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ABOUT US

LexForti is a free open access peer-reviewed journal, which gives insight upon broad and dynamic legal issues. The very objective of the LexForti is to provide open and free access to knowledge to everyone. LexForti is highly committed to helping law students to get their research articles published and an avenue to the aspiring students, teachers and scholars to make a contribution in the legal sphere. LexForti revolves around the firmament of legal issues; consisting of corporate law, family law, contract law, taxation, alternative dispute resolution, IP Laws, Criminal Laws and various other Civil issues.

Legal Implications and Challenges of Air Pollution

Ananyo Mitra

INTRODUCTION

Air is an important constituent of all the individuals, without which nobody can live more than a minute. If this air gets polluted then it is a crucial issue for the present and the upcoming generations. The gravity of air pollution is well reflected in its pervasiveness and the detrimental effects it has on all the living creatures. The air pollutants create major diseases which sometimes are incurable. These adverse effects of air pollution are mainly created by human activities. In the recent years the air quality has degraded to a great extent due to the rapid growth in industrialisation, urbanisation and vehicularisation[1]. It leads to the release of huge amounts of toxic fumes and substances in the air[2]. This not only pollutes the air but also creates critical respiratory problems. If the air gets polluted at this rate then it would be highly unfavourable for human lives to exist in the future. According to the World Health Organization report, two-third of the 800,000 deaths and 4.6 million people lose their lives due to air pollution[3].

SOURCES OF AIR POLLUTION

The definition of air pollution is adopted by the Expert Committee of Central Pollution Control Board, a statutory body created under the Air Act, 1981,[4] is, "*Air pollution means the presence in the outer atmosphere, of one or more contaminants such as dust, smoke, fumes, vapour in such quantities, and of such characteristics and duration, as to be injurious to humans, plants or animal life or to property or which unreasonably interfere with the comfortable enjoyment of life and property."*[5]

Air pollution can be categorised as domestic pollution, industrial pollution, noise pollution, vehicular pollution and radioactive pollution. Commonly, domestic pollution is associated with village life, industrial and radioactive pollution with irresponsible industries, vehicular and noise pollution is identified in urban areas. The persistence of these various form of air pollution is a testimony of the failure to plan for sustainable development. It is a reflection of continuing inability to apply the required policy correctives.

Air pollution, like all other environmental problems, can be seen as arising from under development as well as from negative effect of the very process of development. Most of the

[1] HEI Public Health and Air Pollution in Asia Research Report, Number 154 (November, 2010), available at: http://pubs.healtheffects.org/getfile.php?u=589 (Visited on April10, 2019).
[2] The Economist, available at: http://www.economist.com/news/asia/21642224-air-indians-breathe-dangerously-toxic-breathe-uneasy (Visited on April10, 2019).
[3] HEI Public Health and Air Pollution in Asia Research Report, Number 154 (November, 2010), available at: http://pubs.healtheffects.org/getfile.php?u=589 (Visited on April10, 2019).
[4] http://www.moef.nic.in/legis/air/air1.html (Visited on April10, 2019).
[5] Sanjay Upadhay and Videh Upadhay ,Handbook on Environmental Law, Vol II, (LexisNexis)

domestic pollution in rural areas can be seen as a result of lack of development. It has been pointed out that 'The world's worst air pollution problem could be the wood smoke inhaled by poor rural women while cooking. Manufacturing industries release large amount of carbon monoxide, hydrocarbons, organic compounds, and chemicals into the air thereby depleting the quality of air. Manufacturing industries can be found at every corner of the earth and there is no area that has not been affected by it. Petroleum refineries also release hydrocarbons and various other chemicals that pollute the air and also cause land pollution. The main sources of trans-boundary air pollution today are sulphur dioxide and nitrogen oxides. Mining is a process wherein minerals below the earth are extracted using large equipments. During the process dust and chemicals are released in the air causing massive air pollution. This is one of the reasons which are responsible for the deteriorating health conditions of workers and nearby residents. Household cleaning products, painting supplies emit toxic chemicals in the air and cause air pollution. Suspended particulate matter popular by its acronym SPM, is another cause of pollution. Referring to the particles afloat in the air, SPM is usually caused by dust, combustion etc.

