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Environmental Law

INTRODUCTION

Environment has everything to meet the needs of the individual and not the desire, first unit under the Environmental law helps us to understand the concept of the environment. Since from the ancient times efforts for protection of the environment are found now and then, as an evidence for such efforts there are writings in the Vedas and Upanishads clearly depicts the idea of environment. Change of times did make an impact on environment; the efforts in modern times do follow the golden thread with a change in the perspectives. Environment and development are two paradoxical situations which needs a balance from both the sides.

Sustainable development is the core concept in modern times for protection of environment and keeps up the pace of development. Environment in broader terms includes each and everything in the ecosystem and their relationship between each other. Development signifies change in the way of life without affecting the ambience around. Sustainable Development speaks the essence of balancing the needs of present and future generations, national and international perspectives clearly helps us to understand the idea of protection of the environment and to give preference on development without altering the purpose and essence of which it is built.

IDEA OF ENVIRONMENT

sEnvironment denotes totality of all extrinsic, physical and biotic factors effecting the life and behavior of all living things. it is important that the environment of which land, water, air, human beings plants and animals are the components be preserved and protected from degradation to enable maintenance of the ecological balance. The word “Environment” is derived from the French

word "*Environmer*", means encircle and encompasses within it the land, water, flora, fauna, living creatures, forests and everything on the earth.

Environment or ecology plays a crucial part in men's life as well as in the growth and progress of civilization. Industrialization and ever-growing technological development has caused damage to the environment to an alarming extent. The protection of environment is now so fundamental that it must be answered before it is too late it is now pertinent to take some concrete step in order to protect the very existence of mankind and other forms of life on planet earth, the question of protection of environment is so important that it is regarded as a Human Right around the world.

The term "Environment" is very broad and comprehensive. It is sum of various phenomenons the dynamism of this term defines its scope. On one hand, it is taken to mean that everything in our surrounding on the other hand the entire huge planet. A lot of attempt has been made to define Environment through various national and International instruments. Generally, environment comprises of natural resources, external conditions, stimuli etc., with which a living creature interrelates. The Preamble of the UN Declaration on Human Environment states that: "Man is both creature and moulder of his environment, which gives him physical substance and affords him the opportunity for intellectual, moral, social and spiritual growth".

Environment is clearly Defined under Section 2 (a) of the Environment (Protection) Act 1986 defines:

1. **Environment**: "Environment includes water, air and land and the inter-relationship which exists among and between water, air and land and human beings, other living creatures, plants, micro-organism and property".

2. "**Environmental Pollution**" means the presence in the environment of any environmental pollution'. "**Environmental pollutant**" means any solid, liquid or gaseous substance present in such concentration as may be, or tend to be, injurious to environment.

ANCIENT & MEDIEVAL WRITTINGS

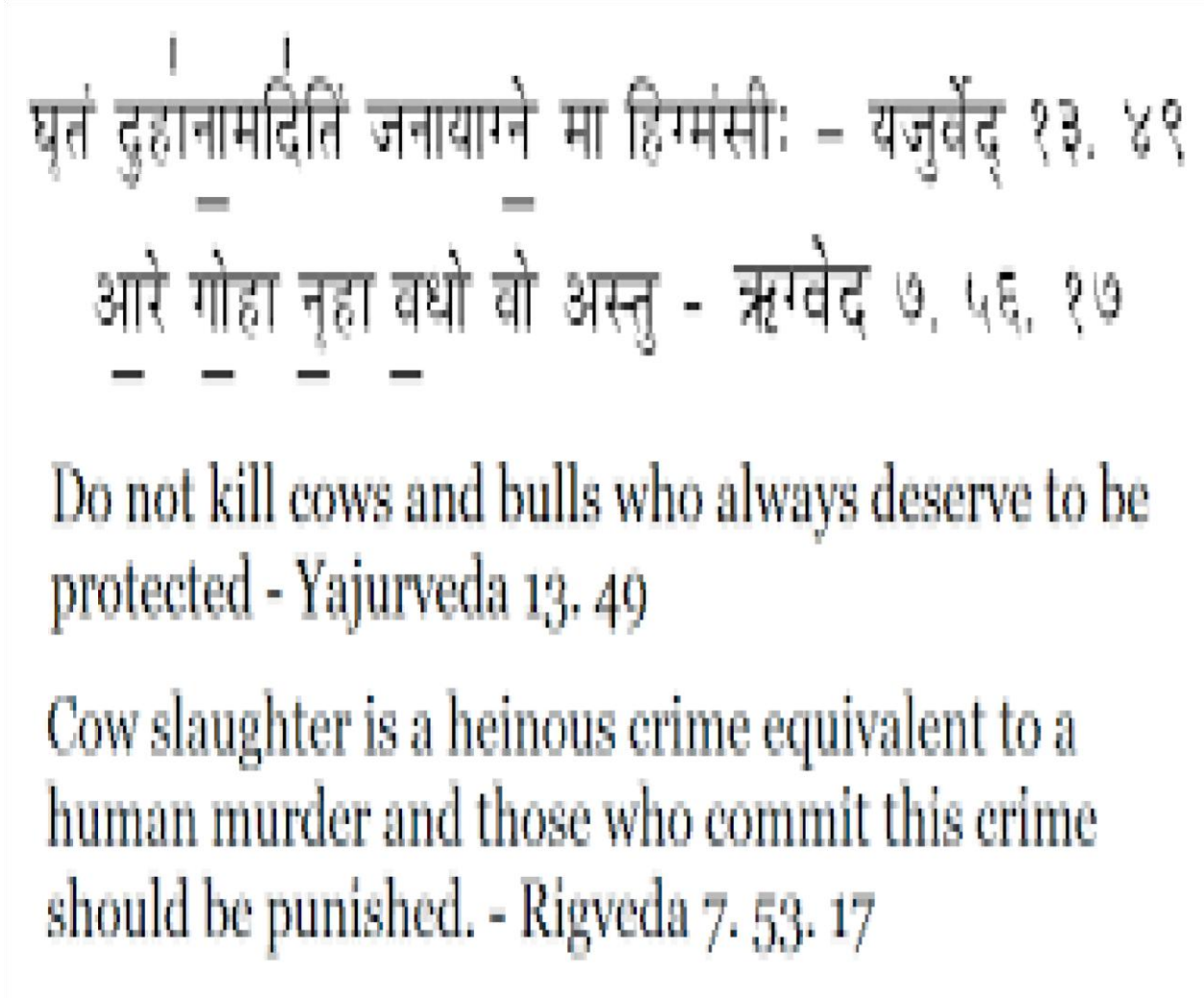
Environment protection is not a new concept for Indians. It has been 6000 years old tradition for us; it was the "Dhrama" for each individual in the society for protection of nature. The five important elements of nature called "Panchabhootas" were the divine incarnation for us. Natural resources management was given major importance in ancient India like conservation of water bodies, Protection of forests,& wildlife were considered to be the important aspects of governance by the rulers and local people. Punishments were prescribed for causing injury to plants.

According to evidences in Vedas and Kautilya's Arthasasthra, different dynasties accorded top priority to environmental protection and sustainable use of its components. All of the tree parts were considered important and sacred and Kautilya fixed punishments based on the destruction of the specific part of the tree, some of the important trees were even elevated to the position of God.

The Rig-Veda establishes the symbolism of this close kinship when it says: 'Heaven is my father; my mother is this vast earth, my close kin. Atharva-Veda contains the hymn - *Bhumi Sukta* – in praise of the earth and invokes a balance: upon the immutable, vast earth supported by the law, the universal mother of the plants, peaceful and kind, may we ever walk for ever.

In Mahabharata, in the *Bhisma Parva,* refers to the earth as an 'ever-yielding cow' provided its resources are developed and managed with balance and control: 'if Earth is well looked after, it becomes the father, mother, children, firmament and heaven, of all creatures.

The Rig Veda does mandates about Cow slaughter is a heinous crime equivalent to a human murder and those who commit this crime should be punished. Protection of animals and plants are clearly depicted in the ancient times, following image clearly depicts what was the effort then and how to comply with the same.



The history of environmental protection in India can be studied under the following headings, the efforts made for protection of environment and the punishment so emphasized.

- In Ancient Period
- In Medieval Period
- The Post-Independence period

Environmental Protection in Ancient Period

Forests, Wildlife and more particularly trees were held in high esteem and held a place of special reverence in Hindu theology. The vedas, Puranas, Upanishads and other scriptures of the Hindu religion gave a detailed description of trees, plants and wildlife and their importance to the people. The Rig Veda highlighted the potentialities of nature in controlling the climate, increasing fertility and improvement of human life emphasizing for intimate kinship with nature.

During the Vedic period, cutting of live trees was prohibited and punishment was prescribed for such acts. In Srimad Bhagavatam, it has been rightly pointed out that a man who with exclusive devotion offers respect to sky, water, earth, heavenly bodies, living beings, trees, rivers and seas and all created beings and considers them as a part of the body of the Lord attaints the state of supreme peace and God's grace. Yajnavalkya smriti has declared cutting of trees and forests as a punishable offence.

The Sages and Saints of India lived in forest. In the history, people attitude towards plants, trees, sky, air, water and animals was to keep a sympathetic attitude towards them. Hindu religion instructed man to show reverence for presence of spirituality in nature. The flora and fauna, hills, mountains, rivers are worshiped as symbols of veneration. The cutting of trees, polluting air, water, and land were regarded as sins and they were to be respected as associated with gods and goddesses. India possesses a great-diversified ecosystem including forests, wetlands, islands, estuaries, parks, landscapes, oceans and rich blend of variety of natural surroundings. Many customary or community practices were evolved by the ancestors to protect the environment. The efforts of the people in local community in conservation of natural resources quite deserve to eulogize.

In consequence to rapid industrialization, sophisticated science and technological advancement, increased population, urbanization, deforestation, indiscriminate utilization of natural resources etc., the traditional practices to preserve and conserve natural resources have not been taken seriously by the people in modern times which have resulted in environmental degradation. The phenomenon of environmental protection is not a new concept to the human civilization. The efforts of people in ancient times for improving the environment can be traced out from early Indian history. Indians have understood the complete significance of environment for their survival on earth. It was considered that the primary duty of the individual is to protect the nature. The people used to worship the gods and goddesses associated with their objects of birds and animals. Hinduism said to be dealt with various aspects of nature and ways of worshipping the nature.

It appears that the civilization of Mohenjodaro, Harappa and Dravidian civilization lived in consonance with its ecosystem and their small population and their needs maintained the harmony with the environment. The Mauryan period was perhaps the most glorious chapter of the India. It was in this period that we find detailed and perceptive legal provisions found in kautalaya's Arthashastra written between 321 B.C. and 300 B.C.

HINDU MYTHOLOGY ON ENVIRONMENT PROTECTION

Hindu religion is one of the oldest religions of the world. Ever since Vedic times, the main motto of social life was to have in harmony with the nature. Sages, saints and the great philosophers of India lived in forest and on mountains where they meditate and expressed in to form, of Vedas, Upanishads and Smriti.

Accordingly felling of trees, polluting air, water and desert land was regarded as sin as these were to be respected and regarded as God and Goddesses. Some of the trees associated with the Gods and Goddesses.

Lotus	Laxmi (goddess of wealth)
Banyan	Brahma (creator of Universe)
Ashoka	Buddha
Kadamb	Krishna

Palasa	Brahma
Neem	Sitala
Mango	Laxmi
Pipal	Vishnu.

Planting of trees was also treated as sacred religious duty and work of great virtue and regarded one tree to equal ten sons. One who plant one pipal, one neem, one ber, ten flowering plants creepers, two pomegranates, two oranges and five mango trees will not go to hell. Similarly, several Hindu Gods and Goddesses have animals and birds as their associates.

Durga	Lion
Brahma	Wildgoose
Indra	Elephant
Ganesh	Elephant, rat
Shiva	Bull, serpent, snake
Saraswati	Swan, peacock
Vishnus	Eagle
Kama	Fish
Rama, Hanuman	Monkey

Kartikeyan	Peacock
Laxmi	Owl
Ganga	Crocodile
Sitla	Ass
Bharirava	Dog
Vayu	Deer

ENVIRONMENTAL PROTECTION IN MEDIEVAL INDIA

From the point of view of environment conservation, a significant contribution of Moghul emperors has been the establishment of magnificent gardens, fruit orchards and green park, round about their places, central and provincial headquarters, public places, on the banks of rivers and in the valley and dales which they used as holiday resorts or places or temporary headquarters during the summer season.

Among the officials empowered for administration of justice by the sultans and the emperors of India, Muhtasibs' were vested with the duty of prevention of pollution. Main duty among others was to remove obstructions from the streets and to stop the commission of nuisance in public places. The instructions were given to a newly appointed muhtasib by the emperor Aurangazed throws a flood of light on the functions of this officer. In the bazaars and lanes observe if anyone, contrary to the regulations and customs has screened off a part of the street, or closed the path or thrown dirt and sweepings on the traffic and opened his shops, there you should in such cases urge them to remove the violation of regulations.

ENVIRONMENTAL PROTECTION DURING THE POST INDEPENDENCE ERA

The post-independence era witnessed a lot of changes in the policies and attitudes of the Governments with respect to environmental protection.

Under the constitution various provisions directly or indirectly deals with environmental protection.

- Article 39(b), 47, 48, 49 of Constitution of India
- National Forest Policy, 1952
- Wild life Protection Act, 1972
- Project Tiger, 1973
- Under 42nd Amendment of the Constitution in 1976
- Forest conservation Act in 1980.
- Air (Prevention and control of pollution) Act, 1981
- Wild life (protection),1983
- Environment (protection) Act, 1986

ENVIRONMENTAL POLLUTION

1. AIR POLLUTION:

Air pollution is generally accomplished through air pollutants. The definition of air pollutants is given under sec 2(9) of the Air Pollution Act, 1981.

Section 2(a): Air pollutant means 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 living creatures or plants or property or environment.

Section 2(b): Air Pollution means the presence in the atmosphere of any air pollutant.

Air pollutants may be gaseous or particulate pollutants. With the progress of the society a large amount of gaseous waster and fine particles are emitted into the atmosphere.

The natural air has got its air purification process and through this process it could be able to be remove different types of pollutants which are continuously introduced into the atmosphere.

When the rate of pollution is high or the self purifying capacity of the air comes down, accumulation of pollutants takes place posing a serious threat to the human health.

2. WATER POLLUTION:

Water is a significant element in the biosphere because on one hand it is vital for the survival of all forms of life and on the other hand it helps in the movement, circulation and cycling of nutrients in the biosphere.

It supports life-system and its shortage has been serious concern of human being's.

Section 2(6) of Water (prevention and control of pollution) Act, 1974:- means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or is likely or create a nuisance, domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms.

3. LAND POLLUTION:

Land is in fact the very heart of life layer(biosphere) because it represents a zone wherein plant nutrients produced, held, maintained and are made available to plants. It is important for human society because it is the basic medium for food and various needs of man and other living creatures.

Land and soil pollution takes place mainly due to the disposal of solid and semi-solid waste from agricultural practices and from poor sanitation, soil erosion, consequent upon land use changes, deforestation, excessive use of chemical fertilizers, pesticides, insecticides, herbicides, polluted waste water from industrial and urban areas.

Urbanization coupled with the desire of men to live comfortably has further aggravated the problem.

4. FOOD POLLUTION:

Food is one of the most essential resources of human survival. Pollution of food begins when the seeds need to be protected from use of chemicals. Again chemicals are used to protect plant growth, flowers, fruits and vegetables.

5. RADIO-ACTIVE POLLUTION:

The advent of nuclear weapons and also to have more and more such destructive weapons has led the exposure level to radiations caused by such tests increase.

Radio-active pollution immediately affects the man and it is his health which is at stake. There is every possibility that water sources particularly the rivers and sewers are likely to be affected by such radiation.

Man may be exposed to such contamination directly by the radioactive particles in air, radioactive gases and absorption of contaminants by respiratory tract and indirectly by consuming food chains.

6. NOISE POLLUTION:

The word noise simply connotes unwanted sound or ordinarily by noise we can mean a sound which is unpleasant that exerts a pressure on our mind.
The sources of noise pollution are numerous, but broadly it can be divided into two.

- Industrial and
- Non- industrial.

The effects of noise are becoming deadlier day to day. It impairs our sensibility, physiological, psychological; it may lead to loss of hearing, speech interference, loss of efficiency, various diseases, and interference with sleeping besides certain other miscellaneous effects

POPULATION AND ENVIRONMENT

Physical environment means non living environment or the land, air, water, soil and minerals. The utilization, overuse and misuse of physical resources increased manifold due to the growth of human population. As it has been told earlier, more population means more mouths to eat food which requires more agricultural production. More cultivable land has been made available by clearing forests and by reclaiming wet lands, ponds and green belts. Advanced agriculture requires utilization of more water, more fertilizers and more pesticides.

Application of fertilizers and pesticides makes the soil infertile. Clearing of forests has its own serious impacts and the environment on the whole gets imbalanced. More population means more space to construct houses and availability of more consumer goods. It also requires more means of

transport, more consumption of fossil fuels and more pollution of air, land and water. Thus growth of population leads to pollution of air, land and water. Different types of pollutions are causing a number of problems in the physical environment that are further affecting the biological environment seriously.

Deforestation

Forests are an important natural resource of India. They have moderate influence against floods and thus they protect the soil erosion. Forests also play an important role in enhancing the quality of environment by influencing the ecological balance and life support system (checking soil erosion, maintaining soil fertility, conserving water, regulating water cycles and floods, balancing carbon dioxide and oxygen content in atmosphere etc. India has a forest cover of 76.52 million square kms. of recorded forest area, while only 63.34 million square kms. can be classified as actual forest cover.

Depletion of ozone layer

The ozone layer protects the Earth from the ultraviolet rays sent down by the sun. The Ozone layer has been gradually ruined by the effect of the CFCs. These CFCs were used as solvents, refrigerants, aerosol propellants, and to blow foam plastics. For this reason, the use of CFCs in aerosols has been banned everywhere. Other chemicals, such as bromine halocarbons, as well as nitrous oxides from fertilizers, may also attack the ozone layer. Nitrogen oxides and methane are also compounds which adversely affect the stratosphere's ozone.

The concentration of CFCs has been increased as the human population has grown, and the thickness of the Ozone layer has been lesser to the extent that a hole in the layer has been formed. Scientists have found that there are other emissions derived from human activities, which have contributed to the depletion of the ozone layer. Antarctica was an early victim of ozone destruction. A massive hole in the ozone layer right above Antarctica now threatens not only that continent, but many others that could be the victims of Antarctica's melting icecaps.

Extinction of species

Today, human activities are causing a massive extinction of species, the full implications of which are barely understood. More than 1.1 billion people live in areas that conservationists consider the richest in non-human species and the most threatened by human activities. While these areas comprise about 12 percent of the planet's land surface, they hold nearly 20 percent of its human population. The population in these biodiversity hotspots is growing at a collective rate of 1.8 percent annually, compared to the world's population's annual growth rate of 1.3 percent. Modern agricultural practices strip the Earth of its thin layer of topsoil through water and wind erosion, destroying this precious micro ecosystem that takes centuries to form and supports all. life on land. Many species are of immense value to humans as sources of food, medicines, fuel and building materials. Between 10,000 and 20,000 plant species are used in medicines worldwide. The diversity of nature helps meet the recreational, emotional, cultural, spiritual and aesthetic needs of people.

CONCLUSION

Environment and protection of the Environment have been the concern from the ancient times; idea of Environment under the first unit clearly depicts what must be the inclusion under the term environment, ancient scriptures are the evidence which clearly depicts what the environment is and how the protection so emphasized. Sustainable development is must and should be emphasized by which there can be a balance in the enivonment and no hindrance on the development. An action to be intiated in the environment must under go the proper analysis, the problems should be reduced the “Population growth and economic incentives are the two causes of environmental disruption”. Discuss the provisions of Kautilyan jurisprudence on protection of ecosystem. Second Unit, under Environmental law explores about Environmental policies framed for the protection of Environment from ancient times and its impact on regulation of the activities which are against the environment. The most detailed and perceptive of these provisions found in the kautilya’s Arthashastra written between 321and 300 B.C. Several factors have influenced Indian Forestry have

affected the policy making in India, commercial and industrial policies have rapidly reduced the forest cover of India's wildlife.

Movements for protection of Environment are there are from the ancient times; few of the notable movements that can be discussed under syllabus are Chipko movement, Appiko Movement, Narmadha Bachao Andolan and few more, till today there is a tussle between Environment and Development. For the eprotection of environment there were international convention ; namely Stockholm Declaration, Rio Declaration. India being a signatory for the convention for protection of did bring a impeccable change as to way of living and the development so concerned.

The Constitution of India is the grundnorm which envisages about the protection of right, and proper execution of powers for the well being of nation. The 42nd Amendment to the constitution have brought in recognition of fundamental duties and rights as to Environment. Judicial decisions for protection of environment have been great support for the development of Environmental Jurisprudence in India. Sustainable Development is the only key to balance the development and Environment for the upcoming generations, right to healthy environment will assure us the dignified life. Environment is must to be nurtured, Protected, and must satisfy the goals of sustainable development.

ENVIRONMENTAL POLICY

India is a large country with a high population density. It is a developing country, with comparatively low per capita incomes and a legacy of colonial rule. It is a strong, vibrant, multiparty democracy with an independent judiciary and open media. The conflict between conservation of the environment and socio-economic growth has been much debated and discussed.

Environmental policy of a country is determined by international actors – either through trade conditions pushed by public pressure of the trading partner or through international covenants.

Though the international community has not arrived at a consensus on binding instrument setting out rights and duties on environmental matters as in the case of human rights and trade, moral obligations of nations arrived at in international summits have been an influence in determining the course of domestic environmental policy.

The UN Conference on Human Environment in 1972, the Montreal Protocol on Substances that Deplete the Ozone layer in 1987, the Rio Earth Summit in 1992, the Kyoto Protocol on Climate Change in 1997 and the Bali Roadmap to the UN Framework on Climate Change in 2007 have been important milestones in the evolution of international environmental policy Environmental disasters have had a role to play in awakening the national consciousness on the need for a green policy. The Bhopal Gas Leak tragedy in 1984, the Chernobyl nuclear accident in 1986, the Exxon Valdez oil spill in 1989 and the Deepwater Horizon oil spill in 2010 are prominent instances than come to mind.

Forest Policy in Colonial India

In early colonial times, forests where viewed as assets under State ownership. The commercial potential of timber and other forest produce drew the interest of the colonial administrators. Forest policies were driven by wood requirements to meet the expansion needs of the railways and telegraph.

The Forest Policy of 1894, the first policy initiative, drew its inspiration from a monogram of Dr Voelcker on the "Improvement of Indian Agriculture" which had a special chapter on forestry; the objective of the policy emphasized maximization of revenue from commercial forests and laid the framework for administration of forests for State's benefit. Preservation forests included those forests which were essential for environmental purposes; commercial forests were earmarked for exploitation for timber and other forest products. Pasture lands satisfied the needs of local people

for fuel wood, small timber and fodder, essential to keep local communities from foraying into commercial forests.

The Indian Forest Act of 1927 replaced the earlier 1878 Act. By that time, Indianisation of forest administration had gathered strength. The implementation of the Montague Chelmsford reforms by the British Government in 1921 placed the subject of forests under the nominal control of elected legislatures in provinces. The preamble of the Act stated that it sought to consolidate the law relating to the transit of forest produce and the duty livable on timber and other forest produce.

There was a clear and continued emphasis on the revenue-yielding aspect of forests.

Forest Policy in Colonial India (1947-72)

The Environmental agenda in the immediate post-colonial phase continued to centre on forestry. The National Forest Policy of 1952 continued with the framework of the 1894 Policy but recalibrated the use of commercial forests for meeting paramount national developmental needs – defence, communications and industry. The Vana Mahotsava (Tree Festival) programme, started in 1948, was built into the Policy of 1952. Tree lands were specified areas where fast-growing tree plantations were encouraged to meet local fuel needs, "making available to cultivators a suitable fuel in place of cow-dung now burnt for fuel and thus help release the latter for its utilisation as manure for increasing agricultural production"

According to the policy, the rights and interests of future generations should not be subordinated to the imprudence of the present generation. Indiscriminate extension of agriculture and consequent destruction of forests has not only deprived the local population of fuel and timber but has also stripped the land of its natural defences against erosion. Nation Building through Investment in Industrialization, agriculture, infrastructure Occupied the centre stage and environment conservation through forest preservation were at fringes of attention.

Environmental Policy (1972-1980)

- The United Nations Conference on Human Environment marked a milestone in the evolution of environmental policy-making in India. The Indian Prime Minister, Mrs. Indira Gandhi, was the only head of Government to address the Conference in Stockholm other than the Swedish Prime Minister.
- The Conference proclaimed that under-development in developing countries was the source of environmental problems and laid out 26 principles calling "upon Governments and peoples to exert common efforts for the preservation and improvement of the human environment for the benefit of all the people and for their posterity".
- The Government of India embraced the declaratory principles of the UN Conference whole-heartedly and refashioned environmental policy through a flurry of legislative and administrative activity.
- The Wildlife (Protection) Act passed by Parliament in September, 1972, was the first in a series of such legislations. The Act was notable in that Parliament exercised its over-riding powers under the Constitution to legislate on a subject assigned to the States. The Act continues to form the cornerstone for wildlife conservation efforts.
- Hunting or destruction of species described in the Schedule to the Act was outlawed. A licensing procedure for game hunting of permitted species was set out. Mechanism for declaration of sanctuaries and National Parks for protection of wildlife living in the designated areas was specified with elaborate machinery for enforcement.

- The first census of the tiger population was conducted in 1972. The tiger population was estimated at an alarmingly low number of 18273. The Wildlife (Protection) Act notified in 1972 had defined the tiger as a protected wildlife species.

- The next in the succession of legislative action was the enactment of the Water (Prevention and Control of Pollution) Act in 1974, Pollution of water bodies and discharge of untreated industrial effluent was sought to be prevented through the law.
- The Act was comprehensive in its coverage of water bodies to include rivers, streams, sea, tidal water, wells and inland water bodies whether natural or artificial. The Central Pollution Control Board was created along with State Boards for granting permissions and enforcement

MOVEMENTS FOR PROTECTION OF ENVIRONMENT IN INDIA

Conceptions of the environmental movement are as various as those of social movements in general. The chief difference has been between a mainly American tradition that adopts a catholic, nominalist and empirical approach, and a European macro-sociological tradition that conceives of social movements restrictively as agents of profound structural change or, at least, as extraordinary phenomena of periods of dramatic social change. From the perspective of the latter, the continuing existence of an environmental movement is problematic.

As defined in International Encyclopedia of Sociology, "a social movement is an organized attempt by a number of people united by a shared belief to effect or resist changes in the existing social order by non-institutionalized means. The ultimate objective of a social movement is what its members see as the betterment of society".

During the past century, there has been a progressive encroachment by the State on the rights and privileges of the people to forest resources. The people have resisted this encroachment in various parts of India mainly through the Gandhian non cooperation method of protest, well-known as "Forest Satyagraha". In the forest areas of the Garhwal Himalaya this style of protest was revived in independent India as the "Chipko" or "Embrace-the-Tree" movement to protect trees marked for

felling. Although Chipko was first practised in the Garhwal Himalaya, it has now spread to most of the country, especially the hilly regions.

CONFLICTS OVER FOREST RESOURCES AND THE EVOLUTION OF THE CHIPKO MOVEMENT

The conflicts and tension from which the famous Chipko Movement has emerged can be traced historically to the drastic changes in forest management and utilization introduced into India during the colonial period. Forests, like other vital resources, were managed traditionally as common resources with strict, though informal, social mechanisms for controlling their exploitation to ensure sustained productivity. In addition to the large tracts of natural forests that were maintained through this careful husbanding, village forests and woodlots were also developed and maintained through the deliberate selection of appropriate tree species. Remnants of commonly managed natural forests and village commons still exist in pockets and these provide insights into the scientific basis underlying traditional land management.

Colonial impact on forest management undermined these conservation strategies in two ways. First, changes in land tenure, such as the introduction of the zamindari system, transformed common village resources into the private property of newly created landlords and this led to their destruction. The pressure of domestic needs, no longer satisfied by village forests and grasslands, were, therefore, diverted to natural forests. Second, large-scale fillings in natural forests to satisfy non-local commercial needs, such as shipbuilding for the British Royal Navy and sleepers (railroad ties) for the expanding railway network in India, created an extraordinary force for destruction. After about half a century of uncontrolled exploitation the need for control slowly became apparent.

The formation of the forest bureaucracy and the reservation of forest areas was the colonial response to ensure control of commercial forest exploitation as a means to maintain revenues. Forest conservancy was directed at the conservation of forest revenues and not at the forests

themselves. This narrow interpretation of conservation generated severe conflicts at two levels. At the level of utilization, the new management system catered only to commercial demands and ignored local basic needs. People were denied their traditional rights which, in some cases, were re-introduced as concessions and privileges after prolonged struggles.

At the conservation level, since the new forest management was only concerned with stable forest revenues and not with the stability of forest ecosystems, ecologically unsound silviculture practices were introduced. This undermined biological productivity of forest areas and transformed renewable resources into non-renewable ones (Nair, 1985). The reservation of forests and the denial of the villagers' right of access led to the creation of resistance movements in all parts of the country. The Forest Act of 1927 intensified the conflicts and the 1930s witnessed widespread Forest Satyagrahas as a mode of non-violent resistance to the new forest laws and policies.

