CHAPTER - I

INTRODUCTION

‘Think globally and act locally. Nature is beautiful we must love it, but not destroy it.’ – Mahatma Gandhi.

Vedas for the first time explained the importance of Nature (Mother earth, air, fire, water and the space above- air space and other spaces and emphasized the need for man to live in harmony with nature. Five elements in nature, Earth, inner space and outer space, Air, Water, fire are to be balanced equally, any imbalance results in dangerous developments leading to degradation of Environment. Hence the importance of Environmental law- International as well as National) about which we have to create awareness amongst common people for the simple reason that intellectuals and people of high income groups, highly educated and cultured people must have had sound knowledge about water pollution, air pollution etc., and their impact on the living conditions of people, in particular the people of the low income groups since poverty is the real pollutant. Environmental degradation and its effects on the health of people in general is matter of major concern all over the world. More so because of the industrial and technological developments in the modern world made matter still worse due to overpopulation of countries like India which has 1.25 billion mouths to be fed with necessary necessities like food shelter, clothing and other minimum requirements for happy living and sustenance of the present and future generations of mankind.

‘Love is God (Power)’, ‘God is Nature’, so ‘Love of Nature’ is an olden concept but it existed from the beginning of humanity. Man loves Nature and nature in turn nourishes him. Man serves society and society in turn protects him. In scientific age environmental considerations are being ignored by people in decision making. Global environmental problem is the result of crisis of values. People have forgotten that the duty to care for the earth is rooted in the fundamental relationship between God, creation
and the mankind. Human life is meant to glorify God who is creator of the earth. None can glorify the God while heaping contempt on the earth as it is his creation.\(^1\)

Humans are defined as a recent addition to the livestock and are considered to have been a wholly disruptive influence on a world which was a paradise before their arrival.\(^2\)

The ancient Indian Law relating to environment protection is found in Kautilya’s Arthshastra,\(^3\) the people worshipped the objects of Nature. The trees, water, land and animals gained important position in ancient times\(^4\). Rivers were considered goddesses\(^5\). Rishis warned against deforestation and cutting of trees as they thought that this would result in poor rainfall\(^6\).

In Hinduism, it is found from Vedic period that the Environment was part of ethos of ancient people. According to Rig Veda the Universe consists of five elements such as Earth, Water (Jal), Air (Vayu), fire and Ether (Space). These five elements are basis of life of everything and man is ordained to conserve them. Nature is considered as “the body of God” – plants (Tulasi), trees (Peepal), birds (Garuda) and animals (Lion), hills, mountains, rivers are worshipped.

According to Professor Paras Diwan, “We pollute air by bursting crackers on Dussehra, Diwali and on the occasions of marriages and other festivals. We pollute our rivers by disposing of our dead bodies and all other human and other waste. We take out so much wood from our trees for fuel that in many areas trees have become scarce. We are primarily a vegetarian nation, but our wild life is on the verge of extinction. We are lovers of cleanliness and, therefore, broom out all our household and other waste on the public streets. Any space is good enough for us to ease. We are a country which believes

\(^1\) See Vedanta Darshan, Sutra 2.
\(^4\) C.M. Jariwala, “Changing dimensions of Indian Environmental Law”, in P.Leela Krishanan (Ed.) V.P. Agarwal, Forest in India, (1985) p.3
\(^6\) Ibid. p.26-27.
in open latrines. Municipalities are obvious of their duties and all city wastes, human and industrial effluents are allowed to flow in open drains and to flood the streets. We are equally pond of noise pollution. We are not less noisy in our secular matters. Our marriage and burial processions must be accompanied by bands, twists and Bhangras”.

“By destroying nature, environment, man is committing matricide, having in a way killed Mother Earth. Technological excellence, growth of industries, economical gains had led to depletion of natural resources irreversibly. Indifference to the grave consequences, lack of concern and foresight has contributed in large measures to the alarming position.”

