of the Noise Pollution (Regulation and Control) Rules and the Environment (Protection) Act and hence it does not infringe the fundamental right guaranteed under Article 19 (1) (g) of the Constitution of India. Recently, a Division Bench of the Kerala High Court<sup>146</sup> directed the Government to take urgent steps to implement Rule 3 of the Noise Pollution (Regulation and Control) Rules, 2000 read with Rule 359 of

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<sup>144</sup> 2004 (1) K.L.T. 335.

<sup>145</sup> 2005 (3) K.L.T.190, *per* K.S. Radhakrishnan and Thottathil B. Radhakrishnan, JJ.

<sup>146</sup> Order dated 21-01-2009 in W.P.(C) No.32109/2008 filed by Dr.Abraham Paul, IMA Kochi Branch President & 3 Ors.

the Kerala Motor Vehicles Rules, as expeditiously and file status report<sup>147</sup>.

### **(vi) Right without Good Health is Denial of Life**

The ill effects of noise pollution have been viewed by the courts as denying to individuals their right to lead a life in good health. Stressing this concept the Madhya Pradesh High Court in *Sayed Masqood Ali v. State of M.P.*<sup>148</sup> declared that reverence for life is a fundamental principle of morality and life without good health is denial of life. The Court also observed that noise is undoubtedly psychologically harmful as an invisible and insidious form which causes irreversible harm. According to court, it thus violates the right to life which includes the right to health. Therefore, the court directed that the Noise Pollution (Regulation and Control) Rules, 2000 must be implemented in letter and spirit<sup>149</sup>.

### **(vii) Noise-free Environment and Right to Life**

The insertion of Articles 48 and 51A in the Constitution<sup>150</sup> has bestowed a positive obligation upon the State as well as on the citizens to protect and improve the environment. This commitment is envisaged by dual approach by way of directives to the State and by imposing a positive duty on every citizen to help in the preservation of the natural environment. There is also an obligation on the State to promote and protect public health<sup>151</sup>. Noise pollution and the

<sup>147</sup> Rule 3 authorizes competent authorities to declare areas comprising not less than 100 meters around hospitals, educational institutions and courts as silence zones and Rule 359 of the Kerala Motor Vehicles Rules prohibit the use of horns in such places. The petitioner in this case highlighted the nuisance of noise arising from honking of horns by vehicles near hospitals which was causing disturbance to the working of the hospital and to the patients. According to the petitioner, this situation arose because of non-declaration of such areas as silence zones.

<sup>148</sup> In this case, the petitioner was a cardiac patient who was residing adjacent to an eye hospital and beside a Dharamsala. The Dharamsala, run by the State accommodates various categories of persons and many religious functions were held in it throughout the year. It was also made available for holding marriages and other functions with loudspeakers which were used at a very high pitch disturbing the petitioner and other residents of the area.

<sup>149</sup> A.I.R. 2001 M.P. 220; Also see *Free Legal Aid Cell v. Govt. of NCT of Delhi*, A.I.R.2001 Del.455.

<sup>150</sup> Inserted by the Constitution 42<sup>nd</sup> Amendment Act, 1976.

<sup>151</sup> For further on the State obligation to protect public health, see Chapter-II, *supra*.

consequent nuisance interfere with the peaceful enjoyment of life of the people and it is hazardous to health also. Hence such activity is violative of the constitutional duty imposed on every citizen of India under Article 51-A to protect and improve the natural environment.

It is now settled that Article 21 guarantees the right of persons to life with human dignity. This means that any one who wishes to live in peace, comfort and quietness within his house has a right to prevent the noise as pollutant reaching him<sup>152</sup>. Indian judicial opinion has been uniform in recognizing the right to live in noise pollution free surroundings as a fundamental right protected by Article 21 of the Constitution and noise pollution beyond permissible limits is considered as an inroad into that right<sup>153</sup>.

In *State of Rajasthan v. G. Chawla*<sup>154</sup> the constitutionality of Ajmer (Sound Amplifier Control) Act, 1952 was challenged as violative of freedom of speech and expression and also on the ground that the State Government has no power to enact such laws under the Constitution. The question before the Supreme Court was whether the State legislature has the right to prevent and control loud noise and make it punishable. The Court held that the prevention and control of noise by the Government will come under reasonable restrictions which are provided in Article 19 (2) of the Constitution. The freedom of speech and expression is not absolute, and the restrictions in the interest of public order are constitutionally valid.

In this case the Court made it clear that the States 'have the right to control loud noises when the rights of such user, in disregard to the comfort and obligations to others, emerge as manifest nuisance to them'. By this significant observation, the Court affirmed the constitutional validity of laws controlling loud noise enacted by

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<sup>152</sup> Available at [http://en.wikipedia.org/wiki/noise\\_mitig](http://en.wikipedia.org/wiki/noise_mitig), accessed on 08-09-2008.

<sup>153</sup> *Noise Pollution Restricting Use of Loud Speakers and High Volume Producing Sound Systems (In Re)*, (2005) 5 S.C.C. 733.

<sup>154</sup> A.I.R. 1959 S.C. 544, *per* S.R.Das, C.J. and S.K.Das, Gajendragadkar, Wanchoo, Hidayatullah, JJ.

various States<sup>155</sup> and confirmed that these laws are within the permissible limits of the Constitution and within the reasonable restrictions on the freedom of speech and expression. The freedom cannot be used to transgress the right of others to live peacefully. Whenever the noise becomes nuisance and health hazard to others then the provision of reasonable restriction comes into operation in the interest of public and this provision has the super hand over the individual constitutional freedom.

In *Ananda Prabhu*<sup>156</sup>, a single judge of the Kerala High Court<sup>157</sup> while considering the question as to whether the freedom of speech and expression extends to the use of mechanical devices and whether the State can regulate such use, held that the freedom involves the right to use amplifiers and hence held that the complete ban on the use of loudspeakers are not coming under reasonable restrictions justifiable under Article 19(2) because it stand across the person's right to speech and expression<sup>158</sup>.

However, a different view was endorsed later in *P.A. Jacob v. Supdt. of Police, Kottayam*<sup>159</sup>, wherein Justice Chettur Sankaran Nair pronounced a very significant verdict by which Court declared that Article 21 guarantees freedom from tormenting sounds, which is negatively the right to be let alone, and positively is the right to be free from noise<sup>160</sup>. Exposure to high noise is a known risk and it is

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<sup>155</sup> M.P. Control of Music and Noises Act, 1951; Rajasthan Noises Control Act, 1963; Bihar Control of the Use and Play of Loudspeakers Act, 1955 etc.

<sup>156</sup> *Dr. Anantha Prabhu v. District Collector*, A.I.R.1975 Ker.117.

<sup>157</sup> *Per* George Vadakkal, J.

<sup>158</sup> The Court agreed with the decision of the Division Bench of the Gujarat High Court in *Indulal v. State*, A.I.R.1963 Guj.259, wherein it was held that freedom of speech and expression includes the freedom to use loudspeakers. The Court in *Indulal* was considering the challenge made to S.33(i) (iii) of the Bombay Police Act and the rules made thereunder which empowered the Commissioner and District Magistrate to prohibit the use of loudspeakers.

<sup>159</sup> A.I.R. 1993 Ker.1.

<sup>160</sup> In this case petitioner challenged the order of the Sub Inspector of Police refusing permission to use loudspeakers to campaign on the custom prevailing in the 'Knanaya' christian community by which its members could only marry from that community. Sanction was refused on law and order grounds. Petitioner challenged the action on the contention that freedom of speech and expression implies freedom to use amplifying devices.

proved to cause bio-chemical changes in the human body. Thus, the court aptly held:

“Compulsory exposure of unwilling persons to dangerous and disastrous levels of noise, would amount to a clear infringement of their constitutional guarantee of right to life under Article 21. Right to life, comprehends right to a safe environment, including safe air quality, safe from noise”.

Later, the Supreme Court also approved the above dictum and issued explicit directions regulating/banning the use of loudspeakers and honking of horns between 10 p.m. and 6 a.m. in all residential areas and further held that the restrictions imposed on the time of bursting firecrackers during festivals did not violate the religious rights of any person<sup>161</sup>.

The Supreme Court went further in terms of judicial activism in noise pollution control in the more recent case of *Noise Pollution Restricting Use of Loud speakers and High Volume Producing Sound Systems (In Re)*<sup>162</sup>. The facts of the case are striking and alarming. It was of the rape of a 13-year-old girl whose cries for help went unheard due to loud music coming from loudspeakers used for religious performances and devotional songs. Later on that day, she set herself alight and died from her injuries. An engineer filed a public interest petition calling for more rigorous enforcement of the relevant noise regulations<sup>163</sup>. Court ultimately came out with severe restrictions on the use of loudspeakers and firecrackers in this case, to avert such incidents in future.

The Court noted that Article 21 of the Constitution guaranteeing life and personal liberty encompasses a right to live in

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<sup>161</sup> *Forum, Prevention of Environmental and Sound Pollution v. Union of India*, A.I.R. 2006 S.C.348; See also “Apex Court is Forced to Crack the Whip”, *The Tribune*, Chandigarh, July 10, 2005 at p.10.

<sup>162</sup> [2005] 5 S.C.C. 733.

<sup>163</sup> In a separate case, which was tagged on to the proceedings before the Supreme Court, an NGO aimed at preventing environmental and sound pollution challenged an amendment to the rules whereby the State Government was empowered to permit the use of loudspeakers or public address systems during night hours between 10 pm and 12 midnight.



peace, comfort and quiet, and that Article 19(1)(a) guaranteeing the right to freedom of speech and expression could not be used to defeat this fundamental right. It also described at some length the perils of noise pollution in India and proceeded to observe that the executive had shown a lack of will to implement the laws, and failed to provide proper equipments for measuring noise levels. Court also lamented on the limitations of the law. It noted that problems in relation to firecrackers applied more specifically to developed jurisdictions due to the density of the population and frequency of celebrations. As regards freedom of religion, the Court stated that the restriction did not breach anybody's right to such freedom, noting further that Diwali is mainly associated with pooja and not with firecrackers, that no religious text prescribes firecrackers and it is considered a festival of lights and not noises. Finally, the Court in a characteristically prescriptive mode set out various means by which the problem of noise pollution was to be curtailed.

#### **(viii) Resolves the Conflict between Right to Life and Right to Trade**

The noise from use and bursting of firecrackers came up before the Calcutta High Court in *Burrabazar Fire Works Dealers Association v. The Commissioner of Police, Calcutta*<sup>164</sup>. In this case, the Court held that Article 19(1) (g) did not guarantee 'absolute right' to practice profession and to carry on business and trade if it is causing noise pollution or is a health hazard and disturbs the peace. Any firework producing excessive noise is a health hazard and disturbs peace. Taking a highly activist and beneficial approach, the Court put severe restrictions on the manufacture, storage and sale of fireworks even in the absence of specific legislation for controlling the same. The High Court relied on the Constitution, specifically Article 19(1)(a) read with Article 21, to hold that citizens have a right to a decent environment,

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<sup>164</sup>1997 (2) Cri.L.J. 468.

right to live peacefully, right to sleep at night and right to leisure, which are all the necessary ingredients of the right to life.

Similarly, the apex Court in *Noise Pollution-Restricting Use of Loudspeakers(In Re)*<sup>165</sup> case set certain guidelines intended to control noise pollution arising from the use of firecrackers. Firstly, it was noted that on a comparison of the two systems, i.e., the present system of evaluating fire crackers on the basis of noise level, and the other where the firecrackers are evaluated on the basis of chemical composition, the court felt that the latter method was more practical and workable in Indian circumstances and therefore, it should be followed until replaced by a better system. Secondly, it was directed that the Department of Explosives(DOE) should undertake necessary research activity and come out with a chemical formulae for each type or category or class of firecrackers and specify the proportion/composition as well as the maximum permissible weight of every chemical used in manufacturing firecrackers. Thirdly, it was pointed out that the DOE may divide the firecrackers into two categories:-(i) sound emitting firecrackers and (ii)colour/light emitting firecrackers and that there shall be a complete ban on bursting sound emitting crackers between 10.p.m. and 6 a.m. Court felt that it is not necessary to impose restrictions as to time on bursting of colour/light emitting firecrackers.

#### **(ix) Court Acknowledges Citizens' Right to Protest and Necessity for Special Courts**

The Court has acknowledged Citizen's right to resist the conduct of meetings at residential areas using loudspeakers and becoming a potential source of noise pollution. In *New Road Brothers v. Commissioner of Police*<sup>166</sup>, the Court stressed the duty of

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<sup>165</sup> 2005 (3) K.L.T. S.N.66 (SC), per R.C. Lahoti and Ashok Bhan, JJ.

<sup>166</sup> 1999 (2) K.L.T. 59.

authorities to oversee that meetings are conducted in open grounds, instead of residential areas to the maximum possible extent.

The Court found that the problem of noise pollution has already crossed the danger point and 'noise like smog is threatening as a slow agent of death' which warrants initiation of immediate remedial measures. Thus, the Orissa High Court in *Bijayananda Patra v. District Magistrate, Cuttack*<sup>167</sup> observed that to deal with cases of noise pollution, special courts have to be established and further directed the Central and State Governments to take legislative measures to prevent the fast-growing menace of noise pollution. Court also stressed the necessity for 'permanent monitoring bodies' to make periodic review of the situation.

### **(x) Court Suggests Remedial Measures**

In *Free Legal Aid Cell v. Govt. of NCT of Delhi*<sup>168</sup>, Chief Justice Arijit Pasayat and Justice D.K. Jain of the Delhi High Court discussed about the remedial measures that can be adopted to reduce the ill effects of noise pollution. The court mainly suggested the need to adopt environment eco-friendly technology while designing and manufacturing machinery so that it do not create more sound than the allowable sound limits. It also suggested to make roads sound proof, plant trees on both sides of roads and outside big factories and industries, create public awareness among masses. Court also felt that houses of God should be kept peaceful and noise free as it is rightly said that God is not deaf. Flights of aeroplanes should also be planned to curb noise. Above all, court stressed on the need for a noise code regulating all aspects of noise pollution.

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<sup>167</sup> A.I.R.2000 Ori.70. In this case the petitioner prayed for a writ to prevent noise pollution arising from the use of loudspeakers and fireworks and consequential health hazard caused in the State of Orissa.

<sup>168</sup> 2001(3)K.L.T.(S.N.)140.

### **Inadequacy of Existing Law**

The existing law against noise pollution is highly insufficient to meet the growing challenges. Considering the magnitude and the gravity of the problem, comprehensive legislation has become the need of the hour and it should be revised from time to time depending upon the changing nature of the noise sources, so that the relationship between noise and health is not affected.

However, there is an inordinate reluctance to introduce statutory noise controls in the form of exclusive legislation in India. Some Central Acts deal with noise nuisance, as do some State laws<sup>169</sup>, but it is generally left to private citizens to take nuisance actions in respect of noise. This is unsatisfactory because nuisance actions are effective only in cases involving single stationary continuous sources of noise. Nuisance action under the Indian Penal Code is a poor remedy as it is nominally punitive rather than preventive or compensatory. The provisions of other legislations dealing with noise pollution, too, are inadequate as they cover restricted area of noise pollution control and do not provide for remedies based on scientific calculations.