SATYAGRAHA AS A NON-VIOLENT MODE OF CONFLICT RESOLUTION

Satyagraha, in the Gandhian view, was the use of nonviolent resistance as a political weapon in place of the force of arms. Unlike many other well-known political philosophies, Gandhian philosophy has never been claimed to be strictly materialist. In the absence of such overt categorization, Gandhian philosophy usually has been assumed to be based on subjective, idealist, or moral forces, rather than objective or materialist ones. Accordingly, the most important political weapon used in the Gandhian movements, the satyagraha, has always been mystified as an emotional force without any materialist base. A closer socio historical evaluation is needed to demystify the image of Gandhian satyagrahas and to establish the materialist basis of Gandhian movements such as Chipko.

The power of satyagraha, in the form of non-cooperation, has been a traditional mode of protest against exploitative authority in India. In Hind Swaraj, Gandhiji wrote that through satyagraha he was merely carrying forward an ancient tradition: "In India the nation at large had generally used passive resistance in all departments of life. We cease to cooperate with our rulers when they displease us." The dominance of the use of moral force was not, however, an indicator of the nonmaterial objectives of these movements.

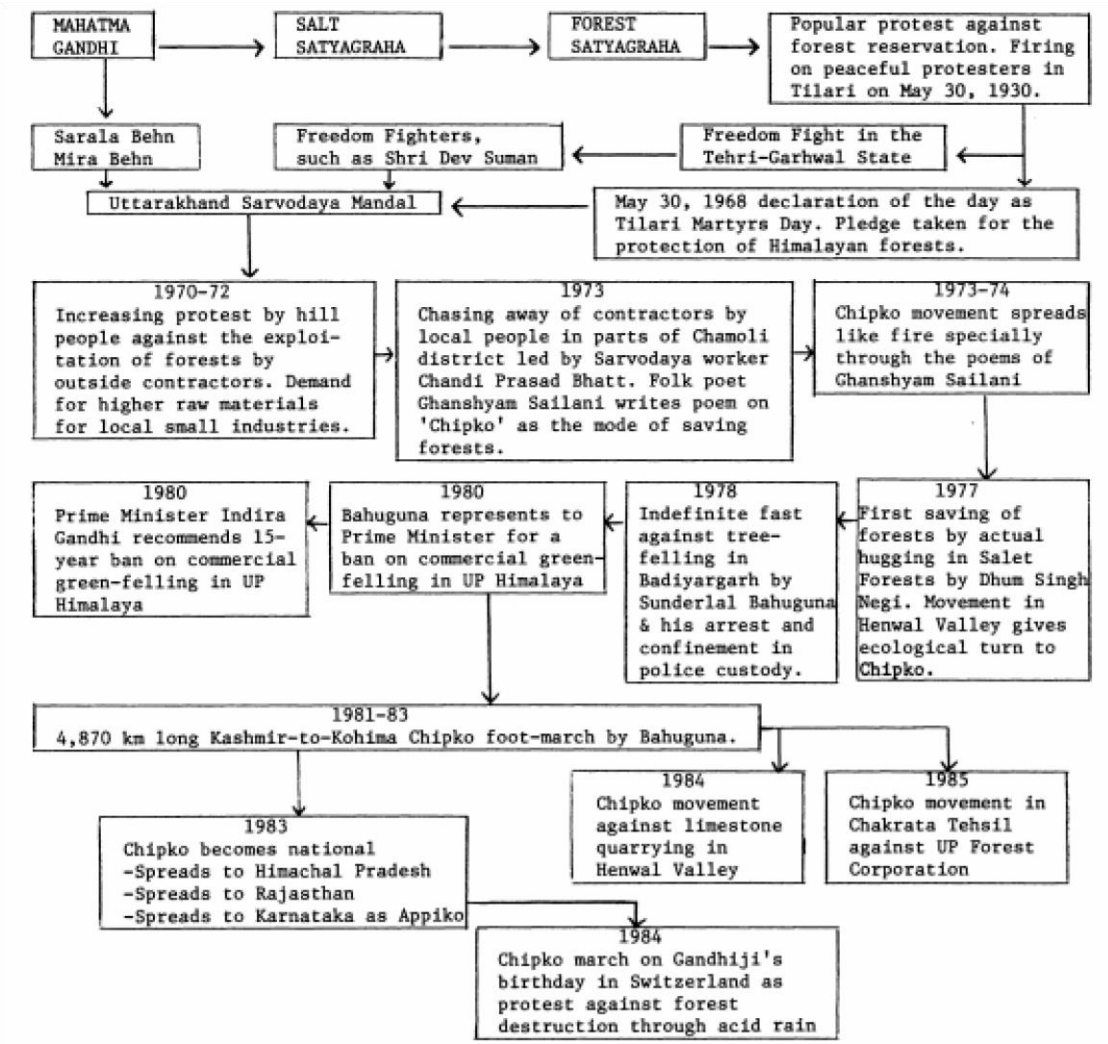
The strong material basis of the Gandhian movements becomes visible after a detailed analysis of the concrete issues and contradictions for the settlement of which the satyagrahas were taken up. Satyagrahas were used by Gandhiji against systems of material exploitation which were the main tools for profit making of the British, and in which was rooted the material under-development of the Indian masses. It was used in Champaran to save Indian peasants from the compulsory cultivation of indigo in place of food crops. It was used in Dandi and in other parts of the country to protest against the exploitative Salt Law. It was used to safeguard the interests of the Indian weavers who were pauperized by the unequal competition with millmade cloth from Europe.

It was used by forest movements to resist the denial of traditional rights. Unfortunately, in spite of the fact that Gandhian satyagrahas were used to oppose the economic system that created material poverty and underdevelopment, usually they have been described and understood as non-material and spiritual transformations without any materialist base. This common perception of Gandhian movements as unrelated to the material contradictions in society is completely fallacious.

The subjective and spiritual nature of the force of satyagraha has systematically been confused with the material and objective contradictions in society against which the force was used. The classical view of the contradiction between the working class and the capitalists has dominated the attempts at analysing the class relations in contemporary Indian society. The deeper and more severe contradictions that touch upon the lives of the vast number of people, based on the contradiction between the economics of sustainable development and capitalist production for profit-making and economic growth, is hardly perceived or recognized.

Gandhiji had focused his attention on these more fundamental and severe material contradictions in Indian society since he understood the problem of the invisible and marginalized majority in India. The material basis for survival of this marginalized majority was threatened by the resource demands of the capitalist production system introduced into India by the British. In this manner, without making any claims about being materialistic, Gandhiji politicized the most severe material contradictions of his time.

The First Chipko Movement took place in 1970 and later on continued for Five years in districts of Himalaya at Uttarakhand. The Chipko Movement was the result of hundreds of decentralised and locally autonomous initiatives. Its leaders and activists have primarily been village women, acting to save their means of subsistence and their communities.



Source –JSTOR http://www.jstor.org/page/info/about/policies/terms.jsp

LEGACY OF FOREST MOVEMENTS IN GARHWAL HIMALAYA

Forest resources are the critical ecological elements in the vulnerable Himalayan ecosystem. The natural broadleaved and mixed forests have been central in maintaining water and soil stability under conditions of heavy seasonal rainfall. They have also provided the most significant input for sustainable agriculture and animal husbandry in the hills. Undoubtedly, the forests provide the material basis for the whole agro-pastoral economy of the hill villages. Green leaves and grass satisfy the fodder requirement of the farm animals whose dung provides the only source of nutrients for food crops.

Dry twigs and branches are the only source of domestic cooking fuel. Agricultural implements and house frames require forest timber. The forests also provide large amounts of fruit, edible nuts, fibres, and herbs for local consumption. During the nineteenth century a third demand was put on these forest resources of Garhwal. In 1850, an Englishman, Mr. Wilson, obtained a lease to exploit all the forests of the Kingdom of Tehri-Garhwal for the small annual rental of 400 rupees. Under his axe several valuable Deodar and Chir forests were clear-felled and completely destroyed.

In 1864, inspired by Mr. Wilson's flourishing timber business, the British rulers of the northwestern provinces took a lease for 20 years and engaged Wilson to exploit the forests for them. European settlements, such as Mussoorie, created new pressures for the cultivation of food crops, leading to large-scale felling of oak forests. Conservation of the forests was not considered.

In his report on the forests of the state, E. A. Courthope, IFS, remarked: "It seems possible that it was not mainly with the idea of preserving the forests that government entered into this contract. In 1895 the Tehri State took the management of forests in its own hands when they realized their great economic importance from the example of Mr. Wilson and the government. Between 1897 and 1899 forest areas were reserved and restrictions were placed on village use. These restrictions

were much disliked and utterly disregarded by the villagers, and led to cases of organized resistance against authority.

On 31 March 1905, a Durbar circular from the Tehri King announced modifications to these restrictions in response to the resistance. The modifications, however, failed to diffuse the tension. Small struggles took place throughout the kingdom, but the most significant resistance occurred in 1907 when a forest officer, Sadanand Gairola, was manhandled in Khandogi. When King Kirti Shah heard about the revolt he rushed to the spot to pacify the citizens. The contradictions between the people's basic needs and the State's revenue requirements remained unresolved and in due course they intensified. In 1930 the people of Garhwal began the non-cooperation movement mainly around the issue of forest resources. Satyagraha to resist the new oppressive forest laws was most intense in the Rawain region.

The King of Tehri was in Europe at that time. His Dewan, Chakradhar Jayal, crushed the peaceful satyagraha with armed force. A large number of unarmed Satyagrahis were killed and wounded, while many others lost their lives in a desperate attempt to cross the rapids of the Yamuna River. While the right of access to forest resources remained a burning issue in the Garhwal Kingdom, the antiimperialist freedom movement in India invigorated the Garhwali people's movement for democracy.

The Saklana, Badiyargarh, Karakot, Kirtinagar, and other regions revolted against the King's rule in 1947 and declared themselves independent panchayats. Finally on 1 August 1949 the Kingdom of Tehri was liberated from feudal rule and became an integral part of the Union of India and the State of Uttar Pradesh. The heritage of political struggle for social justice and ecological stability in Garhwal was strengthened in postIndependence India with the influence of eminent Gandhians, such as Mira Behn and Sarala Behn.

The Chipko Movement is, historically, philosophically, and organizationally, an extension of traditional Gandhian Satyagraha. Its special significance is that it is taking place in postIndependence India. The continuity between the pre-Independence and post-Independence forms of this satyagraha has been provided by Gandhians, such as Sri Dev Suman, Mira Behn, and Sarala Behn. Sri Dev Suman was initiated into Gandhian Satyagraha at the time of the Salt Satyagraha. He died as a martyr for the cause of the Garhwali people's rights to survive with dignity and freedom. Both Mira Behn and Sarala Behn were close associates of Gandhiji. After his death, they both moved to the interior of the Himalaya and established ashrams.

Sarala Behn settled in Kumaun and Mira Behn lived in Garhwal until her departure for Vienna due to ill health. Equipped with the Gandhian world-view of development based upon justice and ecological stability, they contributed silently to the growth of women-power and ecological consciousness in the hill areas of Uttar Pradesh. Sunderlal Bahuguna is prominent among the new generation of workers deeply inspired by these Gandhians.

The contemporary Chipko Movement, which has become a national campaign, is the result of these multidimensional conflicts over forest resources at the scientific, technical, economic, and

especially the ecological levels. It is not a narrow conflict over the local or non-local distribution of forest resources, such as timber and resin.

The Chipko demand is not for a bigger share for the local people in the immediate commercial benefits of an ecologically destructive pattern of forest resource exploitation. Since the Chipko Movement is based upon the perception of forests in their ecological context, it exposes the social and ecological costs of growth-oriented forest management. This is clearly seen in the slogan of the Chipko Movement which claims that the main products of the forests are not timber or resin, but soil and water. Basic biomass needs of food, fuel, fodder, small timber, and fertilizer can, in the

Chipko vision and the Garhwal practice, be satisfied as positive externalities of biomass production primarily aimed at soil and water conservation to stabilize the local agro-pastoral economy.

The First Chipko Movement took place in 1970 and later on continued for Five years in districts of Himalaya at Uttarakhand. The Chipko Movement was the result of hundreds of decentralised and locally autonomous initiatives. Its leaders and activists have primarily been village women, acting to save their means of subsistence and their communities.

SUNDERLAL BAHUGUNA

Bahuguna joined the campaign that already for many years had been opposing construction of a proposed Himalayan dam on the river near his birthplace of Tehri. In 1989 he began the first of a series of hunger strikes to draw political attention to the dangers posed by the dam and in due course the Chipko Movement gave birth to the Save Himalaya Movement. fifteen-year ban on commercial green felling in the hills of Uttar Pradesh, in stopping clear-felling in the Western Ghats and the Vindhyas, and in generating pressure for a national forest policy which is more sensitive to the people's needs and to the ecological requirements of the country.

Unfortunately, the Chipko Movement has often been naively presented by vested interests as a reflection of a conflict between "development" and "ecological concern", implying that "development" relates to material and objective bases of life while "ecology" is concerned with nonmaterial and subjective factors, such as scenic beauty. The deliberate introduction of this false and dangerous dichotomy between "development" and "ecology" disguises the real dichotomy between ecologically sound development and unsustainable and ecologically destructive economic growth.

APPIKO MOVEMENT

The Appiko Movement, a movement similar to the Chipko Movement, was launched in September 1983 by the representatives of a Yuvak Mandali to save the Western Ghats in Southwest India. It was observed by the representatives of the Yuvak Mandali that in areas, which were easily accessible, there was an excessive concentration of trees reserved for felling, and there was also excessive damage to other trees during such course of felling.

The objective of the Appiko Movement is three-fold—to protect the existing forest cover, to regenerate trees in denuded lands and, to utilize forest wealth with due consideration to conservation. All these objectives are implemented through ideally established Parisara

Samrakshna Kendras, The Story of the Movement is that Forest Department has been promoting Monoculture Plantations after clear felling the exsisting mixed semi Ever Green Forests.

In August 1983, the villagers of the Sirsi Taluk of Uttara Kannada requested the forest department not to continue the felling operations in the Bilegal forest under the Hulekal range. The villagers felt the ill effect of this arrogance on the· part of the forest department. There was severe soil erosion and dying up of the perennial water resources. In the Salkani village of Sirsi Taluk, people were deprived of .the only patch of forest left near this and surrounding villages to obtain biomass for fuel wood, fodder, and honey. The Appiko Movement within the forest continued for thirty-eight days after which the government finally withdrew the felling orders. The activists also extracted an oath from the loggers to the effect that they would not destroy trees in the forest.

CHILIKA BACHAO ANDOLAN

Chilika Bachao Andolan is one of the most discussed environmental movements in India. The movement began as a grassroots movement and in the subsequent years it evolved in to an organized mass movement. Although the movement has achieved the initial objective of preventing the entry of big business houses like the Tatas into the commercial aquaculture of prawns, thereby threatening the livelihood of the poor, yet the movement continues with greater environmental and ecological objectives.

Chilika, located in the Puri, Khurda and Ganjam districts of Orissa, is the largest brackish water lake in India, and a home to a large variety of fish and plants that thrive in brackish water.The lake is separated from the Bay of Bengal by a long sandy ridge varying between 100 to 300 yards in width one natural opening near Arakhkuda that permits the flow of water and migration of fish from the sea to the lake. The lake contains sweet-saline ecosystem during the year.As a response to· "this Integrated Shrimp Farm Project, people, mostly , fishermen of Chilika launched the Chilika Bachao Andolan. Non-fishermen farmers, students especially from Utkal University, intellectuals, and human rights activists supported the fishermen in their struggle, that is, the Chilika resistance. Subsequently the Orrisa Krushak Mahasangha (OKM) entered the fray to protect the livelihood rights of the fisher folk.

The villages, surrounding the Lake area, are well-known for they have become serious law and order problems because an ever-increasing rivalry is going on between these villages to capture the aquatic resources of Chilika Lake. The traditional fishing communities have been agitating against the consequent environmental deterioration of the Lake ecology. There has been continuing conflicts between fisher folk and non fisher folk which has been led to violent outbursts too. Because the main life support system of the poor fisher folk has been chocked by the industrial policy of the government favouring capitalist elements like big businessmen, bureaucrats and also economic elites of the state. These conflicts in Chilika are the result of various factors such as modernization, economic competition between socially differentiated segments of the society, social inequality and other allied causes.

The resistance movement of Chilika started by the traditional fishermen community of surrounding villages has been a culmination of all such causes. ~ When the Tata project started intensive shrimp culture inside the Lake, along with a tie up programme with government of Orissa, it ignored the interest and requirement of the marginalized class-traditional fishermen community of Chilika. When their livelihood became threatened by the recent move of the agencies by taking lease other

than those who have traditionally held their rights over their surrounding areas of the natural resources, the outcome was obviously violent - protest and resistance in the form of movement. In the wake of all these developments, a powerful people's movement emerged in Chilika in the name of Chilika Bachao Andolan (CBA) or ' Save Chilika Movement' over the last few years to protect the Lake economy as well as its people from the commercial exploitation by big businessmen and to restore the people right to manage the Lake.

NARMADA BACHAO ANDOLAN

The Narmada Basin covers an area of approximately 94, 500 square kilometers between the Vindhya and the Satpura ranges Central India. It is the site of the Narmada Valley Development Project (NVDP), an ambitious project that seeks to harness the river Narmada that flows through the three states of Madhya Pradesh, Maharastra and Gujarat.

The Narmada Bachao Andolan as successfully brought to public domain the hitherto closed and protected discourse on mega development projects, There by opening new vistas for environmental movements. The protest also has pointed out the necessity to address the shortcomings in institutional frameworks governing big developmental projects by laying bare the ecological implications of such mega development projects.

Medha Patkar has been a central organizer and strategist for Narmada Bachao Andolan (NBA), a people’s movement organized to stop the construction of a series of dams planned for India’s largest westward flowing river, the Narmada. The World Bank-financed Sardar Sarovar Dam is the keystone of the Narmada Valley Development Project, one of the world’s largest river development projects. The dam and its associated canal system would also displace some 320,000 villagers, mostly from tribal communities, whose livelihoods depend on these natural resources.

The Narmada Bachao Andolan began as a resistance against the Sardar Sarovar Project (SSP). Tribal and non tribal politics the area affected by the SSP and other Projects on the Narmada have

a long history ripe with experiences of protests and remembered through stories. The social movement in the Narmada valley indicates the ways in which India's developmental trajectory has been moulded by the interest of the dominant groups, leading to the perpetual marginalization of the poor and the needs for societal Justice, participatory democracy and environmental sustainability.

Name of the Dam	Year Since the Protest Became Active	Main Issue of Protest	Details
Koel Karo, Bihar	1973	◆Tribal Displacement ◆Loss of Forest	1256 villages affected, mostly tribal
Tehri Dam, Uttaranchal (Previously UP)	1978	◆ Fragility of Ecosystem ◆ Dislocation of People	195 Villages affected Displacement of about 70,000 people
Subarnarekha, Bihar	1978	◆Displacement and ◆Rehabilitation	Displacement of 1,20,000 People
Bedhi, Karnataka	1979	◆Environment and ◆Displacement	About 4000 Tribal Displacement
Bhopalapatanam-Inchampalli	1983	◆Displacement ◆Loss of Livelihood ◆Environment	Affecting about 75,000 Tribals
Sardar Sarovar on Narmada, Gujarat	1985	◆Resettlement and ◆Rehabilitation	Displacement of about 400,000 People
Bochghat on Indrawati	1986	◆Environment	Affecting about 10,000 People
Maheswar Dam, Narmada, Madhya Pradesh	1992	◆Resettlement and ◆Rehabilitation	About 400,000 to be affected
Bisalpur on Banas and Dai, Rajasthan	1993	◆Resettlement and ◆Rehasbilitation	Displacement of over 70,000 people
Bargi on Narmada in Madhya Pradesh	1994	◆Displacement and ◆Rehabilitation	Submergence of about 162 villages

(Source: State of India's environment: Centre for Science and Environment, New

Diagram Clearly Depicts about the Dams which have displaced and Rehabilitated People

CONSTITUTION AND ENVIRONMENT

Before the 42nd Amendment - The Constitution of India came into force on 26**th** January, 1950. At that time it did not contain any specific provision dealing directly with environment. Only provision which was of some significance was Article 47 of the Directive Principles of State Policy which reads:

"**The State shall regard the raising of the level of nutrition and standard of living of its people and improvement of public health as among its primary duties**."

Article 21 of the Constitution which deals with the right to life and personal liberty was not of much help in the beginning as it was given a very restricted and narrow meaning. This Article runs as follows:

"No person shall be deprived of his life or personal liberty except according to procedure established by law."

But in due course of time the problem of pollution and environment started drawing attention of environmentalists. In the year 1972 our Prime Minister late Mrs. Indira Gandhi attended the United Nations Conference on Human Environment and Development at Stockholm. In that conference the following two resolutions were passed which are known as the Magna Carta of our environmental law:

(a) 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; and

(b) Man bears a solemn responsibility to protect and improve the environment for present and future generations.

42nd Constitution Amendment and after - In 1976, under the leadership of late Mrs. Indira Gandhi, the Constitution's 42nd Amendment was passed and provisions regarding the protection of environment were incorporated into it. In the Chapter of Directive Principles of State Policy, a new provision in the form of

Article 48A was incorporated which runs as follows:

"48-A. Protection and Improvement of Environment and safeguarding of Forests and Wildlife - The State shall endeavor to protect and improve the environment and to safeguard the forests and wildlife of the country." Apart from this provision, a new provision in the form of

"Fundamental Duties" as Article 51A was also incorporated by the 42nd Constitution amendment. Sub-clause (g) of Article 51A is important which provides

"It shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wildlife, and to have compassion for living creatures."

The above mentioned constitutional provisions impose two-fold responsibilities. On the one hand, they give directive to the State for the protection and improvement of environment and on the other they cast a duty on every citizen to help in the preservation of natural environment.

The scope of Article 51A (g) was examined by the High Court of Rajasthan in *L. K. Koolwal* v. *State of Rajasthan*. Under the Rajasthan Municipalities Act, 1959, the Municipal Authority has primary duty "to clean public streets, sewers and all spaces and places, not being private property, which are open to the enjoyment of public, removing of noxious vegetation and all public nuisances and to remove fifth, rubbish, night soil, odor or any other noxious or offensive matter." The petitioner L. K. Koolwal moved a writ petition under Article 226 of the Constitution before the Rajasthan High Court showing that the municipality has failed to discharge its "primary duty" resulting in the acute sanitation problem in the city of Jaipur which is hazardous to the life of the citizens of Jaipur.

The High Court while pronouncing the judgment explained the true scope of Article 51A in the following term "We can call Article 51A ordinarily as the duty of the citizens. But in fact it is the right of the citizens as it creates the right in favour of citizens to move to the Court to see that the State performs its duties faithfully and the obligatory and primary duties are performed in accordance with the law of the land. Article 51-A gives a right to the citizens to move the Court for the enforcement of the duty cast on State instrumentalities, agencies, departments, local bodies and statutory authorities created under the peculiar law of the State." Thus, Article 51-A has come as a boon so far as environmental protection is concerned. But its benefit can be availed of only if people are alive to their duties regarding protection of environment. Article 51A (g) if read with Article 51A (j) it may give probably a better result Article 51A (j) reads as follows:

"It shall be the duty of every citizen of India to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievements."

Strictly speaking no constitution deals with a matter such as environmental protection. Because any constitution contains only the rule of law in relation to the power, structure, allocation and manner of exercise. Besides Indian Constitution is a bulky document and brevity is the character of an ideal Constitution. Hence from the point of view of the principles of the constitutional law as well as, the length of the Constitution it was impossible to have any such provision safeguarding the healthy environment. Therefore till the subsequent amendments the constitutional text of India was without any specific provision for the protection and promotion of the environment. However the seeds of such provision could be seen in Article 47 of the constitution which commands the State to improve the standard of living and public health. To fulfill the constitutional goal, it is necessary that the State should provide pollution free environment.

The United Nations Conference on Human Environment held on in June, 1972 at Stockholm placed the issue of the protection of biosphere on the official agenda of international policy and law. The agenda of the conference consisted of the following:

(a) Planning and management of human settlements for environmental quality.

(b) Environmental aspects of natural resources management.

(c) Identifications and control of pollutants and nuisances of broad international significance.

(d) Educational, information, social and cultural aspects of environmental issues.

(e) Development and environment.

(f) International organizational implications of action proposals. The Stockholm Conference agendas, proclamations, principles and subsequent global, environment

protection efforts shows the words realization of the need to preserve and protected the natural environment. The conference acclaimed man's fundamental right to adequate conditions of life in an environment of a quality that permitted a life off dignity and wellbeing.

In United Nations Conference on Human Environment, at Stockholm the then Prime Minister of India Mrs. Gandhi while displaying the nations commitment to the protection of environment, said.

"The natural resources of the earth, including the air, water, land flora and fauna and especially representative sample of the nature ecosystem must be safeguard for the benefits of present and future generations through careful planning or management, as appropriate. Natural conservation including wildlife must therefore receive importance in planning for economic development".

To comply with the principles of the Stockholm Declarations adopted by the International Conference on Human Environment, the Government of India, by the Constitution 42 Amendment Act, 1976 made the express provision for the protection and promotion of the environment, by the introduction of Article 48A and 51A (g) which form the part of Directive Principles of State Policy and the Fundamental Duties respectively. The amendment provided for the following:

(1) Article 48A: By the Constitution (42nd Amendment) Act, Section 10 Protection and improvement of environment and safeguarding of forests and wildlife

"The State shall endeavour to protect and improve the environment and to safeguard the forest and wildlife of the country". Fundamental Duty:

(I) Article 51-A (6): By Constitution (42nd Amendment) Act, 1976.

"It shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures". Thus the Indian Constitution makes two fold provisions.

(a) On the one hand, it gives directive to the State for the protection and improvement of environment.

(b) On the other hand the citizen owes a constitutional duty to protect and improve natural environment. In protecting the natural environment, the Article 48-A is of immense importance today. Because with the activist approach of judiciary in India the legal value of Directive Principles jurisprudence has constantly grown up in the Indian Constitutional set-up. Hence the above provisions are of pivotal significance. The Government of India to accelerate the pace for environment protection further amended the constitutional text by making the following changes.

1. **Seventh Schedule of the Constitution:**

(1) In the concurrent list, 42nd Amendment inserted.

(a) Entry 17-A, providing for forests.

(b) Entry 17-B, for the protection of wild animals and birds.

(c) Entry 20-A, providing for population control and family planning.

2. Eleventh Schedule of the Constitution

(1) This new schedule is added by the Constitution 73rd Amendment Act, 1992, which received assent of the President on 20.4.1993. This schedule has 8 entries (2, 3, 6, 7, 11, 12, 15 and 29) providing for environmental protection and conservation.

3. Twelfth Schedule of the Constitution

(1) The entry number 8 of this schedule added to the constitutional text by the 74 Amendment Act, 1992, which received assessment of the President on 20.4.1993 provides for the Urban Local bodies with the function of environment and promotion of ecological aspect to them. Due to the above changes the division of legislative power between the Union and the States is spelt out in the following three of the 7th Schedule of the constitution.

List I (Union List) Entries

52. Industries

53. Regulation and development of oil fields and mineral oil/resources.

54. Regulation of mines and mineral development.

55. Regulation and development of inter-state rivers and river valleys.

56. Fishing and fisheries beyond territorial waters.

List II (State List) Entries

6. Public health and sanitation.

14. Agriculture protection against past and prevention of plant diseases.

18. Land colonization etc.

21. Fisheries.

23. Regulation of Mines and Mineral development subject to the provisions of

24. Industries subject to the provisions of

List III (Common or Concurrent List) Entries

17-A. Forests

17- B. Protection and wild animals and birds

20. Economic and social planning

20A. Population control and family planning

The Eleventh Schedule, added to the Constitution by the constitution 73rd Amendment Act, 1992, assign and functions of soil conservation, water management, social and form forestry, drinking water, fuel and fodder, etc. to the Panchayats with a view to environmental management. The 12th Schedule of the Constitution added by 74th Amendment Act, 1992 commands the urban local bodies such as municipalities to perform the functions of protection of environment and promotion of ecological aspects.

The constitutional changes effected in the 7th Schedule by the 42 Amendment Act, 1976 is a milestone steps, in the direction of the protection of environment. Because the subject of forests originally was in the State list as entry 19, this resulted into no uniform policy by the State so as to protect the forests. By placing the item 'forests' now in the concurrent list by the entry 17A, along with the State, Parliament has acquired a law making power . Because of the above change, in order to have a uniform policy in the forest management the Government of India in the year 1980 set up the Ministry of Environment and Forests. By virtue of this change Parliament also enacted, the central legislation Forest Conservation Act, 1980, which was amended in 1988.

The government also adopted the new National Forest Policy in 1988 with a twin object. One to protect the forests and another to consider the needs of the forest dwellers. Similarly the insertion of the entry 20A in the concurrent list empowers the Parliament to regulate the population explosion, one of the prime causes of the environmental pollution. By these changes, legally and constitutionally it has become possible to take a uniform action in the matters of proper management of the environment.

Fundamental Rights

The judiciary dynamic interpretations of fundamental rights have regulated into it the rights to healthy environment from the following Articles:

(a) Article 14: "State shall not deny to any person equality before the law or the equal protection of the laws within the territory of India."

(b) Article 19 (6): State is empowered to make any law imposing in the interests of the general public, reasonable restrictions on the exercise of freedom to practice any profession, or to carry on any occupation, trade or business guaranteed by (1) (g).

(c) Article 21: "No person shall be deprived of his life or personal liberty except according to procedure established by law".

ROLE OF JUDICIARY ON ENVIRONMENTAL ISSUES

Right to Environment as a Fundamental Right

The importation of the 'due process' clause by the activist approach of the Supreme Court in Maneka Gandhi's case has revolutionized the ambit and scope of the expression 'right to life' embodied in Article 21 of the Constitution. The right to live in healthy environment is one more golden feather of Article 21.