EFFECTS OF AIR POLLUTION[6]

Air pollution affects human health, animals, and plants causing global effects. Lung cancer is a disease caused by polluted air which leads to death. It is mostly associated with respiratory diseases ranging from common cold to lung cancer. Gaseous and particulate pollutants cause emphysema, bronchitis and asthma. Polluted air irritates the eyes and pollutants like lead accumulates in the body. Another direct effect is the immediate alterations that the world is witnessing due to Global warming. With increased temperatures worldwide, increase in sea levels and melting of ice from colder regions and icebergs, displacement and loss of habitat have already signalled an impending disaster if actions for preservation and normalization aren't undertaken soon. Harmful gases like nitrogen oxides and sulphur oxides are released into the atmosphere during the burning of fossil fuels. When it rains, the water droplets combines with these air pollutants, becomes acidic and then falls on the ground in the form of acid rain. Acid rain can cause great damage to human, animals and crops. Eutrophication is a condition where high amount of nitrogen present in some pollutants gets developed on sea's surface and turns itself into algae and adversely affects fish, plants and animal species. The green coloured algae

[6] Conserve energy future, available at: http://www.conserve-energy-future.com/causes-effects-solutions-of-air-pollution.php (Visited on April10, 2019).

that is present on lakes and ponds is due to presence of this chemical only. Just like humans, animals also face some devastating effects of air pollution. Toxic chemicals present in the air can force wildlife species to move to new place and change their habitat. The toxic pollutants deposit over the surface of the water and can also affect sea animals. Ozone exists in earth's stratosphere and is responsible for protecting humans from harmful ultraviolet (UV) rays. Earth's ozone layer is depleting due to the presence of chlorofluorocarbons, hydro chlorofluorocarbons in the atmosphere. As ozone layer will go thin, it will emit harmful rays back on earth and can cause skin and eye related problems. UV rays also have the capability to affect crops.

LEGAL IMPLICATIONS AND CHALLENGES OF AIR POLLUTION

Laws have been formulated for the reduction of air pollutants from the air. Keeping health hazards away from life is a right of every person. Right to health and clean air is now a fundamental right of every individual[7]. The fundamental rights are those rights which are enforceable; hence, if anybody's right to stay in a clean environment is getting vitiated then he can file a writ petition in the court[8].

- A critical analysis between prevention and cure of pollution while diminishing pollution :

There has been a rampant increase of air pollution over the past few years. Managing, preventing and reducing air pollution has become one of the significant problems of all the states. The two major challenges which are faced are as follows:-

- Creating a link between the polluter, who created the air pollution and the person who is affected from the pollution.
- Determining the degree of pollution created by the pollutants and finding out the polluter who has created the harm and to what extent.

Hence, here the precautionary principle comes into practice. This principle states that environmental measures should be taken into practice as soon as there is an anticipation of threat so that environmental degradation can be prevented. Whereas the Polluter's Pay principle states that the polluter who has created the pollution has to bear the legal implications and consequences for the harm caused to the environment. These principles are recognised both in the national and international level. One of the principles has a pro-active approach whereas the

[7]The Constitutional Right to a Healthy Environment by: David R Boyd, available at : http://www.environmentmagazine.org/Archives/Back%20Issues/2012/July-August%202012/constitutional-rights-full.html (Visited on April10, 2019).
[8] Sanjay Upadhay and Videh Upadhay ,Handbook on Environmental law, vol II, (LexisNexis)

other has a reactive approach. Precautionary principle should be accepted first and then Polluter's Pay principle as prevention is always better than cure. Once the air is polluted then restoring it is a very big challenge and at the same time it is costly. There is a need for further scientific research so that better techniques are implemented which would help us to identify the environmental threats and restore the environment.

- Problems which arises while monitoring and enforcing the laws to prevent air pollution :

Enforcement measures to reduce air pollution involve a number of non-populist decisions. In India, there is lot of corruption hence; none of the bodies perform their duties properly. The Central Pollution Control Board does not monitor the emissions of pollution properly. The enforcement agencies are really sluggish and reluctant in taking decisions to prevent the emission rate. Air pollution is an immense challenge in today's date which is more political in nature than technical.

INTERNATIONAL LAW AND AIR POLLUTION

It has been pointed out that air pollution is a global problem. This necessitates international co-operation and collaboration in fighting the battle against the trans-boundary atmospheric pollution. International conventions and declarations have emphasised the requirement for a co-operative and collaborative spirit from all countries. Therefore, it has been said 'international matters concerning the protection and improvement of the environment should be handled in a co-operative spirit by all countries, big or small, on an equal footing. Co-operation through multilateral or bilateral agreements or other appropriate means is essential to effectively control, prevent, reduce and eliminate adverse environmental effects resulting from activities conducted in all spheres, i such a way that due account is taken of sovereignty and interests of all states.'

The foundation for a 'global partnership' in this regard can also be seen in international customary law. The maxim *sic utere tuo, ut alenum non laedas* or 'principle of neighbourliness' provides a useful illustration. It has been held that in international customary law on trans-boundary pollution, two principles enjoy significant support: (a) a duty to prevent, reduce, and control pollution and environmental harm, and (b) an onus to co-operate in mitigating environmental risks and emergencies.