### **Legislative Measures**

It is high time to enact a specific, detailed and uniform legislation, taking into consideration the analysis about the sources,

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<sup>169</sup> The Bihar Control of the Use and Play of Loudspeakers Act, 1955 is an exclusive legislation enacted with a view to control the noise from loudspeakers. Section 3 of the Act provides restrictions against the indiscriminate use of loudspeakers. It reads as follows : No person shall use and play a loudspeaker:(a)within such distance as may be prescribed from a hospital, a building in which there is a telephone exchange, or (b)within such distance as may be prescribed from any educational institution maintained, managed, recognized or controlled by the State Government, or a University established under any law for the time being in force, or a local authority or admitted to such university or any hostel maintained/managed or recognized by such institution when such institution or hostel is in the use of students. The cognizance of an offence would be, under Section 6 of the Act, on a complaint made by or at the instance of the person aggrieved by such offence or upon a report in writing made by any Police Officer concerned. Similar enactments have also been passed in Rajasthan and Madhya Pradesh. These legislations are important and need to be followed by other States, in so far as they incorporate meaningful measures to control noise from loudspeakers.

effects and control of noise pollution and the Indian social and economic aspects on noise pollution control. Additionally, the existing enactments dealing with noise also need to be elaborated and effective provisions incorporated by suitable amendments which provide for enhanced punishment for nuisance by noise in the Indian Penal Code or alternatively, Sections 278 and 290 be amended to enhance the present prescribed punishment of fine to a maximum of ten thousand and five thousand rupees respectively and a sentence of imprisonment for a maximum of three years to five years may also be specified in both the Sections. The offence should be made cognizable and non-bailable. In cases where the offence of public nuisance is committed by a Company or concern, the officials responsible for running the business that causes the noise nuisance should be held liable for imposition of the proposed sentence of imprisonment<sup>170</sup>.

Industrial laws such as the Factories Act need to incorporate safety provisions against noise pollution to safeguard the workers, such as provision for ear plugs, muffs and insulation in addition to the provisions for the reduction of noise at source such as by proper machine design, maintenance, lubrication, use of baffles, use of sound proofing materials like walls, ceilings, floors etc. The Motor Vehicles Act should provide for a provision specifying the limit of noise in terms of decibels.

### **General Measures**

Apart from the legislative measures, adoption of certain strategies and policies have also become necessary and expedient in public interest and in the interest of public health. Those measures include installation of decibel meters in highways and public places, greenbelt vegetation in densely populated areas and in residential

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<sup>170</sup> See Gurpal Singh, "Noise as a Public Nuisance under the Indian Penal Code", in: Paras Diwan (Ed.), *Environment Protection – Problems, Policy Administration, Law*, Deep and Deep Publications Pvt. Ltd., New Delhi(1987), p.424.

premises, technological modification of machineries<sup>171</sup>, inclusion of noise level specification while designing machinery and transport system, identification of potentially hazardous areas by undertaking sound level surveys, supply of personal protection devices like earplugs to those living in the noisy industrial environment, evolving planned programme on acoustical protection, making people conscious of their right to a quiet life<sup>172</sup>, creating awareness through electronic and print media.

### **Administrative Measures**

Administrative measures to control noise pollution should include making licensing of public address system, fireworks display and other noise generators compulsory, specify the place, restrict their use at night, limit the period, monitor the activity, seize and confiscate the equipments, compensate the victims, enhance the penalty, make registration mandatory for the provider, etc. In respect of public address system, amplifier power should be limited to keep the noise level low<sup>173</sup>.

Noise made by vehicles should be reduced by banning honking and streamlining traffic flow, besides ensuring good body and silencer designs. The rules framed in keeping noise levels low should be implemented strictly and all products should be labeled according to noise standards. Noise checking squads should be appointed and they should function as separate units under the control of District Medical Officers. Special Courts should be constituted in every District to try and deal with cases of noise pollution and those courts should dispose of cases within a time frame, after following summary

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<sup>171</sup> This should be done in such a way that machineries only produce sound associated with minimum possible frequency from the machines. See P.R. Trivedi and Gurdeep Raj, *Environment Ecology*, Akashdeep Publishing House, New Delhi (1<sup>st</sup> edn., 1992), Reprint (2002), pp.501-502.

<sup>172</sup> With the above objective, at the domestic level, each individual must be made aware of his role in eliminating noise and at the administrative level, proper legislation and its strict enforcement should be mooted.

<sup>173</sup> Misra, S. G. and Dinesh Mani, *Ecosystem Pollution*, Indus Publishing Company, New Delhi (1993), p.66.

trial procedure. There is also the need to create Monitoring Committees at the State level consisting of experts and such Committees should be called upon to submit periodical reports regarding the state of enforcement of the laws regulating noise pollution and also prescribe new standards/make suggestions for its due enforcement and amendment to the rules. Executive instructions should be brought from time to time to give effect to the suggestions/recommendations made by the monitoring committees. Enforcement authorities should be made accountable for non-performance of their duties by imposing personal liability on them<sup>174</sup>. A special tax must be imposed on all vehicles and other sources of noise pollution in order to raise funds to implement the programmes and policies of noise pollution control. That apart, it is of equal significance to prescribe vibration standards, create noise cells in all State Pollution Control Boards and adopt environmental noise mapping.

### **Conclusion**

Noise pollution is a silent attacker which is directly and indirectly responsible for health hazards, sickness and other ailments and loss of income due to reduced work. It has also added to the sufferings of human beings. Environmental degradation arising from noise pollution and other factors has become a major cause of worry for future generations. One should not experiment with a system in a way that imposes unknown and potentially large risks on future generations<sup>175</sup>.

The law pertaining to noise pollution in India which exists in disparate bits of legislations and the judicial uncertainty prevailing in the arena has not only proved to be inadequate, but also inefficacious

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<sup>174</sup> Kanakaraj, N., "Noise Pollution", [1991] C.U.L.R.319 at p.327.

<sup>175</sup> The observation of Shri Gus Speth, the former Chairman of the US Council of Environmental Quality, as cited in Pashpati N. Singh, *Environment and Economic Development*, Manak Publishers, Delhi (2000), p.77.

to serve the purpose. Hence, in the Indian socio-economic perspective, there is a clear need for a comprehensive legislation to curb noise pollution. Regulations which mainly vest powers in the executive authorities to check noise pollution is also proving ineffective for want of determination and positive action on their part.



## *Chapter -8*

### **TRADITIONAL REMEDIES: CHANGING TRENDS**

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1. Ancient Scriptures in the Development of Traditional Law Remedies
2. Common Law as an Abatement Tool against Pollution
3. Indian Legal Scenario on Nuisance Action
4. Strict Liability Giving Way to Absolute Liability
5. A Liability not Subject to Exceptions
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Court Settles the Conflict
15. Conclusion

# TRADITIONAL REMEDIES: CHANGING TRENDS

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Traditional law remedies provide vibrant mechanism for combating air pollution and air quality deterioration. Traditional law regards the problem of air pollution mostly as a nuisance and provides speedy, cheap and flexible method of redressal of the grievances arising therefrom. Under this, a citizen has a choice from among the three civil remedies against pollution. Those remedies are, (i) a common law tort action against the polluter; (ii) a writ petition to compel the agency to enforce the law; (iii) a citizen's suit, when admissible, to enforce statutory compliance<sup>1</sup>. The importance of traditional law remedy in the Indian legal system rests on the footing that India is a pollution loving nation<sup>2</sup>.

In the midst of disturbing trends affecting air quality, traditional law remedies provide an important tool of access to justice for the common man. In these circumstances, this Chapter examines the origin and development of traditional law remedies and considers the extent to which the concept has changed over the last 150 years. It is concerned about whether a significant overhaul is needed if traditional remedies are to continue in this century as an effective

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<sup>1</sup> Armin Rosencranz *et al.*, (Eds.) *Environmental Law and Policy in India*, Tripathi, Bombay(1991), p.77.

<sup>2</sup> Prof. Paras Diwan beautifully sums up the position as follows: "We pollute air by bursting crackers on Dussehra, Diwali and on the occasions of marriages and other festivals...we are equally fond of noise pollution. Godman's voice must be heard by all, day and night, and our Ratjagas, Akhandpaths and Azan must use loudspeakers and amplifiers; no one should be deprived from hearing God's and Godman's voice and Gods too are far away beyond the hell and heaven. Our voice must reach them, otherwise, our spiritual needs remain unministered. We are not less noisy in our secular matters. Our marriage and burial processions must be accompanied by bands, twists and Bhangras". For reference, see Paras Diwan, "Environmental Protection: Issues and Problems", in Paras Diwan (Ed.) *Environmental Protection: Problems, Policy Administration, Law, Deep & Deep*, New Delhi(1987),p.11.

tool for protecting public health and air quality. This issue has become more pertinent since traditional law remedies are still the frequently used and well-understood tool employed by the common man, though its role has been restricted by the judiciary over the last few decades by according a narrow interpretation, a position that is mirrored especially in the decisions concerning nuisance<sup>3</sup>.

### **Ancient Scriptures in the Development of Traditional Law Remedies**

Vedas, Upanishads, Smritis and other scriptures have sufficiently highlighted on the close relationship between nature including air and human beings. Ancient literatures stressed that man lived in complete harmony with nature<sup>4</sup>. Worshiping of nature, including air arose from deep reverence shown to the forces of nature, which sustained and preserved human life on the planet<sup>5</sup>. The idea of legal protection of ecology and environment are also found in Kautilya's *Arthashastra*<sup>6</sup> and in the writings about the system of governance adopted by Ashoka<sup>7</sup>.

In about 200 BC, Caraka wrote about *vikrti* (pollution) and diseases wherein he mentioned air pollution specifically as a cause of many diseases. He thus observed:

“The polluted air is mixed with bad elements. The air is uncharacteristic of the season, full of moisture, stormy,

<sup>3</sup> The significant English decisions vindicating such restricted judicial approach include the decision of the House of Lords in *Birmingham City Council v Oakley* [2001] 1 All E.R.385; *SFI Group Plc v. Gos Port BC* [1999] Env.L.R.750; *Network Housing Association v. Westminster CC*[1995] Env.L.R.176; *Sterling Homes Ltd v. Birmingham CC* [1996] Env. L.R.121.

<sup>4</sup> Khan, I.A. *Environmental Law*, Mohan Law House, New Delhi(2002), p.22.

<sup>5</sup> Justice Kuldip Singh, “Foreword” in Justice Ashok Desai, *Environmental Jurisprudence*, Vikas Publishing House, New Delhi (1998), p.XV.

<sup>6</sup> The basic issues of today's environmental awareness for environmental preservation and prevention of its degradation are discernible in a number of Sutras in *Arthashastra*, written in 4<sup>th</sup> century BC, also revealed in the form of injunctions. The socio-political and philosophical aspects of Kautilya's thought also sets forth as code of civil and criminal procedure. For details, see Sunil Sen Sarma, “Contemporaneity of the Perception on Environment in Kautilya's *Arthashastra*”, 33(1) *Indian Journal of History of Science*(1998)37; see also Kangle, R.P., *Kautilya Arthashastra*, tr.3 vols., Laurier Books, Motilal, New Delhi(1997), p.112.

<sup>7</sup> Shyam Diwan and Armin Rosencranz, *Environmental Law and Policy in India: Cases, Materials and Statutes*, Tripathi, Mumbai(2002), p.25.

hard to breathe, icy, cool, hot and dry, harmful, roaring, coming at the same time from all directions, bad smelling, oily, full of dirt, sand, steam, creating diseases in the body and is considered polluted”<sup>8</sup>.

In the ancient period, religion controlled the activities of individuals and the *Dharma* of environment formed part of the religious preaching motivating and alerting people to protect the environment from pollution. It also urged the individuals to allow the natural objects to remain in the natural state. It is from this concept that the traditional law remedies emerged and it provided various statutory provisions, specific legislations and application of common law principles with the object of protecting the environment from pollution arising from human activities.

### **Common Law as an Abatement Tool against Pollution**

Common law is the body of customary law of England which is based on judicial decisions. Common law is a living system of law, reacting to new circumstances and new ideas<sup>9</sup>. In fact, environmental law is an amalgam of common law and statutory law<sup>10</sup>. In view of Article 372(1) of the Constitution, the codified principles of common law still survive in India, in so far as it is not altered, modified or repealed by the statutory law. The basis of its application is “justice, equity and good conscience”. However, it is only that part of the common law which is suited to the genius of the country that is accepted by the courts<sup>11</sup>.

<sup>8</sup> *Caraka Samhita*, Vimanastanam III 6:1, as cited in : Priyavrat Sharma, *Caraka-Samhita*, trans. Chankhambha Orientalia, Varanasi(1983)1, 315; see also Roger S. Gottlieb, *This Sacred Earth*, Routledge, Kentucky, U.S.A.(2004), p.157.

<sup>9</sup> Philip Sales and Joanne Clement, “International Law in Domestic Courts: The Developing Framework” 124 L.Q.R. (2008)388 at p.402.

<sup>10</sup> William H. Rodgers, Jr., *Handbook on Environmental Law*, St. Paul : West Pub. Co.(1977), p.100.

<sup>11</sup> *Superintendent and Remembrancer of Legal Affairs v. Corporation of Calcutta*, A.I.R. 1967 S.C. 997; See also *Bar Council of Delhi v. Bar Council of India*, A.I.R.1975 Del.200, per V.S.Deshpande and B.C.Misra, JJ.

Common law has been administered by the common law courts of England since the middle ages<sup>12</sup>. Common law remedies against air pollution and other environmental hazards are available under the law of torts. A right to bring an action in common law jurisdiction with consequent right to damages is invariably present where a tort is committed<sup>13</sup>. This was gradually applied to abate all kinds of pollution including air pollution.

The liability of the polluter under the law of torts<sup>14</sup> is regarded as the major traditional legal remedy to abate pollution. The Indian Courts evolved a blend of tort law adapted to Indian conditions<sup>15</sup>. Accordingly, the tortious liability for pollution mainly operates under nuisance, trespass, negligence and strict liability. The contribution of the case law to air quality preservation and air pollution control and the influence of that law, particularly with regard to statutory nuisance, negligence, strict liability is of immense importance. As far as air pollution is concerned, the remedy against it under the traditional law considered it mostly under nuisance.

### **(i) Nuisance**

Modern environmental law has its roots in the common law principles of nuisance. The substantive law for the protection of the citizen's right to clean air and environment is basically that of common law relating to nuisance<sup>16</sup>. It is also said that all nuisances are environmental since they may potentially affect an indefinite number of property owners<sup>17</sup>. Ordinarily speaking, nuisance means

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<sup>12</sup> 22 *Encyclopaedia Britannica* (1964), p.160.

<sup>13</sup> *Id.*, p.311.

<sup>14</sup> Tort is a civil wrong other than a breach of trust or contract. Any action resulting in damage to property, person or reputation of another is considered as tortious action and the affected party can claim damages/compensation or injunction or both.

<sup>15</sup> Setalvad, M., *The Common Law of India*, Stevens, London(1960), p.53.

<sup>16</sup> Hamilton, R.N.D., "Private Resource for Environmental Harm", in Stephan C. Mc Caffaey and Robert, E.C. (Eds.), *Environmental Pollution and Individual Rights: An International Symposium* (1978), p.19.

<sup>17</sup> Mohd. Altas Hussain Ahangar, "Environmental Pollution Through The Tort of Private Nuisance: An Analytical Assessment" XII K.U.L.R (2005) 62 at p.63.

anything which annoys, hurts or that which is offensive in nature<sup>18</sup>. Nuisance as a tort means 'an unlawful interference with a person's use or enjoyment of land or some right over, or in connection with it'<sup>19</sup>. Therefore, acts interfering with the comfort, health or safety comes under nuisance. Under the common law principle, nuisance is concerned with the unlawful interference with the person's right over wholesomeness of land or of some right over or in connection with it.

There are two categories of nuisances, private and public. Public nuisance is a crime, though it can also be a tort in certain circumstances. But Private nuisance is always tortuous.

### **(a) Public Nuisance**

Public nuisance can be regarded as unreasonable interference with a right common to general public, which means, an act or omission which materially affects the reasonable comfort, convenience, health, safety or quality of life of a class<sup>20</sup> of persons. There are various types of activities which results in air pollution or air quality degradation that can be regarded as public nuisance. The carrying of trades causing offensive smells<sup>21</sup> intolerable noises<sup>22</sup>, dust, vibrations<sup>23</sup>, practice of harmful lifestyles like smoking, household burning, incineration, combustion of fuel or anything that affects the health or habitat of a locality can be regarded as public nuisance. Therefore, it is said that the law of public nuisance has a predominant connection with environmental law<sup>24</sup>.