The right connotes that the enjoyment of life and its attainment and fulfillment guaranteed by Article 21 embraces the protection and preservation of nature's gift without which life cannot be enjoyed. The Supreme Court of India, in 1980, indirectly conceived this right in a monumental judgment in the case of ***Ratlam Municipality*** **v** ***Vardichand.***

***Maneka Gandhi* v *Union of India*, AIR 1978 SC**

In this case the Bench of Justice V. R. Krishna Iyer and Justice Chinnappa Reddy held the neglect of sanitation of the town of Ratlam by Municipal Council caused Health hazard. The Court's decision was founded on its earlier decision in *Govind* v *Shanti Sarup*, where Section 133 of the Code of Criminal Procedure was used by the Court to preserve the environment in the interest of

"health, safety and convenience of public a large". In the judgment the Supreme Court has nowhere referred to Article 21 of the Constitution. But it is simply clear that, the judgment is based on the right to live with decency and dignity as provided in the right to life. The Court continued, its hidden approach of not referring to Article 21 directly, in another landmark case, Rural Litigation and Entitlement Kendra V. State of Uttar Pradesh although the Court has successfully read Article 21 in Article 48-A of the Part IV of th Constitution.

In this case, the Apex Court converted a letter into written petition alleging that the operation of unauthorized and illegal, mining in the Mussorie-Dehradun belt affected the econology of the areas and led to environment disorder. The Bench consist of Chief Justice P. N. Bhagwati (as he then was), Justice A. N. Sen and Justice Ranganath Misra ordered closing down of mining operations on the ground that lime stone quarries operation causing ecological imbalance ad hazard to healthy environment.

The striking feature of this decision is that, the Court converted a letter in the writ petition under Article 32, without referring to any article from the chapter on fundamental rights. From the jurist's process, it could be submitted that Court restrained itself from invoking Article 21 directly, but regarded the right to live in healthy environment as a part of fundamental right.

In ***M. C. Mehta* v *Shriram Food and Fertilizer Industries and Union of India*** (Oleum Gas Leak Case-I)14 petitioner filed the writ against the oleum gas leakage and for closing down one of the units of Shriram Food and Fertilizers industries belonging to Delhi Cloth Mills Ltd. The Court allowed to restart plant subject to certain stringent conditions laid down in the order. But the notable

development is that the Court held that, can enterprise, engaged in anyhazardous or inherently dangerous industry which could pose a threat to public health owned an absolute and non-delegable duty to the community to ensure that no harm resulted to anyone. Here again Court made no reference to Article 21. But in the Oleum Gas Leak Case, M. C. Mehta Vs. Union of India, Chief Justice P. N. Bhagwati (as he then was) speaking for the Court clearly treated the right to live in a healthy environment as fundamental right under Article 21 of the Constitution. This case came before the Apex Court's Judges Bench by a reference made by a Bench of three Judges.

In the judgement, Chief Justice P. N. Bhagwati stressed on the need to develop a law recognizing the rule of strict and absolute liability in cases of hazardous or dangerous industries operating at the cost of environment and the human life. The learned Chief Justice observed: "We in India cannot hold our hands back and venture to evolve a new principle of liability which English Courts a new principle of liability to deal with an unusual situation which has arisen and which is likely to arise in future on account of hazardous or inherently dangerous industries which are concomitant to an industrial economy, there is no reason why we should hesitate to evolve such principle of liability merely because, it has not been so done England". The significant feature of this litigation is that the Court decided the important issues of liability and quantum of compensation without making a decision on the issue of assumption of jurisdiction in a writ petition for orders against Shriram Enterprises on the ground of,violation of Article 21 of the Constitution.

The judgment of the Supreme Court had an impact on the various High Court

***Subhash Kumar* v *State of Bihar* AIR 1991 SC 424**

- The petitioner by way of public interest litigation, filed a petition for ensuring enjoyment of pollution free water and air. Justice K. N. Singh and Justice N. D. Ojha held: "Right to live is a

fundamental right under Article 21 of the Constitution and it includes the right of enjoyment of life. If anything endangers or impairs that quality of life in derogation of laws, a citizen has a right to have resource to Article 32 of the Constitution for removing the pollution of water or air which may deteriorate the quality of life. In the ultimate analysis of the problem of environmental pollution and its solution it is submitted that, no doubt, the legal, constitutional measures are necessary in the process of management of the proper and better environment. But it is not the ever lasting solution.

The ever lasting solution is that it calls for the people's inner feeling for the protection of environment, the environmental value system, the peoples' movement rather than a legal movement. Hence, it calls for the mass education and awareness. This aspect has been very rightly upheld by the Supreme Court in the case of ***M. C. Mehta* v *Union of India* AIR 1992 SC 382**.

The peoples' collective conscience should wake up before the matter slips out of the hands. Each country now must seriously strive for the maintaining of ecological balance, otherwise tomorrow will be too late. Although the expression 'environment' has not been expressly mentioned in the Constitution, there are many items in the legislative lists, which enable the Centre and the states to make law in the field of environment. It took a long time for the apex court to pronounce explicitly that the right to life under art 21 of the Constitution includes the right to live in a healthy environment.

The courts often had to decide on the conflicts of rights between citizens. For instance, the freedom of speech and expression, the right to carry on a business, trade or occupation; the freedom of religion; and above all the right to equality, are the areas where these conflicts arise in contradistinction to the right to a healthy environment under art 21, The freedom of inter-state commerce was also adverted to. There were also conflicts between Central legislation and state legislations. The constitutional mandate under directive principles and the fundamental duty to protect and improve the environment has a substantial role to play in reconciling these conflicts.

Right to live with human dignity

The concepts, 'the right to life', 'personal liberty' and 'procedure established by law' contained in art 21 of the Constitution were in a state of inertia during the period of national emergency, the landmark decision in Maneka Gandhi v. Union of India , where the Supreme Court held that the. Right to life and personal liberty, guaranteed under art 21 can be infringed only by a 'just, fair and reasonable' procedure and not by narrow interpretation of legal and constitutional guarantees. It was held that art 21 generates a procedural justice, and also widens the scope of the substantive right to life. The right to life is not confined to mere animal existence, but it extends to the right to live with basic human dignity.

Ecological Balance

Do the new dimensions of the right to life extend to the right to health and other hygienic conditions? ***The Rural Litigation and Entitlement Kendra* v. *State of Uttar Pradesh* AIR 1985 SC 652** is the first case where the Supreme Court made an attempt to look into this question. It ordered the closure of mining operations in certain areas, though in certain other areas it allowed them to be phased out in due course. Notably, the court considered the hardship caused to the lessees, but was of the view that it is a price that has to be paid for protecting and safeguarding the right of the people to live in healthy environment with minimal disturbance to ecological balance. For rehabilitation of the lessees, it was suggested that preference must be given to them when mining leases were granted in other areas of the state. The case was filed under art 32 of the Constitution, and orders were given with emphasis on the need to protect the environment. It is evident that the court was evolving a new right to environment, without specifically mentioning it.

The Mehta Cases

The right to humane and healthy environment is seen indirectly approved in the MC Mehta group of cases decided in the eighties. In the first MC Mehta case, the court had to deal specially with the

impact of activities were a threat to the workers in the factory, as well as members of the general public living outside. The leakage of oleum gas from the factory resulted in the death of a person, and affected the health of several others. Several conditions were laid down under which industries of hazardous products could be allowed to restart. In doing so the court found that the case raised some seminal questions concerning the scope and ambit of arts 21 and 32 of the Constitution.

***M. C. Mehta* v *Union of India* AIR 1987 SC 985**

The concept of right to life in art 21 and the process of vindication of that right in art 32.Although the second MC Mehta case modified some of the conditions, the third MC Mehta case posed an important question concerning the amount of compensation payable to the victims affected by leakage of oleum gas from the factory. The court held that it could entertain a petition under art 32 of the Constitution, namely a petition for the enforcement of fundamental rights, and that it could lay down the principles on which the quantum of compensation could be computed and paid. Here also it did not specifically declare the existence of the right to a clean and healthy environment in art 21.

However, the court evolved the principle of absolute liability of compensation through interpretation of the constitutional provisions relating to right to live, and to the remedy under art 32 for violation of fundamental rights. The premises on which the decision is rendered is clear and unambiguous- the fundamental right to a clean and healthy environment .The first MC Mehta case enlarged the scope of the right to live and said that the state had power to restrict hazardous industrial activities for the purpose of protecting the right of the people to live in a healthy environment. The third MC Mehta case took a step forward and held that read with the remedies under art 32 including issuance of directions for enforcement of fundamental rights, the right to live contains the right to clam compensation for the victims of pollution hazards.

An entirely different situation existed in the fourth MC Mehta case. In the main judgement, there is no reference to the right to life, and the need to protect the environment. It is evident that the judge took for granted that the fundamental right is violated by the alleged pollution, and that this violation entails the court to interfere and issue directions for a remedy despite the mechanisms available in the Water Act. In the supporting judgement however, K N Singh J noted that the pollution of river Ganga is affecting the life, health and ecology of Indo-Gangetic plain. He concluded that although the closure of tanneries might result in unemployment and loss of revenue; life, health and ecology had greater importance.

In the fifth M C Mehta case, locus standi was the issue. The court held that a person interested in protecting the lives of the people who make use of the water flowing in the river Ganga has the right to move the Supreme Court. A petition filed by a public-spirited lawyer is in order, as it related to the protection of the lives of the people.

In none of the case discussed above, has the Supreme Court held explicitly that the right to the environment is contained in the compendium of rights to life and personal liberty in Art 21. Nevertheless, it is quite evident that, in these cases, the court issued directions under art 32 of the Constitution, which is a provision to enforce fundamental rights; to protect the lives of the people, their health and the ecology. The vigilance to safeguard the fundamental rights and the readiness to interfere for saving the life and health of the people were clearly spelt out in these judicial pronouncements. Despite the presence of specific laws dealing with the matter, the court wanted to ensure that the activities authorized under these laws were carried out without harming the environment to which every person has a fundamental right. Commissions were appointed to examine these questions and report the same so that the court could get more insight into the situation before making any final decisions.

In one case, it went to the extent of laying down the principle of absolute liability for those who violate the environment. These initiatives lead to an irresistible conclusion that the right to life in art 21 is wide and comprehensive. The right becomes meaningless if it does not contain such elements of enhancing the quality of life as the right to a clean, humane and healthy environment, and the right to get fair compensation when this right is violated.

High Courts Initiation for Protection of Environment

While the apex court was reluctant for a short period to make a specific mention, various high courts in the country went ahead and enthusiastically declared that the right to environment was included in the right to life concept in art 21 of the Constitution. In comprehending the right to environment, the high courts were more specific and direct. T. Damodhar Rao v Special Officer, Municipal Corporation of Hyderabad is a landmark decision. The people living in a residential area challenged the attempt to convert open space in their vicinity into another residential complex. Agreeing with the challenge, the court held that the directions in the development planon the nature of the use as open space would prevail. The ownership subsequently acquired stood curtailed by the development plan, and that the attempts to build houses in such open space were contrary to law.

In ***V. Lakshmipathy*** **v** ***State of Karnataka*** , the high court held that once a development plan had earmarked the area for residential purpose, the land is bound to be put to such use only. Interestingly, the respondents in the case neither denied the existence of pollution from the industrial undertakings, nor came forward to explain what measures were taken to curtail pollution. Allowing the petition, the court pointed out: Entitlement to a clean environment is one of the recognized basic human rights and human rights jurisprudence cannot be permitted to be thwarted by status quo on the basis of unfounded apprehensions. The court laid down the following in unmistakable terms. The right to life inherent in Art 21 of the Constitution of India does not fall short of the requirement of quality of life which is possible only in an environment of quality where, on account of human agencies, the quality of air and quality of environment are threatened or

affected, the court would not hesitate to use its innovative power to enforce and safeguard the right to life to promote public interest. The decision in Lakshmipathy clearly and specifically declares that art 21 guarantees right to environment.

In ***LK Koolwal* v *State of Rajasthan*, AIR 1988 Raj 2** the right was based for a demand for cleaning the city of Jaipur and saving it from unhygienic conditions. Looking at the impact of art 51-A(g) of the Constitution, the Rajasthan High Court was of the view that though termed as duty, the provision gives citizens a right to approach the court for a direction to the municipal authorities to clean the city, and that maintenance of health, sanitation and environment falls within art 21,thereby rendering the citizens the fundamental right to ask for affirmative action.

The Apex Court Strikes

The first time when the Supreme Court close to declaring the right to environment in art 21 was in the early nineties, in ***Chetriya Pardushan Mukti Sangharsh Samiti* v *State of Uttar Pradesh* (1990)4 SCC 449** and ***Subhash Kumar* v *State of Bihar*** . In Chhetriya Pardushan, C. J. Sabyasachi Mukherjee observed. Every citizen has a fundamental right to have the enjoyment of quality of life and living as contemplated in Art 21 of the Constitution of India.

In Subhash Kumar, KN Singh J observed in a more vivid manner. Right to live includes the right to enjoyment of pollution free water and air for full enjoyment of life. However, in both the cases, the court did not get an opportunity to apply the principles to the facts of cases, as the court found that the petitioners had made false allegations due to a personal grudge towards the respondents companies alleged to be polluting the environment.

In ***Indian Council for Enviro-legal Action* v *Union of India* AIR 1991 SC 1446** remedial action was sought for the malady that gripped the villagers of Bichiri where the chemical industries for manufacture of toxic. 'H' acted were located. Although the respondents stopped producing the toxic material, they did not comply with various orders of the court in completely removing the sludge

or storing them in a safe place. All facts and materials were brought to the notice of the court. Since the environmental damage to the village was enormous, the Supreme Court categorically fixed the responsibility on the errant industry and asked the Central Government to recover, in case the industry failed to take effective remedial action, the expenses for the action. Attaching the properties of the respondents,

Court held: If this court finds that the said authorities have not taken action required of them by law and that their action is jeopardizing the right to life to the citizens in the country or of any section thereof, it is the duty of this court to interfere. It was social action litigation on behalf of the villagers, whose right to life, was invaded and seriously infringed by the respondents. When the industry is run on blatant disregard of the law to the detriment of life and liberty of the citizens living in the vicinity, it is self-evident that court shall intervene and protect the fundamental right and liberty of the citizens.

Right to a Healthy Environment: Universal Acceptance

The right to a healthy environment got entrenched in art 21 of the Constitution. Courts in a large measure relied on this right in addressing a variety of aspects relating to protection and improvement of environment. The apex court accepted beyond doubt the proposition that art 21 generates the right to a healthy and hygienic environment In ***Andhra Pradesh Pollution Control Board* v *MV Nayudu* AIR 1999 Sc 812, P 825**, the Supreme Court placed environmental concerns and human rights on the same pedestal and held that both are to be traced to art 21.

In ***Hinch Lai Tiwari* v *Kamala Devi* 2003 SC 724, P 731** the court held that preservation of material resources of the community such as forests, tanks, ponds, hillocks is needed to maintain ecological balance so that people would enjoy a quality of life, which is the essence of right guaranteed under art 21. Explaining the concept of the right to life in art 21 of the Constitution, the Supreme Court held in **KM Chinnappa v Union of India**. Enjoyment of life and its attainment including their right to life with human dignity encompasses within its ambit, the protection and

preservation of environment, ecological balance free from pollution of air and water, sanitation without which life cannot be enjoyed. Any contra acts or actions would cause environmental pollution.

In ***M C Mehta* v *Kamal Nath*, AIR 2000 SC 1997** it was made clear that any disturbance of the basic environmental elements, namely, air, water and soil, which are necessary for 'life', would be hazardous to 'life' within the meaning of art 21 of the Constitution.

CONSTITUTIONAL MANDATE

The right to a healthy environment is the product of judicial interpretations adding new dimensions to the right to life in art 21 of the Constitution. On the other hand, the forty-second amendment to the Constitution had imposed a duty on the state and the citizens to protect and improve the environment, by adding art 48A to directive principles and art 51A (g) as a fundamental duty. These insertions in the Constitution have acted as the foundations for building up environmental jurisprudence in the country.

In ***T. Damodar Rao* v *Special Officer, Municipal Corporation of Hyderabad* AIR 1987 AP 171**, Andhra Pradesh High Court referred to art 51-A (g) and 44 art 48-A and prevented conversion of an open space to a residential complex. The court noted that the protection of the environment is the duty of the citizens, as well as the obligation of the state. The Rajasthan High Court found in ***L K Koolwal* v *State* AIR 1988 Raj 2** that the unhygienic conditions in the city of Jaipur were largely due to the negligence of the municipal authorities. Directing them to clean the city, the judgement laid emphasis on the fundamental duty of the citizens under art 51-A (g) of the Constitution to protect and improve the environment. According to the court, the provision renders the citizens the right to move the court to see that the state performs its duties faithfully, and strives to protect and

improve the natural environment. It is the primary duty of the municipal council to remove filth, rubbish, night soil, noxious odour or any offensive matter and financial inability cannot be a plea.

In ***M C Mehta* v *Union of India*, AIR 2002 SC 1696** Arts 39(e), 47 and 48-A collectively cast a duty on the state to secure the health of the people, improve public health and protect and improve the environment. On this premise, to protect the health of the people of Delhi, the court issued several directions to phase out grossly polluting old vehicles and non-CNG buses. The court rightly rejected the government's plea that CNG was in short supply. The courts in India gradually enlarged the scope of the concept of quality of life and living, and applied it to various issues affecting the environment.

The courts mainly relied on right to life in art 21 although significantly, certain cases had wider perspective of the constitutional provisions bearing on environment, especially those among fundamental rights, directive principles and fundamental duties. These provisions imposed a constitutional mandate for protecting and improving the environment. Once the existence of a fundamental right to environment is established in art 21, it is likely that the right may not be confined to human beings only. Besides environment being a compendium of many things, the expression 'person' in art 21 may be interpreted as an entity having legal personality.

As Justice Douglas had stated, inanimate objects may also be considered as invisible parties in environmental litigation. The verdict in the Sludge case, speaks on behalf of a village, its soil, irrigation canals, wells, cattle and trees. It speaks about the sufferings that these animate and inanimate objects faced as a consequence of the accumulated poisonous wastes remaining behind in the village, long after the industry stopped production. Judicial activism has reached such heights that when the written law is found to be weak, courts readily rely on the right to quality of life for removing environmental hazard.

***Indian Council for Enviro Legal Action* v *Union of India* AIR 1996 SC 144**

A question arises whether enforcement of a specific individual right to a humane environment, explicit or implied, in the Constitution, affords sufficient flexibility in balancing environmental values, as opposed to economic and other interests. The rights to environment can be negative as well as positive. While the negative rights protect the individual or groups from interference, the position rights require affirmative action for environmental protection on the part of the state. Therefore, what is the use of an individual right to environment if it is difficult to be enforced It is said that the legislature and the executive, and not the courts offer greater protection for the environment. It is here that the constitutional mandate becomes more relevant.

The Constitution imposes on all institutions—the legislature, the executive and the judiciary—as well as the citizens, the responsibilities of protecting and improvement the environment. It is only when an accident of the magnitude and impact of the Bhopal gas leak disaster takes place, That environmentalists, social workers, the general public and government institutions start thinking about new ways and means of preventing similar tragedies in the future. Process leads to legislative and administrative activism.

Compensation to the victims of Bhopal gas leak disaster raised a dilemma in Indian torts law, which had its origin in English common Law, and sustained its existence through various statutes generating semblance of tort actions. There was paucity of litigation in the field of torts owing to a combination of factors including delays, exorbitant court fee, complicated procedure of recording evidence, lack of public awareness, the technical approach of the Bench and the Bar, and absence of specialization.

SUSTAINABLE DEVELOPMENT & DOCTRINES FOR PROTECTION OF ENVIRONMENT

The concept of sustainable development is the result of an integrated approach of political and decisional factors, in which environmental protection and long-term economic growth are considered to be complementary and interdependent.

The central principles behind sustainable development are:

- Equity and fairness among countries and generations,
- The long-term vision on the development process,
- Systemic thinking and interconnection between economy, society and the environment.

Key objectives have been established based on the major principles of sustainable development:

(a) Environmental protection through measures that allow the separation of economic growth from negative environmental impacts;

(b) Social equity and cohesion through observance of fundamental human rights, cultural diversity, equal chances and elimination of all forms of discrimination;

(c) Economic prosperity through the promotion of knowledge, innovation and competitiveness with an aim to ensure higher living standards and full high-quality employment;

(d) Meeting EU's international responsibilities through the promotion of democratic institutions in the interest of peace, security and freedom and of the principles and practices of sustainable development.

STOCKHOLM DECLARATION 1972

This declaration has enumerated certain principles about sustainable development.

Principle 3: states that the Earth's capacity to produce vital renewable resources be preserved and wherever practical, restored.

Principle 5: states that Non-renewable resources must be used in such a way that they are protected against the danger of their future exhaustion.

Principle 11: it demand that the environmental protection policies of all countries should support and not to have detrimental effect on the present or future development potential of developing countries.

BRUNDTLAND COMMISSION 1987

The term "sustainable development" was brought into common use by the commission in its report "our common future".

According to this commission the concept of Sustainable development contains within it 2 key concepts.

a. The concepts of needs in particular the essential needs of the world's poor, to which overriding priority should be and

b. The idea of limitation imposed by the state of technology and social organization on the environment ability to meet present and future needs.

EARTH SUMMIT

This conference forced the people world-wide to re-think how their lives affect natural environment and resources and to confront a new what determines the surroundings in which they live.

It was the largest U.N. Conference ever held and it put the world on a path of sustainable development which aim at meeting the needs of the present without compromising the ability of future generation to meets their own needs.

Some of the major achievements of Earth Summit lie in the form of following documents which it produced.

a. Rio-declaration on environment and development

b. Agenda 21

c. Forest principles

d. Two legally binding conventions

e. Convention on climate change

f. Convention on biodiversity

Brudtland Commission defines "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs"

(a) *The concepts of needs, in particular the essential needs of the worlds poor, to which overriding priority should be given, and:*

(b) *The idea of limitations imposed by the state of technology and social organization on the environments ability to meet present and future needs.*

BASIC UNDERSTANDING OF SUSTAINABLE DEVELOPMENT

Understanding the sustainable in its basic essence will help to think in the broader perspective. Multidisciplinary approach on the said topic will suffice the interest of the study, following diagram will give us the clarity on sustainable development.

PRINCIPLES INVOLVED IN SUSTAINABLE DEVELOPMENT

- Inter- Generational Equity
- Precautionary Principle
- Polluter pays Principle
- Public Trust Doctrine
- Absolute Liability Principle
- Environmental Awareness Programmes

INTER – GENERATIONAL EQUITY

Intergeneration equity simply implies a duty of present generation towards future generations. A trust in which the present generations of human being are obliged to take care of the natural resources and ecology so that all future generations shall also have an equal chance to enjoy the mother nature and right to life. "The present generation has a right to use and enjoy the resources of the Earth but is under an obligation to take into account the long term impact of its activities and to sustain the resource base and the global environment for the benefit of future generations of humankind." Brundtland Commission clearly emphasized on the importance of the concept of intergenerational equity. It says that "we borrow environmental capital from future generations with no intention or prospect of repaying ... We act as we do because we can get away with it: future

generations do not vote; they have no political or financial power; they cannot challenge our decisions."

- The Natural Resources are the Permanent assets of the man kind and not be exhausted for one generation The principle of inter-generational equity lays emphasis on the right of each generation of human beings to benefit from the cultural and natural inheritance of the past Nexus between the Inter-generational & Intra generational Equity Principles of Inter-generational Equity.
- Principle 1 & 2 of Stockholm declaration speaks about the Intergenerational Equity, three principles which are the basis for the intergenerational equity are as follows –

Conservation of Options:

Each Generation should be required to conserve the diversity of the natural and cultural base, so that it doesn't restrict the options available to future generations in solving their problems and satisfying their needs.

Conservation of Quality:

Each generation should be required to maintain the quality of the planet so that it is passed on in no worse condition,

Conservation of Access:

Each generation should provide its members with equitable rights of access to the legacy of past generations and should conserve for the generations there are two theories of inter generational equity;

(a) Our relationship to other generations of our own species and our relationship to the natural system of which we are a part.

(b) All generations are inherently linked to the other generations, past and future in using common patrimony of the earth.

(c) The Natural Resources are the permanent assets of mankind and are not intended to be exhausted in one generation, lays emphasis on right of each generation of human beings to benefit from the cultural and natural inheritance of its pasts generation.

***State of Himachal pradesh* v *Ganesh Wood Products*, AIR 1996 SC 149**

- Katha is a necessary Ingredient in pan and pan Masales, katha is derived from the Khair tree, central portion of the tree is used for pan masala products, these trees are found in considerable numbers at Himachal pradesh.
- A writ petition was filed by Ganesh wood products against the decision of the government of the state of Himachal Pradesh to refuse the establishment of katha Factories in the state.

- The Government submitted that such establishment would lead to indiscriminate felling of the so called Khair trees, for manufacturing katha was not sufficient to sustain the proposed industries

- Court emphasised that during the years 1992 to 1993 every proposed factory using Khair trees was approved by the state authority, this was contrary to public interest involved in preserving forest, wealth, maintenance of environment.

Judicial Reasoning- The court held that the Himachal Pradesh government body's approach of 'there is no harm in approving any and every proposal that comes before it' was a totally fault and

myopic approach. It was also violate of the National Forest Policy and the State Forest Policy evolved by the Government of India and the Himachal Pradesh Government respectively. Supreme Court stated that "Present Generation has no right to imperil the safety and well being of the next generation to come thereafter".

***Kinkri Devi* v *State*, AIR 1988 HP 4**

Case was adjudicated by Justice P. Deevan, R Thakur, PIL was filed alleging that Unscientific and Uncontrolled quarrying of the limestone has caused damage to shivalik hills was posing a danger to the ecology, environment, and inhabitants of the area

The Himachal Pradesh High Court pointed out that if just balance is not struck between development and the environment by proper tapping of the natural reources, there will be violation of article 14, 21, 48-A and 51A(g). The Natural resources has to be tapped first, but tapping has to be done in such a way that ecology and environmental are not serious way, court issued interim direction to setup committee on this and issue proper granting of lease.

K. Guruprasad rao* v *State of Karnataka, (2013) 8 SCC 418

- Decided by Justice G S Singhvi, & Justice Ranjan Prakash Desai, Apellant filed a writ petition and prayed for cancellation of mining lease granted to respondent, issue mandamus to official respondent(Aarpe Iron ore mines) to stop mining within one kilometer, he further prayed for restoration of temple to original for.

-Sustainable Development includes preservation of historical/ Archaeological monuments for future generations.

PRECAUTIONARY PRINCIPLE

Prevention is better than cure; protection of the environment can effectively be done by taking adequate precautions against the Environmental damage. Precautionary principle mandates about beware of what you do Principle 15 of Rio Declaration, mandates about the protection of the Environment.

In order to protect the Environment polluter principle shall be widely applied Assimilative Capacity, Environment absorb the shock itself but beyond certain limit pollution may cause damage to the environment; rule of law is in to picture when there is a disturbance of the environment.

RIO-DECLARTION

It proclaims that "in order to protect the environment the precautionary approach shall be widely applied by states according to their capabilities. Where there is threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost effective measures to prevent environmental degradation.

Vellore Citizens Welfare Forum* v *Union of India

The Supreme Court declared that the precautionary principle is an essential feature of sustainable development. Supreme Court has also supplied meaning to the precautionary principle in the context of the Municipal law. According to which it means,

i) Environmental measures by the state government and the statutory authorities – must anticipate, prevent and attack the causes of environmental degradation.

(ii) 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.

The 'onus of proof' is on the actor or the developer / industrialist to show that his action is environmentally benign.

The supreme court stated that "the precautionary principle suggest that where there is an identifiable risk of serious and irreversible harm, including, for example extinction of species, wide spread toxic pollution, major threats to essential ecological processes, it may be appropriate to place the burden of proof on the person or entity proposing the activity that is potentially harmful to the environment.

***A P Pollution Control Board* v *M V Nayudu,* AIR 1999**

- Case was decided by Justice S B Majumdar and Justice M Jagantha, Municipal administration and urban development of Government of AP, prohibited various types of development within 10KM of two lakes, Himayat sagar & Osman Sagar these were the reservoirs to supply the water in Hyderabad and Secunderabad.

- Industry sought to establish in prohibited area within 10 KM, court ordered state of AP within radius of any lake, must take an action In-consultation with board to prevent pollution to drinking of water

- Court ordered that there should not be any said industries within the radius and should not pollute the water bodies.

***M.C.Mehta* v *Union Of India* (Air 1996 Sc 2715) or Taj Mahal Case**

- In this case the Supreme Court for protecting the Taj Mahal from air pollution, directly applied precautionary principle. In 1984, M.C.Metha, a conscientious advocate, place a case before the court the material he had gathered and warned of damage to the Taj Mahal from air pollutants.

- According to the petitioner, the foundries, chemical/hazardous industries and the refinery at Mathura were the major sources of damage to the Taj. Sulphur dioxide emitted by the Mathura Refinery and the industries when combined with oxygen- with the aid of moisture- in the atmosphere forms sulphuric acid called "ACID RAIN', which has a corroding effect on the gleaming white marble.
- Industrial /refinery emissions, bricks kilns, vehicular traffic and generator-sets are primarily responsible for polluting the ambient air around Taj Trapezium Zone (TTZ). The petition states that the white marble has yellowed and blackened in places. It is inside the Taj that the decay is more apparent.

- Yellow pallor pervades the entire monument. The court stated that the 'Taj, apart from being a cultural heritage, is an industry by itself. More than two million tourists visit the Taj every year. It is a source of revenue for the country.

- This court has monitored this petition for over three years. Experts studies proved that emissions from coke/coal based industries in the Taj trapezium zone had damaging effect on the Taj Mahal.