1.1 WATER POLLUTION:

Domestic sewage and toxic industrial waste-water have poisoned many water sources: fertilizer and pesticide runoffs in rural areas have emerged as a major cause of water pollution. It is estimated that 70% of the surface water resources are polluted in large stretches of major rivers; even it is not fit for bathing. Polluted water is the source of most of the diseases that affect, cripple or kill millions of Indians every year. Reservoirs of most dams in India are silting up at rates much higher than those anticipated, thereby reducing their expected life. The area prone to flooding has tripled since 1960, from 19 to 50 millions hectares. Over half of the districts in India have suffered from other floods and droughts, between 1983 and 1986.

1.2 WATER RESOURCES:

Only a tiny fraction of the plant’s abundant water is available to us as fresh water (3% only), remaining 97% is found in the oceans and is too salty for drinking, irrigation, or industry.

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In India, out of total rainfall in an area of 3290 lakh hectares, a rainfall of 4000 billion cubic meters (bcm) annually occurs. Out of the total, 41% is lost-evaporation, 40% is lost-run off, 10% is retained – soil moisture, 9% seeps in for recharging ground water. Of the 40% stream flow water, 8% is used for irrigation, 2% for domestic use, 4% for industry, and 12% for electric generation. Out of total available water resources 1869 bcm, the usable, water resources are only 1122 bcm, which consists of surface water 690 bcm, ground water 432 bcm which the present per capita available water resources is 1122 bcm and by 2050 it is likely to reduce to 748 bcm. When the countries per capita water availability is less than 1700 bcm it is considered as water stress country.\(^{10}\)

The main rivers in India are

i) The Himalayan Water System which includes Indus, Ganga, Brahmaputra, Chinab, Jhelum, Ravi and Beas.


iii) Coastal Water Systems and

iv) Others include inland water systems.

1.3 GROUND WATER:

Ground water is the main source of country’s drinking water; almost all in rural areas are depend on ground water. Basically, groundwater has been considered to be safe to drink, but present groundwater is becoming contaminated with industrial effluents discharged on land and septic systems, as well as illegal and uncontrolled hazardous waste sites. Once contaminated, groundwater is difficult to restore.

The total quantity of groundwater on Earth is estimated at more than 50 million cubic km. Of this, 4 million cubic km. are considered as a reasonable quantity of fresh

water that could be exploited, which excludes water that will not drain from small pore spaces, saline water and water lying deep in confined aquifers.

The total ground water reserves of India up to a depth of 300 meters are estimated to be at 3,700 million hectare meters (mham) and the usable groundwater at around 42 mham, per year. Out of this, 27.37 percent is exploited. The State of Uttar Pradesh has a usable potential of 9.27 mham/y followed by Madhya Pradesh (5.95 mham/y), Andhra Pradesh (2.21 mham/y) and Gujarat (2.03 mham/y).11

Since the failure modern scientists and technocrats to provide suitable solutions to tackle the problem of pollution, Environmental law is found to be a suitable (legal) strategy to solve the problem of impending danger global warming and climate change which calls for International and National conferences made the auspices of the United Nations Organization and its specialized agencies. Accordingly the fragile fabric of Mother Nature stretched by the fast deteriorating situation created by Urbanization, Industrialization and other 20th century menaces have caused concern and alarm to the anything of nature. Hence the International Conference on Human Environment was concerned at Stockholm which laid down certain principles for realizing the goal of Environment for sustainable development.

This concern of the World Community has been manifested in number of protocols, conventions and declarations were made under auspices of the UNO during the past six decades. Accordingly more than 200 International and National laws, 6000 bilateral agreements and nearby 200 regional legislations under the authority of the UNO and its specialized agencies, International (NGO’s) Governmental Organizations such as International Union for Conservation of Nature (IUCN), Friends of the Earth, Green Peace International, World Wide Fund for Nature (WWF), Regional Institutions like the European Union (EU), Common Wealth Association, Association of South East Nations (ASEAN) etc., were established to take of the protection of Environment all over the Globe. These organizations have formulated certain principles and for facilitating the

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enforcement of these principles of Environmental Law, an International Tribunal on law of the Sea was constituted headed by an Indian (Andhra) Dr. M.C.Rao.