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<sup>18</sup> *Durga Prashad v. State*, A.I.R. 1962 Raj.92.

<sup>19</sup> Rogers, (Ed.) *Winfield and Jolowicz on Tort*, Sweet & Maxwell, London (17<sup>th</sup> edn., 2006), p.380.

<sup>20</sup> What constitutes a class is not certain. Certainly it is less than the entire population of the nation and more than just a handful of individuals. Nevertheless, a class must be a definite section of the public in the area affected by the alleged nuisance. See Ratan Lal, R. and Dhiraj Lal, K.T., *The Law of Torts*, Wadhwa (1992), p.463.

<sup>21</sup> *Malton Board of Health v. Malton Manure Co.*, (1879), 4 Ex. 302.

<sup>22</sup> *Soltau v. De Held* (1851), 2 Sim NS 133.

<sup>23</sup> *Attorney General v. P.Y.A Quarries* (1957) 2 Q.B 169.

<sup>24</sup> Leelakrishnan, P., *Environmental Law in India*, LexisNexis Butterworths (2<sup>nd</sup> edn., 2005), p.57.

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The legal remedies for a public nuisance are either a criminal prosecution for the offence of causing a public nuisance<sup>25</sup>, or a criminal proceeding before a Magistrate for removing a public nuisance<sup>26</sup>, and in certain cases, a civil action by Advocate General or by two or more members of the public with the permission of the court, for a Declaration, an Injunction or both<sup>27</sup>. Normally, public nuisance does not create a civil cause of action for any person unless he proves particular or special damage beyond that suffered by all the other persons affected by the nuisance. This rule is intended to avoid multiplicity of litigation.

### **(b) Private Nuisance**

Private nuisance means the using or authorizing the use of one's property or of anything done under one's control, so as to injuriously affect an owner or occupier of property by physically injuring his property or by interfering materially with his health, comfort or convenience<sup>28</sup>. In short, private nuisance is an unlawful interference with a person's use or enjoyment of land or some right over, or in connection with it<sup>29</sup>. Therefore, it is the unreasonable and unnecessary inconvenience caused by the use of defendant's land that constitutes the basis of an action under nuisance. Reasonableness of the defendant's conduct is usually the pivotal question in nuisance cases<sup>30</sup>.

In determining 'reasonableness', courts are generally guided by the ordinary standard of comfort prevailing in the neighbourhood and that minor discomforts that are common in crowded cities or urban centers are not viewed as nuisance by the courts<sup>31</sup>. To be a nuisance, the act complained of must arise outside the plaintiff's land and then

<sup>25</sup> Indian Penal Code, 1860, S.286.

<sup>26</sup> Code of Criminal Procedure, 1973, Ss.133-144.

<sup>27</sup> Code of Civil Procedure, 1908, S. 91.

<sup>28</sup> Rattan Lal, *supra*, n.20 at p.465.

<sup>29</sup> Winfield and Jolowicz, *supra*, n. 19 at p.380.

<sup>30</sup> *Bhanwarlal v. Dhanraj*, A.I.R. 1973 Raj. 213, *per* Kan Singh, J.

<sup>31</sup> See Rattan Lal, *supra*, n. 20 at pp.468-470.

proceed to affect that land or its use, must be a continuing wrong, and the damage suffered must be real or sensible and measurable in some way. Private nuisance is only a ground for a civil action for injunction and damages in as much as it is only an act affecting some particular individual or individuals as distinguished from the public at large.

The operation of nuisance in relation to pollution is rather broad and that it covers a wide range of interferences with the use and enjoyment of one's land or property arising from pollution of air, noise, smells, etc. The law of easement also guarantees beneficial enjoyment of land free from pollution<sup>32</sup> and aggrieved party can move for relief under Section 9 of the Code of Civil Procedure. In cases of environmental harms amounting to private nuisance, this provision can be invoked.

Air pollution may amount to an actionable nuisance, though its existence may, sometimes be difficult to establish. If smoke, vapour, gases, fumes, dust, etc. are communicated to the air which surrounds and enters plaintiff's premises so as to cause inconvenience to the occupier thereof and renders the premises less comfortable, the act will be nuisance. Based on this principle, creation of stenches<sup>33</sup>, causing smoke or noxious fumes to pass over the plaintiff's property<sup>34</sup>, rising of clouds of coal dust<sup>35</sup> have all been held actionable nuisance under common law. Where the nuisance causes only personal discomfort, the nature of the locality has to be considered to determine whether action should lie. Under common law, a land owner is entitled to have air untainted and unpolluted by acts of his neighbours. This means that breathing air must be compatible with physically comfortable human existence, though air

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<sup>32</sup> The Indian Easement Act, 1882, S.7, Illu. (b)-(f) and (h).

<sup>33</sup> *Walter v. Selfe* (1951) 4 De G & Son 315.

<sup>34</sup> *Shott Iron Co. v. English* (1882), 7 App Cas 518; *Wood v. Conway Corporation* (1914) 2 Ch. 47.

<sup>35</sup> *Pwllbach Colliery Co. Ltd. v. Woodman* (1915) AC 634.



may not be as pure and fresh as when the plaintiff's house was built<sup>36</sup>.

### **Indian Legal Scenario on Nuisance Action**

In India, voluntarily vitiating the atmosphere so as to make it noxious to public health is indictable as a criminal offence<sup>37</sup>. Control of air pollution amounting to private nuisance, is, however, possible only by instituting a civil remedial action. The civil remedy against air pollution has been in vogue even in the pre-industrial period. Thus, in *J.C. Galstaum v. Dunia Lal Seal*,<sup>38</sup> the Calcutta High Court held that a person cannot claim a right to foul municipal drain by discharging into it what it was not intended to carry off and then throw on the municipal authorities or other persons, an obligation to alter the drain in order to remedy the nuisance that he has produced.

It is increasingly recognized that no proprietor has an absolute right to create noise upon his own land, because any right which the law gives is qualified by the condition that it must not be exercised to the nuisance of his neighbours or the public<sup>39</sup>. As to what amount of noise or annoyance from noise will be sufficient to sustain an action of nuisance, there is no definite legal rule or measure. It is a question of fact in each case. However, the assessment of whether noise constitutes an actionable nuisance will depend on factors such as the nature of the locality, the time when noise was created, the duration of the noise, mode of committing it, the nature and the desirability of the defendant's action, the nature of the harm suffered by the plaintiff and the defendant's state of mind, though not all of these factors will be equally relevant in any given case<sup>40</sup>.

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<sup>36</sup> *Sturges v. Bridgman* (1879) 11Ch. D. 852.

<sup>37</sup> The Indian Penal Code, 1860, S. 278.

<sup>38</sup> (1905) 9 CWN 612. The decision is also analyzed under the injunction remedy in this Chapter.

<sup>39</sup> *Allen v. Flood* (1989) AC 1, 101.

<sup>40</sup> *Bambford v. Turnley* (1860) 3 B & S 62 at p.72.

Noise becomes actionable nuisance only if it materially interferes with the ordinary comfort of life, judged by ordinary, plain and simple notions<sup>41</sup>. The standard of judging actionable noise is according to that of man of ordinary habits and not of man of fastidious tastes or of over-sensitive nature<sup>42</sup>. Noise nuisances include producing noise by tom-tom, cymbal during the performance of ceremony<sup>43</sup>, or from machine<sup>44</sup> long after people would ordinarily go to sleep, running a flour mill in a noisy locality which causes additional noise and vibrations and materially interferes with the physical comfort of the plaintiffs,<sup>45</sup> deliberately making loud noises and shrieks so as to disrupt an activity,<sup>46</sup> ringing of church bells to the annoyance of people in the neighbourhood and the plaintiff <sup>47</sup>, etc.

Even though the tort of nuisance as a common law remedy has been successful to a certain extent in combating air pollution and air quality degeneration, still it has to be noticed that there are certain drawbacks associated with this remedy. The central focus of nuisance action lies on reasonableness of defendant's conduct, which is usually determined by the court by weighing its utility against the gravity of the harm to the plaintiff, as the unreasonableness on the part of the defendant is often difficult to prove. This standard, if

<sup>41</sup> *Vanderbant v. Mayfair Hotel Co.* (1930) 1 Ch. 138; *Dutta Mal Chiranji Lal v. Lodhi Prashod*, A.I.R. 1960 All.632.

<sup>42</sup> *Jankhi Prasad v. Karamat Hussain*, (1931) I.L.R. 53 All. 836.

<sup>43</sup> *Ismail Sahib v. Venkatanarsimhulu*, (1937) I.L.R. Mad. 51.

<sup>44</sup> *Halsey v. Esso Petroleum Co. Ltd.*, (1961) 1 W.L.R. 683.

<sup>45</sup> *Radhey Shiyam v. Gur Prashad*, A.I.R. 1978 All.86, *per* T.S.Misra, J. Similarly, in *Datta Mal, supra*, n. 41, due to running of flour mill in the bazaar locality of Mussoorie adjacent to plaintiff's house, a lot of noise and vibration arose and it caused great inconvenience to plaintiff and his family. Justice B.Upadhyaya of the Allahabad High Court rejected the contention of the defendants that granting an injunction for private nuisance would be contrary to the fundamental right guaranteed under Article 19(1)(g) to carry on any occupation, trade etc. The Court held that Article 19 did not abrogate the law relating to private nuisance. This means that restriction imposed on a person not to carry on his trade in a manner that the same produces objectionable noise interfering with comfort of others, does not mean the denial of the right guaranteed by the Constitution. However, a different approach was seen taken by Justice A.N.Grover of the Punjab High Court in *Ram Rattan v. Munna Lal*, A.I.R. 1959 Punj.217, wherein the court held that the noise caused by additional power looms in a noisy locality was not a serious addition to the noise which already existed in the locality as to warrant actionable nuisance and for that reason refused injunction.

<sup>46</sup> *Christie v. Davey*, (1893) 1 Ch. 316.

<sup>47</sup> *Soltau, supra*, n.22.

applied, means that in cases where the major polluters are large industrial firms, it is difficult to prove unreasonableness in the conduct of their business having regard to their high economic and social status<sup>48</sup>. Further, in certain matters like noise pollution the applicable standard with regard to nuisance varies from place to place and that there is no such uniform standard like that of a 'reasonable man' as existing in the case of negligence.

Consequently, a disturbance will be a nuisance in a peaceful area, whereas a similar disturbance may not be so in a noisy locality. The boiler of a factory generating excessive noise and located in the industrial area may not amount to nuisance, but on the other hand, the same boiler if situated in the residential area and if it causes excessive noise would bring the action within the classification of nuisance. To overcome the same, it is important that the reasonableness or unreasonableness of the interference must be judged by looking at the damage caused by the alleged nuisance to the plaintiff<sup>49</sup>.

In *Ram Baj Singh v. Babu Lal*<sup>50</sup>, a person built a brick grinding machine in front of the consulting chamber of a medical practitioner. The machine was generating lot of dust and noise which polluted the surrounding atmosphere and entered the consulting chamber of the medical practitioner and caused severe physical inconvenience to him as well as to his patients. Justice S.J.Hyder of the Allahabad High Court judged the issue as amounting to private nuisance, on the reasoning that the action complained of cause injury, discomfort and annoyance to the persons.

Together with the difficulties faced in the determination of unreasonableness, lack of 'standing' to sue is also responsible for

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<sup>48</sup> Beena Kumari, V.K., "Environmental Pollution and Common Law Remedies", [1984]C.U.L.R.104.

<sup>49</sup> Bangia R.K., "Noise Pollution and the Remedies under Law of Torts", in Paras Diwan(Ed.), *Environmental Protection, Problems, Policy Administration and Law*, supra. n.2 at p.345.

<sup>50</sup> A.I.R.1982 All.285.

making the nuisance law inadequate to control the growing air pollution. For a private action on public nuisance to be successful, 'special injury' has to be proved which must be different in kind from that suffered by the general public and not merely different in degree. This burdens nuisance action by private persons against air pollution by requiring the plaintiff to establish the casual link between the pollutant and the injury and makes the remedy ineffective<sup>51</sup>. Yet another difficulty encountered in the process is the burden of proving the material harm attributable to unreasonable conduct of the defendant, since in many cases it is rather impossible to point out any particular polluter responsible for the poor air quality<sup>52</sup>.

### **(ii) Trespass**

Though closely related to nuisance, tort of trespass is a distinct legal remedy invoked restrictively in pollution cases. Trespass means intentional or negligent invasion of the plaintiff's interest in the exclusive possession of property without lawful excuse and such invasion may be direct or through some tangible object. The tort of trespass is *per se* actionable and there is no need to show damage as a result of trespass. Thus, emission of gas<sup>53</sup> or invisible fumes<sup>54</sup>, constitute tort of trespass. The distinction between trespass and nuisance is that while trespass is actionable *per se*<sup>55</sup>, nuisance is actionable only on the proof of damage.

The tendency of the court to consider environmental harm within the ambit of trespass action is now mounting. Such an approach is seen reflected in *Martin v. Reynolds Metal Co.*<sup>56</sup> wherein the Court deviated from the traditional definition of trespass to bring industrial pollution within the ambit of liability. In so doing, the court

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<sup>51</sup> Rosencranz, *supra*, n.1 at p. 88.

<sup>52</sup> *Id.*, p.113.

<sup>53</sup> *Macdonald v. Associate Fuels* (1954) 3 DLR 775.

<sup>54</sup> *Martian v. Reynolds Metal Co.* (1959) 221 Ore. 86.

<sup>55</sup> This is because in trespass cases injury is direct, whereas in nuisance, injury is only consequential.

<sup>56</sup> *Martian, supra*, n.54.

stretched the definition of actionable trespass as meaning the 'invasion of land owner's right to exclusive possession, whether by visible or invisible substance' and held that mere setting of fluoride deposits upon the plaintiff's land was sufficient to constitute actionable trespass<sup>57</sup>.

It may be pointed out that trespass remedy, despite its wide scope, is inadequate to control air pollution. The difficulties lie in identifying the definite source of pollution, high litigation cost and unwillingness on the part of the people to resort to the said remedy. These factors make the remedy unpopular and unappealing. That apart, trespass action requires some direct physical interference by one against the person or property of another whereas air quality degradation cases generally tends to be indirect in its nature and effect. Therefore, this remedy is of little importance to combat air pollution, as much of the forms of air pollution subsist in the form of indirect interference with the personal and proprietary rights.

### **(iii) Negligence**

Negligence is another specific tort on which a common law action to prevent air pollution and air quality degradation can be instituted. Negligence is based on the principle of fault. Negligence as a tort is the breach of a legal duty to take care which results in damage, undesired by the defendant, to the plaintiff<sup>58</sup>. It applies to situations when there is a duty to take care and that care is not taken which results in some harm to another person.

What is reasonable care in a given situation is dependent on the surrounding circumstances, facts of the case and varies according to the magnitude or risk involved, the utility of the defendant's action, the burden of taking adequate precaution to

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<sup>57</sup> James E. Krier, *Environmental Law and Policy*, Lexis Publishing, New York (1971), pp.189-191.

<sup>58</sup> Winfield *et al.*, *supra*, n.19 at p.69.

eliminate the risk and magnitude of prospective injury<sup>59</sup> and consequential damage which must have been factually caused by breach of duty and must be the reasonably foreseeable consequence of the breach. Once the above elements are satisfactorily proved, a prima facie case of negligence is made out and thereupon it becomes the duty of the defendant to come forward with evidence to show that the act was not negligent.