The complexities connected in determining the nature and extent of air pollution have not been supported by sufficient scientific data and investigation. Most of the international conventions therefore emphasise the want for further research using science and technology to identify, avoid

and control environmental risks and to make available solutions for the common good of mankind. As has been pointed out, scientific investigation and monitoring is critical for the adoption of 'precautionary principle' in preventing air pollution. International customary law not only requires that states should diminish environmental harm but also lays down an obligation to assiduously thwart and control pollution by adopting a 'precautionary approach'. Some states asserted that they are not compelled to act, until, there is credible scientific proof of actual or apprehended environmental harm. A classical work on international environmental law points out that 'these arguments have been used at various times to delay the negotiations of measures to undertake the risks of global climate change, acid rain, and ozone layer depletion.

In this backdrop, some important international conventions and protocols are reviewed below:

- **STOCKHOLM DECLARATION OF THE UN CONFERENCE ON THE HUMAN ENVIRONMENT, 1972**[9]

The Air Act of 1981, expressly states that it was enacted in pursuance of the decisions taken at the United Nations Conference on the Human Environment held in Stockholm in June, 1972, in which India participated, to take appropriate steps for the preservation of the natural resources of the Earth which, among other things, include the conservation of the quality of air and control of air pollution. The UN Conference on Human Environment adopted the declaration on 16th June, 1972 in Stockholm.

The conference urged the governments and people to exercise collective efforts, for the benefit of all the people and for their posterity. According to the preamble, the main aim of the declaration was to shape a common outlook and common principles to inspire and guide the world in the preservation and enhancement of human environment. This was considered to be imperative for the well being of the people and for economic development throughout the world. The proclamation, keeping in view the nature of the relation of man and his environment, emphasised the need for action to create a better environment. It further recognized the necessity to protect and improve the human environment for present and future generations through established goals of peace and for worldwide economic and social development.

Some of the principles of this declaration have provided the beginning for the future international conventions and agreements on the protection of natural resources in general. The premise for all these principles is the responsibility of man to protect and improve the

[9] http://www.unep.org/Documents.Multilingual/Default.asp?documentid=97&articleid=1503 (Last visited 20 April, 2019)

environment for present and future generations. The declaration also specifies that the discharge of toxic and other substances and the release of heat should not exceed the capacity of the environment and in this context it has to be ensured that serious or irreversible damage is not inflicted upon ecosystems. The just struggle of the people of all countries against pollution should be supported (Principle 6). The declaration requires the various states to make environment policies, regional planning including planning for human settlements and urbanization and appropriate institutions with a view to manage environmental resources and hence environmental quality. Significantly, states should adopt an integrated and coordinated approach to their development is compatible with the need to protect and improve human environment.

Perhaps the most important of all the principles laid down by the Stockholm Declaration is the Principle 21. According to this principle, in addition to the states having the sovereign right to exploit their individual resources pursuant to their own environmental policies, they have the responsibility to guarantee that activities within their jurisdiction or control do not inflict damage to the environment of other states or of other areas beyond the limits of national jurisdiction. It has been authoritatively opined that this principle has remained a highly influential statement in the subsequent development of law and particularly in multilateral treaties including the Geneva Convention on Long-range Trans-boundary Air Pollution and the Ozone Convention.

- **THE GENEVA CONVENTION ON LONG RANGE TRANSBOUNDARY AIR POLLUTION 1979[10]**

The convention aims at regional alliance in Europe, the only major regional agreement regulating trans-boundary air pollution. It has provisions for air quality management, where the parties are to initiate and cooperate in the conduct of research and development of the technologies, alternative methods for environmental assessment and training programs. The convention creates a network between the contracting states by committing them to sharing information and consulting on policies and strategies to combat air pollution.

- **UNITED NATIONS CONVENTION ON LAW OF THE SEA 1982[11]**

The United Nations Convention on Law of the Sea concluded in December, 1982, provides comprehensive legal provisions for protection and preservation of the marine environment.

[10] http://www.unece.org/fileadmin/DAM/env/lrtap/full%20text/1979.CLRTAP.e.pdf (Last visited 20 April, 2019)
[11] http://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf (Last visited 20 April, 2019)

While laying down the obligations of all the states to defend and preserve the marine environment, the convention elaborates the measures to prevent, reduce and control pollution of marine environment. The convention requires the states to adopt law and regulations to prevent, reduce and control pollution of marine environment from or through the atmosphere, applicable to the air space under their sovereignty.

- **VIENNA CONVENTION FOR THE PROTECTION OF THE OZONE LAYER 1985**[12]

The convention was entered into force on 22 September 1988, though India became a party to it on 18 March 1991. The convention obligated the signatory parties to take appropriate measures to protect human health and environment against adverse effects resulting from modification of the ozone layer. Guidelines were laid down relating to research, transmission of information, exchange of information, cooperation in the legal, scientific and technical field, settlement of disputes, etc. The contracting Parties were required to adopt appropriate legislative and administrative measures and harmonise appropriate policies to control, limit or reduce likely to have adverse effects due to modification of the ozone layer.