At the same time all over the World hundreds of legislations at the National level were enacted to take care of the Environmental Protection and to prevent the environmental degradation. For instance, immediately returning from the Stockholm Conference, the then Prime Minister directed the government to constitute the Ministry of Environment and Forests which was made responsible for enacting certain laws under the authority of the Constitution of India. Madam Indira Gandhi thus pioneered the protection of the Environment.

Of all the legislations enacted by the Indian legislature, such as Water (Prevention and Control) pollution Act, 1974, the Air Pollution (Prevention and control) Act, 1981 etc., the most comprehensive legislation which modifies and codifies the uncodified principles of Environment is the Environment (Protection) Act, 1986. Statement of objects and reasons for enacting a General Legislation, the need for which was felt to be very urgent is the Environment (Protection) Act, 1986. Despite the International Conference on Human Environment, 1972 and the existence of laws to deal with the specific types of pollution such as Water and Air pollution.

The Environment (Protection) Act, 1986 is said to be very significant in the sense that it deals with almost all kinds of pollution and paves the way for realizing the goal of sustainable development. Still the Environment (Protection) Act, 1986 does not provide any provision for pollution caused by the effects of Nuclear Radiation and its dangerous consequences threat many lives of people living nearby Nuclear and Thermo nuclear plants.

1.4 MAJOR EFFECTS OF WATER POLLUTION ON HUMAN HEALTH.

Some water pollution effects are recognized immediately, whereas others do not show up for months or years
The food chain is damaged. The toxins present in the water travel from the water the animals drink to humans when the animals’ meat is eaten. 
- Marine food sources are contaminated or eliminated by water pollution.
- Increased incidence of tumors, ulcers due to nitrate pollution.
- Increased incidence of skin disorders due to contact with pollutants.
- Increased incidence of constipation, diarrhea and infections in intestine.
- Dangerous effects on growing fetus.
- Concentration of pollutants due to bio-accumulative pesticides. Through secondary and tertiary food chain in case of non-vegetarians.
- Still births, abortions and birth of deformed children.
- ‘Blue baby’ disease caused by methane globinemia – which results in asphyxia (reduced oxygen supply).
- Reduced activity of immune system.
- Loss of memory power and reduced mental sharpness.
- Waterborne diseases like jaundice, hepatitis, gastroenteritis will be more prevalent due to water pollution.
- Reduced bone development and muscular development.
- Reduced male fertility.
- Shifts in physiological cycles of human body.\textsuperscript{12}

1.5 \textbf{REASON AND OBJECTS OF THE ENVIRONMENT (PROTECTION) ACT, 1986.}

The global concern for Environmental Protection to tackle the various kinds of pollution problem has been felt all over the world, more so because of the growing threat of pollution, loss of vegetation, biodiversity, excessive concentration of chemical uses in the atmosphere, in food chains, growing risk of environmental accidents and threats to life support systems call for the world communities resolve to protect and enhance

environmental quality, which means quality of life accelerated the need for holding the first UN conference on the Human Environment held in Stockholm in the first week of June 1972. This conference attended by more than 100 countries called for taking urgent measures to contain the malady of Environmental degradation without encroaching upon the jurisdiction over natural resources of the neighboring countries resulting in Transboundary pollution posing a threat to the people of other countries.

The above reasons call for the analysis of the Environment Protection Act to find out the efficacy of the Act to tackle or at least minimize the evil effects of pollution of either Water or Air. The key provisions of the Act only need be critically examined so that the environmental auditing is done successfully so that the legality of the Environment Protection Act is tested.

The preliminary provisions deal with definitions, meaning of Environment, components of Environment, kinds of Environment and causative factors of Environmental pollution are covered in chapter II – ‘Environmental Pollution- Causative factors’.