The common law action for nuisance has been of limited success to get damages in air pollution cases<sup>60</sup>. The greatest difficulty confronted in negligence cases is the proof of defendant's fault. Breach is nowadays conceived as an unreasonable failure to achieve the standard of care required by law or to conform to the general and approved practices of the particular sphere of activity. In such a situation, conformation with general policy and associate standards including generally accepted trade or professional practices are the usual ways to defeat the allegations of negligence and are good defenses available to the defendants.

In *Pearson v. North Western Gas Board*<sup>61</sup> the plaintiff and her husband were injured and their house was destroyed as a result of an explosion of gas which had escaped from a gas main. The gas had been able to escape because of movements in the soil consequent to severe frost that fractured the main. The action of plaintiff failed due to his inability to adduce expert evidence to prove negligence on the part of the defendants. The defendants, however, through expert evidence testified that the main was dug sufficiently deep, and the metal of the main was in good condition which was found as sufficient justifiable defence to rebut the case of negligence leveled against them.

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<sup>59</sup> Salmond and Heuston, *Law of Torts*, Sweet & Maxwell, London (21<sup>st</sup> edn., 1996), pp.209-220.

<sup>60</sup> James E. Krier, *supra*, n.57 at pp.154, 169-171.

<sup>61</sup> [1968] 2 All E.R. 669, *per* Rees, Manchester Winter Assizes.

In *Budden v. B.P. Oil Ltd.*,<sup>62</sup> a group of parents in London brought an action for negligence against the defendants on behalf of their children alleging damage to health due to the presence of lead in petrol. The Court of Appeal found that the Oil Companies had complied with regulations made by the Secretary of State for the purpose of controlling pollution. The Court held that where Parliament has sanctioned a general policy and associated standards after due enquiry, it is not for the courts to make decisions which might have the effect of requiring compliance with a different and inconsistent policy<sup>63</sup>.

In *Naresh Dutt Tyagi v. State of U.P.*<sup>64</sup>, chemical pesticides were stored in a godown in residential area. Fumes emanating from the pesticides leaked to the contiguous property through ventilators which resulted in death of three children and an infant in the womb of the mother. It was held that this was a clear case of negligence and the relief was granted by the court.

In air pollution cases, the tort of negligence is seen utilized when other torts of nuisance or trespass are not available. However, at times, it may prove difficult to establish the casual connection between the negligent act and the plaintiff's injury, particularly, in situations when the effects of the injury remain latent over long periods of time and can be attributed to factors other than known pollutants, or to the polluters other than the defendant<sup>65</sup>. Though prospective damages can be claimed in such cases, they may become unclaimable due to operation of *res judicata* in the event of their having been not claimed in the earlier suit. Notwithstanding such difficulties, it has to be stated that the tort of negligence is an effective tool in the armory of common law to control air pollution. But law of negligence can progress only by the formulation of very

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<sup>62</sup> (1980) 124 SOI JO 376.

<sup>63</sup> *Id.*, p.379.

<sup>64</sup> (1995) Suppl.(3) S.C.C. 144, *per* Venkatachaliah and Mohan, JJ.

<sup>65</sup> Rosencranz, A., *supra*. n.1 at p. 89.

broad general statements qualified and adapted in the light of experience<sup>66</sup>.

#### **(iv) Strict Liability**

The rule of strict liability was evolved in the year 1868 by Blackburn, J. in *Rylands v. Fletcher*<sup>67</sup>. It is another form of private law action against air pollution hazards. However, due to its highly technical nature, the role of this form of liability in enforcement of actions has been very limited in India. This rule laid down a principle of liability that if a person who brings on to his land and collects and keeps there anything likely to do harm and such thing escapes and does damage to another he is liable to compensate for the damages caused. The liability under this rule is strict and it is of no defence that things escaped without that person's wilful act, default or neglect or even that he had no knowledge of its existence<sup>68</sup>. However, the blown up exceptions to 'strict liability' have considerably reduced the scope of its operation.

The doctrine of strict liability is very useful in cases of air pollution, particularly, in cases where the harm is caused by the leakage of hazardous substances. The rule of strict liability has been applied to a variety of circumstances wherein damage has resulted due to fire,<sup>69</sup> gas<sup>70</sup>, explosions,<sup>71</sup> oil, noxious fumes<sup>72</sup>, colliery spoil<sup>73</sup>, vibrations<sup>74</sup> etc.

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<sup>66</sup> Richard Buxton, "How The Common Law Gets Made: Hedley Byrne and other Cautionary Tales" 125 L.Q. R. (2009)60 at p.68.

<sup>67</sup> (1868) LR 3 HL 330.

<sup>68</sup> But the rule of strict liability is subject to exceptions such as act of god (e.g., flood or earthquake), the act of third party (e.g., sabotage), the plaintiff's own fault, the plaintiff's consent, the natural use of the land by the defendant, and statutory authority.

<sup>69</sup> *Rainhan Chemical Works Ltd. v. Belvedere Fish Guano Co.*, (1921) 2 AC 465. In India, this is also applied in situations of causing mischief by fire. For details, see *M. Madappa v. K. Kariapa*, A.I.R. 1964 Mys. 80.

<sup>70</sup> *Batcheller v. Tunbridge Wells Gas Co.* (1901), 48 L.T. 765; *North-Western Utilities Ltd. v. London Guarantee and Accident Co.* (1936) A.C.108.

<sup>71</sup> *T.C. Balakrishnan v. T.R. Subramanian*, A.I.R.1968 Ker.151.

<sup>72</sup> *West v. Bristol Tramways Co.*, (1908) 2 K.B. 14.



The rule of strict liability was evolved in the 19<sup>th</sup> century when the development of science and technology had not taken place. However, with the thundering and wondering developments in the field of science and technology in the wake of the 21<sup>st</sup> century, strict liability rule cannot afford any permanent guidance or lasting solution for evolving any standard of liability in air pollution mischiefs, consistent with the constitutional norms and the needs of the present day economy and social structure. Law cannot remain static. In the midst of new situations emerging, law has to be evolved in order to meet the challenges of the new situations. At the same time, the approach of the law should also take into account the phenomenal economic developments taking place in the country.

### **Strict Liability Giving Way to Absolute Liability**

When the legislature failed to bring out legislation laying down new standards for determination of liability in the midst of fast changing and growing trends in the economic scenario, Indian judiciary aptly intervened and evolved the principle of absolute liability in *M.C. Mehta v. Union of India*<sup>75</sup>. In the above case, Supreme Court felt that a stage reached to evolve new principles and to lay down new norms of liability which could adequately deal with new problems that arise in highly industrialized economy. Thus the court evolved the new principle of absolute liability<sup>76</sup>. The principle of absolute liability was explained by the Supreme Court in the following words:

“Where an enterprise is engaged in a hazardous or inherently dangerous activity resulting for example, in the escape of toxic gas, the enterprise is strictly and absolutely liable to compensate all those who are affected by the accident and such

<sup>73</sup> *Attorney General v. Cory Bros. Ltd.*, (1921) 1 A.C. 521.

<sup>74</sup> *Hoare and Co. v. McAlpine* (1923) 1 Ch. 167.

<sup>75</sup> A.I.R. 1987 S.C.1086, *per* P.N.Bhagwati, C.J. and Ranganath Misra, Oza, Dutt, K.N.Singh, JJ. (popularly known as *Oleum Gas Leak Case*).

<sup>76</sup> However, the English Courts have not undertaken such progressive interpretations.

liability is not subject to any of the exceptions which operate vis-à-vis to tortious principle of strict liability..."<sup>77</sup>

### **A Liability not Subject to Exceptions**

The main difference between strict liability and absolute liability is that whereas in the case of strict liability, the same is subject to certain exceptions which do not fasten liability, in the case of absolute liability, the liability is absolute and non-delegable and the same is not subject to any exceptions. The Court also pointed out that the measure of compensation must be co-related to the magnitude and capacity of the enterprise because such compensation must have deterrent effects<sup>78</sup>. Going by the above legal yardstick, the larger and more prosperous the enterprise, greater must be the amount of compensation payable by it for the harm caused on account of or in connection with the carrying on of the hazardous or inherently dangerous activity by the enterprise.

The principle of absolute liability was emphatically reiterated once again by the Supreme Court in *Indian Council for Enviro-Legal Action v. Union of India*<sup>79</sup>, wherein the Court held that the *Rylands* principle which is subject to certain exceptions is not suitable for Indian conditions and hence not applicable.

From the above analysis of the factual scenario, it becomes self-evident that under the common law remedies, there is a potential for evolving new principles suiting the present day or emerging new socio-economic conditions. It also establishes that whenever there is a tort action, the plaintiff can sue either for damages or injunction.

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<sup>77</sup> *M.C.Mehta, supra*, n.75 at p.1099; See also *Union Carbide Corporation v. Union of India*, (1991) 4 S.C.C.584 at pp.608-609. The Bench consisted of Ranganath Misra, C.J., and K.N.Singh, M.N.Venkatachaliah, A.M.Ahmadi, N.D.Ojha, JJ.

<sup>78</sup> *Ibid.*

<sup>79</sup> (1996) 3 S.C.C. 212 at pp.241-246, *per* B.P.Jeevan Reddy and B.N.Kirpal, JJ.

## Statutory Nuisance: A Vibrant Mechanism to Address Air Quality Challenges

Statutory nuisance took its wings as the rule of strict liability was found to be unsuited to combat environmental pollution<sup>80</sup>. Statutory nuisance procedure is a useful method to address the localized environmental problems such as smoke, smells, noise, etc. affecting air quality in the vicinity. It is a convenient route to resolution to which most people affected by problems of the breathing air are likely to turn<sup>81</sup>. Its roots can be traced to the cholera outbreak in England<sup>82</sup>, when Nuisances and Contagious Diseases Bill, 1848 was mooted. While opening the debate on the stage of second reading, Marquess of Lansdowne remarked about the spread of cholera as follows:

“This was epidemic only, and not contagious... that its causes were atmospheric; that it was influenced by the currents of air, and certain meteoric changes and vicissitudes; that the disturbing causes which prompted the disorder resided principally, if not altogether, in the atmosphere”<sup>83</sup>.

Further, the ‘miasma’ theory of infection that prevailed in 1870s also conveyed the idea that disease was caused by the transmission of minute faecal particles suspended in droplets of breath<sup>84</sup>. These events led to the necessity to provide legal measures to prevent and control atmospheric pollution.

The earliest legislation in England specifically incorporating statutory nuisance was the Nuisances Removal Act, 1855 which was

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<sup>80</sup> Delivering the lead Judgment, Lord Goff in *Cambridge Water Company v Eastern Counties Leather plc*, [1994] 2 AC 264 at p.265.

<sup>81</sup> Rosalind Malcolm and John Pointing, “Statutory Nuisance: The Sanitary Paradigm and Judicial Conservatism”, 18 *Journal of Environmental Law* (2006)37.

<sup>82</sup> To combat the serious outbreak of cholera, the earliest attempt was in the form of sanitary legislation.

<sup>83</sup> HL Debs (3<sup>rd</sup> Series) Vol. 101, Col 614 (1848).

<sup>84</sup> Fraser Brockington, C., *Public Health in the Nineteenth Century*, E & S Livingstone, London (1965).

subsequently consolidated in the form of Public Health Act, 1875, and further re-enacted as Public Health Act, 1936. Noise Abatement Act, 1960 also contained provisions to curb health problems arising from noise nuisance. Later, Environmental Protection Act, 1990 came into existence and Part III of the Act envisaged a scheme on statutory nuisance.

There are two routes which an individual may pursue through the umbrella of statutory nuisance—one is to approach the local authority to serve abatement notice on the perpetrator and the other is to serve a letter on the perpetrator intending to apply to a Magistrate Court for an abatement order<sup>85</sup>.

There is a growing trend in England to include new categories of pollution within the penumbra of statutory nuisance. The Clean Neighbourhoods and Environment Act, 2005 provides that light pollution should be included as a statutory nuisance<sup>86</sup>. The Act further provides that ‘insects emanating from relevant industrial, trade or business premises’ and being ‘prejudicial to health or a nuisance’ is a statutory nuisance<sup>87</sup>.

### **Nuisance Remedy: A Critique of the Judicial Approach**

Freedom from nuisance and adverse health effects are not, and have never been fixed entities. Health aspirations in modern industrialized societies go beyond preventing the spread of infectious and contagious diseases, but also include the right to clean air, protection from excessive noise<sup>88</sup>, or unpleasant smells.

Today, freedom from disease together with promotion of the quality of life is considered to fall within the human rights

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<sup>85</sup> *R v Carrick District Council, ex P Shelley* [1996] Env.L.R.273.

<sup>86</sup> S. 102.

<sup>87</sup> S.101. For a critical analysis of the Act dealing with light and insect nuisances, see *Environmental Health Journal*, May 2005, pp.12-14.

<sup>88</sup> McManus, F., “Noise Law in the United Kingdom: A Very British Solution” 20 *Journal of Legal Studies* (2000)264.

framework, which places quality of life issues at central stage and has raised expectations about environmental protection<sup>89</sup>. For this, interpretation of statutory nuisance should be updated meeting modern expectations and the needs of a modern public health paradigm. However, courts are preventing its expansion in the twenty-first century. Judiciary is not recognizing that statutory nuisance regime affords an effective means for local government to deal with problems as well as providing an accessible remedy for private individuals aggrieved by the nuisances of their neighbours<sup>90</sup>. Courts fail to notice that local authority is a local and familiar administrative body to residents and that accessibility and accountability at the local level are important mechanisms for promoting effective environmental rights.

### **Private Law Remedies**

Under the civil law, a person injured by an air pollution activity can claim damages for his loss as well as cessation of the questioned activity by seeking injunctive relief.

#### **(a) Damages**

Damages are the principal remedy for the loss or injury suffered. Damages in law are the monetary compensation payable for the commission of a tort<sup>91</sup>. In cases of air pollution or other environmental harms, the damages are generally claimed whenever there is a tort of negligence or in cases which are covered by the principles of strict and absolute liability.

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<sup>89</sup> Birnie, P. and Boyle, A., *International Law and the Environment*, Oxford University Press (2<sup>nd</sup> edn., 2002)pp.252-266.

<sup>90</sup> Environmental Protection Act, 1990, S. 82 permits a 'person aggrieved' to apply to the Magistrate Court for an abatement order in respect of a nuisance falling within the list in Section 79.

<sup>91</sup> Damages can be substantial or exemplary. Substantial damages are paid to compensate for the injury or loss caused due to some tort action. Exemplary damages are generally granted against the wrongdoer to have deterrent effect.

In *Mukesh Textiles Mills (P) Ltd. v. H.R. Subramanya Sastry*,<sup>92</sup> the appellant had a sugar factory adjacent to the cultivated land of the respondent. The appellant used to store molasses, a bye-product in the manufacture of sugar, in three tanks in the premises of the factory. One of the tanks was close to the respondent's land and was separated only by a water channel. Due to burrowing activity of the rodents, the said tank containing 8000 tonnes of molasses collapsed and molasses emptied themselves into the water channel and through it spread over to the respondent's land damaging the standing paddy and sugar crop. The respondent filed a suit for damages of Rs. 35,000/-. On the other hand, the appellant defended the suit contending that it was an 'Act of God' as he could not have seen this burrowing by rodents and thus pleaded that he was not liable.

The lower Court held that the damage suffered by the respondent was attributable to actionable negligence on the part of the appellant. Accordingly, the lower Court awarded Rs.14,700/- as damages. In Appeal, the High Court relied on the rule of strict liability in *Rylands* and held that the appellant was liable for damages. However, the High Court reduced the damages to Rs. 12,200/- as the crops had not been ready for harvest and the lower Court had taken into account the gross value of the crops in calculating the damages.

The House of Lords in *Rookes v. Banard*<sup>93</sup>, classified three categories of cases wherein exemplary damages can be allowed. The first category is oppressive, arbitrary or unconstitutional action of the Government or its servants. Cases in the second category are those in which the defendant's conduct has been calculated by him to make a profit for himself which may well exceed the compensation payable to the plaintiff. Third category consists of cases in which exemplary damages are expressly authorized by Statute. The Supreme Court of

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<sup>92</sup> A.I.R. 1987 Kant. 87, per M.N.Venkatachaliah and S.R.Rajasekhara Murthy, JJ.