The court observed that "the atmospheric pollution in TTZ has to be eliminated at any cost. Not even 1% chance can be taken when-human live apart-the preservation of a prestigious monument like the Taj is involved.

- The court held that the industries, identified by the pollution control board as potential polluters, had to change over to natural gas as an industrial fuel and those who were not in a position to obtain gas connection should stop functioning in TTZ.

Marble Color has changed it to Pale Yellow

POLLUTER PAYS PRINCIPLE

Polluter pays principle is the double edge sword There is an absolute liability on harm to the environment, the person who is responsible for Environmental pollution should pay the penalty and compensation for the people.

- Principle 16 of Rio Declaration Endeavours to promote the polluter pays principle
- Polluter shall be responsible for the act done and must contribute for the growth of an environment.

***M.C.Mehta* v *Kamalnath*, 1997 (1) SCC 388**

- Decided by Justice kuldip Singh and Justice S Saghir Ahmad. Span Motels had also encroached upon an additional area of land adjoining leasehold area, motel has used earthmovers and bulldozers to turn the course of river Beas, create new channel to divert water flow

- Court observed that area being ecologically fragile and to be converted to private ownership, court relied upon the public trust doctrine; state is the trust of all documents. Public at large is the beneficiary of seashore

- Court quashed the leases and directed the HP to take over the area of land and to restore it to the original natural conditions, applied polluter pays principle and asked for payment of damage

- The Polluter is Responsible for compensating and repairing the damage caused by his omission; this is the quintessence of polluter pays principle

Indian Council for Enviro Legal Action* v *Union of India*, AIR 1996 SC *1446

- The petitioner, the Indian Council for Enviro-Legal Action brought this action to prohibit and remedy the pollution caused by several chemical industrial plants in Bichhri village, Udaipur District, Rajasthan.

- The Respondents operated heavy industry plants there, producing chemicals such as oleum (a concentrate form of sulphuric acid), single super phosphate and the highly toxic "H" acid (the manufacture of which is banned in western countries)

- The Supreme Court gave its verdict on the long impending judgment on the Bichhri case, Writ Petition No. 967 of 1989. It imposed a fine of Rs 38.385 crores on Hindustan Agro Chemicals Ltd (HACL) with compound interest since 1997 for the remediation of over 350 hectares of land in Bichhri.

- The Court also slapped a fine of Rs 10 Lakh on HACL for keeping the litigation alive for almost 15 years even though the court had disposed the petition in 1997, imposing the fine.

- Polluter Pays Principle according to which polluter must pay for the damage done to the human beings and environment.

- An azo dye and untreated toxic sludge was discharged into the open compound which, in due course of time, flowed through a canal across entire area and the rain water washed the sludge deep into the bowels of earth.

- It caused pollution of river water and underground water upto 70 feet below the ground within a radius of seven miles of the village *Bichhari*, It further left the fields of this area infertile. As a result of which residents of *Bichhari* and of nearby villages had to migrate to other places.

- Looking at the widespread ramification of the hazardous or inherently dangerous activities, persons or the institutions would be held 'liable absolutely', though they have taken all reasonable care while carrying out such activity.

- The liability to compensate is twofold; to compensate the victims of pollution for inconvenience and health loss and the other, to restore the environmental degradation.
- It was also ordered by the court that the Central Government must determine the amount required for carrying out remedial measures and the status report submitted by the National Environmental & Engineering Research Institute (NEERI) in the year 1994 be made a basis to compute it. NEERI in its report, had stated that rupees 4,00,00,000/- would be needed to reverse the power of soil and water contamination.

***S. Jaganath* v *UOI*, AIR 1997 SC 811**

- Judgement delivered by Justice kuldip singh & Justice Sagir Ahmad. Laws Applicable: PIL Under A. 32, Provisions of EPA, 1986, Provisions of CRZ Notification 1991, and Provisions of Water Act, 1974. Cost benefit analysis of aquaculture industry vis-a-vis Eco- restoration

- In this case, it was found that the shrimp culture industry in Chilka & Pulikat lakes (Orissa), adjacent to high sea, was causing salinity of soil and the drinking water, turbidity of water courses with detrimental implication on local fauna and flora.

- The Petitioner through PIL has sought the enforcement of CRZ Notification, 1991 for prohibiting intensive and semi intensive type of prawn farming in ecologically fragile coastal area an Constitution of national Coastal Management Authority for safeguarding the marine life.

- Due to commercial Aquaculture farming there is a considerable degradation of mangrove ecosystems, pollution of potable waters and reduction in fish catch

- The court observed that most of the coastal land have been converted in to shrimp farm which were used for food crops and traditional fishing.

ISSUE

Whether Intensive and Semi- intensive farming type of prawn farming in the ecologically fragile area allowed

JUDGMENT

- The Aesthetic qualities and recreational utility of the said area has to be maintained Court ordered that No part of the agricultural land shall be converted into shrimp culture Farm.

  An Authority shall be constituted under the central government under sec 8(3) of EPA, 1986.

- Aquaculture industries functioning at present within 1KM radius of Chilka lake must compensate the affected persons Aquaculture functioning outside the CRZ Should obtain permission and clearance from authority within prescribed time failing which they shall stop working.

PUBLIC TRUST DOCTRINE

Government shall be the trustee for all the natural resources like; river, lake, trees and other things which are present in the environment. Doctrine was founded on idea of government is the trusteeship for fee and unimpeded use of general public. It is the common law concept, defined and

addressed by academics in the United States and the United Kingdom. The Said resources being a gift of nature, they should be made freely available to everyone irrespective of the status in life.

The Doctrine Enjoins upon the government to protect the resources for enjoyment of general public rather than to permit their use for private ownership or commercial purposes. The PTD has developed in India through several landmark cases in the Supreme Court. The Supreme Court has deduced this doctrine from various sources such as the Common Law and Article 21 of the Indian Constitution.

The public trust doctrine "is based on the notion that the public holds inviolable rights in certain lands and resources, and that regardless of title ownership", and that "the state retains certain rights in such lands and resources in trust for the public."This conception of public rights has two ancient bases.

Firstly, under Roman law the air, running water, the sea, and consequently the sea shore' were the property of no man but rather were common to all." Secondly, early English common law provided that title to tidelands had two components": "the King's right of jus privatum, which could be alienated, and the jus public cum rights of navigation and fishing, which were held by the King in inalienable trust for the public" the Constitution, which guarantees the fundamental right to life, and Article 39 in Part IV of the Constitution which provides for equitable distribution of material resources.

***M. I. Builders* v *Radhey shyam sahu* (AIR 1999 SC 2468)**

- Case was Decided was by Justice Majumder and Justice Wadhwa, Construction of Underground Shopping Complex in public park Permission granted by City Corporation, entrusting construction to a private builder Tenders were not invited was against the Municipal Act and Developmental plan

- Judicial Review was under Article 226, on violation of public trust doctrine, The builder was supposed to develop the site at its own cost and then to realize the cost with profit not exceeding more than 10% of the investment in respect of each shop. Under the terms of the agreement, full freedom was given to the builder to lease out the shops as per its own terms and conditions to persons of its choice on behalf of the Mahapalika.

- The builder was also given the right to sign the agreement on behalf of the Mahapalika and was only required to a copy to the Mahapalika after its execution. Both the builder and the Mahapalika were to be bound by the terms of that agreement.

JUDGMENT

- The Court ordered Mahapalika to restore the park to its original position within a period of three months from the date of the judgment and until that was done, to take adequate measures and to provide necessary safeguards and protections to the users of the park.

- The only reason given by Mahapalika for the construction of the underground commercial complex was to ease the congestion in the area but it led in to more congestion Supreme Court found that the terms, conditions, clauses of Agreement between M.I. Builders and Mahapalika were found were unreasonable, unfair atrocious.
- Agreement was opposed to Public policy, court ordered for demolition of said shopping complex. Supreme court reaffirmed that the public trust doctrine is established in the Indian legal system and asserted that the public authorities should act as trustees of natural resources.

***Perumatty Grama Panchayat* v *State of Kerala*, 2004 (1) KLT 731**

Coca-Cola Company (soft drinks giant) established a factory at Plachimada, Kerala to produce beverages, the main raw material of which was groundwater. The company obtained a licence from the Perumatty Grama Panchayat and started commercial production in March 2000.

The company started operation the local people (mainly from tribal communities) began to experience groundwater scarcity as wells in the nearby area became dry. As the local people raised objection against the groundwater exploitation of the company the Panchayat refused to renew the licence of the company. Later the State Government of Kerala challenged the Gram Panchayat's power to take such decision in the High Court.

The State and its instrumentalities should act as trustees of this great wealth. The State has got a duty to protect ground water against excessive exploitation and the inaction of the State in this regard will tantamount to infringement of the right to life of the people guaranteed under Article 21 of the Constitution of India.

- Apex Court has repeatedly held that the right to clean air and unpolluted water forms part of the right to life under Article 21 of the Constitution. So, even in the absence of any law governing ground water, Panchayat and the State are bound to protect ground water from excessive exploitation.

- The matter went up to the supreme court and finally the Hindustan Coca-Cola Beverages Limited, informed the Supreme Court that it had no plans whatsoever to restart operations in its bottling plant in Plachimada, Kerala, the curtain came down on more than a decade-long tireless agitation by the residents of Perumatty *gram panchayat* against the beverage giant.

Cokes' Factory shutdown at Plachimada

ABSOLUTE LIABLITY

Absolute liability in its basic sense refers to no fault liability, in which the wrong doer is not provided with exceptions which are provided in rule of strict liability. Absolute liability is more stringent from of strict liability; the rule laid in *Rylands* v *Fletcher* was recognized by Supreme Court of India in M. C. *Mehta* v *Union of India*.

A clear distinction between Strict and Absolute liability rule was laid down by SC in *M.C.Mehta* v *Union of India* , giving four basic points only those enterprises will be liable which are betrothed in hazardous or inherently dangerous activity, this implies that other industries not falling in the ambit stated, will be covered under Strict liability rule.

- The escape of a dangerous thing from one's land is not necessary, which means that the rule will be applicable to those injured within the premise and person outside the premise

- Rule doesn't have an exception, which is provided in rule of Strict Liability

- The quantum of damages depends on the magnitude and financial capability of the enterprise.

- The facts of the case are that there was leak of oleum gas from one of the units of Shriram Foods and Fertilisers Industries, on 6th December, 1985, in the aftermath of the Bhopal gas, the application was filed to get compensation to the persons who had suffered harm on account of leak of the oleum gas.

- The important question before the court was that whether as to continue with the principle of strict liability for the compensation or to evolve our very own principle which is more strict and binding. SC in the above case apart from dealing with the point of law regards

the ambit of Art. 12 and 34, also gave a new rule of absolute liability, where by giving various features of the same and clearly differentiating between the earlier existing principle and the new principle.

- Petition was filed by M. C. Mehta for closure of Shriram Industries, was engaged in manufacturing of hazardous substances and located in densely populated area Whether such hazardous industries to be allowed to operate, If they are allowed to work in such areas any regarding mechanism to be evolved Liability and compensation how to be determine, CPCB to Appoint an Inspector to inspect and see the pollution standards under water

- Act and Air act as Workers safety committee, Instruct and train workers in plant safety and install loudspeakers To use safety masks Undertaking from chairman, stating by Escape of gas if there are deaths. Court directed to Deposit 20 lakhs as guarantee and 15 Lakhs for payment of compensation.

Difference between Strict Liability and Absolute Liability

The difference between Strict and Absolute liability rules was laid down by Supreme Court in ***M.C. Mehta* v *Union of India***, where the court explains as:

Firstly, In Absolute Liability only those enterprises shall be held liable which are involved in hazardous or inherently dangerous activities, this implies that other industries not falling in the above ambit shall be covered under the rule of Strict liability.

Secondly, the escape of a dangerous thing from one's own land is not necessary; it means that the rule of absolute liability shall be applicable to those injured within the premise and person outside the premise.

Thirdly, the rule of Absolute liability does not have an exception, whereas as some exception were provided in rule of Strict Liability. Also in the case of ***Union of India*** **v** ***Prabhakaran Vijay Kumar*** the view of constitutional bench was that the rule of MC Mehta is not subject to any type of exception.

Fourthly, the Rule of Ryland v Fletcher apply only to the non natural use of land but the new rule of absolute liability apply to even the natural use of land. If a person uses a dangerous substance which may be natural use of land & if such substance escapes, he shall be held liable even though he have taken proper care. Further, the extent of damages depends on the magnitude and financial capability of the institute.

Supreme Court also contended that , The enterprise must be held to be under an obligation to ensure that the hazardous or inherently dangerous activities in which it is engaged must be conducted with the highest standards of safety and security and if any harm results on account of such negligent activity, the enterprise/institute must be held absolutely liable to compensate for any damage caused and no opportunity is to given to answer to the enterprise to say that it had taken all reasonable care and that the harm caused without any negligence on his part.

Bhopal Gas Leak Disaster Case

In 1984, on night of December 2/3 mass disaster, the worst in the recent times, was caused by the leakage of Methyl Isocynate and other toxic gases from the Union Carbide India Ltd, (UCIL) at Bhopal. It is a subsidiary of Union Carbide Corporation (UCC), a multinational company registered in USA. About 2660 people died instantaneously and lacs of people were seriously injured. However, the toll of death had risen to 4000. Several suits were filed against UCC in the United States District Court of New York by the legal representatives of the deceased and many of the affected persons for damages.

The Union of India under the Bhopal Gas Leak Disaster (Processing of Claims) Act, 1985 took upon itself the right to sue for compensation on behalf of the affected parties and filed a suit for the same. All the suits were consolidated and dismissed by Judge Keenan on the ground of forum inconvenience. On 12th May, 1986, Judge Keenan held that Indian judiciary must have the "opportunity to stand tall before the world and to pass judgment on behalf of its own people." After the judgment of Keenan Judge the Government of India in the exercise of its power under the Bhopal Gas Leak Disaster (Processing of Claims) Act, 1985 filed a suit in the District of Bhopal which awarded interim compensation for the amount of Rupees 350 crores. This amount, on an appeal to Madhya Pradesh High Court preferred by UCC, was reduced to rupee 250 crores. This order was challenged in Supreme Court.

While the suits were pending in the New York District Court, an offer of 350 million dollars had been made by UCC for the settlement of the claim. This effort continued when the dispute arising out-of interim compensation ordered by the District Court of Bhopal came before the High Court. However, the decision of the Madhya Pradesh High Court was challenged by both, UCC and the Union of India.

The Government of India assailed the reduction in the amount of interim compensation and UCC contended that in a suit for damages where the basis of liability was disputed the Court had no power to make an award of interim compensation. It is in this case that the matter was settled by two orders dated 14th and 15th of February, 1989. On 14th February, 1989, the Supreme Court recorded the settlement for claims reached between the parties in the suit for 470 million U.S. Dollars and as a consequence, all civil and criminal proceedings against UCC and UCIL and their officers were terminated. On 15th February 1989 the terms of settlement signed by learned Attorney General for the Union of India and the Counsel for the UCC was filed.

The Settlement of the claims which was recorded by the Supreme Court was assailed mainly on two grounds

(a) The criminal cases could neither have been compounded nor quashed nor could the immunity have been granted against criminal action,

(b) The amount of compensation was very low. As to the withdrawal of criminal cases it was held that "the quashing and termination if the criminal proceedings brought about by the orders dated 14th and 15th February, 1989 required to be, and are, hereby reviewed and set aside." As to quantum of compensation it was argued that the principle laid down in M.C. Mehta v. Union of India, should be adopted. It was held by the court that the "settlement cannot be assailed as violative of Mehta principle which might have arisen consideration in a strict adjudication. In the matter determination of compensation also under the Bhopal Gas Leak Disaster (PC) Act, 1985, and the Scheme framed there under, there is no scope for applying the Mehta principle inasmuch as the tortfeasor, in term of the settlement- for all practical purpose – stand nationally substituted by the settlement and which now represent and exhausts the liability of the alleaged hazardous entrepreneurs, viz. UCC & UCIL. We must all add that the Mehta principle can have no application against Union Of India inasmuch as requiring it to make good deficiency. If any, we do not impute to it the position of a joint tort-feasor but only of a welfare state".

CONCLUSION

Policies for Protection of Environment have played pivotal role for protection of the Environment, right from the ancient times there has been an urge for development and for protection of the environment. Movements with a motto for protection of the Environment have been impeccable.

Provisions under the Constitution of India have laid a path line for Protection of environment by 42nd amendment, wherein it inserted fundamental rights and implied fundamental right for protection of the environment.

International Conventions on Environment have brought in the most remarkable change in the protection of environment nationally and internationally. Judicial approach on Environment have been the boosting factor for protection of the environment, a lot of NGO's and Pro bono workers have been the contributing factor for protection of the environment.

Questions

1) Explain the role of public interest litigation in environmental protection.
2) Explain the constitutional provisions which protects environment with decided cases?
3) Explain the doctrine of public trust, polluter pays and precautionary principles with the help of decided cases.
4) Discuss the significance of Rio-summit and its principles 5) Write a brief note on Stockholm declaration 1972.
6) "Article 21 of Indian constitution is wide enough to encompass various aspects of right to clean environment and earn livelihood." Discuss with the help of leading cases?
7) Explain the remedies prescribed under criminal law for pollution problem.
8) Explain the rule of absolute liability in Environmental Law.
9) 42 Amendment of Constitution in 1976 and Environment Protection
10) "Right to live in wholesome environment is fundamental right". Discuss with decided cases.

UNIT – III

SYNOPSIS

- Introduction
- Sustainable Development
- International Conventions
- Tran boundary Pollution
- Common law aspect of Environment
- Criminal Law and Environment
- Conclusion

Introduction

Third unit under Environmental law deals with International Conventions which are the strength of sustainable development; second unit under the Environmental law has in itself the principles of sustainable development like precautionary principle, Polluter pays principle, public trust doctrine and many so. If one is clear with the second unit it will be very easy to understand the third unit. Common law aspect of Environment speaks about the laws which are governing environment from torts perspective. Criminal law and Environment has the provisions of IPC and Criminal procedure code, which clearly envisages the punishment for protection of the environment.

Sustainable Development

In 1987, the Bruntland Commission published its report, Our Common Future, in an effort to link the issues of economic development and environmental stability. In doing so, this report provided the oft-cited definition of sustainable development as "development that meets the needs of the

present without compromising the ability of future generations to meet their own needs". Albeit somewhat vague, this concept of sustainable development aims to maintain economic advancement and progress while protecting the long-term value of the environment; it "provides a framework for the integration of environment policies and development strategies". However, long before the late 20th century, scholars argued that there need not be a trade-off between environmental sustainability and economic development.

The overall goal of sustainable development (SD) is the long-term stability of the economy and environment; this is only achievable through the integration and acknowledgement of economic, environmental, and social concerns throughout the decision making process. The key principle of sustainable development underlying all others is the integration of environmental, social, and economic concerns into all aspects of decision making.

Sustainable Development Goals

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by all United Nations Member States in 2015 as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030.

The SDGs are a bold commitment to finish what we started, and tackle some of the more pressing challenges facing the world today. All 17 Goals interconnect, meaning success in one affects success for others. Dealing with the threat of climate change impacts how we manage our fragile natural resources, achieving gender equality or better health helps eradicate poverty, and fostering peace and inclusive societies will reduce inequalities and help economies prosper. In short, this is the greatest chance we have to improve life for future generations.

Through the pledge to Leave No One Behind, countries have committed to fast-track progress for those furthest behind first. That is why the SDGs are designed to bring the world to several lifechanging 'zeros', including zero poverty, hunger, AIDS and discrimination against women and girls. Everyone is needed to reach these ambitious targets. The creativity, knowhow, technology and financial resources from all of society are necessary to achieve the SDGs in every context.

INTERNATIONAL CONVENTION ON PROTECTION OF ENVIRONMENT

STOCKHOLM DECLARATION

The evolution of environmental issues on the agenda of International Institutions can be better understood by dividing the post war periods into three periods defend by two major land mark meetings the United Nations Conference on human environment, which was convened in Stockholm in June, 1972 and United Nations Conference on Environment and Development

(UNCED), otherwise known as 'Earth Summit', which was held in Rio de Janeiro in June, 1992. Although United Nations Charter does not explicate mention the environmental or conservation resources, the U.N. convened its 1st environmental conference in 1949 and hosted many negations prior to the Stockholm in 1972.

The first or Pre-Stockholm era extends to 1948, the year in which the UN General Assembly adopted a resolution to convene the Stockholm conference 4 years later. However, the Stockholm declaration was not the first step in the International efforts in the protection of the Environment. There were several other steps taken by the U.N. from time to time, i.e., prior to 1968. However,

these steps were in piece meal manner and the outer peace treaty, 1966 etc., the second or the Stockholm era, spans 2 decades from 1968 to 1987.

It encompasses the 1972, Stockholm conference, including the extensive array of precautionary meetings in the years preceding it, as well as the implementation of its recommendations over the following decade. The Stockholm conference became the prototype for spate of major world conferences, sometimes referred to as, 'Global town meetings', which focused worldwide attention on International issues. In 1989, the United Nations adopted the 'Basel convention on the controls of Transboundary Movements of hazardous wastes and their disposal's, 1989, which is aimed at controlling improper treatment of hazardous wastes 46 and mitigate the damages arising out of Transboudary movements and disposal of such wastes. In 1972, U.N. also adopted the 'convention' for the Protection of World cultural and natural heritage, 1972.

The conduct of hostilities does not relieve states of their responsibilities to the environment. The 1977 convention, on the prohibition of Military or any other hostile use of environmental modifications techniques and protocol 1 of the 1980 conventional weapons treaty prohibits mode of warfare having a severe and long term effect on the environment and requires respect to be shown for the natural environmental and its protection from severe wide spread and lasting damage. Even in UNCLOS, 1982 reference was made to the general obligation to protect and reserve the environmental lay down in article 192. In 1982, U.N. also adopted another convention on conservation of marine living resources.

The third or Rio de Janeiro era, commences in 1987 with the release of the influential report of the Brundtland Commission, entitled 'Our Common Future' which set the stage for the earth summit and follow-up efforts to implement the summit's lengthy and elaborate plan of action entitled agenda 21. The U.N. on Environment and Development (Rio, 1992) provides a platform for putting flesh on the bones of sustainable development in International Law and to address the concern,

noted in the Brundtland Report, of the 'Sectoral' and 'Piece meal' nature of International Environmental Law.

The concept of "Sustainable Development" was brought into common use by World Commission on Environment and Development (the Brundtland Commission) in its 1987 Report over Common Future. The World Commission on Environment and Development was set up by the General Assembly of the United Nations in the year 1983.

Brundtland Report defines Sustainable Development as follows: "Sustainable development is development that meets the needs of the present without compromising the ability of the future generations to meet their own needs.

According to the Brundtland Report, it contains two key concepts:

i) The concept of needs, in particular the essential needs of the world's poor, to which overriding priority should be given.

ii) The idea of limitations imposed by the State of Technology and Social organization on the Environment's ability to meet present and future needs.

Brundtland Report emphasizes that sustainable development means an integration of economic and ecology in decision-making at all levels. Further it clarifies that the critical objectives for environment and development policies that follows from that concept of sustainable development include – reviving growth, changing quality of growth, meeting essential needs for jobs, food, energy, water and sanitation, ensuring the resource base, reorienting technology and managing risk, and merging environment and economics in decision making. Thus in its broadest sense, the strategy for sustainable development aims at promote harmony among human beings and between humanity and nature.

Since, none of the U.N. agencies existing in 1972 was prepared to take primary responsibility for implementing the action plan adopted at Stockholm conference, the General Assembly in 1972 created UNEP to become the Institutional Focus for environmental activities within the U.N. system. However, UNEP's role was limited to primarily to catalyzing and coordinating environmental programmes both by nations and other international organizations. Apart from it, the General Assembly, in December, 1992 also adopted a resolution providing for the establishment of a commission on sustainable development, to monitor and facilitate efforts to implement the diverse goals and recommendations of the Earth Summit, in particular the

Declaration on the Environment and Development or Agenda 21 and the Statement of forest principles. Agenda 21, in particular, is built on the recognition that the world's natural and cultural resources are the ultimate basis of survival and that, however monetarily prosperous a country or people may be, it cannot live without fresh air and water.

Agenda 21, legally binding conventions on biodiversity and climate change, a framework of principles on the conservations and use of forests, and a series of declarations were the result of the Rio Summit. Together these constitute an impressive commitment to taking the world away from the self-destructive path of conventional "development". In 1990, at the suggestion of France and Germany, the World bank took the lead in setting up an experimental program named the

'Global Environmental Facility' (GEF) to provide funds on favorable terms to low and middle income countries for environmental projects that would have global benefits. Later, the GEF has become a key instrument for dispersing funding for environmental projects in development countries. Apart, from it, International Environmental Protection Act which was passed in 1983 authorizes the president to assist countries in protecting the maintaining the Wild Life Habitat and provides as active role in conservation by the Agency for International Development (AID).

In 1992, UN adopted a convention on the "Trans boundary effects of Industrial accidents". The convention applies to the prevention of and response to industrial accidents capable of causing trans boundary effects, including the effects of such accidents caused by natural disasters. In 1993, U.N also adopted a convention on the applicability of the development, production and stockpiling and use of chemical weapons and on their destruction, the purpose of which was to prohibit and eliminate all chemical weapons. In 1994, the International law commission has also drafted articles on the Law of the Non-navigational uses of International water courses and to protect the ecosystem and the marine environment. In 1995, U.N. entered into an 'Agreement on straddling fish stocks and highly migratory Fish stocks' etc.

DECLARATION OF THE UNITED NATIONS CONFERENCE ON THE HUMAN ENVIRONMENT

The United Nations Conference on the Human Environment, having met at Stockholm from 5 to 16 June 1972, having considered the need for a common outlook and for common principles to inspire and guide the peoples of the world in the preservation and enhancement of the human environment, proclaims that:

1. Man is both creature and molder of his environment, which gives him physical sustenance and affords him the opportunity for intellectual, moral, social and spiritual growth. In the long and tortuous evolution of the human race on this planet a stage has been reached when, through the rapid acceleration of science and technology, man has acquired the power to transform his environment in countless ways and on an unprecedented scale. Both aspects of man's environment, the natural and the man-made, are essential to his well-being and to the enjoyment of basic human rights the right to life itself.

2. The protection and improvement of the human environment is a major issue which affects the wellbeing of peoples and economic development throughout the world; it is the urgent desire of the peoples of the whole world and the duty of all Governments.

3. Man has constantly to sum up experience and go on discovering, inventing, creating and advancing. In our time, man's capability to transform his surroundings, if used wisely, can bring to all peoples the benefits of development and the opportunity to enhance the quality of life. Wrongly or heedlessly applied, the same power can do incalculable harm to human beings and the human environment. We see around us growing evidence of man-made harm in many regions of the earth: dangerous levels of pollution in water, air, earth and living beings; major and undesirable disturbances to the ecological balance of the biosphere; destruction and depletion of irreplaceable resources; and gross deficiencies, harmful to the physical, mental and social health of man, in the man-made environment, particularly in the living and working environment.

4. In the developing countries most of the environmental problems are caused by underdevelopment. Millions continue to live far below the minimum levels required for a decent human existence, deprived of adequate food and clothing, shelter and education, health and sanitation. Therefore, the developing countries must direct their efforts to development, bearing in mind their priorities and the need to safeguard and improve the environment. For the same purpose, the industrialized countries should make efforts to reduce the gap themselves and the developing countries. In the industrialized countries, environmental problems are generally related to industrialization and technological development. The natural growth of population continuously presents problems for the preservation of the environment, and adequate policies and measures should be adopted, as appropriate, to face these problems. Of all things in the world, people are the most precious. It is the people that propel social progress, create social wealth, develop science and technology and, through their hard work, continuously transform the human environment. Along with social progress and the advance of production, science and technology, the capability of man to improve the environment increases with each passing day.

6. A point has been reached in history when we must shape our actions throughout the world with a more prudent care for their environmental consequences. Through ignorance or indifference we can do massive and irreversible harm to the earthly environment on which our life and well being depend. Conversely, through fuller knowledge and wiser action, we can achieve for ourselves and our posterity a better life in an environment more in keeping with human needs and hopes. There are broad vistas for the enhancement of environmental quality and the creation of a good life. What is needed is an enthusiastic but calm state of mind and intense but orderly work. For the purpose of attaining freedom in the world of nature, man must use knowledge to build, in collaboration with nature, a better environment. To defend and improve the human environment for present and future generations has become an imperative goal for mankind-a goal to be pursued together with, and in harmony with, the established and fundamental goals of peace and of worldwide economic and social development.

7. To achieve this environmental goal will demand the acceptance of responsibility by citizens and communities and by enterprises and institutions at every level, all sharing equitably in common efforts. Individuals in all walks of life as well as organizations in many fields, by their values and the sum of their actions, will shape the world environment of the future. Local and national governments will bear the greatest burden for large-scale environmental policy and action within their jurisdictions. International cooperation is also needed in order to raise resources to support the developing countries in carrying out their responsibilities in this field. A growing class of environmental problems, because they are regional or global in extent or because they affect the common international realm, will require extensive cooperation among nations and action by international organizations in the common interest. The Conference calls upon Governments and peoples to exert common efforts for the preservation and improvement of the human environment, for the benefit of all the people and for their posterity.

Principles state the common conviction that:

Principle 1 Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations.

In this respect, policies promoting or perpetuating apartheid, racial segregation, discrimination, colonial and other forms of oppression and foreign domination stand condemned and must be eliminated.

Principle 2 The natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate.

Principle 3 The capacity of the earth to produce vital renewable resources must be maintained and, wherever practicable, restored or improved.