The United Nations Conference on Human Environment at Stockholm (1972) declared that ‘man has the fundamental right to freedom, equality and adequate conditions of life in an environment of quality … and he bears a solemn responsibility to protect and improve the environment for the present and future generation’. The Rio de Janeiro ‘Earth Summit’ (1992) also declared that ‘human beings are entitled to a healthy and productive life in harmony with nature’. This all affords a duty of mankind to balance the increasing needs and aspirations of man in the form of development, environmental degradation and eco-imbances. Therefore, an attempt has been made to present the basic laws relating to protection and improvement of Environment in Chapter III – ‘Measures under United Nations – Stockholm Conference – 1972’.

The polluted water undergoes physical, chemical or biological changes and it becomes unsuitable for use in its natural state. The polluted water is not only nuisance or
injury to public health but also it poses danger to the life and health of animals, plants and aquatic organisms. The sources of water pollution are domestic, industrial and others like agricultural run off. Water pollutants may be organic, inorganic, sediments, radioactive materials and thermal discharges. Water pollution and its effects, classifications of pollutants, waste water treatment, the use of Surface water and Ground water, Metals and Metalloids are discussed in chapter IV – ‘Physical and Chemical Pollution of Water’.

Modern Environmental law has its roots in the Common Law principles of nuisance. The substantive law for the protection of the citizen’s environment is basically that of common law relating to nuisance. Nuisance created by environmental pollution can also be controlled and regulated under the statutory provisions of Indian Penal Code, Criminal Procedure Code and Civil Procedure Code. The important legislations that have been enacted for controlling water pollution are discussed in chapter V – ‘Legal Aspects of Water Pollution’.

The prevention and control Agencies/Boards of water pollution, Joint Boards, powers and functions of Boards, Funds, Accounts and Audit, Penalties and procedure have been discussed in Chapter – VI – ‘Prevention and Control of Water Pollution’.

The discharge and emissions of toxic materials, discharge of oil to sea, have resulted in physical damage to birds, mammals and marine organisms and their natural habitats. The marine pollution has developed into a serious environmental problem of the Law of the Sea. Therefore, an attempt has been made, under this chapter – VII – ‘Marine Oil Pollution’ to present the principles relating to protection and improvement of environment.

The judicial response to almost all environmental problems has been very positive in India. The operative provisions capable of having impact on the prevention of consequences to contain the malady of the menace of ecological imbalance and environmental degradation, general authority, jurisdictional control over the persons concerned handling the devices or measures to contain the menace of environmental
degradation as a result of water pollution due to the discharge of pollutants causing waterborne diseases, amongst the people living nearby the chemical factories. In general all these diseases or pollutants would result in danger to public health or property of the people and people living nearby such factories and industries which fail to provide safety devices to reduce the impact of pollutants discharged by heavy industries and factories apart from small scale industries such as oil and rice mills. In this chapter- VIII – ‘Role of Judiciary’ has been explained with the help of the important decided case-law.

1.6 SCOPE OF THIS WORK:

This work being a critical appraisal of the legal control of Water Pollution, tried to search the gravity and status of the problem, the plans and policies adopted by the government and governmental authorities, the inventory of legal provisions in hand, the applications of these laws, attitude of the various authorities like judicial, administrative, legislative and others as far as possible, the insights and inherent philosophy behind the actions, comparative approach, both of laws and its implementations. An attempt has also been made to examine the legal provisions in the light of the international environmental laws and principles and the laws of some other countries. At the last some recommendations have been given from the discussion of the whole problems from various angles.

1.7 METHODOLOGY:

In this work the basic objective is to examine the operation of a legal control mechanism to check the Water Pollution. As such, the major emphasis is also upon the discovery of ideas on the basis of which the legal control mechanism to combat the problem is to be developed. Simultaneously a diagnostic approach will also be there to identify the weak points of the mechanism and to point out the possible remedial measures. So the design will be a mixture of flexibility and pre-determined. The various court orders as reported in the reputed journals relating to water pollution and other records of pollution control system as published by various organizations since the
enactments of the water Act will also be studied. Historic and legal aspects with a scientific approach of study will be conducted.