<sup>93</sup> (1964) AC 1129(HL).

India in *Shriram Gas Leak Case*<sup>94</sup> has added yet another category, viz., harm resulting from hazardous or inherently dangerous activities.

Prospective damages can also be awarded in respect of future loss resulting from the same cause of action in the same suit. The determination of prospective damages in environmental cases is hard to quantify in some cases and may remain unawarded on account of difficulty involved in their being proved.

Damages are the principal relief in a tort action. But such a relief suffers from inherent drawbacks. Firstly, damages awarded in tort actions in India are very low. Protracted litigation and depreciation in the value of damages awarded at the end of litigation owing to chronic inflation make such a relief of little value to a successful plaintiff<sup>95</sup>.

### **Compensatory Remedy against Ultra-Hazardous Activities**

The remedy of restitution or compensation is a legal enforcement measure to penalize and deter polluters or potential polluters. Liability to compensate arises when a lawful but dangerous or ultra-hazardous activity give rise to disastrous consequences<sup>96</sup>. Emissions into the atmosphere affecting the breathing air quality is a ground for fixing liability<sup>97</sup>. The imposition of liability reduces the potentiality of its harm<sup>98</sup>. Liabilities imposed compel polluters to compensate the victims of pollution<sup>99</sup>. It is therefore, an incentive to control pollution. Liability for tort stands used extensively for combating air pollution. The damages are measured according to

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<sup>94</sup> *M.C. Mehta, supra, n.75.*

<sup>95</sup> It is pointed out that such relief does not have any deterrent effect on the polluter and is not effective in meeting air pollution issues.

<sup>96</sup> "Environment, Economic Development and HR? A Triangular Relationship", *Proceedings of the 82<sup>nd</sup> Annual Meeting* (1988) Am. So. I.L.40.

<sup>97</sup> Such as damage caused by emission affecting air quality.

<sup>98</sup> Goldie, L.F.G., "Liability for Damage and Progressive Development of International Law", 14 *I.C.L.Q.*(1965)1221.

<sup>99</sup> Melissa Poale, "Liability for Environmental Damage in Antarctica", 10 *Journal of Energy and Natural Resources* (1992)21.

what the plaintiff has lost<sup>100</sup>. The principle of strict liability got strong footing for dealing with environmental harms primarily because, reasonable foreseeability test is applied in determining liability for nuisance<sup>101</sup>. The difficulty in establishing liability of the violators of environmental quality and of quantifying the damages compelled environmentalists and pollution victims to change their remedies from tort to writs<sup>102</sup>.

The liability to pay compensation for violation of the fundamental right to live do exist side by side with the common law remedy and is used extensively by the higher courts. Environmental legislation deal with criminal liability<sup>103</sup>. It is deterrent in nature and is in the form of sanctions for violation of laws. Thus liability under municipal law is a civil liability for damages under common law or a liability towards the society in the public interest or a statutory criminal liability.

### **(b) Injunction**

The remedy of injunction is very useful in cases of trespass and nuisance. Injunction is a judicial process by which the person causing or likely to cause pollution is prohibited from doing so. It is therefore, an order of a court restraining the commission, repetition or continuation of a wrongful act of the defendant and it is awarded at the discretion of the Court. Injunction is of two types, i.e., temporary and perpetual. A temporary injunction is regulated by Sections 94 and 95 and Order 39 of the Code of Civil Procedure, 1908, whereas perpetual injunctions are governed by Sections 37 to 42 of the Specific Relief Act, 1963. For the grant of temporary

<sup>100</sup> Jenny Steale, "Remedies and Remediation: Foundational Issues in Environmental Liability", 58 M.L.R.(1995)615; See also Rogers(Ed.), *Winfield and Jolowicz on Tort, supra*, n.19 at pp.669-670, 673-674.

<sup>101</sup> Beenakumari, K., *supra*, n.48 at p.103.

<sup>102</sup> Sadasivan Nair, G., "Environmental Offences: Crime against Humanity", in Leelakishnan, P. *et al.*, (Eds.) *Law and Environment*, Eastern Book Co., Lucknow(1992)p.186; See also Chandrasekharan Pillai, K.N., "Criminal Sanctions and Enforcement of Environmental Legislation", in Leelakrishnan, P. *et al.*, *Id.*, p.175.

<sup>103</sup> Air (Prevention and Control of Pollution) Act, 1981, Ch. VI, Ss. 37-46.



injunction, there should be existence of a prima facie case; likelihood of irreparable loss or injury; and balance of convenience leaning towards the grant of injunction. Perpetual or permanent injunction is awarded by the courts to permanently restrain the person from doing tortious act. A perpetual injunction will be generally granted where a strong probability of grave damage to plaintiff accrues and where damages would not be an adequate remedy. The test of 'balance of convenience' also applies to in the award of permanent injunctions.

In *J.C.Galstaum*<sup>104</sup>, the cause of action for the suit related to refuse let into municipal drain from defendant's shellac factory emitting foul smell noxious to health and resulting in damage to the comfort and the market-value of plaintiff's garden property. Lower Court granted perpetual injunction to abate the nuisance and also awarded Rs.1000/-as damages. Sustaining the order of injunction and damages awarded by the lower court, the Calcutta High Court in appeal held that the appellant/defendant was not at liberty to discharge the refuse of the aforesaid character<sup>105</sup>. The above ruling equally applies in respect of air pollution matters where as a result of an activity undertaken by a person as part of business or for personal gain, a nuisance is caused to the neighbourhood. It is of equal application to industrial emissions, dust and fumes, poisonous gases, household burning, noise etc. which are nuisances. The Court in the instant case proceeded by treating the foul smell emitted from the discharge of factory refuse as nuisance and accordingly applied the private law remedies of injunction and damages as methods for abating the nuisance. Although the judgment is century old, the manner in which court approached the problem and the principles laid down therein have increasing application in the present day context when as a result of industrialization, urbanization and exploitation of natural resources, great threat is posed to the air

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<sup>104</sup> *Supra*, n.38.

<sup>105</sup> In this context, it is pertinent to note that the amount of Rs.1000/- awarded as damages was a huge amount at that time and thus it could be termed as 'special damages' which the court had awarded.

environment due to human activities, some or most of which amounts to instances of nuisance, for abatement of which the private law remedies of injunction and special damages can be pressed into operation.

In *B. Venkatappa v. B. Lovis*<sup>106</sup>, the appellant had constructed a chimney with its holes projecting towards the respondent's side. The respondent complained that the smoke and fumes from the chimney was causing injury to his health and discomfort in the enjoyment of the property. The Court directed the appellant to close the holes in the chimney facing the respondent's side and thus issued mandatory injunction. In appeal the appellant contended before the Andhra Pradesh High Court that without any proof of an injury of discomfort to the plaintiff on account of emanation of smoke from the chimney, there was no cause of action for the respondent to lay action seeking mandatory injunction.

Justice Ramaswamy of the Andhra Pradesh High Court rejected the contention of the appellant and observed that it was common knowledge that when the smoke emanates, it would also pass through the holes of the chimney and when the smoke is thus spreading in the atmosphere, it causes and would be injurious to the health of the neighbours. Therefore, the court concluded that it would cause discomfort in the enjoyment of the property and become injurious to the health as well. An evaluation of the above decisions would make it abundantly clear that the remedy of injunction is more effective in tackling air pollution problems, than the remedy of damages.

### **(c) Self-Help**

Self-help is another private law remedy in the hands of an occupier to abate air pollution nuisance, when an occupier is

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<sup>106</sup> A.I.R. 1986 A.P. 239.

detrimentally affected by it. Under this remedy, an occupier can abate nuisance without the intervention of the court, provided while doing so, he does not commit any unnecessary damage and that there is an emergency in the sense that the nuisance threatens to cause immediate harm<sup>107</sup>.

From the above exposition, it is submitted that the tort remedies constitute an important part of the Indian legal system aimed at the prevention, control and abatement of air pollution and for seeking relief for the consequent harm. The tort remedies are, however, subject to a number of drawbacks which lessen their utility. Firstly, tort action is a costly and lengthy affair. Secondly, people in India lack perception that air pollution issues can be brought to court under litigation based on law of torts. Thirdly, tort actions are fraught with problems such as that of proof, in cases of pollution where the victims lack access to technological information and knowhow placing them in a psychologically disadvantageous position further aggravated by the fear of confrontation and the size of the population which makes proof of damage always difficult.

### **Impact of Treaties and Obligations on Common Law**

Unincorporated treaties and obligations arising under customary international law have a bearing on the process of development of the common law<sup>108</sup>. A treaty may provide a perspective or a formulation of values capable of informing the general assessment of justice which the courts struggle to achieve when seeking a direction for development of the common law<sup>109</sup>. It is becoming recognized that if and to the extent development of the common law is called for, such development should ordinarily be in harmony with the international obligations<sup>110</sup>. The courts are under a

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<sup>107</sup> *Lemmon v. Webb* (1895) AC 1.

<sup>108</sup> *Lyons* [2002] UKHL 44, per Lord Bingham.

<sup>109</sup> *D v East Berkshire Community National Hospitals Trust* [2005] 2 A.C.373.

<sup>110</sup> *A v Secretary of State for the Home Department* (No.2) [2006] 2 A.C. 221 at p.227.

duty to interpret the common law in accordance with the international law obligations of the State<sup>111</sup>. Hence, treaties can be used to resolve the uncertainties in the common law<sup>112</sup>. But common law cannot be used to achieve a “backdoor incorporation” of international treaties<sup>113</sup>.

Treaties also form important sources of authority for determining transboundary problems causing environmental damages<sup>114</sup>. Initially, the international liability of States for transboundary pollution issues was based on the principle of good neighbourliness. Now it is the responsibility of the State of origin to exercise due diligence to assure that the activities within their territories are carried out in conformity with internationally accepted safety standards,<sup>115</sup> and that lack of ability to control pollution is not an excuse in such cases.

### **Common Law Remedies and Judicial Approaches: A Critical Appraisal**

The primary actors involved in ensuring compliance with environmental law obligations are public authorities. In Europe, Environmental Liability Directive, 2004<sup>116</sup> regulates almost exclusively the claims brought by public authorities. It explicitly states in Article 3(3) that the Directive shall not give private parties a right of compensation as a consequence of environmental damage or of an imminent threat of such damage. In common law countries, notably

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<sup>111</sup> *Att-Gen v Guardian Newspapers (No. 2)* [1990] 1 A.C. 109 at p.238.

<sup>112</sup> *Derbyshire CC v Times Newspapers Ltd* [1993] A.C. 534.

<sup>113</sup> *A v Secretary of State for the Home Department* [2005] 1 W.L.R. 414 at p.434.

<sup>114</sup> Bharat Desai, *Water Pollution in India, Law and Environment*, Lancers Books, New Delhi (1990), p.68.

<sup>115</sup> This is stressed by the Arbitral Tribunal in *Trail Smelter Case* as early as in 1935, For details, see *Trail Smelter Arbitration Decisions*, 35 A.J.I.L.(1941)684.

<sup>116</sup> Dir.2004/35/CE of the European Parliament and of the Council of March 30, 2004 on environmental liability with regard to the prevention and remedying of environmental damage (2004) O.J.L 143/56.

in the United States, access to private law remedies by public authorities is now widely invoked<sup>117</sup>.

In England, although little was heard of *Rylands* in the decades that followed, more recently two decisions of the House of Lords, *Cambridge Water Co. Ltd. v Eastern Counties Leather Plc.*<sup>118</sup> and *Transco v. Stockport MBC*<sup>119</sup> have once again focused attention on the strict liability rule, subject to the fact that there should be a rationale of strict liability which is that the defendant had been engaged in a peculiarly dangerous activity, i.e., an ultra-hazardous activity. Thus, rule although not abolished, Court has imposed severe constraints on the rule's application<sup>120</sup>.

In future, courts may develop the common law in the perceived interests of justice, although they must act within the confines of the doctrine of precedent and the change so made must be seen as a development, usually a very modest development, of existing principle and so can take its place as a congruent part of the common law web as a whole<sup>121</sup>. In the above background, the present trends, if continued, would provide better scope for the invocation of common law remedies in meeting public health and air quality challenges.

### **Remedy under Criminal Procedure Code**

The provisions of the Criminal Procedure Code, 1973 envisage urgent measures to abate the nuisance of air pollution<sup>122</sup>. But this remedy is not taken seriously by the public due to ignorance and illiteracy. The remedy under Section 133 of Cr.P.C.<sup>123</sup> can be used

<sup>117</sup> Gerrit Betlem *et al.*, "European Private International Law, The Environment and Obstacles for Public Authorities", 122 L.Q.R.(2006)124 at p.129.

<sup>118</sup> (1994) 2 A.C. 264.

<sup>119</sup> (2003) 2 A.C.1.

<sup>120</sup> Donald Nolan, "The Distinctiveness of *Rylands v Fletcher*", 121 L.Q.R.(2005)421.

<sup>121</sup> *Kleinwort Benson v Lincoln City Council* [1999] 2 A.C. 349 at pp.377-378.

<sup>122</sup> See Code of Criminal Procedure, 1973, Ss. 133 to 144.

<sup>123</sup> Under Section 133 of the Cr.P.C, the District Magistrate or Sub-Divisional Magistrate or Executive Magistrate, if he is so empowered by the State Government, on the receipt of report from police officer or other information, may make conditional order to remove the public nuisance causing pollution. The conditional order may be made absolute and if the person concerned fails to carry it

even against statutory bodies like Municipalities, Corporations and other Government bodies if their action or inaction leads to public nuisance and environmental pollution<sup>124</sup>. The decisions in *Govind Singh*<sup>125</sup>, *P.C.Cherian*<sup>126</sup>, *Krishna Gopal*<sup>127</sup>, *Ajeet Mehta*<sup>128</sup> speaks in volume of the activist role played by the Courts in India towards protection of the air environment by positively interpreting the provision under Section 133 of the Criminal Procedure Code<sup>129</sup>. The said approach continues, as discernible from the landmark decision of the Kerala High Court in *Cheruchi*<sup>130</sup> wherein the court has taken the view that right to live peacefully and in a healthy atmosphere free from all kinds of pollution is coming under the fundamental rights guaranteed to the citizens. Justice V.K.Mohanan observed:

“In this changed society, the right of the common people to have a peaceful life, protection from endanger to life, security and a healthy and pollution free life cannot be subsided for the profit motivated trade or business. It is the duty of the State to ensure the above right of the common people. In order to ensure such constitutional right and to prevent violation of such right or misuse of the same, the State can enact law or rule or procedure as preventive and remedial measures by which State can control, regulate or prevent any action either under the guise of business or trade or any subject covered by Section 133 of Cr. P.C. Chapter X and the powers therein are incorporated in the Code of Criminal Procedure so as to enable the State to move its machinery to prevent any such act and to take remedial measures and thereby to protect the larger interest of general public”<sup>131</sup>.

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out, he can be prosecuted under Section 188 of the Indian Penal Code. Even the head of the government department or public bodies can be prosecuted for defying the orders.

<sup>124</sup> See *Municipal Council, Ratlam v. Vardichand*, A.I.R.1980 S.C.1622.

<sup>125</sup> A.I.R. 1979 S.C. 143.

<sup>126</sup> (1981) K.L.T. 113.

<sup>127</sup> (1986)Cri. L.J. 396.

<sup>128</sup> (1990) Cri.L.J.1596, *per* A.K.Mathur, J.

<sup>129</sup> Description and analysis of the above cases are made in Chapter-V, *supra*.