- **HELSINKI DECLARATION ON PROTECTION OF THE OZONE LAYER, 1985**[13]

The declaration was adopted at the first meeting of the parties to the Vienna Convention and Montreal Protocol. The declaration was passed to encourage all the states that were not a party to the Vienna Convention and Montreal Protocol, to do so. The parties to the declaration agreed to:

a. Phase out production and consumption of CFC's latest by the year 2000;
b. Commit themselves to accelerate development of environmentally acceptable substituting chemicals, products and technologies;
c. Facilitate access to developing countries to relevant scientific information, research results and training; and
d. Develop a funding mechanism to facilitate the transfer of technology and replacement of equipment at minimum cost to developing countries.

[12] http://www.jus.uio.no/lm/ozone.layer.protection.convention.vienna.1985/portrait.a4.pdf (Last visited 20 April, 2019)
[13] Sanjay Upadhay and Videh Upadhay ,Handbook on Environmental law, vol II, (LexisNexis)

- **MONTREAL PROTOCOL ON SUBSTANCES THAT DEPLETE THE OZONE LAYER 1987 (INCLUDING LONDON AND COPENHAGEN AMENDMENTS)[14]**

Adopted under the Vienna Convention, the protocol entered into force in 1 January, 1989 (the London amendments and Copenhagen amendment in November 1992). The preamble to the amended protocol states that its objective is to protect the ozone layer by taking precautionary measures to control equitably total global emission of Ozone Depleting Substances (ODS) with the ultimate objective of their elimination, on the basis of developments in scientific knowledge, taking into account technical and economic considerations and bearing in mind the development needs of developing countries. It provides for cooperation between parties in promoting research, development and exchange information and creates public awareness on matters relating to controlled substances. The protocol adopts new financial and technical incentive to encourage developing states in particular to switch over as quickly as possible to alternative substances and technologies.

- **RIO DECLARATION ON ENVIRONMENT AND DEVELOPMENT 1992[15]**

The United Nations Conference on Environment and Development on 13 June 1992 adopted the declaration. The main objective of the declaration was to build upon the Stockholm Convention with the goal of establishing global partnership through cooperation between states, key sector societies and people. It recognized the integral and interdependent nature of the earth and aimed to work towards international agreements that seek to protect global environmental and developmental systems. The declaration mandates development of law regarding liability and compensation for victims of pollution and damage by states. This principle states that the national authority should endeavour to internalise environmental costs and use of economic instruments taking into account the 'polluter pays' and precautionary principle.

- **UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE 1994[16]**

Though the convention was concluded at Rio de Janiero ion 1992, it came into force on 21 March 1994. Article 2 of the framework states that the objective of the convention is to achieve stabilization of the greenhouse gas which are concentrated in the atmosphere at such a level

[14] http://ozone.unep.org/pdfs/Montreal-Protocol2000.pdf (Last visited 20 April, 2019)
[15] http://www.unesco.org/education/nfsunesco/pdf/RIO_E.PDF (Last visited 20 April, 2019)
[16] http://unfccc.int/resource/docs/convkp/conveng.pdf (Last isited 21 April, 2019)

which would prevent the interference of the dangerous anthropogenic in the climate system. Article 3 lays down guidelines for the signatory parties for achieving the objective of the convention. These include precautionary measures to anticipate, prevent or minimise the cause of climate change and to mitigate its harmful effects, use of precautionary principles and promotion of sustainable development, etc.

A review of international agreements and declarations has shown that in general they only seek to 'bind' states on broad objectives and principles. Commitments to specific targets for the reduction of trans-boundary air pollution often get ignored. The nature and extent of obligation of the developed and developing nations tend to be at variance. However, the international conventions illustrate that a framework for cooperation between various countries has been devised which can be utilised to further strengthen the 'global partnership' which is vital for the battle against air pollution.

DIFFERENT FACETS OF AIR POLLUTION ON A GLOBAL SCENERIO

- **TRANS-BOUNDARY POLLUTION**

Trans-boundary pollution is very common in today's date. Local problems related to pollution can easily cause translocation of the pollutants over a large distance. The first law which was enacted to prohibit such activities was the Geneva Convention on Large- Range Trans-boundary air pollution under the umbrella of UN Economic Commission for Europe, (UNECE) in the year, 1979. This framework of law had control over air pollution across the nations. No nation would ever be willing to accept the pollution of a country.

- **CLIMATE CHANGE**

The Rio Declaration on Environment & Development, 1992, also known as the Earth Summit was a watershed in the battle against climate change. The main stay of the Summit was reduction of greenhouse gas emissions and the treaty was ratified by 50 countries, which came into effect in March 1994. The details of the legally binding reduction targets were left until the end of 1997, when after much deliberation the Kyoto Protocol was agreed. The Kyoto Protocol established various reduction targets for different countries in relation to six gases: carbon dioxide, NO_x, hydrofluorocarbons (HFC_s), perfluorocarbons (PFC_s), methane and sulphur hexafluoride (SF_6).