Principle 4 Man has a special responsibility to safeguard and wisely manage the heritage of wildlife and its habitat, which are now gravely imperiled by a combination of adverse factors. Nature conservation, including wildlife, must therefore receive importance in planning for economic development.

Principle 5 The non-renewable resources of the earth must be employed in such a way as to guard against the danger of their future exhaustion and to ensure that benefits from such employment are shared by all mankind.

Principle 6 The discharge of toxic substances or of other substances and the release of heat, in such quantities or concentrations as to exceed the capacity of the environment to render them harmless, must be halted in order to ensure that serious or irreversible damage is not inflicted upon ecosystems. The just struggle of the peoples of ill countries against pollution should be supported.

Principle 7 States shall take all possible steps to prevent pollution of the seas by substances that are liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea. Principle 8 Economic and social development is essential for ensuring a favorable living and working environment for man and for creating conditions on earth that are necessary for the improvement of the quality of life.

Principle 9 Environmental deficiencies generated by the conditions of under-development and natural disasters pose grave problems and can best be remedied by accelerated development through the transfer of substantial quantities of financial and technological assistance as a supplement to the domestic effort of the developing countries and such timely assistance as may be required.

Principle 10 For the developing countries, stability of prices and adequate earnings for primary commodities and raw materials are essential to environmental management, since economic factors as well as ecological processes must be taken into account.

Principle 11 The environmental policies of all States should enhance and not adversely affect the present or future development potential of developing countries, nor should they hamper the attainment of better living conditions for all, and appropriate steps should be taken by States and international organizations with a view to reaching agreement on meeting the possible national and international economic consequences resulting from the application of environmental measures.

Principle 12 Resources should be made available to preserve and improve the environment, taking into account the circumstances and particular requirements of developing countries and any costs which may emanate- from their incorporating environmental safeguards into their development planning and the need for making available to them, upon their request, additional international technical and financial assistance for this purpose.

Principle 13 In order to achieve a more rational management of resources and thus to improve the environment, States should adopt an integrated and coordinated approach to their development

planning so as to ensure that development is compatible with the need to protect and improve environment for the benefit of their population.

Principle 14 Rational planning constitutes an essential tool for reconciling any conflict between the needs of development and the need to protect and improve the environment.

Principle 15 Planning must be applied to human settlements and urbanization with a view to avoiding adverse effects on the environment and obtaining maximum social, economic and environmental benefits for all. In this respect projects which are designed for colonialist and racist domination must be abandoned.

Principle 16 Demographic policies which are without prejudice to basic human rights and which are deemed appropriate by Governments concerned should be applied in those regions where the rate of population growth or excessive population concentrations are likely to have adverse effects on the environment of the human environment and impede development.

Principle 17 Appropriate national institutions must be entrusted with the task of planning, managing or controlling the 9 environmental resources of States with a view to enhancing environmental quality. Principle 18 Science and technology, as part of their contribution to economic and social development, must be applied to the identification, avoidance and control of environmental risks and the solution of environmental problems and for the common good of mankind.

Principle 19 Education in environmental matters, for the younger generation as well as adults, giving due consideration to the underprivileged, is essential in order to broaden the basis for an enlightened opinion and responsible conduct by individuals, enterprises and communities in protecting and improving the environment in its full human dimension. It is also essential that mass

media of communications avoid contributing to the deterioration of the environment, but, on the contrary, disseminates information of an educational nature on the need to project and improve the environment in order to enable mal to develop in every respect.

Principle 20 Scientific research and development in the context of environmental problems, both national and multinational, must be promoted in all countries, especially the developing countries. In this connection, the free flow of up-to-date scientific information and transfer of experience must be supported and assisted, to facilitate the solution of environmental problems; environmental technologies should be made available to developing countries on terms which would encourage their wide dissemination without constituting an economic burden on the developing countries.

Principle 21 States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

Principle 22 States shall cooperate to develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage caused by activities within the jurisdiction or control of such States to areas beyond their jurisdiction.

Principle 23 Without prejudice to such criteria as may be agreed upon by the international community, or to standards which will have to be determined nationally, it will be essential in all cases to consider the systems of values prevailing in each country, and the extent of the applicability of standards which are valid for the most advanced countries but which may be inappropriate and of unwarranted social cost for the developing countries.

Principle 24 International matters concerning the protection and improvement of the environment should be handled in a cooperative spirit by all countries, big and small, on an equal footing.

Cooperation through multilateral or bilateral arrangements or other appropriate means is essential to effectively control, prevent, reduce and eliminate adverse environmental effects resulting from activities conducted in all spheres, in such a way that due account is taken of the sovereignty and interests of all States.

Principle 25 States shall ensure that international organizations play a coordinated, efficient and dynamic role for the protection and improvement of the environment.

Principle 26 Man and his environment must be spared the effects of nuclear weapons and all other means of mass destruction. States must strive to reach prompt agreement, in the relevant international organs, on the elimination and complete destruction of such weapons.

RIO DECLARATION

The United Nations Conference on Environment and Development, Having met at Rio de Janeiro from 3 to 14 June 1992, Reaffirming the Declaration of the United Nations Conference on the Human Environment, adopted at Stockholm on 16 June 1972, a/ and seeking to build upon it, With the goal of establishing a new and equitable global partnership through the creation of new levels of cooperation among States, key sectors of societies and people, Working towards international agreements which respect the interests of all and protect the integrity of the global environmental and developmental system. The Rio Declaration on Environment and Development is a set of principles that recognize the importance of preserving the environment and set forth international guidelines for doing so. They were compiled at the United Nations Conference for Environment and Development in Rio de Janeiro in 1992 and are found in the report of this conference.

The Rio Declaration serves as some of the standards by which UN Member countries create domestic and international environmental policies and by which they form agreements or organizations with one another, as it pertains to the environment and conservation. All the

Principles under Rio- Declaration has the nexus under the Principles defines the sustainable Development; namely the Polluter Pays Principle, Precautionary Principle, Inter- generational Equity, Public trust doctrine, by reading the provisions which are clearly defined under the declaration, a fair idea can be obtained.

Principle 1

Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.

Principle 2

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

Principle 3

The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.

Principle 4

In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.

Principle 5

All States and all people shall cooperate in the essential task of eradicating poverty as an indispensable requirement for sustainable development, in order to decrease the disparities in standards of living and better meet the needs of the majority of the people of the world.

Principle 6

The special situation and needs of developing countries, particularly the least developed and those most environmentally vulnerable, shall be given special priority. International actions in the field of environment and development should also address the interests and needs of all countries.

Principle 7

States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.

Principle 8

To achieve sustainable development and a higher quality of life for all people, States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies.

Principle 9

States should cooperate to strengthen endogenous capacity-building for sustainable development by improving scientific understanding through exchanges of scientific and technological

knowledge, and by enhancing the development, adaptation, diffusion and transfer of technologies, including new and innovative technologies.

Principle 10

Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

Principle 11

States shall enact effective environmental legislation. Environmental standards, management objectives and priorities should reflect the environmental and developmental context to which they apply. Standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular developing countries.

Principle 12

States should cooperate to promote a supportive and open international economic system that would lead to economic growth and sustainable development in all countries, to better address the problems of environmental degradation. Trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade. Unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country should be avoided. Environmental measures addressing transboundary or global environmental problems should, as far as possible, be based on an international consensus.

Principle 13

States shall develop national law regarding liability and compensation for the victims of pollution and other environmental damage. States shall also cooperate in an expeditious and more determined manner to develop further international law regarding liability and compensation for adverse effects of environmental damage caused by activities within their jurisdiction or control to areas beyond their jurisdiction.

Principle 14

States should effectively cooperate to discourage or prevent the relocation and transfer to other States of any activities and substances that cause severe environmental degradation or are found to be harmful to human health.

Principle 15

In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

Principle 16

National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle,

bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.

Principle 17

Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.

Principle 18

States shall immediately notify other States of any natural disasters or other emergencies that are likely to produce sudden harmful effects on the environment of those States. Every effort shall be made by the international community to help States so afflicted.

Principle 19

States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a significant adverse trans-boundary environmental effect and shall consult with those States at an early stage and in good faith.

Principle 20

Women have a vital role in environmental management and development. Their full participation is therefore essential to achieve sustainable development.

Principle 21

The creativity, ideals and courage of the youth of the world should be mobilized to forge a global partnership in order to achieve sustainable development and ensure a better future for all.

Principle 22

Indigenous people and their communities and other local communities have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognize and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development.

Principle 23

The environment and natural resources of people under oppression, domination and occupation shall be protected.

Principle 24

Warfare is inherently destructive of sustainable development. States shall therefore respect international law providing protection for the environment in times of armed conflict and cooperate in its further development, as necessary.

Principle 25

Peace, development and environmental protection are interdependent and indivisible.

Principle 26

States shall resolve all their environmental disputes peacefully and by appropriate means in accordance with the Charter of the United Nations.

Principle 27

States and people shall cooperate in good faith and in a spirit of partnership in the fulfilment of the principles embodied in this Declaration and in the further development of international law in the field of sustainable development.

JOHANNESBURG DECLARATION ON SUSTAINABLE DEVELOPMENT

- Introduction
- Preamble
- The challenges we face
- Making it happen
- Conclusion

Introduction

The Johannesburg Declaration on Sustainable Development was adopted at the World Summit on Sustainable Development (WSSD) in 2002. It is built on earlier declarations made at the United Nations Conference on the Human Environment at Stockholm in 1972 and the Earth Summit in Rio de Janeiro in 1992. The Declaration commits the nations of the world to build a humane, equitable and carry global society, cognizant of the need for human dignity for all.

In terms of the political commitment of parties, the Declaration is a more general statement than the Rio Declaration. It is an agreement to focus particularly on "the worldwide conditions that pose severe threats to the sustainable development of our people, which include: chronic hunger; malnutrition; foreign occupation; armed conflict; illicit drug problems; organized crime; corruption; natural disasters; illicit arms trafficking; trafficking in persons; terrorism; intolerance

and incitement to racial, ethnic, religious and other hatreds; xenophobia; and endemic, communicable and chronic diseases, in particular HIV/AIDS, malaria and tuberculosis.

Preamble

We, the representatives of the peoples of the world, assembled at the World Summit on Sustainable Development in Johannesburg, South Africa, from 2 to 4 September 2002, reaffirm our commitment to sustainable development.

We commit ourselves to building a humane, equitable and caring global society, cognizant of the need for human dignity for all.

At the beginning of this Summit, the children of the world spoke to us in a simple yet clear voice that the future belongs to them, and accordingly challenged all of us to ensure that through our actions they will inherit a world free of the indignity and indecency occasioned by poverty, environmental degradation and patterns of unsustainable development.

As part of our response to these children, who represent our collective future, all of us, coming from every corner of the world, informed by different life experiences, are united and moved by a deeply felt sense that we urgently need to create a new and brighter world of hope.

Accordingly, we assume a collective responsibility to advance and strengthen the interdependent and mutually reinforcing pillars of sustainable development - economic development, social development and environmental protection - at the local, national, regional and global levels.

From this continent, the cradle of humanity, we declare, through the Plan of Implementation of the World Summit on Sustainable Development and the present Declaration, our responsibility to one another, to the greater community of life and to our children.

Recognizing that humankind is at a crossroads, we have united in a common resolve to make a determined effort to respond positively to the need to produce a practical and visible plan to bring about poverty eradication and human development. From Stockholm to Rio de Janeiro to Johannesburg **Thirty years ago**, in Stockholm, we agreed on the urgent need to respond to the problem of environmental deterioration.

Ten years ago, at the United Nations Conference on Environment and Development, held in Rio de Janeiro, we agreed that the protection of the environment and social and economic development are fundamental to sustainable development, based on the Rio Principles. To achieve such development, we adopted the global programme entitled Agenda 21 and the Rio Declaration on Environment and Development, to which we reaffirm our commitment. The Rio Conference was a significant milestone that set a new agenda for sustainable development.

Between Rio and Johannesburg, the world's nations have met in several major conferences under the auspices of the United Nations, including the International Conference on Financing for Development, as well as the Doha Ministerial Conference. These conferences defined for the world a comprehensive vision for the future of humanity.

At the Johannesburg Summit, we have achieved much in bringing together a rich tapestry of peoples and views in a constructive search for a common path towards a world that respects and implements the vision of sustainable development. The Johannesburg Summit has also confirmed that significant progress has been made towards achieving a global consensus and partnership among all the people of our planet.

Hurdles on achieving the sustainable development

- We recognize that poverty eradication, changing consumption and production patterns and protecting and managing the natural resource base for economic and social

development are overarching objectives of and essential requirements for sustainable development.

- The deep fault line that divides human society between the rich and the poor and the ever-increasing gap between the developed and developing worlds pose a major threat to global prosperity, security and stability.

- The global environment continues to suffer. Loss of biodiversity continues, fish stocks continue to be depleted, desertification claims more and more fertile land, the adverse effects of climate change are already evident, natural disasters are more frequent and more devastating, and developing countries more vulnerable, and air, water and marine pollution continue to rob millions of a decent life.

- Globalization has added a new dimension to these challenges. The rapid integration of markets, mobility of capital and significant increases in investment flows around the world have opened new challenges and opportunities for the pursuit of sustainable development. But the benefits and costs of globalization are unevenly distributed, with developing countries facing special difficulties in meeting this challenge.

- We risk the entrenchment of these global disparities and unless we act in a manner that fundamentally changes their lives the poor of the world may lose confidence in their representatives and the democratic systems to which we remain committed, seeing their representatives as nothing more than sounding brass or tinkling cymbals.

- Our commitment to sustainable development. We are determined to ensure that our rich diversity, which is our collective strength, will be used for constructive partnership for change and for the achievement of the common goal of sustainable development.

- Recognizing the importance of building human solidarity, we urge the promotion of dialogue and cooperation among the world's civilizations and peoples, irrespective of race, disabilities, religion, language, culture or tradition.

We welcome the focus of the Johannesburg Summit on the indivisibility of human dignity and are resolved, through decisions on targets, timetables and partnerships, to speedily increase access to such basic requirements as clean water, sanitation, adequate shelter, energy, health care, food security and the protection of biodiversity. At the same time, we will work together to help one another gain access to financial resources, benefit from the opening of markets, ensure capacity-building, use modern technology to bring about development and make sure that there is technology transfer, human resource development, education and training to banish underdevelopment forever.

We reaffirm our pledge to place particular focus on, and give priority attention to, the fight against the worldwide conditions that pose severe threats to the sustainable development of our people, which include: chronic hunger; malnutrition; foreign occupation; armed conflict; illicit drug problems; organized crime; corruption; natural disasters; illicit arms trafficking; trafficking in persons; terrorism; intolerance and incitement to racial, ethnic, religious and other hatreds; xenophobia; and endemic, communicable and chronic diseases, in particular HIV/AIDS, malaria and tuberculosis.

We are committed to ensuring that women's empowerment, emancipation and gender equality are integrated in all the activities encompassed within Agenda 21, the Millennium development goals and the Plan of Implementation of the Summit.

We recognize the reality that global society has the means and is endowed with the resources to address the challenges of poverty eradication and sustainable development confronting all humanity. Together, we will take extra steps to ensure that these available resources are used to the benefit of humanity.

In this regard, to contribute to the achievement of our development goals and targets, we urge developed countries that have not done so to make concrete efforts reach the internationally agreed levels of official development assistance.

We welcome and support the emergence of stronger regional groupings and alliances, such as the New Partnership for Africa's Development, to promote regional cooperation, improved international cooperation and sustainable development.
We shall continue to pay special attention to the developmental needs of small island developing States and the least developed countries.

We reaffirm the vital role of the indigenous peoples in sustainable development.

We recognize that sustainable development requires a long-term perspective and broad-based participation in policy formulation, decision-making and implementation at all levels. As social partners, we will continue to work for stable partnerships with all major groups, respecting the independent, important roles of each of them.

We agree that in pursuit of its legitimate activities the private sector, including both large and small companies, has a duty to contribute to the evolution of equitable and sustainable communities and societies.

We also agree to provide assistance to increase income-generating employment opportunities, taking into account the Declaration on Fundamental Principles and Rights at Work of the International Labour Organization.

We agree that there is a need for private sector corporations to enforce corporate accountability, which should take place within a transparent and stable regulatory environment.

We undertake to strengthen and improve governance at all levels for the effective implementation of Agenda 21, the Millennium development goals and the Plan of Implementation of the Summit. Multilateralism is the future 31. To achieve our goals of sustainable development, we need more effective, democratic and accountable international and multilateral institutions.

We reaffirm our commitment to the principles and purposes of the Charter of the United Nations and international law, as well as to the strengthening of multilateralism. We support the leadership role of the United Nations as the most universal and representative organization in the world, which is best placed to promote sustainable development. We further commit ourselves to monitor progress at regular intervals towards the achievement of our sustainable development goals and objectives.

How to Overcome

- We are in agreement that this must be an inclusive process, involving all the major groups and Governments that participated in the historic Johannesburg Summit.

- We commit ourselves to act together, united by a common determination to save our planet, promote human development and achieve universal prosperity and peace. 36. We commit ourselves to the Plan of Implementation of the World Summit on Sustainable Development and to expediting the achievement of the time-bound, socioeconomic and environmental targets contained therein.

- From the African continent, the cradle of humankind, we solemnly pledge to the peoples of the world and the generations that will surely inherit this Earth that we are determined to ensure that our collective hope for sustainable development is realized.

Conclusion

- The Declaration is a more general statement than the Rio Declaration. It is an agreement to focus particularly on "the worldwide conditions that pose severe threats to the sustainable development of our people, which include: chronic hunger; malnutrition; foreign occupation; armed conflict; illicit drug problems; organized crime; corruption; natural disasters; illicit arms trafficking; trafficking in persons; terrorism; intolerance and incitement to racial, ethnic, religious and other hatreds; xenophobia; and endemic, communicable and chronic diseases, in particular HIV/AIDS, malaria and tuberculosis.

TRANS- BOUNDARY POLLUTION

Basel Convention on Trans-boundary pollution

Awakening environmental awareness and corresponding tightening of environmental regulations in the industrialized world in the 1970s and 1980s had led to increasing public resistance to the disposal of hazardous wastes – in accordance with what became known as the NIMBY (Not In My Back Yard) syndrome – and to an escalation of disposal costs. This in turn led some operators to seek cheap disposal options for hazardous wastes in Eastern Europe and the developing world, where environmental awareness was much less developed and regulations and enforcement mechanisms were lacking. It was against this background that the Basel Convention was negotiated in the late 1980s, and its thrust at the time of its adoption was to combat the "toxic trade", as it was termed. The Convention entered into force in 1992.

Objective

The overarching objective of the Basel Convention is to protect human health and the environment against the adverse effects of hazardous wastes. Its scope of application covers a wide range of wastes defined as "hazardous wastes" based on their origin and/or composition and their characteristics, as well as two types of wastes defined as "other wastes" - household waste and incinerator ash.

Aims and provisions

The provisions of the Convention center around the following principal aims:

- the reduction of hazardous waste generation and the promotion of environmentally sound management of hazardous wastes, wherever the place of disposal;

- the restriction of trans-boundary movements of hazardous wastes except where it is perceived to be in accordance with the principles of environmentally sound management; and

- a regulatory system applying to cases where trans-boundary movements are permissible.

The first aim is addressed through a number of general provisions requiring States to observe the fundamental principles of environmentally sound waste management (article 4). A number of prohibitions are designed to attain the second aim: hazardous wastes may not be exported to Antarctica, to a State not party to the Basel Convention, or to a party having banned the import of hazardous wastes (article 4). Parties may, however, enter into bilateral or multilateral agreements on hazardous waste management with other parties or with non-parties, provided that such agreements are "no less environmentally sound" than the Basel Convention (article 11). In all cases where trans-boundary movement is not, in principle, prohibited, it may take place only if it represents an environmentally sound solution, if the principles of environmentally sound management and non-discrimination are observed and if it is carried out in accordance with the Convention's regulatory system.

The regulatory system is the cornerstone of the Basel Convention as originally adopted. Based on the concept of prior informed consent, it requires that, before an export may take place, the authorities of the State of export notify the authorities of the prospective States of import and transit, providing them with detailed information on the intended movement. The movement may only proceed if and when all States concerned have given their written consent (articles 6 and 7). The Basel Convention also provides for cooperation between parties, ranging from exchange of

information on issues relevant to the implementation of the Convention to technical assistance, particularly to developing countries (articles 10 and 13). The Secretariat is required to facilitate and support this cooperation, acting as a clearing-house (article 16). In the event of a transboundary movement of hazardous wastes having been carried out illegally, i.e. in contravention of the provisions of articles 6 and 7, or cannot be completed as foreseen, the Convention attributes responsibility to one or more of the States involved, and imposes the duty to ensure safe disposal, either by re-import into the State of generation or otherwise (articles 8 and 9).

The Convention also provides for the establishment of regional or sub-regional centre's for training and technology transfers regarding the management of hazardous wastes and other wastes and the minimization of their generation to cater to the specific needs of different regions

and sub-regions (article 14). Fourteen such centres have been established. They carry out training and capacity building activities in the regions.

COMMON LAW AND ENVIRONMENT

Remedies under Tort Law

Tort law is based upon the principles se your property as not harm others. Although tort law does not deal directly with pollution control still one can spell out rules of pollution control and successfully apply them from the principles evolved out of certain aspects of the law. Majority of environment pollution cases of tort in India fall under four major categories:

- Nuisance,
- Trespass,

- Negligence,
- Strict Liability.

Nuisance

It means anything which annoys, hurts or that which is offensive. Under the common law principle, the nuisance is concerned with unlawful interference with the person's right over whole of land or of some right over or in connection with it. But for an interference to be an actionable nuisance the conduct of the defendant must be unreasonable.

Nuisance may be public or private in nature. Hence acts interfering with the comfort, health or safety are covered under nuisance. The interference may be due to smell, noise, fumes, gas, heat, smoke, germs, vibrations, etc. In the private nuisance, the basis of an action under nuisance is unreasonable and unnecessary inconvenience caused by the use of the defendants land. The basis of the law of nuisance 'a man must not make such use of his property as unreasonably & unnecessarily to cause inconvenience to his neighbors.

An individual may have a private right of action in respect of public nuisance:

- Particular injury to himself beyond that which is suffered by rest of public.
- Such injury must be direct & not a mere consequential injury
- Injury must be of substantial character.

A public nuisance is an unreasonable interference with a right common to the general public, otherwise an act or omission which materially affects the reasonable comfort, convenience, health, safety and quality of life of a class of persons. The activities include carrying of trades causing

offensive smells, intolerable noises, dust, vibrations, collection of filth that affects the health or habitability in a locality.

Case Laws

***St. Helen Smelting Co.* v *Tipping* (1865) HL 642**

In this case, the fumes from the defendants manufacturing work damaged plaintiffs trees and shrubs. The Court held that such damages being an injury to property gave rise to a cause of action. In the case of damage to property, any sensible injury will be sufficient to support an action.

***Dilaware Ltd.*v *Westminister City Council,* (2001) UKHL 55**

In this case, the respondent was the owner of a tree growing in the footpath of a highway. The roots of the tree caused cracks in the neighboring building. The transferee of the building, after the cracks were detected, was held entitled to recover reasonable remedial expenditure in respect of the entire damage from the continuing nuisance caused by the trees.

***Ram Baj Singh* v *Babu Lal*, AIR 1982**

In this case, A person built a brick grinding machine in front of the consulting chamber of a medical practitioner. The machine was generating a lot of dust and noise which polluted the atmosphere and entered the consulting chamber of the medical practitioner and caused physical inconvenience to him and his patients. The Allahabad High Court held that this amounts to the private nuisance which can reasonably be said to cause injury, discomfort or annoyance to a person. Exposure of unwilling persons to dangerous and disastrous levels of noise amounts to noise pollution. It is also known as noise nuisance and thus it can be controlled under the law of torts. No citizen can exercise his fundamental freedom under the constitution in such a way that it creates a nuisance to others to become a health hazard activity.

***Free Legal Aid Cell* v *Govt. of NCT of Delhi,* AIR 2001 Delhi 455**

In this case, the petition was filed on behalf of an association of public activists in public interest. The main grievance in this petition was that as a result of display of fireworks and use thereof during festivals and marriages, physical and mental health hazard is suffered by adults as well as children. It was also submitted that because of indiscriminate use of loudspeakers, noise pollution has become a routine affair affecting mental as well as physical health of citizens and it causes a nuisance. The Delhi high court rightly observed that the effect of noise on the health is a matter, which has yet not received full attention of our judiciary, which it deserves. Pollution being wrongful contamination of the environment which causes material injury to the right of an individual, noise can well be regarded as a pollutant because it contaminates the environment, causes nuisance and effects health of a person if it exceeds a reasonable limit.

***Lakshmipathy* v *State*, ILR 1991 KAR 1334**

In this case, the petitioners were aggrieved by the location an operation of industries and industrial enterprises in a residential area in alleged gross violation of the provisions of the Karnataka Town And Country Planning Act, 1961. The petitioners were questioning the industrial activity in a residential locality by establishing and running factories, workshops, factory sheds, manufacture of greases and lubricating oils by distillation process and also the production of inflammable products by the respondents. The Karnataka High Court directed such industries to be stopped and further held that earmarked residential area should not be used for such industries. The court also directed the authorities to remove all encroachments in public lands and roads in the area in question and to implement the order of the court within sixty days from the date of the receipt of the copy of the order. The petitioners were also held entitled to costs Rs.3000/- from the respondents.

Section 133 of Cr.P.C. Conditional order for removal of nuisance

(1) Whenever a District Magistrate or a Sub- divisional Magistrate or any other Executive Magistrate specially empowered in this of behalf by the State Government, on receiving the report of a police officer or other information and on taking such evidence (if any) as he thinks fit, considers-

(a) that any unlawful obstruction or nuisance should be removed from any public place or from any way, river or channel which is or may be lawfully used by the public; or

(b) that the conduct of any trade or occupation, or the keeping of any goods or merchandise, is injurious to the health or physical comfort of the community, and that in consequence such trade or occupation should be prohibited or regulated or such goods or merchandise should be removed or the keeping thereof regulated; or

(c) that the construction of any building, or, the disposal of any substance, as is likely to occasion configuration or explosion, should be prevented or stopped; or

(d) that any building, tent or structure, or any tree is in such a condition that it is likely to fall and thereby cause injury to persons living or carrying on business in the neighbourhood or passing by, and that in consequence the removal, repair or support of such building, tent or structure, or the removal or support of such tree, is necessary; or

(e) that any tank, well or excavation adjacent to any such way or public place should be fenced in such manner as to prevent danger arising to the public; or

(f) that any dangerous animal should be destroyed, confined or otherwise disposed of, such Magistrate may make a conditional order requiring the person causing such obstruction or nuisance, or carrying on such trade or occupation or keeping any such goods or merchandise, or owning,

possessing or controlling such building, tent, structure, substance, tank, well or excavation, or owning or possessing such animal or tree, within a time to be fixed in the order-

(i) to remove such obstruction or nuisance; or

(ii) to desist from carrying on, or to remove or regulate in such manner as may be directed, such trade or occupation, or to remove such goods or merchandise, or to regulate the keeping thereof in such manner as may be directed; or

(iii) to prevent or stop the construction of such building, or to alter the disposal of such substance; or

(iv) to remove, repair or support such building, tent or structure, or to remove or support such trees; or

(v) to fence such tank, well or excavation; or

(vi) to destroy, confine or dispose of such dangerous animal in the manner provided in the said order; or, if he objects so to do, to appear before himself or some other Executive Magistrate subordinate to him at a time and place to be fixed by the Order, and show cause, in the manner hereinafter provided, why the order should not be made absolute.

(2) No order duly made by a Magistrate under this section shall be called in question in any Civil Court. Explanation- A" public place" includes also property belonging to the State, camping grounds and grounds left unoccupied for sanitary or re-creative purposes.

Executive magistrate should diligently exercise powers under S. 133. Commissioner shall satisfy himself about immediate need to issue orders to abate nuisance. This legal tool shall not be abused to fulfill person agendas.

Conflicting Laws and Jurisdiction

Whether there is implied repeal of S. 133 of Cr.P.C. by provisions of Water Act and Air Act. Though Water Act and Air Act are later in time and are special legislations, there is no direct conflict between the said provisions. Hence there is no implied repeal of S.133 of Cr.P.C. If implied repeal is accepted it would make no good as Pollution Control are located in capitals and there is procedural delays with regard to special legislations whereas relief under S.133 is handy and provides quick remedy.

CRIMINAL LAW AND ENVIRONMENT

Environmental crime related to the violation of Environmental laws intended to protect the environment and human health. These laws regulated air and water quality and dictate the ways in which the disposal of waste and hazardous materials can legally take place. Individuals or corporations can be found guilty of environmental crimes.

Various provisions of IPC protecting Environment

Indian Penal Code, 1860, makes various acts affecting environment as offences. IPC can be used to prevent pollution of atmosphere. Thus no trade, business or manufacturing process can be carried out in residential area which produces noxious and offensive smell.

Chapter XIV of IPC containing Sections 268 to 290 deals with offences affecting the public health, safety, convenience, decency and morals. Its object is to safeguard the public health, safety and convenience by causing those acts punishable which make environment polluted or threaten the life of the people.

Section 268 & 290 of IPC defines public nuisance and provides for punishment of fine upto Rs. 200 for public nuisance respectively. Under these provisions any act or omissions of a person which caused injury to another by polluting the environment can be controlled.

Public Nuisance

A Person is guilty of public nuisance who does any act or is guilty of an illegal omission which causes any common injury, danger to the people in general who dwell or occupy the property in the vicinity or cause injury, danger , obstruction to persons who use any public right.

Section 269 & 270 of IPC provides, whoever negligently or malignantly does any act which spreads the infection of disease dangerous to life, can be controlled by punishing the person responsible for such act with imprisonment upto six months to six years or with fine or both respectively.