The problem of the Water Pollution has been analyzed from various angles with related aspects. The area of the study has been examined with reference to the problems of the pollution and degradation of water. The present research is basically descriptive and analytical work. Therefore, the set of regulations with reference to which the problem is to be judged has also been analyzed in the proper way. The object is to examine how far the set of present rules and regulations relating to the water pollution in our country is able to control and prevent the water pollution considering the frequency, gravity and magnitude of pollution in the present days. We should also examine the new insides in the present problem solving mechanism.

1.8 REVIEW OF LITERATURE:

Now a day’s Environmental deterioration has rapidly increased. Research and publicity also increased. Scholars, environmentalists, researchers and writers added more knowledge and discussed in their studies and writings. There are number of publications, books and periodicals in developed and developing countries with regard to environment and ecological development. The review of literature is focused to have insight into existing literature on the subject. The present research work is mainly based on secondary source material and the work is in the form of doctrinaire research.

In the process of preparing the thesis, the Researcher has gathered the material from various sources relating to “Legal Aspects of Water Pollution, Indian perspective - A Critical Appraisal”. The present study being a socio-legal problem, the researcher has adopted the doctrinaire research and collected the material from both primary and secondary source and from legal and non-legal sources like authoritative text books, book reviews, reports, digests, journals like fortnightly, monthly, quarterly, half yearly and yearly digests, periodicals, magazines, news papers, weekly’s etc., Further, certain material has also taken from the Constitutional Assembly Debates and the Judgments of Supreme Court and various High Courts of India. Books written by foreign authors are
also referred a lot because the problem selected for study is a global problem and also to have complete knowledge on the problem.

**1.9 SCHEME OF THE STUDY:**

An attempt is made to give an overview of the problem of the subject. As the science and technology developed with the ever-increasing population, the human environment started to change tremendously. Nature and its resources have their adequate capacity to feed and bear the burden of the requirements of the mankind. But the over exploitation of the natural resources, careless and mindless works of development leads to damage the equilibrium relationship between the man and the nature. Gradually, the eco-system has become in danger. All the components of ecosystem are interdependent. For the survival of all living organisms, the ecological balance is very essential.

The basic components of the environment are, mainly, the air, water and soil, from which, the evolution of the life system, the formation of the earth, atmosphere and hydrosphere were created. Atmosphere is the blanket of various gases surrounding the earth supplying the gaseous components essential for the survival and sustenance of life system and saves the earth from the hostile environment of the outer space. The hydrosphere includes all types of water resources including surface and ground waters, reservoirs, glaciers, polar ice caps etc.

The major sources of water pollution are discussed in ‘Environmental Pollution – Causative Factors’, which are domestic sources in both rural and urban areas, industrial sources, agricultural run off and deforestation. In addition to that the Electronic Waste (E-Waste) is one of the fastest growing waste streams, with people changing their computers, television sets, and mobile phones more frequently than ever before. The government must enforce a ban on the import of E-waste for recycling and also ban the import of secondhand computers for re-use, as most of these products end up in the recycling yard.
The thermal power plant either in public or private sector mainly use coal for generation of electricity is one of the major source of pollution, the fall-out increases the suspended particulate matter in the air and affects the agricultural land, flora and vegetation around. Today, the modern technologies then exceeding the high rate of rapacious exploitations of natural resources and uncontrolled development by developed countries are responsible for alarming situation of grave environment and ecological disturbances all over the globe.

The fragile fabric of Mother Nature stretched by the fast deteriorating situation created by Urbanization, Industrialization and other 20th century menaces have caused concern and alarm to the anything of nature. Hence the International Conference on Human Environment was concerned at Stockholm which laid down certain principles for realizing the goal of Environment for sustainable development. The contributions of the United Nations Conference on Human Environment at Stockholm (1972), the Nairobi Declaration 1982 ‘Parliament of the Planet’, the Rio de Janeiro ‘Earth Summit’ (1992), the Habitat-II, 1996, Kyoto Protocol, 1997, Earth Summit Plus 5, Millennium Conference, Stockholm Conference on Persistent Organic Pollutants (POPs), the Johannesburg declaration on sustainable development, 2002, Kyoto Protocol 2005, United Nations Climate Change Conference at Bali 2007, projects the efforts and steps taken by UN in promoting the awareness among the states and thereby stressing the need by environmental protection are critically analyzed and discussed in this work.