As a result of the political difficulties faced by the US in setting significant reduction targets, the Kyoto Protocol was a subject of very tough negotiations. The end result was the introduction of novel mechanisms which could be used by countries to achieve the targets set in the Protocol. These include the following:

(i) EMISSION TRADING SYSTEMS

This would allow countries with a considerable 'surplus' of emissions reduction as a result of exceeding targets, either to sell that surplus to countries which have a 'deficit' (i.e. having problems in meeting their own target) or 'stockpile' it as a safeguard against future reduction targets.

(ii) THE CLEAN DEVELOPMENT MECHANISM

As the developing countries are not subjected to any reduction targets, there was some apprehension expressed that there was little incentive for them to implement measures which would contribute to the overall accomplishment of the aims and objectives of the Climate Change Convention. Therefore, under this Protocol, the countries which are subject to the reduction targets can achieve credit for supporting the developing countries in the formation of project activities which yield in certified emission reductions. Where a Protocol country aid a developing country with the construction of a power station which will reduce overall emission levels, the reduction achieved can be balanced against the Protocol country's own target (as long as the emission reductions achieved are 'additional' to those that would have occurred anyway).

(iii) CARBON SINKS

The establishment of carbon sinks – land uses such as afforestation which reduces the amount of greenhouse gas – can be taken into account in certain circumstances. The calculation of the definite extent of the reduction is a matter of some controversy as the amount of the reduction in densely forested countries could be noteworthy in overall total reduction (eg. it is estimated that Russia could claim over 25% reduction of its overall target from the use of managed forests).

EUROPEAN LAW AND AIR POLLUTION

Until the mid 1980S, protection of the environment was not the primary concern of the European Commission (EC). There were two primary reasons for such neglect of the environment. First, an utter lack of political will and secondly, a genuine and an honest effort to

delve into other areas. The German government, however, concerned by the detrimental effects of acid rain, pressed for swift action in the year 1983 and as a result the main framework Directive on emission from industrial plants was introduced after a decade after the framework directives for water and waste pollution. Since that time, important issues like trans-boundary pollutions, ozone layer depletion and global warming has been the catalyst for the introduction of a wide array of directive.

The EC's approach towards the protection of the environment has been wide-ranging in its scope. Numerous mechanisms have been initiated and implemented, which includes the following:

(A) ENVIRONMENTAL QUALITY STANDARD

In 1996, in order to establish new air quality standards and objectives, a framework Directive on Air Quality was formally agreed. It was intended that the Framework Directive would apply three types of quality control, viz, a limit value, a guide value and an alert threshold. Limits were set for pollutants like sulphur dioxide, nitrogen dioxide, ozone, benzene, carbon monoxide, etc.

(B) EMISSION LIMIT

In 1997, the EC proposed an acidification strategy which was designed to minimize the reduction of the emission of sulphur dioxide, nitrous oxide and ammonia beyond pre-existing commitments. The primary enforcing mechanism was a proposal for a directive to fix a national emission ceiling for each member state for the above mentioned pollutants.

(C) PRODUCT STANDARDS

There has been an extensive use of product standards in the regulation of air pollution. This is because, before the EC treaty which permitted environmental protection measures, was amended, the introduction of such product standards was seen to be justifiable in terms of market harmonization where environmental justifications were not accepted by every member states.

(D) MARKET MECHANISMS

Compulsory taxation on fuels (carbon-based) has been assented to by majority of the member States, while proposals for an EU carbon/energy tax have been progressing through different stages for some time.

(E) EUROPEAN COMMISSION ACTION ON A WORLDWIDE BASIS

EC is a signatory to the Vienna Convention on Ozone Layer Protection. It has encouraged umpteen numbers of worldwide initiatives like the Climate Change Convention and the Kyoto Protocol by negotiating in its own right on issues which require global action.

EVOLUTION OF AIR POLLUTION IN INDIA

In India, air pollution can be traced back to the Vedic era[17]. During that time there was the presence of Forest and Wild Life laws. These laws were found in the pollution preventing areas[18]. In Arthshastra by Kautilya, it has been mentioned that if any person is found polluting the environment then that person would be punished for the pollution and nuisance created[19].

In practice, there is a dearth of specific laws which would prevent a person from polluting the environment but indeed there was the presence of initiative of the people to prevent the air from getting contaminated. This states that the people during that era knew the importance of air. Once the air gets degenerated then restoring it back to its former existence will be a huge problem. Traces of pollution management have been found in that era. The general thinking of the people was that, as air is an inexhaustible resource hence special attention is not required[20].

In the 19th century, there was a legal regime on pollution. The attempt to regulate air pollution was initially started by the British Government. Specific laws were indeed missing but there were enactments which were capable enough to achieve the objective of protecting the air from being polluted. Later on, many other acts were formulated in India to protect the air.