Section 277 provides, whoever voluntarily fouls the water of any public spring or reservoir, so as to render it less fit for the purpose for which it is ordinarily used, shall be punished with imprisonment for three months or with fine of five hundred rupees or with both.

Section 278 provides, whoever voluntarily vitiates the atmosphere in any place so as to make it noxious to the health of persons dwelling or carrying on business in the neighbourhood or passing along the public way, shall be punished with fine upto Rs.500.

Section 284 provides, whoever does, with any poisonous substance, any act in a manner so rash or negligent as to endanger human life, or to be likely to cause hurt or injury to any person, shall be punished with imprisonment for a term of 6 months or with fine upto Rs.1000 or with both**.**

Section 285 provides, whoever does, with the fire or any combustible matter, any act rashly or negligently as to endanger human life, to be likely to cause or injury to any other person, shall be punished with imprisonment for a term of 6 months, or with fine upto Rs.10000 or with both.

Section 286 provides, whoever does, with any explosive substance, any act rashly or negligently as to endanger human life, to be likely to cause or injury to any other person, shall be punished with imprisonment for a term of 6 months, or with fine upto Rs.10000 or with both.

Under sections 426, 430, 432 of IPC general pollution caused by mischief can be controlled and the same is punishable.

Mens Rea or Strict Liability

Some environmental offences require proof of a defendant's *mens rea* in order for him to be found guilty, but that on many occasions, where the charge is one merely of having "caused" the prohibited act, liability is strict. This strict liability nature of a number of environmental offences has exercised the minds of the higher courts on numerous occasions.

Strict liability offences mean that the task of securing a conviction is much easier as only proof that the defendant did the relevant act is necessary and there is no need to prove his mental state, although it may be a factor to be considered either by the prosecution when exercising its discretion whether or not to prosecute, or by the court when determining sentence when it can act as either a mitigating or aggravating factor. As Cartwright points out "empirical research shows that the use of discretion by enforcement agencies is important in countering any potential harshness in strict liability.

Non effective sanctions

There is an overwhelming view in Environmental law circles that fines for environmental offences are generally too low. It indicates that insignificant fines will not act as a deterrent to the commission of further environmental crimes and correspond to the seriousness of the crime is that environmental crime is not regarded as a 'real' crime and conviction rate is low. Thus environmental crimes continue. Those companies that do regularly pollute come to regard the fine as merely a further cost of production which can quite readily be passed on to the consumer.

Conclusion

Every concept which are under the third unit have clearly specified about the protection of the environment. Right from the International Convention, sustainable Development and Criminal law aspects as to Environment clearly mandates that each and everyone must and should consciously enjoy the right of environment and must not go against the mother earth

Questions

1. Explain the provisions of criminal law relating to abatement of Public nuisance.

2. Explain the significance of Stockholm Declaration on human environment.

3. Define sustainable development. Discuss the contribution of judiciary for the protection of environment.

4. Discuss the significance of Rio Summit and its principles.

5. "Actions brought under tort are among the oldest of the legal remedies to abate pollution"- Explain

6. Discuss international obligation of India relating to environmental matters.

7. "Rio declaration reaffirmed the Stockholm Declaration with the object of to establish global partnership to protect human environment"-Explain

8. Discuss significance of Rio declaration and write note on Agenda 21.

9. Write note on sustainable development.

10. Mr. Rakesh had a sugar factory and used to store molasses, a by-product in manufacturing sugar, in a mud tank located close to Mr. Ram's land. Due to burrowing activity of rodents the said tank containing 8000 tonns of molasses collapsed and emptied themselves on Mr. Ram's land damaging standing crop of paddy and sugarcane. Mr. Ram claims compensation by filing a petition before competent court. Will he succeed? Give reasons.

UNIT – IV

- **Water Act, 1974**
- **Air Act, 1981**
- **Wildlife protection Act, 1972**
- **Forest Conservation Act, 1980**

SYNOPSIS

WATER ACT, 1974

- Introduction
- Provisions of Constitution of India
- Salient features of Water Act, 1974
- Composition of State and Central Pollution Control Board
- Disqualification of members of board
- Functions and Powers of Central Board and State Board

- Judicial Decisions
- Conclusion

Introduction

Water pollution is said to have occurred when the pollution load exceeds the natural regenerative capacity of a water resource. It is a very serious problem in India where 70 percent of the sources of surface water, such as rivers and lakes, are polluted and there is an alarming increase in groundwater pollution as well. In light of the fact that surface water and groundwater are the major sources of water supply for different uses, their pollution creates a situation where water may be available in sufficient quantity but there is water scarcity due to quality concerns.

The sources of water pollution can be divided into point sources and non-point (or diffuse) sources – the former include disposal of untreated or partly treated industrial effluents and domestic sewage while the latter include agricultural run-off. Water pollution can also result from encroachments, sand mining, religious activities, dumping of waste, etc.

Provisions the Constitution of India

The Constitution of India does not specifically mention water pollution. However, the Supreme Court of India has interpreted Article 21 of the Constitution, which guarantees the fundamental right to life, broadly to include the right of enjoyment of pollution-free water environment *Subash*

Kumar v State of Bihar & Others, and the right to hygienic environment *Virendra Gaur & Others v State of Haryana & Others* Two of the Directive Principles of State Policy, included in Part IV of the Constitution, which provide that the State shall endeavour (a) to improve public health (Article 47); and (b) to protect and improve the environment (Article 48-A), are also relevant.Further, protection and improvement of the natural environment, including lakes and rivers, has been identified as a fundamental duty of every citizen in the Constitution (Article 51-A (g).

Under the Constitution, water, sanitation and public health are included in List II of the Seventh Schedule; in other words, state governments rather than the Central Government exercise powers in respect of these subjects. The 73rd and 74th Constitutional Amendment Acts in the year 1992 led to the introduction of Parts IX and X in the Constitution, which constitutionalised local level governing bodies, that is, municipal authorities in urban areas and Panchayati Raj Institutions (Gram Sabhas or panchayats) in rural areas. States have been vested with the discretion to delegate any or all of the functions relating to water, sanitation and public health, among others, to these local bodies.

SALIENT FEATURES OF WATER ACT, 1974

The subject water fall under state list but Central Government in exercise of the power vested in it by resolutions passed by two or more State Legislatures in accordance with Article 252 of the Constitution enacted Water (Prevention and Control of Pollution) Act, 1974.

The main objectives of the Water Act are:

(i) To prevent and control water pollution.

(ii) To maintain or restore wholesomeness of water.

(iii) To establish pollution control board.

(iv) To confer power & functions to Board for prevention and control of pollution.

(v) Establishment of Boards for the prevention and control of water pollution

(vi) Conferring powers on such Boards and assigning functions to such Boards

"pollution" means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or is likely to, create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms.

The Water Act establishes the Central Pollution Control Board (CPCB) (at the national level) and the State Pollution Control Board (SPCB) or the Pollution Control Committee (at the State/Union Territory level) to carry out the objectives under the Act.

Composition

S.3 The Central Board shall consist of the following members, namely

(a) a full-time chairman, being a person having special knowledge or practical experience in respect of matters relating to environmental protection or a person having knowledge and experience in

administering institutions dealing with the matters aforesaid, to be nominated by the Central Government;

(b) such number of officials, not exceeding five, to be nominated by the Central Government to represent that Government;

(c) such number of persons, not exceeding five, to be nominated by the Central Government, from amongst the members of the State Boards, of whom not exceeding two shall be from those referred to in clause (*c*) of sub-section (*2*) of section 4;

(d) such number of non-officials, not exceeding three, to be nominated by the Central Government, to represent the interests of agriculture, fishery or industry or trade or any other interest which, in the opinion of the Central Government, ought to be represented;

(e) Two persons to represent the companies or corporations owned, controlled or managed by the Central Government, to be nominated by that Government;

(f) A full-time member-secretary, possessing qualifications, knowledge and experience of scientific, engineering or management aspects of pollution control, to be appointed by the Central Government.

(*3*) The Central Board shall be a body corporate with the name aforesaid having perpetual succession and a common seal with power, subject to the provisions of this Act, to acquire, hold and dispose of property and to contract, and may, by the aforesaid name, sue or be sued.

S. 4 Constitution of State Board

(1) The State Government shall, with effect from such date as it may, by notification in the Official Gazette, appoint, constitute a State Pollution Control Board, under such name as may be

specified in the notification, to exercise the powers conferred on and perform the functions assigned to that Board under this Act.

(2) A State Board shall consist of the following members, namely:—

(a) A chairman, being a person having special knowledge or practical experience in respect of matters relating to environmental protection] or a person having knowledge and experience in administering institutions dealing with the matters aforesaid, to be nominated by the State

Government: Provided that the chairman may be either whole-time or part-time as the State Government may think fit;

(b) Such number of officials, not exceeding five, to be nominated by the State Government to represent that Government;

(c) such number of persons, not exceeding five, to be nominated by the State Government from amongst the members of the local authorities functioning within the State;

(d) such number of non-officials, not exceeding three, to be nominated by the State Government to represent the interests of agriculture, fishery or industry or trade or any other interest which, in the opinion of the State Government, ought to be represented;

(e) two persons to represent the companies or corporations owned, controlled or managed by the State Government, to be nominated by that Government;

(f) a full-time member-secretary, possessing qualifications, knowledge and experience of scientific, engineering or management aspects of pollution control, to be appointed by the State Government.

(3) Every State Board shall be a body corporate with the name specified by the State Government in the notification under sub-section (*1*), having perpetual succession and a common seal with power, subject to the provisions of this Act, to acquire, hold and dispose of property and to contract, and may, by the said name, sue or be sued.

(4) Notwithstanding anything contained in this section, no State Board shall be constituted for a Union territory and in relation to a Union territory, the Central Board shall exercise the powers and perform the functions of a State Board for that Union territory:

Provided that in relation to any Union territory the Central Board may delegate all or any of its powers and functions under this sub-section to such person or body of persons as the Central Government may specify.

S.6 Disqualifications

(*1*) No person shall be a member of a Board, who—

- Adjudged insolvent, declared of unsound mind by competent court, convicted of an offence involving moral turpitude or convicted of offence under the Act.

- Has directly or indirectly by himself or by any partner, any share or interest in any firm or company carrying on the business of manufacture, sale or hire of machinery, plant, equipment, apparatus or fittings for the treatment of sewage or trade effluents, or

- Is a director or a secretary, manager or other salaried officer or employee of any company or firm having any contract with the Board, or with the Government constituting the Board, or with a local authority in the State, or with a company or corporation owned, controlled or

managed by the Government, for the carrying out of sewerage schemes or for the installation of plants for the treatment of sewage or trade effluents.

- Has so abused, in the opinion of the Central Government or as the case may be, of the State Government, his position as a member, as to render his continuance on the Board detrimental to the interest of the general public.

- No order of removal shall be made by the Central Government or the State Government, as the case may be, under this section unless the member concerned has been given a reasonable opportunity of showing cause against the same.

Joint boards may be constituted for two or more state Governments or two or more Union territories.

S. 16 Functions of Central Board

(1) Subject to the provisions of this Act, the main function of the Central Board shall be to promote cleanliness of streams and wells in different areas of the States.

(2) In particular and without prejudice to the generality of the foregoing function, the Central Board may perform all or any of the following functions, namely:—

(a) Advise the Central Government on any matter concerning the prevention and control of water pollution;

(b) Co-ordinate the activities of the State Boards and resolve dispute among them;

(c) Provide technical assistance and guidance to the State Boards carry out and sponsor investigations and research relating to problems of water pollution and prevention, control or abatement of water pollution;

(d) Plan and organise the training of persons engaged or to be engaged in programmes for the prevention, control or abatement of water pollution on such terms and conditions as the Central Board may specify;

(e) organise through mass media a comprehensive programme regarding the prevention and control of water pollution;

(*ee*) perform such of the functions of any State Board as may be specified in an order made under sub- section (*2*) of section 18

(f) collect, compile and publish technical and statistical data relating to water pollution and the measures devised for its effective prevention and control and prepare manuals, codes or guides relating to treatment and disposal of sewage and trade effluents and disseminate information connected therewith;

(g) lay down, modify or annul, in consultation with the State Government concerned, the standards for a stream or well: Provided that different standards may be laid down for the same stream or well or for different streams or wells, having regard to the quality of water, flow characteristics of the stream or well and the nature of the use of the water in such stream or well or streams or wells;

(h) plan and cause to be executed a nation-wide programme for the prevention, control or abatement of water pollution;

(i) perform such other functions as may be prescribed.

(3) The Board may establish or recognise a laboratory or laboratories to enable the Board to perform its functions under this section efficiently including the analysis of samples of water from any stream or well or of samples of any sewage or trade effluents.

S. 17 Functions of State Board

(*1*) Subject to the provisions of this Act, the functions of a State Board shall be—

(a) to plan a comprehensive programme for the prevention, control or abatement of pollution of streams and wells in the State and to secure the execution thereof;

(b) to advise the State Government on any matter concerning the prevention, control or abatement of water pollution;

(c) to collect and disseminate information relating to water pollution and the prevention, control or abatement thereof;

(d) to encourage, conduct and participate investigations and research relating to problems of water pollution and prevention, control or abatement of water pollution;

(e) to collaborate with the Central Board in organising the training of persons engaged or to be engaged in programmes relating, to prevention, control or abatement of water pollution and to organise mass education programmes relating thereto;

(f) to inspect sewage or trade effluents, works and plants for the treatment of sewage and trade effluents and to review plans, specifications or other data relating to plants set up for the treatment of water, works for the purification thereof and the system for the disposal of sewage or trade effluents or in connection with the grant of any consent as required by this Act;

(g)to lay down, modify or annul effluent standards for the sewage and trade effluents and for the quality of receiving waters (not being water in an inter-State stream) resulting from the discharge of effluents and to classify waters of the State;

(h)to evolve economical and reliable methods of treatment of sewage and trade effluents, having regard to the peculiar conditions of soils, climate and water resources of different regions and more especially the prevailing flow characteristics of water in streams and wells which render it impossible to attain even the minimum degree of dilution;

(i) to evolve methods of utilisation of sewage and suitable trade effluents in agriculture;

(j) to evolve efficient methods of disposal of sewage and trade effluents on land, as are necessary on account of the predominant conditions of scant stream flows that do not provide for major part of the year the minimum degree of dilution;

(k)to lay down standards of treatment of sewage and trade effluents to be discharged into any particular stream taking into account the minimum fair weather dilution available in that stream and the tolerance limits of pollution permissible in the water of the stream, after the discharge of such effluents;

(l) to make, vary or revoke any order—

(*i*) for the prevention, control or abatement of discharges of waste into streams or wells;
(*ii*) requiring any person concerned to construct new systems for the disposal of sewage and trade effluents or to modify, alter or extend any such existing system or to adopt such remedial measures as are necessary to prevent, control or abate water pollution;

(m) to lay down effluent standards to be complied with by persons while causing discharge of sewage or sullage or both and to lay down, modify or annul effluent standards for the sewage and trade effluents;

(n)to advise the State Government with respect to the location of any industry the carrying on of which is likely to pollute a stream or well;

(o)to perform such other functions as may be prescribed or as may, from time to time, be entrusted to it by the Central Board or the State Government.

The Board may establish or recognise a laboratory or laboratories to enable the Board to perform its functions under this section efficiently, including the analysis of samples of water from any stream or well or of samples of any sewage or trade effluents**.**

S. 18 Powers to give directions

(*1*) In the performance of its functions under this Act—

(a) the Central Board shall be bound by such directions in writing as the Central Government may give to it; and

(b) every State Board shall be bound by such directions in writing as the Central Board or the State Government may give to it:

Provided that where a direction given by the State Government is inconsistent with the direction given by the Central Board, the matter shall be referred to the Central Government for its decision.

(2) Where the Central Government is of the opinion that any State Board has defaulted in complying with any directions given by the Central Board under sub-section (*1*) and as a result of

such default a grave emergency has arisen and it is necessary or expedient so to do in the public interest, it may, by order, direct the Central Board to perform any of the functions of the State Board in relation to such area, for such period and for such purposes, as may be specified in the order.

(3) Where the Central Board performs any of the functions of the State Board in pursuance of a direction under sub-section (*2*), the expenses, if any, incurred by the Central Board with respect to the performance of such functions may, if the State Board is empowered to recover such expenses, be recovered by the Central Board with interest (at such reasonable rate as the Central Government may, by order, fix) from the date when a demand for such expenses is made until it is paid from the person or persons concerned as arrears of land revenue or of public demand.

(4) For the removal of doubts, it is hereby declared that any directions to perform the functions of any State Board given under sub-section (*2*) in respect of any area would not preclude the State Board from performing such functions in any other area in the State or any of its other functions in that area.

S. 20 Power to obtain information

(1) For the purpose of enabling a State Board to perform the functions conferred on it by or under this Act, the State Board or any officer empowered by it in that behalf, may make surveys of any area and gauge and keep records of the flow or volume and other characteristics of any stream or well in such area, and may take steps for the measurement and recording of the rainfall in such area or any part thereof and for the installation and maintenance for those purposes of gauges or other apparatus and works connected therewith, and carry out stream surveys and may take such other steps as may be necessary in order to obtain any information required for the purposes aforesaid.

(2) A State Board may give directions requiring any person who in its opinion is abstracting water from any such stream or well in the area in quantities which are substantial in relation to the flow or volume of that stream well or is discharging sewage or trade effluent into any such stream or well, to give such information as to the abstraction or the discharge at such times and in such form as may be specified in the directions.

(3) Without prejudice to the provisions of sub-section (*2*), a State Board may, with a view to preventing or controlling pollution of water, give directions requiring any person in charge of any establishment where any 1[industry, operation or process, or treatment and disposal system] is carried on, to furnish to it information regarding the construction, installation or operation of such establishment or of any disposal system or of any extension or addition thereto in such establishment and such other particulars as may be prescribed.

S. 21 Power to take samples of effluents and procedure to be followed in connection therewith-

(*1*) A State Board or any officer empowered by it in this behalf shall have power to take for the purpose of analysis samples of water from any stream or well or samples of any sewage or trade effluent which is passing from any plant or vessel or from or over any place into any such stream or well.

(2) The result of any analysis of a sample of any sewage or trade effluent taken under sub-section (*1*) shall not be admissible in evidence in any legal proceeding unless the provisions of sub-sections

(*3*), (*4*) and (*5*) are complied with.

(3) Subject to the provisions of sub-sections (*4*) and (*5*), when a sample (composite or otherwise as may be warranted by the process used) of any sewage or trade effluent is taken for analysis under sub-section (*1*), the person taking the sample shall—

(a) serve on the person in charge of, or having control over, the plant or vessel or in occupation of the place (which person is hereinafter referred to as the occupier) or any agent of such occupier, a notice, then and there in such form as may be prescribed of his intention to have it so analysed;

(b) in the presence of the occupier or his agent, divide the sample into two parts;

(c) cause each part to be placed in a container which shall be marked and sealed and shall also be signed both by the person taking the sample and the occupier or his agent;

(d) send one container forthwith,—

(i) in a case where such sample is taken from any area situated in a Union territory, to the laboratory established or recognised by the Central Board under section 16; and

(ii) in any other case, to the laboratory established or recognised by the State Board under section17;

(*e*) on the request of the occupier or his agent, send the second container,—

(i) in a case where such sample is taken from any area situated in a Union territory, to the laboratory established or specified under sub-section (*1*) of section 51; and

(ii) in any other case, to the laboratory established or specified under sub-section (*1*) of section52.

(*4*) When a sample of any sewage or trade affluent is taken for analysis under sub-section (*1*) and the person taking the sample serves on the occupier or his agent, a notice under clause (*a*) of subsection (*3*) and the occupier or his agent wilfully absents himself, then,—

(a) the sample so taken shall be placed in a container which shall be marked and sealed and shall also be signed by the person taking the sample and the same shall be sent forthwith by such person for analysis to the laboratory referred to in sub-clause (*i*) or sub-clause (*ii*), as the case may be, of clause (*e*) of sub-section (*3*) and such person shall inform the Government analyst appointed under sub-section (*1*) or sub-section (*2*), as the case may be, of section 53, in writing about the willful absence of the occupier or his agent; and

(b) the cost incurred in getting such sample analysed shall be payable by the occupier or his agent and in case of default of such payment, the same shall be recoverable from the occupier or his agent, as the case may be, as an arrear of land revenue or of public demand:

Provided that no such recovery shall be made unless the occupier or, as the case may be, his agent has been given a reasonable opportunity of being heard in the matter.

(*5*) When a sample of any sewage or trade effluent is taken for analysis under sub-section (*1*) and the person taking the sample serves on the occupier or his agent a notice under clause (*a*) of subsection (*3*) and the occupier or his agent who is present at the time of taking the sample does not make a request for dividing the sample into two parts as provided in clause (*b*) of sub-section (*3*), then, the sample so taken shall be placed in a container which shall be marked and sealed and shall also be signed by the person taking the sample and the same shall be sent forthwith by such person for analysis to the laboratory referred to in sub-clause (*i*) or sub-clause (*ii*), as the case may be, of clause (*d*) of sub-section (*3*).

S. 23 Power of entry and inspection

(*1*) Subject to the provisions of this section, any person empowered by a State Board in this behalf shall have a right at any time to enter, with such assistance as he considers necessary, any place—

(a) for the purpose of performing any of the functions of the Board entrusted to him;

(b) for the purpose of determining whether and if so in what manner, any such functions are to be performed or whether any provisions of this Act or the rules made there under of any notice, order, direction or authorization served, made, given, or granted under this Act is being or has been complied with;

(c) for the purpose of examining any plant, record, register, document or any other material object or for conducting a search of any place in which he has reason to believe that an offence under this Act or the rules made there under has been or is being or is about to be committed and for seizing any such plant, record, register, document or other material object, if he has reason to believe that it may furnish evidence of the commission of an offence punishable under this Act or the rules made there under

Provided that the right to enter under this sub-section for the inspection of a well shall be exercised only at reasonable hours in a case where such well is situated in any premises used for residential purposes and the water thereof is used exclusively for domestic purposes.

S. 24 Prohibition on use of stream or well for disposal of polluting matter, etc

(*1*) Subject to the provisions of this section,—

(a) no person shall knowingly cause or permit any poisonous, noxious or polluting matter determined in accordance with such standards as may be laid down by the State Board to enter

(whether directly or indirectly) into any 3[stream or well or sewer or on land]; or

(b) no person shall knowingly cause or permit to enter into any stream any other matter which may tend, either directly or in combination with similar matters, to impede the proper flow of the

water of the stream in a manner leading or likely to lead to a substantial aggravation of pollution due to other causes or of its consequences.

S. 25 Restrictions on new outlets and new discharges

(*1*) Subject to the provisions of this section, no person shall, without the previous consent of the State Board,—

(a) establish or take any steps to establish any industry, operation or process, or any treatment and disposal system or any extension or addition thereto, which is likely to discharge sewage or trade effluent into a stream or well or sewer or on land (such discharge being hereafter in this section referred to as discharge of sewage); or

(b) bring into use any new or altered outlet for the discharge of sewage; or

(c) begin to make any new discharge of sewage:

Provided that a person in the process of taking any steps to establish any industry, operation or process immediately before the commencement of the Water (Prevention and Control of Pollution) Amendment Act, 1988 (53 of 1988), for which no consent was necessary prior to such commencement,

(a) constructing, improving or maintaining in or across or on the bank or bed of any stream any building, bridge, weir, dam, sluice, dock, pier, drain or sewer or other permanent works which he has a right to construct, improve or maintain;

(b) depositing any materials on the bank or in the bed of any stream for the purpose of reclaiming land or for supporting, repairing or protecting the bank or bed of such stream provided such materials are not capable of polluting such stream;

(c) putting into any stream any sand or gravel or other natural deposit which has flowed from or been deposited by the current of such stream;

(d) causing or permitting, with the consent of the State Board, the deposit accumulated in a well, pond or reservoir to enter into any stream.

(3) The State Government may, after consultation with, or on the recommendation of, the State Board, exempt, by notification in the Official Gazette, any person from the operation of sub-section (*1*) subject to such conditions, if any, as may be specified in the notification and any condition so specified may by a like notification be altered, varied or amended.

(4) The State Board may

(*a*) grant its consent referred to in sub-section

(*1*), subject to such conditions as it may impose, being— conditions as to the point of discharge of sewage or as to the use of that outlet or any other outlet for discharge of sewage;

(ii) in the case of a new discharge, conditions as to the nature and composition, temperature, volume or rate of discharge of the effluent from the land or premises from which the discharge or new discharge is to be made; and

(iii) that the consent will be valid only for such period as may be specified in the order,

and any such conditions imposed shall be binding on any person establishing or taking any steps to establish any industry, operation or process, or treatment and disposal system of extension or addition thereto, or using the new or altered outlet, or discharging the effluent from the land or premises aforesaid; or

(*b*) refuse such consent for reasons to be recorded in writing.

(5) Where, without the consent of the State Board, any industry, operation or process, or any treatment and disposal system or any extension or addition thereto, is established, or any steps for such establishment have been taken or a new or altered outlet is brought into use for the discharge of sewage or a new discharge of sewage is made, the State Board may serve on the person who has established or taken steps to establish any industry, operation or process, or any treatment and disposal system or any extension or addition thereto, or using the outlet, or making the discharge, as the case may be, a notice imposing any such conditions as it might have imposed on an application for its consent in respect of such establishment, such outlet or discharge.

(6) Every State Board shall maintain a register containing particulars of the conditions imposed under this section and so much of the register as relates to any outlet, or to any effluent, from any land or premises shall be open to inspection at all reasonable hours by any person interested in, or affected by such outlet, land or premises, as the case may be, or by any person authorised by him in this behalf and the conditions so contained in such register shall be conclusive proof that the consent was granted subject to such conditions.

(7) The consent referred to in sub-section (*1*) shall, unless given or refused earlier, be deemed to have been given unconditionally on the expiry of a period of four months of the making of an application in this behalf complete in all respects to the State Board.

S. 28 Appeals.—(*1*) Any person aggrieved by an order made by the State Board within thirty days from the date on which the order is communicated to him, prefer an appeal to such authority (hereinafter referred to as the appellate authority) as the State Government may think fit to constitute.

The power to issue directions includes the power to direct—

(a) the closure, prohibition or regulation of any industry, operation or process; or

(b) the stoppage or regulation of supply of electricity, water or any other service.

Judicial Decisions

In ***MC Mehta* v *Union of India* (Kanpur Tanneries case), AIR 1988 SC 1037**, a public interest litigation sought an order from the Supreme Court to restrain the tanneries near Kanpur city from discharging trade effluents into the river Ganga until they set up effluent treatment plants. The Court observed that the provisions of the Water Act were comprehensive but the SPCBs had not taken effective steps to prevent the discharge of effluents into the river Ganga. It also noted the failure of the Central Government to do much under the Environment Act to stop the grave public nuisance caused by the tanneries.

Insofar as the tanneries are concerned, the Court observed that the fact that their effluents are first discharged into municipal sewers did not absolve the tanneries from being proceeded against under the provisions of the law in force, since ultimately the effluents reach the river Ganga.Among other directions, the Court ordered stoppage of work in the tanneries, which were discharging effluents into the river and which did not set up primary treatment plants. It considered the financial capacity of the tanneries to set up primary treatment plants to be irrelevant. According to the Court, the tanneries were not being taken by surprise as they were being asked to take necessary steps to prevent discharge of untreated wastewater into the river for several years.

In another important case, ***M C Mehta* v *Union of India* (Municipalities case), AIR 1988 SC 1115**, a public interest litigation was filed seeking the enforcement of the statutory provisions which impose duties on municipal authorities and the SPCB constituted under the Water Act. The Supreme Court observed that the municipal authorities have the statutory duty to prevent public nuisance caused by pollution of the river Ganga and therefore, the municipal corporation of Kanpur

has to bear the major responsibility for river pollution near the city.The Court also took note of the fact that many of the provisions of the Water Act and the municipal laws for prevention and control of water pollution have just remained on paper without any adequate action being taken pursuant thereto.

***Indian Council for Enviro-Legal Action* v *Union of India and Others*, AIR 1996 SC 1446**, among other claims, it was alleged that water in wells and streams in village Bichhri in Udaipur district in the State of Rajasthan had become unfit for consumption as a result of disposal of untreated toxic sludge from an industrial complex located within the limits of the village. The Supreme Court held that the respondents were absolutely liable to pay compensation for the harm caused by them to the villagers in the affected area and surrounding areas as well as to the environment. According to the Court, the power to levy costs required for carrying out remedial measures is implicit in the Environment Act.

***Vellore Citizens Welfare Forum* v *Union of India and Others*, AIR 1996 SC 2715**, the petitioner organization was concerned about water pollution resulting from the discharge of untreated effluents by tanneries and other industries into river Palar in the State of Tamil Nadu, which was a source of drinking water supply. The Supreme Court directed the constitution of an authority under the Environment Act to deal with the situation created by the tanneries and other polluting industries in the State. The authority was also directed to frame and execute scheme(s) for reversing ecological/environmental damage caused by pollution in the State. It also imposed pollution fine on all the tanneries, and ordered the closure of tanneries that fail to pay the fine. However, it allowed suspension of closure orders where tanneries agree to set up common effluent treatment plants or individual pollution control devices and obtain consent to operate from the SPCB. Failure to obtain consent from the SPCB would however result in closure of tanneries.

Conclusion

Water pollution is a very serious problem in India. The right to a water pollution-free environment has been read into the fundamental right to life guaranteed under the Constitution of India. In addition to a specific law to prevent and control water pollution as well as the environment protection legislation, which follow a command-and-control approach, the statutory framework governing water pollution comprises provisions of municipal laws and public nuisance-related provisions in civil and criminal laws. While the first three laws have suffered from serious implementation failures, the provisions relating to public nuisance have also not been invoked. However, the issue of water pollution has been raised in a number of public interest litigations to varying effect.