When toxic substances enter lakes, streams, rivers, oceans and other water bodies, they get dissolved or lie suspended in water or get deposited on the bed. This results in the pollution of water whereby the quality of the water deteriorates, affecting aquatic ecosystems, pollutants can also seep down and affect the groundwater deposits. Water pollution and its effects, classification of pollutants, waste water treatment, the use of Surface water and Ground water, major pollutants in Leather Tanning, water pollutants and their toxic effects on health, toxic effects of heavy Metals and Metalloids are discussed in “Physical and Chemical Pollution of water”.

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India has a number of legal sources to prevent and control the water pollution. Such legal rules can be divided into two groups: Non-statutory legal sources and statutory legal sources. The non-statutory legal rules are the common law principles under the law of tort. The common law doctrines of nuisance, trespass, negligence, rule of strict liability and absolute liability, the riparian owners rights are in enforceable in India. Those doctrines enshrined the common law control for the liability for the escape of the noxious objects, careless use of noxious articles and pollutants and the infringement of property rights in water. A number of statutory sources are available to abate the water pollution. They may be divided into two groups: Pre-Stockholm or the post-Stockholm period. The pre-Stockholm statutes contain the water pollution problems as the passing references. The post-Stockholm statutes have dealt with the water pollution problems and also air in a comprehensive and dedicated manner, through with some limitations. Modern environmental law has its roots in the Common law principles of nuisance. The substantive law for the protection of the citizen’s environment is basically that of common law relating to nuisance. The important legislations that have been enacted for controlling water pollution and the salient features relating to water pollution of various statutes are discussed in “Legal Aspects of Water Pollution”.

The purpose of the legislation is not only the prevention and control of Water Pollution but also the maintenance and restoration of the wholesomeness of the water. This specialized legislative measure is meant to tackle one facet of environmental pollution. The prevention and control Boards of water pollution, Joint Boards, powers and functions of Boards, Funds, Accounts and Audit, Penalties and procedure, Central/State Water Laboratory, Analysis and their report and Bar of jurisdiction have been discussed in ‘Prevention and Control of water Pollution.’

The Marine Pollution has developed into a serious environmental problem and there is little need to emphasize this aspect of the issue. At the same time the protection of the marine environment and the prevention of marine pollution has become a major problem of the Law of the Sea. Marine pollutants, sources of marine oil pollution, impact of oil pollution, oil pollution in different seas, measures to control oil pollution and
International/Regional legal control of Marine Oil Pollution are analyzed in this work. The Marine Oil Pollution has developed into a serious environmental problem of the Law of Sea. Therefore, an attempt has been made, under ‘Marine Oil Pollution’ to present the principles relating to protection and improvement of environment.

The Judicial attitude – Judiciary – High Courts and the Supreme Court have played the key role in curbing environmental pollution – water pollution in particular. The judicial response to almost all the environmental issues concerned is very positive in India. The people’s response to ecological crisis and voluntary association has shown their deep concern by filing Public Interest Litigation and got favourable directions from the courts in appropriate cases. The role of Judiciary has been explained with the help of the latest important case-laws. The wide range of cases of various segments of environmental pollution is critically examined in this work. The researcher attempts at critical analysis of the implementation of the various law relating to water pollution.

The Environment (Protection) Act is the umbrella Act dealing with all the components of the environment giving wide powers to the Central Government. The Public Insurance Liability, the National Environment Tribunal Act deals with the enquiry, fixation and payment of compensation relating to any environment accidents recognizing the concept of absolute liability.

While summing up the thesis the researcher has suggested the establishment of a highly independent Environmental Authority apart from the already existing environmental tribunals to monitor the various pockets of pollution all over the country.