<sup>130</sup> *Cheruchi v. State of Kerala*, 2009 (1) K.H.C.49. This was a case in which Sub Divisional Magistrate initially passed an order under S.133(1) of Cr.P.C. to stop the functioning of the quarry, as it was injurious to public interest. Later, the Sub Divisional Magistrate stayed his own proceedings initiated under S.133(1) and permitted the functioning of the quarry after fulfilling certain conditions stipulated in the order. The High Court held that Sub Divisional Magistrate has no power to stay his own proceedings initiated under S.133(1) Cr.P.C. and that thereafter he can pass only final order under S.138(2) of the Code.

<sup>131</sup> *Id.*, p.55.

However, the path of development of magisterial law was attempted to be curtailed by the courts itself by adopting narrow interpretations embarking upon the principle of 'implied repeal' and theory of 'imminent danger accompanying public nuisance'<sup>132</sup>.

### **Tata Tea: A Passive Approach of the Kerala High Court**

The view taken by the Kerala High Court in *Tata Tea Ltd.*<sup>133</sup> holding that the provisions of the special statute like the Air Act or the Water Act has impliedly repealed Section 133 of Cr. P.C. has substantially affected the power of the executive Magistrate to provide quick relieves in the case of continuing nuisance affecting the air quality. Though the decision is an instance of judicial oversight, the mistake committed by the court while construing the scope of Section 133 was carried further to other subsequent cases also<sup>134</sup>. In *Tata Tea Ltd.*, it was alleged in the complaint that the owners of the tea factory were discharging its effluents into the river thereby polluting the water in the river which was used as drinking water by the people. The Sub-Divisional Magistrate passed an order under Section

<sup>132</sup> For further details on the theory of 'imminent danger' accompanying public nuisance, see the decision of the Supreme Court in *Kachrual Bhagirath Agrawal v State of Maharashtra*, 2004 Cri. L.J.4634, per Arijit Pasayat and C.K.Thakker, JJ. In this case, the allegation related to storage, loading and unloading of red chillies in a godown situated in a residential locality which amounted to public nuisance. According to the complainants, the business resulted in many residents suffering from sneezing, coughing, asthma, irritation of the skin and burning sensation. The Sub-Divisional Magistrate passed a conditional order which was confirmed by the Sessions Court and the High Court. But in appeal, the Supreme Court expressed view about the jurisdiction under S.133 that unless there is imminent danger to health or the physical comfort of the community, an order under S.133 cannot be passed. Thus, the decision left confusion on whether a danger happening in the immediate future is a ground for interference, though it may be a potential nuisance with an imminent danger, thus defeating the scope and object of S.133 as a legal measure to give urgent relief in nuisance cases.

<sup>133</sup> *Tata Tea Ltd. v. State of Kerala*, (1984) K.L.T. 645, per U.L.Bhat, J.

<sup>134</sup> See *Abdul Hamid V. Gwalior Rayon Silk Mfg. (Wvg) Co. Ltd.*, 1989 Cri. L.J. 2013 (MP), per K.L.Srivastava, J. In this case, petitioner filed an application before the SDM, Khachrod under Section 133 of the Cr.P.C alleging that the respondents were creating nuisance by factory emissions polluting the air environment of the surrounding area. Respondents defended the application before the SDM by taking the plea that the acts complained of were specific offences under the Air Act and therefore, the previous sanction of the State Board was a pre-requisite for their prosecution. The SDM accepted the above contention and dismissed the application filed seeking action under Section 133 Cr.P.C. Aggrieved by the above order of the SDM, the petitioner approached the Madhya Pradesh High Court, which dismissed the revision petition and agreed with the reasoning of the SDM that one cannot approach the SDM under Section 133 of the Cr.P.C. for acts covered by the Air Act.

133 of Cr. P.C. directing the owners of the factory to make suitable arrangements, for the passage and storage of effluents from the factory in such a manner as to prevent the same from passing into the river.

It was contended on behalf of the owners of the factory that it had obtained sanction under the Water (Prevention and Control of Pollution) Act, 1974, for the discharge of effluents. It was further contended that the said Act was a complete code relating to prevention and control of water pollution and, therefore, in this regard the Magistrate had no power under Section 133 of the Cr. P.C. and in so far it related to water pollution, it must be deemed to have been repealed.

The High Court accepting the contentions of the petitioner took the view that with the enactment of the environmental legislation, there has been an implied repeal of Section 133 of the Code. It was further held that the establishment of the institutional control mechanism, namely the Pollution Control Board has curtailed the powers of the executive magistrate under Section 133.

Similarly, in *M/s Executive Apparel, Processors v. Taluka Executive Magistrate and Tahsildar*<sup>135</sup>, the Karnataka High Court adopted the same view expressed in *Tata Tea* case and held that the Air Act and the Water Act are self-contained special enactments legislated with the avowed object of preventing and controlling pollution and hence the power of the executive magistrate under Section 133 of the Criminal Procedure Code to take action in regard to pollution must, by necessary implication, give way and yield to the superseding statutory power of the Board to tackle the problem of pollution. It is submitted that *Tata Tea*, *Abdul Hamid*, *Executive Apparel* cases failed to appreciate the role and scope of Section 133

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<sup>135</sup> I.L.R. 1997 (Kar.) 2020.



Cr.P.C., in preventing pollution, the availability of magistrate in every district and the sluggish speed of the wheels of the Pollution Control Board<sup>136</sup>.

It is further submitted that the view in *Tata Tea* does not depict the true legislative intent. Special Statutes like the Air Act or the Water Act does not in any way oust the jurisdiction of the executive magistrates under Section 133 Cr.P.C. In fact, both the above legislations operate simultaneously and are complementary and supplementary to each other, when issues relating to environmental wrongs occur.

### **A Remedy Completely Different and Wider in Application: High Courts of Andhra Pradesh, Madras, Kerala and Karnataka**

Quite different from the above view taken in *Tata Tea*, the Andhra Pradesh High Court in *M/s Nagarjuna Paper Mills Ltd. case*<sup>137</sup>, took the view that the Magistrate's power under Section 133 of the Cr.P.C. was completely different in as much as it deals with the issue of nuisance, whereas under the Air Act, the Pollution Control Board had wide powers to deal with the problem of air pollution. In this case, the petitioner was directed by the Sub-Divisional Magistrate of Patancheru under Section 133 of the Code to stop air pollution.

Later, in the same year itself, the Madras High Court in *Ramaswamy's case*<sup>138</sup> delivered a judgment concurring with the view expressed in *Nagarjuna Paper Mills Ltd.* The petitioners in this case were the owners of two factories functioning for the purpose of extracting lead content from used and condemned car batteries. The process involved burning of the batteries, which was sought to be

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<sup>136</sup>Leelakrishnan, P., "Evolving Environmental Jurisprudence: The Role Played by the Judiciary" in Leelakrishnan, P. et al., (Eds.) *Law and Environment, supra*, n.102 at p.126.

<sup>137</sup> *M/s Nagarjuna Paper Mills Ltd. v. SDM and RDO, Sangareddy, Medak District*, 1987 Cri.L.J. 2071(AP).

<sup>138</sup> *N. Ramaswamy v. SDM, Coimbatore* (1988) 1 Comp. L.J. 169 (Mad.).

prevented by recourse to Section 133 of the Code. It was alleged that the factories released a tremendous amount of carbon monoxide and caused irritation and a vomiting sensation among the nearby residents. The Executive Magistrate passed an order under Section 133 of the Code, which was challenged before the Sessions Court, Coimbatore in Revision. The Sessions Judge dismissed the Revision, against which they approached the Madras High Court.

The main argument of the petitioners was that there had been implied repeal of Section 133 of the Code, with the enactment of the Air(Prevention and Control Pollution)Act, 1981 and cited the decision of the Kerala High Court in *Tata Tea* in support of their contention. However, the Madras High Court disagreed with the view taken in *Tata Tea* and rejected the argument of the petitioners mainly on the reasoning that the analysis of the provision in Section 133 of the Cr.P.C. and the provisions of the Air Act would show that the object, scope, areas of operation, effect, and the powers of the authorities under both the Acts are different. The Court also held that in relation to public nuisance, the provisions of the Code are wider in application and more effective and are primarily intended to remove public nuisance and prevent its recurrence. The Air Act, on the other hand, is limited in its operation to certain areas and to certain kinds of pollutants and it is primarily intended to control certain kinds of pollution on scientific lines and penalize the offender. There is no inconsistency or repugnancy between the two legislations so as to infer an implied repeal of Section 133 of the Code. The Court further opined that the two legislations are complementary to each other and are intended to function side by side in their own parallel channels.

Within a short distance of time, in *Krishna Panicker v. Appukuttan Nair*<sup>139</sup>, the Kerala High Court overruled its own decision in the *Tata Tea* case by holding that both Air Act and Section 133 of Cr.P.C. operate in two different fields and demonstrate distinct

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<sup>139</sup> 1993(1)K.L.T.771, *per* Sankaran Nair & Mohammed, JJ.

approaches in resolving air pollution issues. The said view was also endorsed by the Karnataka High Court in *Harihar Polyfibers v. The SDM, Haveri, Dharwar District*<sup>140</sup>.

### **Mutually Exclusive, Not Parallel and Conflicting: Supreme Court Settles the Conflict**

The question as to whether there is any scope for invoking Section 133 of the Criminal Procedure Code, 1973 in circumstances where the remedy under the Air Act applies assumed significance in view of the conflicting judgments rendered in the matter by the various High Courts. The issue cannot be seen merely as a case of conceptual aberration or functional conflict but rather leads to the presumption of implied repeal of the jurisdiction vested with the executive magistrate under Section 133 of the Criminal Procedure Code, 1973. Such thinking has appeared in view of the wide and sweeping powers conferred upon the Pollution Control Board under the Air Act to deal with situations of air pollution. That apart, when there is already a control mechanism to prevent, control and abate air pollution, is there any necessity for a different mechanism under a different statute to deal with cases of pollution and nuisance to air environment. The jurisdictional conflict cannot be seen lightly as the Air Act was enacted at a later point of time than the Criminal Procedure Code<sup>141</sup>.

The issue has been finally put to rest by the Supreme Court in *State of MP v. Kedia Leather & Liquor Ltd.*<sup>142</sup>. In this case, the specific question before the Supreme Court was as to whether there was an implied repeal of Section 133 of Cr.P.C. with the introduction of the Air and Water Acts. The High Court in this case had taken the

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<sup>140</sup> I.L.R. 1997 (Kar.) 1139.

<sup>141</sup> It is the rule of interpretation of statutes that a statute dealing with specific matters overrides a statute that is general in nature and that a statute which is enacted by the Parliament at a later point of time overrides a statute enacted at an earlier point of time. Reasoning for this premise is that the statute enacted at a later point of time is the more recent expression of the intention or will of the Parliament.

<sup>142</sup> (2003) 7 S.C.C.389, *per* Doraiswamy Raju and Arijit Pasayath, JJ.

view that Section 133 had been impliedly repealed by the Air and Water Acts. Reversing the above view, the Supreme Court held:

“While the provisions of Section 133 of the Code are in the nature of preventive measures, the provisions contained in the two Acts are not only curative but also preventive and penal. The provisions appear to be mutually exclusive and the question of one replacing the other does not arise. Above being the position, the High Court was not justified in holding that there was any implied repeal of Section 133 of the Code”.

Thus, it is submitted that the Supreme Court has rightly interpreted the Air Act in relation to Section 133 of Cr.P.C. by holding that both are mutually exclusive, alleviating the scope of the plea of implied repeal and finally sorted out the confusion that prevailed among various High Courts. By taking the above stand, the Court extended the peoples’ right to take recourse to statutory remedies at their discretion, the choice of which largely depends upon situational demands and the facts and circumstances of the case.

However, a close analysis of the criminal law remedy reveals that it is not free from limitations. The punishment provided for violation of any prohibited act is not much and it does not create deterrent effect on the wrongdoer. In some cases when an action is brought against the statutory bodies like Municipalities, these bodies instead of rectifying the wrong try to justify their act or omission and fight the legal battle and take the plea of financial inability. Despite the same, it offers easy access and immediate and lasting solution to the common man.

## **Conclusion**

It is an acknowledged fact that air pollution and air quality degradation issues cannot be absolutely tackled by law, though law serves as a pivotal mechanism for solving the social problems connected with such issues. Common law doctrines under the law of torts are one among the category of laws to regulate the conduct of

environmentally harmful activities and provide remedies in cases of their breach. The common law doctrines of nuisance, trespass, negligence, principle of strict liability are applied in India along with the newly forged principle of absolute liability and other statutory measures for controlling air pollution and for preservation of air quality. The common law doctrines enshrine common law control for the liability for escape of noxious objects, discharge of noxious articles and pollutants. Thus, they cover cases of air and noise pollution.

Without undermining the significance of common law control of air quality and air pollution, it has to be admitted that common law is inadequate and difficult to operate in modern conditions. In liberalized industrialized societies, the tort actions present problems of establishing the proof of damage which is a pre-requisite for the successful action under the law of torts. Together with it, the common law standard of 'reasonableness' does not provide satisfactory basis for regulating air pollution. Further, the utility of the common law principles seems to have lessened in as much as judges in India rarely deal with cases involving 'subjective standards of reasonableness', though there are rare occasions when judges have been instrumental in modifying the common law doctrines as has been done in *Shriram Gas Leak Case*. By and large judges in India often seek statutory basis to support their view of reasonableness, leaving no scope for the further expansion of common law rules. This vacuum is to a certain extent filled by general laws like the Indian Penal Code 1860 and the Criminal Procedure Code 1973. The provisions contained in Sections 133 and 144 of the Criminal Procedure Code can be invoked for controlling air pollution. But the general laws are not impressive enough, as they simply contain scanty and piecemeal provisions hardly enough to effectively control the problem. Further, people also by and large remain unaware of these remedies and hardly invoke the same.

Unlike the traditional laws, the recent environmental legislations mark spectacular improvement upon the traditional dissipated statutes, in view of their wide coverage even in unregulated areas such as noise, vehicular emissions, indoor and personal sources of pollution, hazardous waste and micro-organism, toxic fumes, etc. They contain stringent penalties of sufficient deterrent value and new regulatory techniques in the form of citizens' suit. Similarly, the enforcement techniques stand improved with the Boards empowered even to shut down the polluting industries and to cut the supply of water or power. Further, public insurance cover has been made compulsory for all hazardous chemical industries extending their liability to pay compensation compulsorily to the victims of accidents to ensure workers safety. Mandatory worker's participation in plant safety and stringent penalties on high level management for the breach of factory regulations are other characteristics features of modern legislations intended to ensure worker's safety and to reduce industrial accidents. However, it has to be stated that amidst difficulties there are opportunities to develop the traditional law remedies to achieve the purpose of air pollution control more effectively and decisively without waiting for an environmental *Donoghue v. Stevenson*<sup>143</sup>. For this, courts are also primary actors<sup>144</sup> and that they should give green interpretation to traditional remedies.

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<sup>143</sup>Cross, G., "Does Only the Careless Polluter Pay? A Fresh Examination of the Nature of Private Nuisance" 111 L.Q.R.(1995)445 at pp.458-473.

<sup>144</sup> To cite an instance of such approach, the decision of the Patna High Court in *Sitaram Chhaparia v. State of Bihar*, A.I.R.2002 Pat.134 deserves mentioning wherein the High Court directed a Tyre retreading plant set up in a residential area emitting obnoxious gases causing harm to the air environment of a locality to be wound up.(*per* R.S.Dhawan, C.J. & S.K.Singh, J.)

## *Chapter -9*

### **CONCLUSIONS AND SUGGESTIONS**

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Protection and improvement of public health is one of the serious challenges faced by the global community today in the midst of degenerating air quality that even threatens the survival of human beings on earth. Breathing air has turned to be unbreathable-worth everywhere, paving the way for the spread of airborne epidemic diseases.