THE AIR (PREVENTION AND CONTROL OF POLLUTION) ACT, 1981

- Introduction
- Aims of the Act
- Definition
- Functions of Central Board
- Functions of State Board
- Standard of emission for automobile
- Judicial decisions
- Conclusion

Introduction

This Act was passed by the Indian Parliament in the exercise of its powers conferred under Article 253 of the Constitution. The aims and objects of the Act provide: Whereas decisions were taken at the United Nations Conference on 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 preservation of the quality of air and control of air pollution.

And whereas it is considered necessary to implement the decisions aforesaid in so far as they relate to the preservation of the quality of air and control of air pollution.

Aims of the Act

The Act aims to achieve the following goals:

1. Provide for the prevention, control and abatement of air pollution.

2. Establishment of Boards with a view to carry out the above mentioned purpose.

3. Confer on and assign to such Boards powers and functions relating to prevention, control and abatement of air pollution and

4. Lay down the standards to maintain the quality of air.

Definition

The term "air pollutant" means 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 and "air pollution" means the presence in the atmosphere of any air pollutant.

Thus, air pollutants include smoke, soot, heat, fly ash, suspended particulate matter (SPM), noise, radioactive substances, vibrations1, etc. A small quantity of pollutants usually does not affect human health adversely. Such quantity or volume may be described as permissible/tolerable limit as nature also has its self-purification mechanism. But if the volume or the quantity of the pollutants is such which is deleterious/ injurious to the health of human beings, flora, fauna, etc., it becomes environmental pollution.

In ***M.C. Mehta* v *Union of India* (Taj Trapezium case**), the court observed that emission of sulphur dioxide from coke/coal using industries was causing acid rain (sulphur dioxide when combined with moisture forms sulphuric acid called acid rain) which had a corroding effect on the gleaming white marble of the Taj Mahal. Therefore, 292 industries were ordered either to close down or to switch to using gas. Courts on various occasions have observed: pollution being wrongful contamination of the environment which causes material injury to the right of an individual, noise can well be regarded as a pollutant, because it contaminates the environment, causes nuisance and affects the health of a person.

It has also been observed that the fireworks also release a deadly concoction of fumes into the air causing extreme air pollution during Diwali and festival. As per one study the fireworks emit fine particles of various elements like copper, barium, strontium, magnesium and potassium which cause air pollution. As a result of such pollution the Capital was "smogged" into an environmental emergency of unseen proportions.

Central Board

The Act provides that the Central Pollution Control Board (CPCB), which was constituted under Section 3, Water (Prevention and Control of Pollution) Act, 1974, shall also exercise the powers and functions of the CPCB for the prevention and control of air pollution under this Act. Thus, the powers have been delegated to the already existing Board and no new board has been constituted for the precise purpose of prevention, control and abatement of air pollution.

The Central Board shall also exercise the powers and perform the functions of the State Boards in Union Territories; or it may delegate such powers and functions to any person or body of persons as the Central Government may specify.

State Boards

Where State Pollution Control Boards (SPCB) have been constituted under the Water (Prevention and Control of Pollution) Act, 1974, such State Boards shall also be deemed to be State Boards for the prevention and control of air pollution, and shall also exercise all powers and functions of State Boards for prevention and control of air pollution under this Act.

Meeting of the Board (Section 10)

The Board shall meet at least once in every three months and shall observe such rules of procedure in its meetings as provided under the Air (Prevention and Control of Pollution) Rules, 1982. The Chairman may also convene a meeting at any time he thinks fit for an urgent work to be transacted. Copies of the minutes of the meeting shall always be forwarded to the Central Board and to the State Government.

Functions of Central Board (Section 16)

(a) advise the Central Government on any matter concerning the improvement of the quality of air and the prevention, control or abatement of air pollution;

(b) plan and cause to be executed a nation-wide programme for the prevention, control or abatement of air pollution;

(c) co-ordinate the activities of the State and resolve disputes among them;

(d) provide technical assistance and guidance to the State Boards, carry out and sponsor investigations and research relating to problems of air pollution and prevention, control or abatement of air pollution; 12*(dd)* perform such of the function of any State Board as may, be specified in and order made under sub-section (2) of section 18;

(e) plan and organise the training of persons engaged or to be engaged in programmes for the prevention, control or abatement of air pollution on such terms and conditions as the Central Board may specify;

(f) organise through mass media a comprehensive programme regarding the prevention, control or abatement of air pollution;

(g) collect, compile and publish technical and statistical data relating to air pollution and the measures devised for its effective prevention, control or abatement and prepare manuals, codes or guides relating to prevention, control or abatement of air pollution;

(h) lay down standards for the quality of air.,

(i) collect and disseminate information in respect of matters relating to air pollution;

(j) perform such other functions as may be prescribed.

(3) The Central Board may establish or recognise a laboratory or laboratories to enable the Central Board to perform its functions under this section efficiently.

(4) The Central Board may-
(a) delegate any of its functions under this Act generally or specially to any of the committees appointed by it;

(b) do such other things and perform such other acts as it may think necessary for the proper discharge of its functions and generally for the purpose of carrying into effect the purposes Of this Act.

Functions of State Boards (Section 17)

(1) subject to the provisions of this Act, and without prejudice to the performance of its functions, if any, under the Water (Prevention and Control of Pollution) Act, 1974 (Act 6 of 1974), the functions of a State Board shall be-

(a) to plan a comprehensive programme for the prevention, control or abatement of air pollution and to secure the execution thereof-,

(b) to advise the State Government on any matter concerning the prevention, control or abatement of air pollution;

(c) to collect and disseminate information relating to air pollution;

(d) to collaborate with the Central Board in organising the training of persons engaged or to be engaged in programmes relating to prevention, control or abatement of air pollution and to organise mass-education programme relating thereto;

(e) to inspect, at all reasonable times, any control equipment, industrial plant or manufacturing process and to give, by order, such directions to such persons as it may consider necessary to take steps for the prevention, control or abatement of air pollution;

(f) to inspect air pollution control areas at such intervals as it may think necessary, assess the quality of air therein and take steps for the prevention, control or abatement of air pollution in such areas;

(g) to lay down, in consultation with the Central Board and having regard to the standards for the quality of air laid down by the Central Board, standards for emission of air pollutants into the

atmosphere from industrial plants and automobiles or for the discharge of any air pollutant into the atmosphere from any other source whatsoever not being a ship or an aircraft:

Provided that different standards for emission may be laid down under this clause for different industrial plants having regard to the quantity and composition of emission of air pollutants into the atmosphere from such industrial plants;

(h) to advise the State Government with respect to the suitability of any premises or location for carrying on any industry which is likely to cause air pollution;

(i) to Perform such other functions as may be prescribed or as may, from time to time, be entrusted to it by the Central Board or the State Government;

(j) to do such other things and to perform such other acts as it may think necessary for the proper discharge of its functions and generally for the purpose of carrying into effect the purposes of this Act.

(2) A State Board may establish or recognise a laboratory or laboratories to enable the State Board to perform its functions under this section efficiently.

In ***K. Muniswamy Gowda*** **v** ***State of Karnataka***, the Karnataka High Court ordered that the State Board is, under Section 18, to abide by the order issued by the government which relates to Section 17, Air (Prevention and Control of Pollution) Act, 1981. The State Government cannot give directions to the State Board which has not been mentioned under Section 17 of the Act and the Board is also not bound to carry out such orders. In this case, the State Government precluded the rice-mills from the jurisdiction of the Air (Prevention and Control of Pollution) Act, 1981. A rice-mill was causing air pollution from husk and dust production by the operation of the mill. Residents of the nearby area filed a writ against the State and the State Board, as the air pollution produced

by the rice-mill violated the right to life provided under Article 21 of the Constitution. The court ordered for the closure of the mill and declared that the State Government has no power to preclude any industry which causes air pollution from the operation of the Act.

Powers to declare air pollution control areas

Section 19 empowers the "State Government", in consultation with the State Board, to declare any area or areas within the State as air pollution control area/areas for the purpose of this Act. Such declaration will be made by a notification in the Official Gazette in such manner as may be prescribed by the rules made under the Act.

Other control measures in such area

1. The State Government may also alter any such area by way of extension or reduction, or declare a new air pollution control area, but after consultation with the State Board.

2. The State Government may, after consultation with the State Board, prohibit the use of such fuel which may cause or is likely to cause air pollution in such area or part thereof for at least three months.

3. Similarly, the State Government may also direct that no appliances other than approved appliances shall be used on the premises situated in an air pollution control area.

4. The State Government may also prohibit the burning of such material (other than fuel) which may or is likely to cause air pollution in such pollution control area.

Power to take samples of air or emission and the procedure to be followed (Section 26)

One of the powers granted to a State Board is to take samples of air or emission for the purpose of analysis from any chimney, flue or duct or any other outlet in the prescribed manner. The procedure to take the sample shall be in the following manner. The person taking the sample shall

(a) serve on the occupier or his agent, a notice, then and there, in such form as may be prescribed, of his intention to have it so analysed;

(b) in the presence of the occupier or his agent, collect a sample of emission for analysis;

(c) cause the sample to be placed in a container or containers which shall be marked and sealed and shall also be signed both by the person taking the sample and the occupier or his agent;
(d) send, without delay, the container or containers to the laboratory established or recognised by the State Board.

In ***M C Mehta* v *Union of India***, the Supreme Court suggested/directed

1) The State Government to levy "Environmental Compensation Charge" (ECC) on few categories of vehicles entering into Delhi.

2) Further, to check air pollution, the court issued notice to the Government of India as to why Badarpur Thermal Power Station should not be shut down to make use of alternative or less polluting fuel instead of coal.

3) It was directed by the court that all taxis like OLA and UBER in Delhi, must move to CNG not later than 31 March 2016 to reduce air pollution.

In ***Animal Feeds Dairies and Chemicals Ltd.*** **v.** ***Orissa State (Prevention and Control of Pollution) Board*** (Orissa State Board), the Orissa High Court made it clear that the State Government can declare a pollution control area, and it is within the power of the State Government to prohibit the use of fuel causing air pollution but the State Board cannot issue such direction. Such powers can be exercised by the State Board

Standard of emission from automobile

Section 110, Motor Vehicles Act, 1988, under clause (1) empowers the Central Government to make rules regarding 1) the emission of smoke, visible vapour, sparks, ashes, grit, etc.; 2) the reduction of noise emitted by vehicles; 3) the standards for emission of air pollutants, and others. Similarly, Schedules I and III of the Environment (Protection) Act, 1986 have also laid down various parameters for various air pollutants including noise; and Schedule IV declared the standards for emission of smoke, vapour, grit, ashes, cinders, etc., from motor vehicles.

Power of state board to control pollution

In Delhi Transport Dept., the Supreme Court declared that the Delhi State Government was under a constitutional obligation to control pollution and, if necessary, by anticipating the causes of pollution and curbing the same. Restrictions on the plying of old taxis, three-wheelers and other vehicles in the city were imposed to keep the environment pollution free.

Judicial Decisions

In ***Ved Kaur Chandel*** **v** ***State of H.P.,*** the H.P. State Pollution Control Board issued only a

"conditional consent" to establish the tyre retreading factory before the final order was to be issued. The respondent also gave an affidavit that the industry shall undertake to follow the cold-retreading process with electricity. Therefore, there was no apprehension of air and water pollution.

In M.C. Mehta v. Union of India, the Supreme Court ordered for the closure of a hot-mix plant operating in the vicinity of the international airport in Delhi. The plant was needed to resurface the runway which was a work of national importance. The court ordered to set up the plant in safe vicinity of the airport if it had adopted the latest technology in the field and conditional permission was granted.

In ***Chhatisgarh Hydrade Line Industries* v. *Special Area Development Authority***, the Pollution Control Board (PCB) refused to grant permission for starting a hydrated lime factory as it was close to a to a government college and a 100-bed hospital. The Supreme Court also directed in M.C. Mehta v. Union of India, (Badkhal Lake & Surajkund case) to stop mining activities within a 2-kms radius of the tourist resorts of Badkhal and Surajkund and develops a green belt of 200 metres as the mining operations were causing air and noise pollution in these areas.

In ***Chaitanya Pulvarising Industry* v. *Karnataka State Pollution Control Board***, the court held that if consent has been granted by the Board with specific conditions and they are not abided by, the consent can be taken back by the Board. In this case, the industry failed to carry out the conditions specified in the consent order. Therefore, the court decided that action could be taken against the erring industry under Section 37 of the Act and it could be punished accordingly. But before passing any prohibitory order, the Board must also take into consideration the problems which may arise from the closure of an industry as the denial of livelihood to the workers, or grave injury to the owner of the industry. The Board, before issuing the order for closure and order for withdrawal of consent, should follow the procedure prescribed for the same.

In ***Suma Traders* v. *Karnataka State Pollution Control Board,*** the petitioner challenged the directions issued by the PCB to close the industry and its order to the authorities concerned to stop the supply of electricity and water to the industry. The petitioner pleaded that the directions issued by the Board were void as the State Government did not delegate the powers to issue directions to the Board. The court accepted the arguments put forth by the petitioner and quashed the directions issued by the Board. The petitioner was an industry processing grain in Bangalore. And it was alleged that the machine used for processing grain was causing air pollution in the area.

In ***M.C. Mehta* v *Union of India* (Matter Regarding Brick Kilns)**, the CPCB in compliance with the Supreme Court's order, after giving notice to the industries concerned, directed them to close down w.e.f. 30 June 1997. Further it decided that these brick kiln industries could open after shifting to new allotted site, and after adopting newer and cleaner technology. The Delhi Administration was also directed to render necessary help and facilities to brick kilns wanting to shift/relocate themselves. The court also laid down the rights and benefits to be given to the workmen of the closing brick kilns.

In ***Pollution Control Board* v. *Mahabir Coke Industry***, the Board directed the respondent industry to conform to the required standards or establish an air pollution control device. The Supreme Court upheld the direction of the Board.

Conclusion

Air pollution is a big menace to globe in large, domestic legislations and policies has to be effective to reduce and control air pollution. The institutional mechanism under the Air Act and its functions and powers are enumerated above.

Noise Pollution (Regulation and Control) Rules, 2000

- Introduction
- Different areas/zones
- Responsibility as to enforcement of noise pollution control measure
- Restrictions on the use of public address system
- Power to prohibit continuance of sound or noise
- Judicial Decisions
- Conclusion

Introduction

Whereas the increasing ambient noise levels in public places from various sources, inter-alia, industrial activity, construction activity, fire crackers, sound producing instruments, generator sets, loud speakers, public address systems, music systems, vehicular horns and other mechanical devices have deleterious effects on human health and the psychological well being of the people; it

is considered necessary to regulate and control noise producing and generating sources with the objective of maintaining the ambient air quality standards in respect of noise;

Central Government by exercising power under Sec.3 of Environment Protection Act, 1986 enacted Noise Pollution (Regulation and Control) Rules, 2000.

Different areas/zones

- The State Government shall categorize the areas into industrial, commercial, residential or silence areas / zones for the purpose of implementation of noise standards for different areas.

- The State Government shall take measures for abatement of noise including noise emanating from vehicular movements, blowing of horns, bursting of sound emitting firecrackers, use of loud speakers or public address system and sound producing instruments and ensure that the existing noise levels do not exceed the ambient air quality standards specified under these rules.

- All development authorities, local bodies and other concerned authorities while planning developmental activity or carrying out functions relating to town and country planning shall 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.

- An area comprising not less than 100 metres around hospitals, educational institutions and courts may be declared as silence area / zone for the purpose of these rules.

Responsibility as to enforcement of noise pollution control measure (Rule 4)

- The noise levels in any area / zone shall not exceed the ambient air quality standards in respect of noise as specified in the Schedule.

- The authority shall be responsible for the enforcement of noise pollution control measures and the due compliance of the ambient air quality standards in respect of noise.

- The respective State Pollution Control Boards or Pollution Control Committees in consultation with the Central Pollution Control Board shall collect, compile and publish technical and statistical data relating to noise pollution and measures devised for its effective prevention, control and abatement.

Restrictions on the use of loud speakers / public address system and sound producing instruments (Rule 5)

- A loud speaker or a public address system shall not be used except after obtaining written permission from the authority.

- A loud speaker or a public address system or any sound producing instrument or a musical instrument or a sound amplifier shall not be used at night time except in closed premises for communication within, like auditoria, conference rooms, community halls, banquet halls or during a public emergency.

- The State Government may subject to such terms and conditions as are necessary to reduce noise pollution, permit use of loud speakers or public address system and the like during night hours (between 10.00 p.m. to 12.00 midnight) on or during any cultural or religious festive occasion of a limited duration not exceeding fifteen days in all during a calendar year. The concerned State Government shall generally specify in advance, the number and particulars of the days on which such exemption would be operative.

- The noise level at the boundary of the public place, where loudspeaker or public address system or any other noise source is being used shall not exceed 10 dB (A) above the ambient noise standards for the area or 75 dB (A) whichever is lower; (5) The peripheral noise level of a privately owned sound system or a sound producing instrument shall not, at the boundary of the private place, exceed by more than 5 dB (A) the ambient noise standards specified for the area in which it is used. 5A.

Restrictions on the use of horns sound emitting construction equipments and bursting of fire crackers (Rule 5A)

- No horn shall be used in silence zones or during night time in residential areas except during a public emergency.

- Sound emitting fire crackers shall not be burst in silence zone or during night time.

- Sound emitting construction equipments shall not be used or operated during night time in residential areas and silence zones.

Power to prohibit etc. continuance of music sound or noise (Rule 8)

(1) If the authority is satisfied from the report of an officer in charge of a police station or other information received by him including from the complainant that it is necessary to do so in order to prevent annoyance, disturbance, discomfort or injury or risk of annoyance, disturbance, discomfort or injury to the public or to any person who dwell or occupy property on the vicinity, he may, by a written order issue such directions as he may consider necessary to any person for preventing, prohibiting, controlling or regulating:-

(a) the incidence or continuance in or upon any premises of-

(i) any vocal or instrumental music,

(ii) sounds caused by playing, beating, clashing, blowing or use in any manner whatsoever of any instrument including loudspeakers, public address systems, horn, construction equipment, appliance or apparatus or contrivance which is capable of producing or re-producing sound, or

(iii) sound caused by bursting of sound emitting fire crackers, or,

(c) the carrying on in or upon, any premises of any trade, avocation or operation or process resulting in or attended with noise. (2) The authority empowered under sub-rule (1) may, either on its own motion, or on the application of any person aggrieved by an order made under sub-rule (1), either rescind, modify or alter any such order: Provided that before any such application is disposed of, the said authority shall afford to the applicant and to the original complainant, as the case may be, an opportunity of appearing before it either in person or by a person representing him and showing cause against the order and shall, if it rejects any such application either wholly or in part, record its reasons for such rejection.

Judicial Decisions

***Own Motion* v *State of Tripura*, WP(C) No.508/2018**

This case is concerned with grievance of some students in their letter addressed to the former Chief Justice about unauthorized use of loudspeakers at night affecting their studies. The Court took it as writ petition in the public interest. The Court observed that any noise having effect of materially interfering with the ordinary comforts of life judged by standard of a reasonable man to nuisance. The Court held that it is the duty of the State Government to ensure strict compliance with law in this regard. In no circumstance use of loudspeakers be permitted within Silence Zone

i.e. radius of 100 meters from school, college, hospital, Court or office and issued directions accordingly.

***Church of God (Full Gospel) in India* v. *K.K.R. Majestic Colony Welfare Association*, 2000 Cri.LJ 4022**

The apex Court held that the noise pollution rules would apply even if such noise was a direct result of and was connected with religious activity. The Court observed that undisputedly, no religion prescribes that prayers to be performed by disturbing the peace of others nor does it preach that they should be through voice amplifiers or beating of drums. In this case, the Court further opined that in a civilized society in the name of religion, activities which disturb old or infirm persons, students or children having their sleep in the early hours or during daytime or other persons carrying on other activities cannot be permitted. The Court stressed the need to honour the rights of aged, sick, people afflicted with psychic disturbances as well as children up to 6 years of age as they are considered to be very sensitive to noise.

Conclusion

Noise pollution is one of menace which irritates animals and humans. Noise pollution takes away right to life. Noise pollution causes many health repercussions. Though there is law in place to protect general public from noise pollution its implementation is at stake and there is need for effective and comprehensive law relating to noise pollution.

THE WILD LIFE (PROTECTION) ACT, 1972

- Introduction
- Historical background
- Preamble of the Wildlife (Protection) Act
- Authorities under the Act
- Prohibition of hunting
- Protected area
- CITES 1973
- Institutional mechanisms under the Act
- Implementation Challenges and the Role of the Judiciary
- Conclusion

Introduction

India is a country with rich wildlife diversity. Wildlife in India is threatened, most significantly, by human actions or environmental degradation induced by human actions. Many species are on the verge of extinction. Given the close interrelationship between all living beings (and non-living beings), the extinction of one species will affect the whole ecological balance and consequently the survival of other species also.

Historical background

During Ashok an regime and philosophers like Bhuddha, Basavanna preached and practiced compassion towards animals and many religions propounded for the same. Britishers enacted several legislation for protection of wild species they are-Wild Birds Protection Act, 1887, The Wild Birds and Animals (Protection) Act, 1912. After Independence, since the subject of wildlife was in the State List of the Constitution, it was not possible for Parliament to enact a law for the protection and preservation of wildlife except by invoking the provisions of Article 252 of the Constitution.

Preamble of the Wildlife (Protection) Act

An Act to provide for the protection of wild animals, birds and plants and for matters connected therewith or ancillary or incidental thereto with a view to ensuring the ecological and environmental security of the country.

A number of regulatory and conservation measures have been provided under the Act. Key measures in this regard are:

- Prohibition of hunting of all wild animals
- Protection of specified plants

- Protection and management of wildlife habitats by declaring Sanctuaries and National Parks

- Regulation and control of trade in wildlife and parts and products derived from wildlife

Authorities under the Act

Director of Wild Life Preservation- appointed by Central Government Chief Wild Life Warden and Wild Life Wardens-appointed by State Government National Board for Wild Life and State Board for Wild Life

Functions of the National Board (Sec. 5C)

(1) It shall be the duty of the National Board to promote the conservation and development of wild life and forests by such measures as it thinks fit.
(2) Without prejudice to the generality of the foregoing provision, the measures referred to therein may provide for—

(a) framing policies and advising the Central Government and the State Governments on the ways and means of promoting wild life conservation and effectively controlling poaching and illegal trade of wild life and its products;

(b) making recommendations on the setting up of and management of national parks, sanctuaries and other protected areas and on matters relating to restriction of activities in those areas;

(c) carrying out or causing to be carried but impact assessment of various projects and activities on wild life or its habitat;

(d) reviewing from time to time, the progress in the field of wild life conservation in the country and suggesting measures for improvement thereto; and

(e) preparing and publishing a status report at least once in two years on wild life in the country.

Duties of State Board for Wild Life (Sec.8)

It shall be the duty of State Board for Wild Life to advise the State Government,—

(a) in the selection and management of areas to be declared as protected areas;

(b) in formulation of the policy for protection and conservation of the wild life and specified plants;

(c) in any matter relating to the amendment of any Schedule;

(*cc*) in relation to the measures to be taken for harmonising the needs of the tribals and other dwellers of the forest with the protection and conservation of wild life; and

(*d*) in any other matter connected with the protection of wild life, which may be referred to it by the State Government.

Prohibition of hunting

Section 9 of the WLPA seeks to protect wildlife by prohibiting hunting. The term 'hunting' has been defined under section 2(16) of the Act in a broad manner and it includes capturing, killing, poisoning, snaring, and trapping. In the case of wild birds or reptiles, damaging the eggs of such birds or reptiles, or disturbing the eggs or nests of such birds or reptiles, also come under the term 'hunting'.

However, prohibition of hunting under WLPA is not absolute. It is permitted under certain specified circumstances and subject to the prescribed procedure. Conditions under which hunting may be permitted vary according to the schedules. There are four schedules in WLPA and wild animals and birds have been included in these schedules according to the degree of protection required for such animals and birds. Hunting of wildlife included in Schedules I, II, III and IV requires the previous permission of the Chief Wildlife Warden appointed by the state government as per section 4 of the Act. WLPA requires that the Chief Wildlife Warden should make such order in writing and state the reasons for issuing the order. Stringent restrictions are applicable in the case of wildlife included in Schedule I. Permission to hunt Schedule I wildlife can be issued in two situations. They are:

(1) if any animal has become dangerous to human life; or

(2) if any animal is so disabled or diseased as to be beyond recovery.

In the case of wildlife included in Schedules II, III and IV, hunting may be allowed under the following circumstances:

(a) if animals have become dangerous to human life or to property (including standing crops on any land); or

(b) if an animal is so disabled or diseased as to be beyond recovery. It can be seen that hunting of wildlife included under Schedules II, III and IV may be allowed not only to protect human life but also property including crops.Killing or wounding of any wild animal to protect life is not an offence. However, in such cases, the killed or wounded wild animal shall be the property of the Government.

The Chief Wildlife Warden also has the power to permit hunting of an animal in the Schedules for limited purposes – education, scientific research, collection of specimens, for recognised zoos, for museums and similar institutions; derivation, collection or preparation of snake-venom for the

manufacture of life saving drugs. In the case of wildlife included in Schedule I, such permission can be granted with the previous permission of the Central Government, and in respect of any other wild animal, previous permission of the State Government is required.

Similar restrictions are also laid down in the case of specified plants (specified by the Central Government through notification). The Act prohibits causing destruction or damage to plants specified by notification. However, it allows acquisition or collection of specified plants with the permission of the Chief Wildlife Warden including for educational and scientific research purposes. Trading in such plants is also not allowed. The Chief Wildlife Warden can also give permission to cultivate such plants subject to the conditions in the license. Purchasing such plants or any part thereof from unauthorized parties is also an offence under the Act.

Protected Areas (Sec. 18- 34)

"Protected area" means a National Park, a sanctuary, a conservation reserve or a community reserve. the State Government may declare any area of adequate 'ecological, faunal, floral, geo morphological, natural or zoological significance' as a Sanctuary (section 18) or a National Park (section 35).

The State Government is required to follow certain procedure to declare any area as a Sanctuary or a National Park. WLPA requires the government to determine existing rights of any person in or over the land comprised within the limits of such proposed protected area before it is finally declared as Protected Area. In cases where the rights of any person are confirmed by the concerned district collector, the State Government has three options:

(a) declare the Protected Area after excluding such land;

(b) acquire such land by paying compensation; or

(c) allow continuance of rights within the Sanctuary.

Protected Areas are by law more restrictive, allowing virtually no human activity except that which is in the interest of wildlife conservation. For example, generally, entry to a Sanctuary is prohibited. Entry is permitted for a limited number of people for limited purposes such as a public servant on duty, a person who has any right over immovable property within the limits of the Sanctuary and a person passing through the Sanctuary along a public highway. Further, the Chief Wildlife Warden has the power to grant a permit to any person to enter or reside in a Sanctuary for purposes prescribed under WLPA, which include investigation or study of wildlife, photography, scientific research and tourism.

Grazing and private tenurial rights are not allowed in National Parks but can be allowed in Sanctuaries at the discretion of the Chief Wildlife Warden. WLPA does not allow any commercial exploitation of forest produce in both National Parks and Sanctuaries, and local communities can collect forest produce only for their bona fide needs. The establishment of Protected Areas is considered a major step forward in the conservation of India's wildlife. However, the idea of

Protected Areas as envisaged and implemented under WLPA has some limitations. A report of the Ministry of Environment and Forests cites the following lacunae in the present scheme:

- Protected Areas are not drawn as per ecological boundaries;
- Protected Areas are often too small in size to adequately sustain rich genetic resources and ecological processes;
- commercial interests and imperatives of development continue to impact many Protected

  Areas, leading to further habitat fragmentation and disjunction;
- unreasonable delay in settlement of rights and final notification of Protected Areas;

- legal framework does not recognize corridors even though they are vital to the well-being of species;
- very limited focus on special habitats such as mountains, wetlands, marine areas and deserts;
- inadequate funding

CITES 1973

The issue of illegal trade in wildlife has been a key focus of the international community at least since the 1960s and the process culminated in the adoption of the Convention on International Trade in Endangered Species, 1973 (CITES) which came into force on 1 July 1975. India is a signatory to CITES since 1976 and therefore, legally obliged to take all measures to control international trade in wildlife.

Moreover, a lucrative foreign market for wildlife and articles made from wildlife is a major reason for illegal poaching and killing of wildlife in India. This situation necessitates strict legal measures to prevent hunting of wildlife within India as well as measures to prevent international transportation of wildlife.

WLPA does not permit trade in wildlife. The 1986 amendment prohibited trade in wildlife, wildlife articles and trophies within the country. The scope of prohibition was expanded through the 1991 amendment which went one step ahead and prohibited the import of ivory and ivory articles. The Act also prohibits, under section 17A, the collection or trade in specified plants (whether alive or dead or part or derivative), i.e., those listed in Schedule VI of the Act, from any forest land and any area specified by notification by the Central Government. Trade in scheduled animals/animal

articles, i.e., animals/animal articles covered under Schedule I and Part II of Schedule II which also include some invertebrate such as insects, corals, and sea cucumber, are prohibited under the Act.