MAIN FEATURES FOR THE REGULATION OF THE AIR POLLUTION

Air pollution regulation is pretty difficult as it is not comprehensive in nature. There is varied and diverse source of pollutants and a wide range of polluter.

[17] Origin of Environmental Science from Vedas, by: Shashi Tiwari, available at: http://www.sanskrit.nic.in/svimarsha/v2/c17.pdf , (Visited on April10, 2019).
[18] Pollution of Hinduism, available at :http://www.downtoearth.org.in/content/pollution-hinduisim , (Visited on April10, 2019).
[19] Sanjay Upadhay and Videh Upadhay ,Handbook on Environmental law, vol II, (LexisNexis)
[20] *Ibid*

Certain regulatory and policy mechanisms are formulated which would provide a basic framework to regulate air pollution[21].

- Provisions are made for the National Air Quality strategy which would ensure the air quality and standard. The emission of pollution should not exceed the standards set[22].
- Local authorities are formed which would ensure that there is proper management of the air quality in the Air Quality Management Area. The Environmental Agency regulates the air emission under IPC, 1860[23].
- The industrial processes are also kept under regular monitoring. The best techniques available are used to reduce the emission of pollution from these processes[24].
- There is a blanket prohibition on the emission of smoke, grit, dust and fumes[25].
- A number of economic instruments are formed which reflects the different environmental cost of using substances like unleaded fuel[26].
- Air pollution policies are formed so that the specific problems which would arise can be tackled easily and if necessary penalties can be imposed.

MANAGING OF AIR QUALITY

Managing of air quality has always been the main objective of environmentalists. The first attempt to manage the air pollution was initiated by the Environmental Protection Act, 1995. National Air Quality Standards comprised of different standards, objectives and measures. The first strategy to manage the air quality was introduced in the year, 1997, and the review was published in 1999. This proposal provides the fundamentals of the air quality policy. It also states about the legislation which would implement and enforce the policies. These strategies lack statutory force hence there cannot be any direct obligations upon the regulatory bodies. The introduction of the Environmental Protection Act, 1995 provides authority to the legislative body to impose standards and obligations in managing the air pollution. To control and manage

[21] Ministry of Environment, Forest and Climate Change, National air quality index, available at : http://www.moef.nic.in/content/national-air-quality-index, (Visited on April10, 2019).
[22] Air Quality Trends and Action Plan for Control of Air Pollution from Seventeen Cities by: Central Pollution Control Board, available at: http://aqi.iitk.ac.in:9000/ http://cpcb.nic.in/upload/NewItems/NewItem_104_airquality17cities-package-.pdf,, http://www.cpcb.nic.in/, (Visited on April10, 2019).
[23] Stuart Bell and Donald McGillivray, Environmental Law The Law and Policy Relating to the Protection of the Environment (Universal Law Publishing Co. Pvt. Ltd, 2001)
[24] Environmental history resources, available at: http://www.eh-resources.org/timeline/timeline_industrial.html, (Visited on April10, 2019).
[25] Stuart Bell and Donald McGillivray, Environmental Law The Law and Policy Relating to the Protection of the Environment (Universal Law Publishing Co. Pvt. Ltd, 2001)
[26] *Ibid*

air pollution, action plans are designed in the Quality Management Area. It provides the right to implement and enforce the action plans so that air pollution can be reduced tactfully.

MONITORING OF AIR POLLUTION

Air pollution can be managed effectively provided it is monitored regularly. Whoever is found violating the policy has to face penalty. Strict actions should be taken in violation of the policies so that the polluters would fear before breaking the rules. In order to make monitoring of air pollution effective there has to be proper measurement of the pollutants in the air. Pollutants have a detrimental effect on the health and environment. In the year 1961the monitoring sites were coordinated into one networking system. There was an up gradation of the one networking system to ten different networking systems. These systems were supplemented by emissions inventories. These emissions inventories worked both at the local and national level. This system of monitoring the air pollution was appreciated widely but the only criticism to this system was that it was not located in the areas of high exposure of pollution hence it provides a false impression.

INDIAN LEGAL FRAMEWORK ON AIR POLLUTION

- **CONSTITUTIONAL FRAMEWORK**

The Constitution of India permits our parliament to make laws for giving effect to the international agreements. Art. 253 of the Constitution of India provide the parliament with the right to make laws for the entire or any part of the territory of India[27]. This allows the proper implementation of any treaty, agreement or convention. Prevention of air pollution is a mandatory constitutional obligation[28]. Art.21, 48A, 51A (g) of the constitution states that it is the right of every individual to live in a clean environment. Art.21 states about the right to life and personal liberty[29]. The scope of this article has been expanded and the honourable judge has stated that "*right to life includes the right to enjoyment of pollution free air and water for the full enjoyment of life*"[30]. Art. 48A, 51A (g) clearly states that every individual should be compassionate towards the environment and they should take steps to protect the air from getting degenerated[31].