Right to public health has been passing through various stages of evolution both under customary international law and municipal law. In that process it has assumed revolutionary dimensions. In the beginning it was viewed as a part of life emanating from natural right and subsequently elevated to the level of human right and became a fundamental right. In India, it is now recognized as part of the 'right to life' under Article 21 of the Constitution. It is also considered as the essence of productive life, central to quality of life and as involving individuals, State and international responsibility. Thus, the concept of health has undergone a sea change from absence of illness or infirmity to the ability to lead a socially and economically productive life. This progressive interpretation has thereby placed a positive obligation on the State to protect public health.

The rising air pollution and the consequent degeneration of the quality of breathing air were the main focus of attention at the international level which produced a series of international documents and thereby established the linkage between human rights and the air environment. This, in turn, resulted in the formulation and exposition of accepted environmental and human



rights principles that embody the right of everyone to live in a secure, healthy and ecologically sound environment. The international documents also prescribe the procedural rights, such as the right to public participation necessary for realization of the substantive right and the duties that correspond to such rights.

Extensive human activity with the environment is found to be the root cause of air quality degeneration. Industrialization, urbanization, population explosion, over exploitation of resources, depletion of traditional resources of energy and raw material are its accelerating factors. Industrial emissions, indoor and personal based pollutants, vehicular pollution and noise pollution have now emerged as major public health hazards that affect the breathing air quality and leading towards an unproductive life. It has drastic effects on human health and safety, particularly in children, women and aged population and also on animals and plants. It affects aesthetic air quality, climatic conditions and general environment and brings about socio-economic consequences.

In India, air pollution hazards are now becoming a major threat to nation's growth and peaceful existence. However, ancient Indian people had never been oblivious of the need to preserve, protect and improve public health and the air environment. In the ancient period it was considered as the *dharma* to protect the nature. The religious and cultural heritage of India makes it clear that since the Vedic age people in India have shown their intense concern for the nature and natural resources. They worshipped trees, animals and believed in pollution-free air. Each individual in the society knew of his duty to protect public health and environment and everyone tried to act accordingly.

India initially followed the common law remedies to control public health hazards arising from air pollution. The rule of 'strict liability' evolved in *Rylands* was followed and applied by the Indian

courts till 1987 when it was replaced by the rule of 'absolute liability' tailored by the Supreme Court in *M.C. Mehta*. There have been various statutory provisions in the Indian Penal Code 1860, Criminal Procedure Code 1973, and the Civil Procedure Code 1908, under which air pollution could be controlled by envisaging remedial measures and by punishing the wrongdoer. However, with few exceptions, these provisions could not be of much help to combat the problem of air pollution arising from different sources and for preservation of the air quality.

Under the constitutional scheme, protection and improvement of public health is conceived as State responsibility and that of the environment as an obligation of the State as well as a duty on the citizens. The judicial grammar of interpretation has also treated right to life as implying right to pollution-free air and the right to live in a healthy environment by articulating the duty cast on the State under Articles 47 and 48A as creating a right in favour of citizens. At the same time, there exists a difference between fundamental rights and directive principles, in as much as the implementation of directive principles requires expenditure from State exchequer and is therefore dependent on the level of economic development of the nation, whereas fundamental rights impose restriction on the power of the State and creates negative duty on the State not to violate the rights through State action. Failure to take notice of this difference between fundamental rights and directive principles is found to create difficulties at the implementation stage.

It was found that presence of pollutants in air beyond certain limits has a detrimental effect on peoples' health. The Air (Prevention and Control) of Pollution Act, 1981 was enacted in furtherance of the decision taken at the Stockholm Conference fully to meet this challenge. The Act has rather properly defined the term 'air pollutant' as including noise as well and has also envisaged several provisions intended to preserve the air quality and to control

air pollution. The power of the State Government to declare air pollution control area, to ensure standards for emissions from automobiles; power of the Pollution Control Board to restrain persons from causing pollution; to close, prohibit or regulate industry, operation or process; to penalize for operating in control area without consent or for emitting pollutants in excess of the prescribed standards or for violating the directions of the Board appears to be commendable. But, still it has not succeeded in arresting the growing proportion of air pollution or in improving air quality. The major loopholes in the Act are that penalty provisions are not deterrent and that there is no provision for ensuring public participation. The Act does not contain sufficient provisions for helping the implementing machinery by making it functionally independent and sufficiently armed with manpower, equipments and funds. There is also political interference into its functioning.

It is submitted that to supplement the Air (Prevention and Control of Pollution) Act, 1981 and to strengthen the hands of the implementing agencies, Parliament enacted the Environment (Protection) Act, 1986 and this legislation envisages preventive, curative and remedial measures for protecting the environment, which also includes air. Some of the objectives of this enactment are to cover uncovered gaps in the areas of major environmental hazards and to provide for deterrent punishment to those who endanger human environment, safety and health.

From the above development of law it is clear that public health jurisprudence in relation to air quality maintenance never remained hollow in India. Instead, a legal regime has rightly evolved to meet the pressing needs of the time. However, enactment of a statute does not mean that desired goal would be attained automatically. It has to be effectively implemented also.

Air Quality control laws in India suffer from deficiencies with regard to the structure of governance of the Pollution Control Boards, citizens' suit provision, sampling provision, consent procedure regulations and consent administration system. Problems also persist with reference to the determination of ambient air quality standards and of its enforcement. Poor enforcement of law mainly arise from information asymmetry, budget constrains, lack of skilled manpower and technical facilities for monitoring pollution between regulators and the regulated units. There is absence of pollution charge system as prevalent in US and in the European countries which can generate revenues to governmental agencies. There is also absence of market signaling mechanisms such as eco-labeling of products, adverse publicity for the erring units and enforcement procedures such as blacklisting and placing frequent violators under a special category wherein the possibility of inspection is higher than for the complying units, as measures for ensuring compliance with standards.

### **Control of Industrial Air Pollution**

The problem of industrial air pollution is posing a grave public health hazard. Cottage and small scale industries are also equally contributing to the air pollution load. Industrial pollutants are found to be responsible for ozone depletion, green house effect, global warming and acid rain. All nations have a common responsibility for this phenomenon, although richer nations are technologically and financially better equipped to shoulder this responsibility. Air quality monitoring undertaken in the industrial sector revealed that respirable particulate matter, sulphur dioxide and nitrogen dioxide emissions frequently exceed the permissible limits due to industrial development and poor enforcement mechanism.

At the governmental level, certain measures have been taken to keep industrial air pollution under control, such as environmental impact assessment, prescription of emission standards for industries,

environmental auditing, zoning atlas for siting industries and pollution prevention technologies. But still it has not improved the situation. The concept of sustainable industrial development is yet to gain recognition in the industrial sector. Judiciary has timely intervened to keep industrial air pollution under control and made significant contribution in the areas of quarrying, mining, stone-crushing, hazardous and dangerous industrial activities and in that process, the court has stood for sustainable development to meet equitably the needs of the present and future generations and timely applied the principles of intergenerational equity, polluter pays and public trust doctrine. It has also taken a precautionary approach by ordering shifting of hazardous and dangerous industrial activities. The principle of absolute liability and clean up costs was also tailored to the matters relating to industrial activities. By doing so, the court has explicitly treated the problem of air quality degradation as a social problem. The approach put forth by the judiciary has been that industrial development must continue, but not at the cost of air environment.

To control industrial air pollution, legislative and judicial activism alone is insufficient. There is the need for administrative activism. Government as the policy maker should adopt a multi-linked remedial approach drawing and fixing priorities. Such an approach should concentrate on strengthening of emission standards for various categories of industries aimed towards prevention of pollution than its control. There should be database on clean technology, thrust for cleaner technologies, siting of high pollution potential industries, fiscal measures for pollution prevention, which envisages incentives for environmentally benign substitutes, technologies and energy conservation in the form of customs duty, tax concession, cess rebate. There is the need for strengthening of monitoring network to cover new stations and more air pollutants.

There is the need for comprehensive urban air quality management strategy envisaging information related to urban planning, ambient air quality, emission inventory, and air quality dispersion models. There should be critical assessment of environmental impact assessment. Environmental audit mechanisms and planned emission load mapping studies should be undertaken at regular intervals by developing emission factors fit for Indian conditions.

There should be greater emphasis given for information dissemination, mass awareness and training. State-of-the-art technologies should be used for wider dissemination of environmental information. For that purpose, transparency and access to the data should be improved. Measures such as publication of pollution bulletins and air pollution forecasts should be started on a regular basis. Massive thrust should be provided to mass awareness campaigns involving community organizations such as residents association, students, voluntary bodies and NGOs. Strategic action plan for implementation of policies in letter and spirit should be devised. Supportive measures such as training and education for the industry, governmental agencies, and institutions are other necessities considered to be important.

A management policy for industries should be newly evolved at the governmental level or the existing policy and standards for industries should be reformulated by incorporating environmental strategy, regulation, institutional capacity building, corporate social responsibility, economic incentives and penalties. Such a policy should insist that industries should be located outside the city and that the location of industries should be as per the environmental guidelines. Industries should strictly obey the prescribed standards of emissions. The Pollution Control Boards must enforce environmental legislations in various types of industrial units depending on their process, technology and pollution potential. Particular attention must

be paid to highly polluting industries. To generate popular pressure, people should know who is polluting their air and to what extent. Constant monitoring and auditing of industries should also be considered as viable methods to control air pollution in the industrial sector.

In the industrial sector, there is the need for green initiatives. Green cover should be increased through appropriate design of green belts and barriers and proper selection of plant species. Companies, both private and public, should be encouraged to have green procurement and green products. Every industry should have Environmental Management Division comprising of experts who should evolve and implement green initiatives for the industry.

There is the need to encourage and popularize Best Available Techniques (BAT) in production process and to set the emission limits for individual industry in accordance with BAT standard aimed at reducing harmful atmospheric emissions. Flue gas desulphurization should be adopted for achieving reduction of sulphur dioxide and nitrogen oxide emissions and carbon capture for reducing carbon dioxide emission.

### **Control of Indoor and Personal Air Pollution**

Pollution of air due to indoor and personal sources is having a tremendous impact on the health and quality of life of the population, besides imposing heavy burden on health costs. Children, women and aged population are its immediate victims. Indoor sources of air pollution include bio-fuel burning and household burning in rural areas, waste burning by the method of incineration, open burning of agricultural residues etc. Smoking is the most prevalent form of personal air pollution. These activities discharge gaseous emissions, toxic fumes, smoke, dust, vapour etc. into the atmosphere. The institutional mechanisms, economic and technological approaches now adopted are inadequate and failure in general and this points to

the need for consultation with stakeholders and people's participation in these areas.

To get rid of the problem from bio-fuel burning, use of alternate clean fuels such as biogas, solar stoves, kerosene, liquefied petroleum gas or electricity should be insisted. Cooking with kerosene should be encouraged for household use, for which, kerosene should be made available at reasonable price for the rural population. Design of biogas plants should be improved by developing reliable and cost effective community designs. For this purpose, municipal legislation should be amended to incorporate a provision making it compulsory to provide for installation of appropriate systems for generating energy from alternative sources of energy like biomass, hydropower, wind, solar, waves, tidal and waste in all plans submitted to municipality or local body for putting up all kinds of buildings residential or otherwise. As far as State of Kerala is concerned, it requires amendment to Section 387 of the Kerala Municipality Act, 1994. A further provision should also be added in the municipal law which requires that completion certificate shall be issued only on installation of such units or systems as indicated in the plan submitted, as a measure to encourage the use of energy produced from alternative sources and to avoid dependence on one source of energy alone.

The problem of uncontrolled burning of solid waste through incineration and open burning should be got rid off by making applicable strict emission standards so that the hazardous gases are not directly released into the environment. This would also eschew the chances of poisonous fog formation. Waste burning and household burning and burning of agricultural residues or refuse incineration should be substituted by efficient garbage removal and landfill management to harvest methane. For this, municipal legislation should provide for a provision requiring vermicompost production or biogas production with every residential building as a



pre-condition for issuing building permit. In Kerala, this calls for amendment of Section 332 of the Kerala Municipality Act, 1994.

Tobacco smoking has become a lifestyle. It is the primary cause of several illnesses. The primary outcome of smoking is pulmonary disease. Secondhand smoking/passive smoking is equally dangerous. Smoking in public places has been regarded by the judiciary as a nuisance and a potential threat to clean air affecting the lives and sustenance of human beings. So much so, judiciary has expressed its deep concern in this arena. Dangers of passive smoking were also exposed by the courts by declaring that a person is entitled to protection of law from being exposed to the hazards of passive smoking under Article 21 of the Constitution. The court has taken the view that passive smoking adversely affects the life of the citizen by slow and insidious poisoning of the air environment thereby resulting in reducing the lifespan itself. It was also held that passive smoking is indirect deprivation of life without any process of law and hence non-smokers cannot be compelled to become helpless victims of pollution caused by smoking. The court has also canvassed for the strict implementation of anti-smoking law by holding that inaction in the matter amounts to failure of the rule of law.

It is submitted that it is a mystery that still the country is not tobacco-free or smoke-free and smoke nuisance continues in public places like bus stands, railway stations, as the ban on smoking has failed to evince any public response. There is the indisputable evidence that implementing 100% smoke-free environment is the only effective way to protect the population from the harmful effects of smoking. For attaining this position, apart from a comprehensive, clear and enforceable legislation, the role of the civil society is also important. Government should evolve an implementation plan and provide infrastructure for its enforcement. Implementation process should be monitored and their impact measured and experiences must be documented. Government should also evolve educational

strategies to reduce secondhand smoking exposure in the home. Fiscal strategy of the government should cover bidi sales also and incidence of taxation should be high on tobacco products to have deterrent effects on its consumption. There should be effective warning labels and public campaigns to reduce tobacco consumption. Above all, people should be educated and made conscious of the necessity to regulate their harmful and injurious lifestyles.

Though after Stockholm and Rio, series of global and national endeavours were made to regulate the release of gaseous emissions and toxic fumes into the atmosphere, still the situation has not improved. In these circumstances, there is the need for a Public Health Code to meet present day health hazards by envisaging a clear definition of nuisance corresponding to public health by making certain things to be nuisance. The definition of nuisance should include premises in such a state as to be prejudicial to public health; factory, workshop or work places not provided with sufficient means for ventilation or not kept clean and free from noxious effluvia; any fire place or furnace which does not consume the smoke arising from the combustibles used therein; chimneys sending forth smoke in such quantities prejudicial to health; irritating smell or offensive odor produced by any place which is a nuisance to the neighbourhood. The Code should authorize the local authorities to detect nuisance by conducting periodical inspection and to take abatement measures. Most important of all the measures is peoples' participation, for which citizens should be seen as allies and they should be empowered through information and vigorous public awareness campaigns.

### **Control of Vehicular Pollution**

Vehicles constitute a major source of air pollution and are greatly responsible for the unhealthy air quality. Any Government committed to constitutional values and peoples' health cannot shrink

from its responsibility to abate or at least minimize this public health hazard. In cities, automobiles contribute about 50 per cent of the total air pollution. The worst thing about vehicular pollution is that it cannot be avoided as vehicular emissions are emitted at the near-ground level where one breathes. In India, older vehicles are predominant in vehicle vintage, accompanied by inadequate inspection and maintenance facilities. There is predominance of two stroke two wheelers, adulteration of fuel and fuel products, improper traffic management system and chaotic road conditions. There is high level of pollution at traffic intersections and absence of effective mass rapid transport system and intra-city railway networks. High population exodus to the urban centers is also found to aggravate the problem. It is true that advanced manufacturing techniques have considerably reduced emission from automobiles. However, the benefits are upset by the rapid increase in the number of vehicles and the poor maintenance of the Indian roads.

The legal control of vehicular pollution in India exist in the form of some scarce provisions contained in the Air (Prevention and Control of Pollution) Act 1981, Motor Vehicles Act 1988, and Motor Vehicles Rules 1989. Administrative measures are only directed towards emission norms, fuel quality inspection and maintenance, thus leaving policy and information gaps. From time to time, various public interest litigations have been filed in the Supreme Court and different High Courts in the country to curb vehicular pollution, wherein the courts have played an activist role and developed the principles of clean air jurisprudence and wholesome environment as mitigation measures. The Supreme Court has adopted precautionary approach and became Supreme Court for Indians and even took upon itself different roles as constitutional governors, super administrators and policy makers. The institutional role of the court has been refashioned to readily enforce social rights and to impose positive obligations on the State.

The Court has given directions for improving the traffic conditions, disciplining private vehicles and towards clean fuel. It has found diesel as not a safe fuel and ensured that vehicles are run on safe fuel. In addition to dealing with CNG supply problems, the Court also considered issues related to the pricing of CNG, safety inspection and maintenance of CNG vehicles and monitoring implementation of the CNG policy in the critically polluted cities. It also considered the necessity of parking policy. The Court has also mercilessly handled defiant attitudes. The court has treated protection of public health and environment as divine proclamations and adopted a bold approach. The Court has given directions to the concerned authorities to enforce the relevant provisions of law and take all effective steps to control the vehicular pollution. Automobile manufacturers were directed to ensure that an in-built mechanism should be fitted to reduce the pollution. The legitimacy for such extent of judicial activism arises from inaction on the part of executive. However, it is difficult for the courts to monitor the control of vehicular pollution. The first responsibility is of the citizens to keep their vehicles in the proper condition so that their vehicles do not become the major source of air pollution. It has been noticed that most of the government vehicles, buses and trucks are not maintained properly and they become the major source of pollution. It is suggested that the Government should act as a "model" to maintain its transport fleet in a proper condition. The competent authorities should enforce the anti-pollution laws effectively.

It has come to the notice of the researcher that in some cities people obtain 'pollution certificate' without getting their vehicles checked. In fact every petrol pump should have pollution checking device and the petrol should be given only after proper checking of the vehicles and ensuring that their emission is under control. There is also need to regulate the traffic in cities. Ensuring unimpeded vehicular movement by way of widening of roads, construction of

flyovers and subways and introduction of underground rails are also worth consideration for reducing vehicular emission as part of the general strategies.

Together with the general strategies, short-term and long-term measures must also be evolved. Short term measures must envisage measures to phase out old vehicles from urban areas; use of catalytic converters for vehicles; effective monitoring of vehicular emissions; strict emission testing, taxing of vehicles for differential pollution; proper maintenance of engines; introducing free environment awareness course in different cities; schemes of penalty and rewards; people's participation; strict implementation of licensing conditions; constituting visionary authority with political will to implement relevant measures; promoting walking and cycling and giving preference to bicycles in parking near bus stand, railway station etc.

Long term measures must include introduction of four stroke engines(both for fuel efficiency and low emissions); improvement of fuel quality; development of intensive plantation to reduce dust, smoke and other pollution; granting incentives for the use of electric, propane, battery operated vehicles or LPG or CNG based transport means etc. Similarly, disincentives should be created for diesel vehicles, as diesel particulates are more hazardous to human beings than petrol emission. This may be made possible by imposing environment cess on diesel. The money collected as cess by the government can be utilized for implementation of clean air policy. Low carbon economy is a viable method to reduce the accumulation of carbon dioxide and other green house gases in the atmosphere and compressed air-engine car is an innovative system for low carbon economy.

There is a need for practical approach that reduces both vehicular emissions and congestion, using a mixed set of instruments dictated by command and control and by the market based

principles. There is the need to undertake pollution source inventory surveys to assess the contribution of each source to the total pollution load. Improvements should be brought in the vehicular emission norms and auto fuel quality throughout the country and in cities that have high vehicular pollution; city-specific measures should be taken, to reduce pollution from old in-use vehicles. Similarly, strategies should be evolved to discourage use of private vehicles by ways like levying of parking fee, road pricing, imposing restriction on entry, encouraging car pools and constructing bus ways, which increase the productivity of buses and induce people to change their modes of conveyance.

An exclusive legislation in the form of Clean Air Act must be enacted for containing the problem of vehicular pollution. Such legislation should confer power on the State Government to issue a notification declaring that all the motor vehicles in use within the State shall use CNG/petrol/ LPG/electricity as fuel in a phased manner. Time frame should be fixed in respect of existing vehicles including State owned buses to convert as to make them fit for using CNG, LPG or electricity. After the above cut off date, no diesel vehicle should be allowed to be operated in the State. Persons acting in contravention should be punished with imprisonment up to one month or fine up to Rs.5000/-, besides recording the punishment in the Registration Certificate as well as in the driving license. In the event of repeating the offence, the user should be punished with imprisonment up to 3 months and fine up to Rs.1,00,000/-.

### **Control of Noise Pollution**

Noise is considered to be an insidious form of air pollution as it invades the air environment in dangerous proportions, causing nuisance and annoyance. It infringes the natural right to quietness. It is considered to be an air pollutant under the Air(Prevention and Control of Pollution)Act, 1981 and the Environment(Protection) Act,

1986. Its sources are industrial like boiler, machinery, foundry, flour-mill, cutting machines and non-industrial like loudspeakers, aircrafts and trains, construction work, domestic appliances, religious rituals and festivals, social and political gatherings, generator sets etc.

Noise has physiological, psychological and behavioral effects on human beings and it affects other living beings and non-living things also. Noise becomes actionable when it turns to be excessive, undesirable and unreasonable. Noise related problems are mounting up daily bringing out dreadful and hazardous consequences especially in the urban and industrial belts.

Control of noise pollution requires initiation of legislative and non-legislative measures. Legislative measures consider it as a tort and as an offence and for which remedies are prescribed under various enactments like Indian Penal Code 1860, Criminal Procedure Code 1973, Motor Vehicles Act 1988 etc., apart from the remedies envisaged under the Air(Prevention and Control of Pollution)Act 1981 and the Environment (Protection)Act 1986. Besides these general legislations, local legislations also operate to control noise arising especially from music, use of loudspeakers, fireworks etc. However, an exclusive rule making attempt to regulate and control noise generated from loudspeakers and generator sets can be found in the Noise Pollution (Regulation and Control) Rules 2000 and it provides for ambient air quality standards in respect of noise for different areas, namely, industrial, commercial, residential and silent zones both during day time and night time in reference to decibel levels and also confers power on the State Government to categorize the area into any of the above categories and to take measures for abatement of noise including noise from vehicular movements. There is obligation on the local bodies and development authorities to take steps to prevent noise pollution as a parameter of quality of life.

Rules place responsibility on the designated authority to enforce noise pollution control measures and ensure compliance with ambient air quality standards. Restrictions on the use of loudspeakers/public address system and consequences for offences committed in silence zones are also prescribed. The Rules also provide for complaint mechanism and the power to prevent, prohibit, control or regulate continuous music, sound or noise.

Judiciary has also shown its deep concern over the noise hazard and has filled the cavernous gaps left by legislation to make the air environment free from noise pollution. It has evaluated noise control legislation from the stand point of constitutional freedoms guaranteed under Articles 19(1)(a), 19(1)(g), 21, 25 and 26 and has also reconciled inter-provisional constitutional conflicts. Judiciary has also considered the ethical issue pertaining to the subject and built up law based on ethics. Even when public health was not provided as a ground for restricting the constitutional freedoms under Article 19(2) or 19(6), the vigorous and progressive process of interpretation adopted by the Court has thus resulted in creating a public health jacket to protect the environment from unhealthy noise.

Courts have also responded timely and positively against the impending public health danger arising from the uncontrolled use of firecrackers and sound emitting fireworks associated with religious practices, cultural festivals and political celebrations. In that process, it has made a stark distinction between sound emitting and light emitting fireworks and imposed severe restrictions on the use of sound emitting fireworks and also issued directions for tightening the licensing system and licensing conditions and directed the authorities to undertake continuous monitoring of fireworks activities, thus leaving no stone untouched. From all these developments, it can be seen that the approach of the Court in this arena was remarkable in resolving the dichotomies existing between individual freedom versus community interest and religious practices versus social order. In the



efforts to check industrial noise, court declared that persistent noise arising from industrial activities infringes Article 21 of the Constitution. In the use of loudspeakers, court has also balanced religious rights with noise free environment and in the process distinguished between religious practices and religious faith and declared that the protection under Articles 25 and 26 operates only in respect of religious faith and that religious practices must be subject to public order, morality and health. The Court has also recognized that life without good health is denial of life, while exposing the ill-effects of noise pollution on human health.

The existing law against noise pollution is highly insufficient. Nuisance action under the Indian Penal Code is a poor remedy as it is nominally punitive rather than preventive or compensatory. The provisions in other legislations are also inadequate as they cover restricted area of noise pollution control and do not provide for remedies based on scientific calculations. It is therefore high time to enact a specific, detailed and uniform legislation, taking into consideration the analysis about the sources, effects and control of noise pollution and the Indian social and economic aspects on noise pollution control. Additionally, the existing enactments dealing with noise also need to be elaborated and effective provisions incorporated by suitable amendments which provide for enhanced punishment for nuisance by noise in the Indian Penal Code or alternatively, Sections 278 and 290 be amended to enhance the present prescribed punishment of fine to a maximum of ten thousand and five thousand rupees respectively and a sentence of imprisonment for a maximum of three years to five years may also be specified in both the sections. The offence should be made cognizable and non-bailable. In cases where the offence of public nuisance is committed by a Company or concern, the officials responsible for running the business that causes the noise nuisance should be held liable for imposition of the proposed sentence of imprisonment.

Industrial laws such as the Factories Act need to incorporate safety provisions against noise pollution to safeguard the workers, such as provision for ear plugs, muffs and insulation in addition to the provisions for reduction of noise at source by proper machine design, maintenance, lubrication, use of baffles, use of sound proofing materials like walls, ceilings, floors etc. The Motor Vehicles Act should provide for a provision specifying the limit of noise in terms of decibels.

General strategies should be adopted such as installation of decibel meters in highways and public places, green belt vegetation, inclusion of noise level specification while designing machinery and transport system, undertaking of sound level surveys, planned programme on acoustical protection, creating awareness through media. Licensing should be made compulsory for all public address system, fireworks display and other noise generators, specify the place, restrict their use at night, limit the period, monitor the activity, cease and confiscate the equipment, compensate the victims, provide penalty, make registration mandatory for the provider. All products should be labeled according to noise standards. Noise by vehicles should be reduced by banning honking, streamlining traffic, ensuring good body and silencer designs and imposing special tax. Noise checking squads should be appointed under the control of District Medical Officers. Special courts should be constituted in every district to try the offence of nuisance by noise. Monitoring Committees should be established at State level. Noise Cells should be attached to Pollution Control Boards. Environmental noise mapping should be adopted. Vibration standards should be prescribed and personal liability should be imposed on the enforcement authorities for non-performance of duties.

### **Need for Vitalizing Traditional Remedies**

Traditional remedies provide convenient tools of access to justice for the common man to meet the problem of air pollution and air quality degradation. Traditional law regards air pollution problem basically as a nuisance and accords to citizens a choice among a common law tort action against polluter, a citizen's suit or a writ petition to enforce statutory compliance. However, the common law action for nuisance in India has been of limited success to get damages in air pollution cases.

Though, the Supreme Court has evolved the principle of absolute liability in modification to the rule of strict liability, judicial approach has limited its invocation, by placing severe constraints on rule's application. That apart, judges in India often seek statutory basis to support their view of reasonableness, which lessens the utility of common law which is centered on subjective standards of reasonableness. This vacuum is filled to a certain extent by the general laws like Indian Penal Code 1860 and the Code of Criminal Procedure 1973. But the provisions of Sections 133 and 144 of the Criminal Procedure Code are not impressive enough as they contain only scanty provisions, hardly enough to control air pollution. Though the remedy under Section 133 Criminal Procedure Code is different and wider in its application and mutually exclusive of the remedy under the Air(Prevention and Control of Pollution)Act 1981, the benefit of this remedy is not adequately taken advantage of by the people due to ignorance. Hence, there is the need for educating the people to make them aware of the remedies under the traditional law to be used as effective weapon for resolving air pollution problems.

### **Some General Suggestions**

The fear of false public interest litigation, lack of scientific and technical expertise and the difficulty faced in monitoring the

implementation of court orders have inhibited the judicial attempts of air quality control to a large extent. It is, therefore, suggested that the Government should not delay in creating independent "Environmental Courts" in the Australian Model comprising of experts to handle matters relating to environmental pollution exclusively, as proposed by the Law Commission of India in its 168<sup>th</sup> Report, 2003. The possibility of constituting Ecological Sciences Research Group to help the court and the government as an information bank should also be explored. Judiciary should consider public opinion when interpreting the Constitution because such opinion represents the evolving social mores of the community. Similarly, the jurisdictional authority and powers of National Environment Appellate Authority should also be broadened. The sensitized civil society must act as a pressure group for promotion of societal interests.

Right to environment should be included as a specific fundamental right, as suggested by the National Commission for the Review of the Working of the Constitution. An exclusive legislation in the form of Clean Air Act for preservation of air quality and for prevention, control and abatement of air pollution is also desirable. There is the need to bring 'public health' within the concurrent list and it should also be included as a ground for restricting the freedoms in Article 19.

Executive must be awakened from its deep slumber and made committed for the cause of healthy air environment. Central Government should make use of the powers under Environment (Protection) Act, 1986 to ensure that industries do not pollute the air. Section 24 (2) of the Environment (Protection) Act which has taken away the deterrent effect of Section 15 should be removed by suitable amendment. Similarly, the requirement of giving 60 days notice under Section 19 of the Environment (Protection) Act for citizens' suit

should be done away with. There is a need to place reliance on environmental reporting as a tool for regulation.

It is found that laws on air quality controls are observed more in breach, than in compliance. Administration is not performing its duty to implement legislative mandate. The judicial orders are also not obeyed in time, and implemented only after initiation of contempt proceedings in courts. The absence of clear cut implementation protocols have led to the erosion of the system itself. Under these circumstances, the feasibility of using pre-litigatory remedial measures such as conciliation, mediation, community participation to resolve air pollution problems also requires serious consideration.

An analysis of the air quality control laws in India shows that they are repressive and prohibitive, state-rule based and state-discretionary. It is true that control of air pollution is a difficult task. Complete eradication or prevention is impossible and undesirable, as it would deprive the society of the benefits of productive economic activity. Besides control is also a technical problem to be solved by engineering methods such as containment, replacement and dilution and not merely a legal issue to be resolved by legislative and regulatory measures alone. Despite the same, effective air quality controls have many social benefits, as clean air not only means reduction in health costs, but healthier and brighter environment as well. It is submitted that the necessity of public health protection in the midst of degenerating air quality is not the problem of any individual nation. It is a global problem and it has to be tackled globally also with the co-operation of all the countries.

The situation as now exists warrants a clear perception and imaginative planning at every stage by the Government and local bodies. It also requires sustained efforts and result oriented strategic action. Indeed, there is a need to evolve a national policy to protect public health from degenerating air quality and further the need for a

'co-operative' model of society, in which the major task of the executive becomes one of finding alternatives through which the various agencies of the society can co-operate with each other to attain the common ends. If the life is to be peaceful, happy and satisfied, people should be made aware of public health hazards and the vice of pollution. The right of the posterity demands that there should be acceptance of responsibility by individuals and communities in the efforts to maintain air quality and to control air pollution. In this context, it would be appropriate to recall the words of Winston Churchill:

“The dark ages may return.....on the gleaming wings of science; what might now shower immeasurable material blessings upon mankind, may bring about its destruction. Beware, I say, time is short”<sup>1</sup>

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<sup>1</sup> As cited by Justice Chettur Sankaran Nair in *Mathew Lukose v. Kerala State Pollution Control Board*, 1990(2) K.L.J. 717 at p.725.

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