[27] Constitution of India, 1949 (Art. 253 of 1949)
[28] Sanjay Upadhay and Videh Upadhay ,Handbook on Environmental law, vol II, (LexisNexis)
[29] Constitution of India, 1949 (Art.21 of 1949)
[30] Subhash Kumar v. State of Bihar, AIR 1991 SC 420.
[31] Constitution of India, 1949 (Art. 48A, 51A (g) of 1949)

- **THE AIR (PREVENTION AND CONTROL OF POLLUTION) ACT,1981[32]**

In the United Nations Conference on Human Environment, held in Stockholm, 1972, it was decided that an appropriate step should be taken to conserve our resources including the quality of air. One of the main objectives of the conference was to decrease air pollution. The government appointed an expert committee who would measure the air pollution and decide how to tackle it. Under this act two authorities were formed who would look after the emission of pollution in the air. In case there is any inconsistency between the state government and the CPCB, than the matter is referred to the Central government, the decision of the central government is binding of the bodies[33]. This act states about the penalties which would be given to the people if they violate any provisions of the given act. The main function of the Central government is to improve the quality of the air and prevent the pollution of air[34]. The state board has even more extensive functions to that of the central board. Its function includes planning; programming so that air pollution can be prevented and proper measures to prevent the emissions of harmful gases can be taken on the right time.

- **ENVIRONMENT PROTECTION ACT,1986[35]**

The Bhopal Gas Tragedy incident in 1984 enunciated the urgency for a comprehensive legislation which would deal with only environment as a whole. Hence the Environmental Protection Act, 1986 was formed. This act clearly explains the meaning of environment, environmental pollution and environmental pollutants. The environment (protection) rules were passed on 1986. These rules laid down the standards of emissions of environmental pollution and the other guidelines which would state about the considerations and the restrictions in the location of the industries. This act states that every project needs to fetch an environmental clearance to further pursue with the project. This clearance is done by the Environmental Impact Assessment Report. There are four steps to receive the environmental clearance. They are: - Screening, Scoping, Public Consultation and Appraisal. Only when the project clears all these four steps then only it will be granted with the environmental clearance. The committee which heads this body can come up with certain considerations which the owner of the project has to accept. These processes have indeed put a restriction on the emission of harmful pollutants in the air. This act has also adopted the precautionary principle and the polluter's pay principle.

[32] http://www.moef.nic.in/legis/air/air1.html (Last visited on 20th April, 2019)
[33] The Air (Prevention And Control Of Pollution) Act,1981(Sec.18 of 1981)
[34] The Air (Prevention And Control Of Pollution) Act,1981(Sec.16(1) of 1981)
[35] http://envfor.nic.in/legis/env/env1.html (Last visited on 20th April,2019)

This act actually gives authority to the legislation to make laws so that our air remains clean and clear without any pollutants.

- **CLEAN AIR ACT, 1993**

Clean Air act was initially enacted in the year, 1956. This act was further amended in the year 1968. This act had control over a separate and distinct area. It mainly controlled smoke, dust and grit from all fires and furnaces. It prohibits the emission of dark smoke from the chimneys[36] of any buildings. According to this act the polluter is solely responsible for the pollution created by its industry. There are provisions for certain exemptions made by the Secretary of the State[37]. The local authorities can take action if anybody is found violating the rules of the act[38]. The Secretary of States can make regulations which would permit the local authorities to monitor the grit and dust from the furnaces[39]. This act is really effective and if it is minutely followed than it can be of great help to reduce the air pollution. Smoke, grit, dust are some of the important constituents which pollute the air, if control on the emission of these substances can be achieved than the air quality can be restored to a great extent.

- **PREVENTION AND CONTROL OF POLLUTION (UNIFORM CONSENT PROCEDURE) RULES, 1999[40]**

In the year, 1998 the chairperson of the CPCB formed a proposal full of recommendations which would help the central government to exercise its power. It also stated that all the industries listed in schedule VII has to take consent from the State Board or the committee[41]. The consent is granted on a co- terminus basis depending upon the work pressure and convenience. Various terminus dates would be fixed. The rules are even simpler for the non-polluting industries like the small cottage or tiny industries.

- **NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000[42]**

The Environmental Protection Act and the Air Act both has recognised noise pollution to be one of the significant sources of environmental pollution. Initially there wasn't any laws related to noise pollution but the central government later on enacted the Noise Pollution (Regulation

[36] Clean Air Act, 1993 (Sec.1of 1993)
[37] Clean Air Act ,1993 (Sec.1(3) of 1993)
[38] Clean Air Act, 1993(Sec.55(2) of 1993)
[39] Clean Air Act, 1993 (Sec.10 of 1993)
[40] http://envfor.nic.in/legis/ucp/ucprules.html (Last visited on 20th April, 2019)
[41] Prevention And Control Of Pollution (Uniform Consent Procedure) Rules, 1999 (Sec.3(2) of 1999)
[42] http://envfor.nic.in/downloads/public-information/noise-pollution-rules-en.pdf (Last visited on 20th April, 2019)

and Control) Rules under the power given by the Environmental Protection Act, 1986. These rules states about the standards in respect to the quantity of noise in the different areas[43] at different time slots of the day. This rule also provides restriction on the usage of loudspeakers. Special permission has to be taken from the authority for exceeding the given time limit. Anybody who violates the standards of the noise limit will be punished and need to bear the legal consequences. Prohibiting noise pollution comes under the principle of natural justice[44]. Before the formulation of this rule anybody indulging in noise pollution would face legal consequences under the provision of Sec. 268 of IPC (public nuisance). In a famous judgement it was stated that money could not be an adequate relief to the plaintiff[45]. Noise pollution should be reduced as much as possible.

- **OZONE DEPLETING SUBSTANCES (REGULATION AND CONTROL) RUKES,2000[46]**

The consequence of the Montreal Protocol was the Ozone Depleting Substances (Regulation and Control) Rules, 2000. The main objective for this rule was to prevent the usage of the substances which led to the depletion of the ozone layer. This rule mainly prevents the usage of the chlorofluorocarbon gas because it is a main ingredient for the depletion of the ozone layer. The ozone layer protects the air from being polluted in many manners, if the ozone layer gets depleted than the air will get polluted.

IMPORTANT JUDGEMENTS ON THE PREVENTION OF AIR POLLUTION

Judgements play a pivotal role in the prevention of air pollution. Some of the landmark cases which played an active role in the prevention of air pollution are as follows:-

- **M.C Mehta v. Union of India[47]**

This is one of the landmark cases where the honorable Supreme Court took a really firm decision to convert all the vehicles which run on diesel to CNG vehicles. This decision was taken to prevent Delhi from the pollution Hazards. Vehicles which run on diesel pollute the air

[43] Noise Pollution (Regulation And Control) Rules, 2000 (Sec.3 of 2000)
[44] Noise Pollution (Regulation And Control) Rules, 2000 (Sec.8 of 2000)
[45] Gothan Construction Company v. Amulya Krishna Ghose, AIR 1968 Cal.91.
[46] http://envfor.nic.in/legis/ods/odsrcr.html (Last visited on 20th April, 2019)
[47] M.C Mehta v. Union of India, AIR 2002 SC 1696.

to a great extent. This action has honestly brought a drastic change in reducing the pollution from the air above Delhi.

- **Murli S Deora v. Union of India**[48]

In this Supreme Court judgment the honorable justice prevented smoking in public places. Smoking pollutes the air in an extensive level. Smoking pollutes the air ten times more than that of the pollution exhausted from the diesel. Cigarettes contain fine particulars of $PM_{2.5}$ at a great extent and it is an important constituent of air pollution.

- **Obayya Pujari v. Member Secretary, KSPCB, Bangalore**[49]

In this case a PIL was filed where the agriculturists challenged the licensing provided to a stone crushing business. The site of this stone crushing was located in the nearby locality. The process of stone crushing created loads of dust which not only polluted the air but also the crops which were cultivated at a short distance. The court decided that the respondent authorities were restrained from receiving permission.

- **MC Mehta v. Union of India**[50]

There were brick kilns which were situated near the Taj Trapezium. These kilns polluted the air to a great extent. A report was submitted on the degree of pollution created by the National Environmental Engineering Research Institute (NEERI). The honourable Supreme Court gave its decision based on this report. The court ordered all the brick kilns which were situated at a radius of 20 kms. of the Taj trapezium to be closed immediately. The court also ordered the closure of all the unlicensed brick kilns operating in that zone. The court finally took a harsh decision that no further license of any brick kilns would not be issued in that zone.

CONCLUSION

Air pollution is a huge problem at a global level. Remedies to prevent air pollution have to be implemented so that the future of the upcoming generations is secured. There are many laws which prevent the air from being polluted and also have laws to punish the polluters. The problem is that these laws are not properly implemented. In India corruption is at its peak so the laws are never enforced properly. The polluters are not punished for their fault. The

[48] Murli S Deora v. Union of India, AIR 2002 SC 40.
[49] Obayya Pujari v. Member Secretary, KSPCB, Bangalore, AIR 1999 Kant. 149
[50] MC Mehta v. Union of India, (2001)9 SCC 235

precautionary principle and the polluter's pay principle should be enforced meticulously so that our air can be saved from any further degradation. These principles have gained international recognition and it has led to the creation of a regime of liability. Every individual should develop a sense of responsibility to keep the air clean. The agencies and bodies embodied to protect the environment should fulfil their responsibilities. The bodies should regularly monitor the emissions of pollutants from the industrial bodies. The standards set for the emission should be always upto that level, it should never exceed it. If vigorous actions are taken to protect the air from being polluted than the air quality can be restored, otherwise it would be too late.