National Wildlife Crime Control Bureau

The National Wildlife Crime Control Bureau (NWCB) was created in 2007 to combat organized wildlife crime in the country. The headquarters of the NWCB is in New Delhi and there are five regional offices at Delhi, Kolkata, Mumbai, Chennai and Jabalpur; three sub-regional offices at Guwahati, Amritsar and Cochin; and five border units at Ramanathapuram, Gorakhpur, Motihari, Nathula and Moreh. The key functions of the NWCB are laid down in section 38 (Z) of WLPA. They are:

(a) to collect and collate intelligence related to organised wildlife crimes and to disseminate the same to state and other enforcement agencies for immediate action so as to apprehend the criminals;

(b) to establish a centralised wildlife crime data bank;

(c) to co-ordinate actions by various agencies in connection with the enforcement of the provisions of WLPA;

(d) to assist foreign authorities and international organizations concerned to facilitate coordination and universal action for wildlife crime control;

(e) to advise the Government of India on issues relating to wildlife crimes having national and international ramifications, relevant policy and laws.

Central Zoo Authority

Chapter IVA of WLPA provides for the establishment of the Central Zoo Authority. The Central Zoo Authority is entrusted with the power to recognise or derecognise any zoo in the country.

Laying down standards for keeping animals in a zoo also comes under the mandate of the Authority. It also identifies endangered species of wild animals for purposes of captive breeding and assigning responsibility in this regard to zoos.

National Tiger Conservation Authority

The National Tiger Conservation Authority came into existence in 2006. The key functions of the Authority as prescribed under section 38O of WLPA are:

(a) to approve the tiger conservation plan prepared by the State Government

(b) to evaluate and assess various aspects of sustainable ecology and disallow any ecologically unsustainable land use such as, mining, industry and other projects within the tiger reserves;
(c) to lay down normative standards for tourism activities and guidelines in core area of tiger reserves and ensure their due compliance;

(d) to provide scientific, information technology and legal support for better implementation of the tiger conservation plan.

Implementation Challenges and the Role of the Judiciary

Implementation of WLPA faces a number of challenges. In many cases, the higher judiciary has played a crucial and active role to facilitate the implementation of WLPA as well as to give progressive meaning to the provisions of the Act.

***Centre for Environmental Law, WWF* v. *Union of India*, WP(C) No.202 of 1995**

The issue of inaction by various state governments in implementing WLPA was discussed in this case. The Supreme Court directed state governments to establish Wildlife Advisory Boards. Further, the Court directed all states which had failed to appoint Wildlife Wardens to make the appointments. The Court also interfered when states failed to make the final notifications on Protected Areas.

It is to be noted that the active role of the judiciary has gone to the extent of rule-making also. The Supreme Court, *in* ***Centre for Environmental Law, WWF* v. *Union of India* (1997),** laid down rules for de-notification of Protected Areas. The Court directed the state governments to refer proposals for de-notification to the Indian Board for Wildlife (IBWL) and place the proposal and opinion of IBWL before the Legislative Assembly. The Supreme Court also directed the Central Government and state governments to provide modern arms and communication facilities to forest guards in sanctuaries and national parks to control the menace of poaching. The judiciary had also assumed a monitoring role and examined proposals for development activities in protected areas and decided/monitored approvals.

Transportation of or trade in wildlife has been a contentious issue and the judiciary has taken a pro environment, pro-wildlife approach in *Ivory Traders and Manufacturers Association* v. *Union of India*, In this case, the constitutionality of the 1991 amendment of WLPA that prohibits trade in imported ivory was challenged before the Delhi High Court. It was argued that the prohibition violates the freedom of trade and profession guaranteed under the Constitution. The High Court upheld the constitutional validity of the amendment and said 'trade and business at the cost of disrupting life forms and linkages necessary for the preservation of bio-diversity and ecology cannot be permitted'.

Trade or commerce in wild animals, animal articles and trophies The term trophy means the whole or any part of any captive animal or wild animal, other than vermin, which has been kept or preserved by any means, whether artificial or natural, and includes, rugs, skins, and specimens of such animals mounted in whole or in part through a process of taxidermy, and antler, horn, rhinoceros horn, feather, nail, tooth, musk, eggs, and nests. And uncured trophy means the whole or any part of any captive animal, other than vermin, which has not undergone a process of taxidermy, and includes a freshly killed wild animal ambergris, musk and other animal products

Sec. 39 of the Act, declares that every wild animal other than vermin, which is hunted or kept or bred in captivity or found dead or killed by mistake, shall be the property of the State Government. Likewise, animal articles, trophy or uncured trophy, meat derived from any wild animal, ivory imported to India, article made from such ivory, vehicle vessel weapon, trap or tool that has used for committing an offence and has been seized shall be the property of the state government. If any of the above is found in the sanctuary or a National Park declared by the Central Government, then it shall be property of the Central Government.

In ***Rajendra Kumar* v *Union of India* AIR 1998 RAJ165**, the petitioner challenged the vis of the above clause which imposed a complete ban on import of ivory and articles made from it. It affected his livelihood and freedom of trade and business provided under Article 19(1). Moreover, he contended that ivory derived from a mammoth was not ivory derived from a scheduled animal, therefore, any article made out of such fossil ivory could not be brought within the purview of the Act. But the Court observed that, the Chapter V-A of this Act, is incorporated in accordance with the direction of Convention on International Trade in Endangered Species of Wild Fauna and Flora . The object and reasons of the Amendment Act, 1991 make it amply clear that trade in African ivory is proposed to be banned after giving due opportunity to traders to dispose of the existing stocks. So this Section cannot be void.

Prevention and Detection of Offences

Sec. 50 of this Act confers power of entry, search, arrest and detention on the Director or any other officer authorized by him or the chief wildlife warden or Officer authorized by him or any Police Officer not below the rank of Sub-inspector. Officer not below the rank of Assistant Director of Wildlife Preservation or Wildlife Warden shall have the powers to issue a search warrant, to enforce the attendance of witnesses, to compel the discovery and production of documents and material objects and to receive and record evidence. Cognizance of Offence No court shall take cognizance of any offence against the Wildlife Protection Act except on a complaint by: The Director of wildlife preservation or any other officer authorized in this behalf by the Central Government or; The Chief Wildlife Warden or any other officer authorized by the State Government; or, any person who has given notice of not less than 60 days, in the manner prescribed, of the alleged offence and of his intention to make a complaint to the Central Government or the State Government or the officer authorised as aforesaid.

Punishments

Sec. 9 of the Act prohibits hunting of any wild animal specified in Schedules 1, 2, 3, and 4. Any person who hunts any wild animal shall be punishable with imprisonment for a term which may extend to 3 years or with fine which may extend to Rs. 25000/- or with both. However, if any person commits the offence in the sanctuary or national park, with respect to any animal specified in Schedule 1, he shall be punishable with imprisonment which shall not be less than 1 year but may extend to 6 years and also with fine which shall not be less than 5000/-. As per section 51 of the Act, Any person who contravenes any provision of this Act (except Chapter VA and section 38J) or any rule or order made there under or who commits a breach of any of the conditions of any license or permit granted under this Act, can be punished with imprisonment for three years or with

fine or with both: Any person who contravenes any provisions of Chapter VA, can be punished with imprisonment for three years to seven years and also with fine which shall not be less than ten thousand rupees; Any person who contravenes the provisions of section 38 J can be punished with imprisonment of six months, or with fine up to two thousand rupees, or with both.

Any person, who commits an offence in relation to the core area of a tiger reserve or where the offence relates to hunting in a tiger reserve or altering the boundaries of the tiger reserve, such offence can be punished on first conviction with imprisonment for three years to seven years, and also with a fine which shall not be less than fifty thousand rupees but may extend to two lakh rupees; and in the event of a second or subsequent conviction with imprisonment for seven years and also with a fine which shall not be less than five lakh rupees but may extend to fifty lakh rupees.

If any person, exercising powers under this Act, vexatious and unnecessarily seizes the property of any other person on the pretence of seizing it for the reasons mentioned in sec. 50, he shall, on conviction, be punishable with imprisonment for a term which may extend to six months, or with fine which may extend to five hundred rupees, or with both.

Forfeiture of Property Derived from Illegal Hunting and Trade A new chapter, Chapter VI-A, had been incorporated by the Wildlife (Protection) Amendment Act of 2002. According to this new chapter, if any person or associate of persons or trust acquires property from illegal hunting or trade of wildlife, it shall be forfeited to the State Government by the competent authority. Such property can be forfeited after taking all necessary steps (inquiry, investigation or survey in respect of any person, place, property, documents institution, etc.) and after tracing and identifying any such property. During the investigation and proceeding of forfeit the property, if the competent authority finds that only a part of the acquired property is proved illegal, the authority shall make orders, giving an opportunity to the person affected, to pay a fine equal to the market value of such part of property in lieu of forfeiture.

Offences by Government Departments and Authorities

If a person, authority or department is found guilty of committing an offence under the Forest Conservation Act, he shall be liable to be proceeded against and punished accordingly as per the rules of the act. The head of department or an authority or any other person can avoid punishment if he proves that the offence was committed without his knowledge or he exercised his full power to stop the offence to be committed.

Conclusion

The history of wildlife law in India dates back to the pre-colonial era. Even though some laws were introduced during the colonial period, they were limited in their scope and application. A comprehensive legal framework came into existence in India in 1972 with the enactment of the Wildlife (Protection) Act, 1972. This Act adopts an eco-centric approach towards wildlife by strictly regulating killing of wildlife, controlling trade in wild animals and plants. It also envisages measures for the conservation of wildlife mainly through protecting their natural habitats. It could be seen that the Indian judiciary has also contributed significantly to the development of wildlife law by taking proactive roles sometimes and by adopting expansive interpretation some other times. While it is undeniable that wildlife needs to be protected and conserved, it needs to be noted that the implementation of the Wildlife (Protection) Act, 1972 has resulted in adverse implications for tribal's and forest dwellers.

FOREST CONSERVATION ACT, 1980

- Introduction
- Historical Perspective
- British Period
- Forest Act, 1927
- Forest (Conservation) Act, 1980
- Judicial decisions
- Conclusion

Introduction

Forests are a major natural resource and are also recognised as a colourful expression of nature. They are also recognised as guardians and protectors of the wildlife of the country. Forests are valued not only for various kinds of flora and fauna but also for minerals, watersheds, cradles of rivers, check on desertification, as an important recreational resource and for their scenic beauty. Therefore, management of forests is an essential aspect of the protection of the environment. It also becomes more important as the trees are known as pools or banks of carbon dioxide. Cutting of trees releases carbon dioxide into the atmosphere which has largely contributed to the greenhouse effect or global warming. This global warming, in turn, has resulted in the melting of ice-caps and rise in the sea level; a change in a climate patterns has also been experienced all over the world.

During the last century, forests have been cut at rates unequalled in the world and they are disappearing at an alarming rate. In India, it has been claimed that we have got vegetation cover over 19 per cent of the total land area as against the accepted ideal of 33 per cent in India and over 40 per cent internationally. Thus, vegetation cover is much less than required.

Historical perspective

The Rigveda and the other Shrutis make it abundantly clear that often people saw the images of God in nature (trees, plants, animals, etc.) and treated them as divine objects with great devotion and love. Some trees were declared as sacred (e.g., peepal, banana, tulsi, amla, etc.) and this, in turn, automatically worked to protect the forests from the onslaught of mankind.

Mastya Purana: one pond is equal to 10 wells, one son is equal to 10 ponds and one tree is equal to 10 sons. Manusmriti declares the cutting of green trees an “offence”. Kautilya has provided in his Arthashastra that it is the duty of the king to guard, upkeep and plant forests for the kingdom. He also prescribes that it is the duty of the king to plant forests which grant safety to animate and inanimate objects. Emperor Ashoka is also known for his work to protect forests and for planting

trees along public roads. The edicts issued by him include “forests must not be burned”, and “trees shall be planted on both the sides of the roads”.

British Period

During British period forests were treated as a source of revenue for the government and not as a natural resource. During this time most of the forests were destroyed in the name of agriculture and the need for more land for cultivation.

The first Forest Act was enacted in 1865 and the Forest Department was established. The main purpose of this Act was to facilitate the acquisition of the Indian forest areas to supply timber for railways and to establish the claim of the State on the forest land. But the Act did not have provisions to protect the existing rights of the people living in the forests. Basically, this Act was meant to regulate forest exploitation, and the management and preservation of forest resources.

Indian Forest Act, 1878 classified forests into three types.

- The first category was reserved forests meant for- exploitation of timber for commercial purposes. Customary rights were not recognised in reserved forests.

- The second category was protected forests. The rights and privileges of forest communities were recorded but not settled.
- The third category was village forests which implied that any revenue from village forests was meant for the village communities managing such forests.

Forest Act, 1927

To make forest laws more effective and to improve the Forest Act, 1875, a new comprehensive Forest Act was passed in 1927 which repealed all the previous laws. The Act consists of 86 sections divided into 13 chapters. The main objects of the Act are to consolidate the laws relating to forests) regulation of and the transit of forest produce; and to levy duty on timber and other forest produce. The term "forest" has not been defined in the Act.

Forest (Conservation) Act, 1980

- Restriction on the use of forest land for non-forest purposes and
- Control of de-reservation of forests that have been reserved under the Indian Forest Act, 1927.

FCA shifts the power to control forests from state governments to the Central Government. It makes prior approval of the Central Government mandatory for the use of forest areas for nonforest purpose. The expression 'non-forest purpose' means breaking up or clearing of forest for cultivation of tea, coffee, spices spices, rubber, palms, oil-bearing plants, horticultural crops or medicinal plants. However, clearing of forest for reafforestation or any work for conservation and management of forest and wildlife does not amount to 'non-forest purpose'. FCA makes prior approval of the Central Government is mandatory for state governments to de-notify a reserved forest.

Banwasi Seva Ashram* v. *State of UP

Raised an important question relating to the right of the state notify an area as reserved forest and its effect on Adivasis already living there. State pleaded that the forest land had been acquired to set up thermal power station and provide cheaper electricity to people. The court declared that the land which had been acquired already been acquired would not be part of writ petition FCA lays down the procedure to be followed in the implementation of the law. The MoEF is required to refer

every proposal to the Forest Advisory Committee (FAC) constituted by the central government under section 3 of the FCA, which advises the MoEF whether the forest land should be allowed to be diverted. FAC can also specify conditions and restrictions in such permissions for diversion.

While considering the proposal for conversion of forest area for non-forest purpose, the FAC considers factors such as whether the forest land to be converted is a part of a protected forest, whether the use of the land is for agricultural purposes or for rehabilitation of persons displaced due to any river valley or hydro-electric project.

Defining the term 'forest'

In ***Godavarman* case** the Court held that the term 'forest' must be understood according to its dictionary meaning and that it covers all statutory recognised forests. It was further explained that the term 'forest land' will not only include 'forest' as understood in the dictionary sense, but also any area recorded as a forest in the government record irrespective of ownership. The order of the Supreme Court was in the context where state governments were interpreting the meaning of the term 'forest' narrowly to include only reserved forests and going ahead with de-notification of other forests for non-forest purposes. The Supreme Court's intervention brought all forests within the purview of the term 'forest' for the purpose of the FCA and thus arguably prevented such misuse of the legal provisions by states.

- The expression 'non-forest purpose' means breaking up or clearing of forest for cultivation of tea, coffee, spices, rubber, palms, oil-bearing plants, horticultural crops or medicinal plants. Using of forest for re-forestation or any work for conservation and management of forest and wildlife does not amount to 'non-forest purpose.

- non-forest purpose do not include any work relating or ancillary to conservation, development and management of forests and wildlife, namely establishment of check posts,

wireless communication and construction of fencing, bridges and culverts, dams, trench marks, pipelines, boundary marks or other like purposes.

Regulation of activities

The *Godavarman* case is a landmark in the context of the legal regime for protection and conservation of forests in India. The Supreme Court radically re-oriented licensing and functioning of forest-based industries. Subsequently, more than 2,000 interlocutory applications have been admitted, and several hundred orders have been issued, many with far-reaching implications. The case is still pending before the Supreme Court.

The Court held that when forest land is used for non-forest purposes, provisions must be made for compensatory afforestation. The logic was that diversion of forest land for non-forest purposes leads to tangible and intangible losses. In this case, the Court went on to suggest that the user agencies ought to pay compensation on the basis of the net present value of the land diverted for afforestation purposes.

The judiciary's key contribution, from an institutional point of view, is the setting up of the Central Empowered Committee (CEC). In 2002, pursuant to an order of the Supreme Court, the CEC was established by the MoEF under section 3(3) of the Environment (Protection) Act, 1986. The key functions of the CEC are to examine the interlocutory applications, reports and affidavits filed by the states in the *Godavarman* case and to submit their recommendations before the Court. The CEC is entrusted with the power to decide complaints filed by individuals regarding any steps taken by the government or compliance with the orders passed by the Supreme Court.

When Supreme Court faced the question whether the grant of lease by the Government of Chhattisgarh to a company concerned a forest land or not, the Court relied on the report of the CEC and decided that the land in question was not forest land and therefore, prior approval from the

Central Government is not needed. The creation of the ad-hoc Compensatory Afforestation Fund Management and Planning Authority (CAMPA) was another instance where the Court played a proactive role. Even though the MoEF issued a notification in 2004 for establishing CAMPA, it had not been made operational. In this context, the Supreme Court, through an order on 5 May 2006 in the *Godavarman* case, constituted the ad-hoc CAMPA. The Supreme Court has also actively interfered on the issue of expenditure of money received by states from user agencies to whom permissions were granted for using forest land for non-forest purposes.

In Godavarman case, the Court has gone far beyond its traditional role as the interpreter of law, and assumed the roles of policymaker, lawmaker and administrator. Through a series of orders, the Supreme Court of India controlled or prohibited a number of activities affecting forest ecology. It was held that running of saw mills and mining of minerals are non-forest purposes requiring permission from the Central Government. The Supreme Court banned felling of trees in the tropical ever-green forests in the State of Arunachal Pradesh. Movement of cut trees from any of the seven North-Eastern states to any other states was also banned.

In another case, ***Sushila Saw Mills* v. *State of Orissa*, AIR 1995 SC 2484**, where the constitutional validity of the Orissa Saw Mills and Saw Pits (Control) Act, 1991 which bans saw mills within a distance of 10 kms from reserved forests was challenged, the Court held that protection of forests is in public interest and therefore it is not violative of Article 14 of the Constitution and it is not arbitrary.

Role of judiciary: A critique

The role played by the judiciary has been criticized on many grounds.

First, it has been argued that the judiciary got involved in the micromanagement of the forests in India. The activism of the judiciary has gone to the level of assuming regulatory and legislative functions such as defining the value of forests across the country, banning the transport of timber,

determining the location of sawmills outside forest lands, or giving permission for pruning of shade trees in coffee plantations.

Second, the critique highlights that the judiciary has created quasi-executive structures like the CEC that function in a manner that is at complete odds with the separation of powers, since the CEC is nominated by and reports only to the Court. This may amount to bypassing of the powers of the executive and the establishment of a monopoly over the forest law regime. This can create problems because the MoEF has the power, under FCA, to constitute the FAC.

Third, the manner in which the Supreme Court has addressed the issue of forest encroachments led to a violation of the rights of tribals and forest dwellers. When the Supreme Court addressed the question of forest encroachments, the Court-appointed *amicus curiae* highlighted that states were allowing encroachments despite the Court's directives. Taking cognizance of this situation, the MoEF unilaterally issued a directive on 3 May 2002 to all states requiring that they summarily evict all illegal encroachers on forest land, and to complete the process by 30 September 2002. This directive was both impractical, given the magnitude and complexity of the encroachment issue, and also completely contradictory to the MoEF's earlier detailed guidelines (issued in 1990) on how such matters should be dealt with. The MoEF circular led to a series of evictions violating the rights of tribals and forest dependent communities.

Fourth, it has been highlighted that in many cases, the directions of the Supreme Court are both unsound and impractical and lack an understanding of the complexities of conditions and laws across such a diverse country. Rationalizing the boundaries of 'forests' may require notifying some revenue lands and de-notifying some forest lands. However, the Court does not go beyond the notified forests.

Conclusion

The rampant deterioration of forests in India under the Indian Forest Act, 1927 prompted the central government to strengthen its role in forest governance through through the adoption of the

Forest (Conservation) Act, 1980. This Act makes central government's permission mandatory for diversion of forest for non-forest purposes. The Indian judiciary, particularly the Supreme Court, has also played significant roles in the development of forest laws in India. For example, the Supreme Court has treated the *Godavarman* case as a continuing mandamus and continues to monitor forest governance in a big way which also includes establishment of institutional mechanism such as the CAMPA. However, the role played by the Indian judiciary in the field of forest governance needs to be analysed critically from the point of view of the ability of the judiciary to micro manage the forests in India as well as from the point of separation of power as envisaged under the Constitution of India. Further, the whole legal regime on forests needs to be assessed not just from the point of view of its contribution to the conservation of forests, but also from the point of view of its implications on tribals, forest dwellers and forest dependent communities.

PREVENTION OF CRUELTY TO ANIMALS (PCA) ACT, 1960

- Indian Penal Code, 1860 and animal protection
- Constitutional provisions for animal welfare
- Objective of PCA, 1960
- Animal Welfare Board of India
- Functions of the Board

- What is cruelty? (Section 11)
- Case laws
- Conclusion

INTRODUCTION

The origins of the Prevention of Cruelty to Animals Act, 1960 can be traced to Common Law. At Common Law, animals were treated as property. One had an absolute right to domestic animals. Only a qualified right to wild animals (often co-extensive with possession; required Crown permission). The understanding was that as lower beings, they existed for humankind to exercise dominion over for the use and comfort of humans. The question then came to be asked, how far does this proprietary right go: Animals being made to fight for entertainment; being trained to perform like humans.

Indian Penal Code, 1860 and animal protection

- It contained certain offences relating to animals under 'offences relating property'
- Section 428 offence of mischief by killing or maiming animal of value Rs. 10 or upward punishable by up to two years
- Section 429 offence against any elephant, camel, horse, mule, buffalo, bull, cow or ox, whatever may be the value thereof, or any other animal of value of Rs. 50 or imprisonment up to five years
- Also contained provisions in 'offences against health'

- Offence to be negligent with animal in one's possession such that it causes harm to others (Section 289)

Constitutional provisions for animal welfare

- Article 48: The State shall endeavor to organize agriculture and animal husbandry on modern and scientific lines and shall, in particular, take steps for preserving and improving the breeds, and prohibiting the slaughter, of cows and calves and other milch and draught cattle.

- Article 48 A: The State shall endeavor to protect and improve the environment and to safeguard the forests and wildlife of the country.

- Article 51 A (g): It shall be the duty of every citizen of India – to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures.

- Article 51 A (h): It shall be the duty of every citizen of India to develop the scientific temper, humanism and the spirit of inquiry and reform.

- Article 300 A: No person shall be deprived of his property save by authority of law.

- Article 21: No person shall be deprived of his life or personal liberty except according to procedure established by law.

Objective of PCA, 1960

An Act to prevent the infliction of unnecessary pain or suffering on animals and to amend the laws relating to prevention of cruelty to animals

Animal Welfare Board of India

For the promotion of animal welfare generally and for the purpose of protecting animals from being subjected to unnecessary pain or suffering, in particular, Animal Welfare Board has been established by the Central Government. The Board shall be a body corporate having perpetual succession and a common seal to acquire, hold and dispose of property and may by its name sue and be sued.

Functions of the Board- Sec.7

(a) to keep the law in force in India for the prevention of cruelty to animals under constant study and advise the Government on the amendments to be undertaken in any such law from time to time;

(b) to advise the Central Government on the making of rules under this Act with a view to preventing unnecessary pain or suffering to animals generally, and more particularly when they are being transported from one place to another or when they are used as performing animals or when they are kept in captivity or confinement;

(c) to advise the Government or any local authority or other person on improvements in the design of vehicles so as to lessen the burden on draught animals;

(d) to take all such steps as the Board may think fit for 1[amelioration of animals] by encouraging, or providing for, the construction of sheds, water-troughs and the like and by providing for veterinary assistance to animals;

(e) to advise the Government or any local authority or other person in the design of slaughterhouses or in the maintenance of slaughter-houses or in connection with slaughter of animals so that unnecessary pain or suffering, whether physical or mental, is eliminated in the pre-slaughter stages as far as possible, and animals are killed, wherever necessary, in as humane a manner as possible;

(f) to take all such steps as the Board may think fit to ensure that unwanted animals are destroyed by local authorities, whenever it is necessary to do so, either instantaneously or after being rendered insensible to pain or suffering;

(g) to encourage, by the grant of financial assistance or otherwise [the formation or establishment of *pinjrapoles*, rescue homes, animal shelters, sanctuaries and the like] where animals and birds may find a shelter when they have become old and useless or when they need protection;

(h) to co-operate with, and co-ordinate the work of, associations or bodies established for the purpose of preventing unnecessary pain or suffering to animals or for the protection of animals and birds;

(i) to give financial and other assistance to animal welfare organisations functioning in any local area or to encourage the formation of animal welfare organisations in any local area which shall work under the general supervision and guidance of the Board;

(j) to advise the Government on matters relating to the medical care and attention which may be provided in animal, hospitals and to give financial and other assistance to animal hospitals whenever the Board thinks it necessary to do so;

(k) to impart education in relation to the humane treatment of animals and to encourage the formation of public opinion against the infliction of unnecessary pain or suffering to animals and for the promotion of animal welfare by means of lectures, books, posters, cinematographic exhibitions and the like;

(l) to advise the Government on any matter connected with animal welfare or the prevention of infliction of unnecessary pain or suffering on animals.

What is cruelty? (Section 11)

- Beating, kicking, torturing, over-rides, over-drives so as to subject unnecessary pain or suffering
- Use/ employ a sick/ injured animal for any purpose
- Administer any injurious drug (oxytocin) to produce large amount of milk.
- Transport in a manner that causes discomfort and pain to the animal.
- Intensive confinement.
- Constant chaining.
- Negligence to exercise.
- an animal by leaving it suffer from pain by reason of starvation or thirst.
- Abandoning a sick animal by the owner to go at large in the street .
- Fail to provide basic necessities for the animal.

- Selling sick/ injured animal.
- Mutilating or killing an animal by use of strychnine injections in the heart or in any other unnecessarily cruel manner.
- Using bait for animal fights or organises animal fights for the sole purpose of entertainment of human beings.
- Shooting match

Experiment on Animal is allowed for:

- Knowledge for physiological discoveries
- Saving prolonging life
- Reducing suffering
- Combating diseases/disorders of humans, animals, plants.

Case laws

***Animal Welfare Board of India* v *A. Nagaraja*, (2014) 7 SCC 547**

- The Supreme Court held that bulls are not performing animals. Jallikattu and other animal races and fights are prohibited.
- Section 3 and 11 of PCA Act when read with Article 21 and Article 51A give rights to animals to life of dignity without cruelty

- The five freedoms to be read as part of constitution and statutory guarantees:
  - Freedom from hunger, thirst and malnutrition
  - Freedom from fear and distress
  - Freedom from physical and thermal discomfort
  - Freedom from pain, injury and disease
  - Freedom to express normal patterns of behaviour

***Nair* v *Union of India,* 2001 (3) SCR 353**

The Court Clearly mandated that Bears, Monkeys, Tigers, Panthers and Lions shall not be trained or exhibited as performing animals. The Kerala High Court dismissed petitioner's right to carry out any trade or business under Article 19 (g) of the Constitution.

***Gauri Maulekhi* v *Union of India,* WP(C) 881/2014**

Strict implementation of prohibition of cattle smuggling across the border for Gadhimai animal sacrifice in Nepal was ordered by Supreme Court. Additionally, several welfare recommendations shall be was adopted.

Conclusion

Though the Act has very pious object of preventing inflicting of unnecessary pain and suffering on animals, still the cruelty against animals is noticed because the Act prescribe very nominal fine amount of 100 Rs.

Questions

1. Define air pollution. Explain how Indian judiciary dealt with sound pollution problem.
2. Write short note on: Protected areas, trans-boundary pollution, Environmental laboratories.
3. Explain the framework of Water Act, 1981. Discussed the identified sources of pollution.
4. Narrate the framework of Air Act, 1981and discuss the principles laid in Taj Trapezium case.
5. Define pollution. Discuss the significant changes in environmental policy in the light of in Indian environmental policy in the light Stockholm declaration.
6. What is air pollution? Explain the salient features of Air Pollution Act.
7. Explain the various powers of State Board under the Water (Prevention and Control of Pollution) Act, 1974.
8. Discuss the judicial response for conservation of forest resources.
9. Why wildlife have to be protected? What are the causes for extinction of species?
10. What are the powers and functions of central pollution control board.
11. Write a note on object and salient features of Wild life protection Act, 1972.

12. Write a note on Prevention of Cruelty to Animals Act.

UNIT - V

- Eco mark
- Environmental Audit
- Environmental Protection Act, 1986
- Environmental Impact Assessment
- Costal Regulation zone
- Solid Waste Management

INTRODUCTION

Fifth unit under Environmental law clearly specifies the checks and balance for the protection of the environment, and there are provisions clearly specifies about the punishment and protection. Eco mark clearly indicates what kinds of the product are against the environment, and the criteria so followed for the protection of the environment. Environmental Audit and Environmental Impact assessment clearly helps us to understand the project, which are against the environment, CRZ rules and regulations are violated in India in larger scale. Solid waste management gives us the idea about the segregation of waste in India like wet and dry.

ECO MARK

SYNOPSIS

- Introduction
- Objectives of Ecomark Scheme
- Ecomark Logo
- Eco mark criteria
- Functions of Bureau of Indian Standards
- Conclusion **Introduction** Ecomark is issued for first time in 1991 by the Ministry of Environment and Forests. Ecomark is a certification mark issued by the Bureau of Indian Standards (BIS) for products which are ecologically safe and adheres to the standards prescribed by the BIS. Eco mark provides certification and labeling for house-hold and other consumer products which meet certain environmental criteria along with quality requirements prescribed in relevant Indian Standards for the product

Objectives of Eco mark scheme

- To offer an incentive to producers and importers to reduce the adverse impact of their products on the environment.

- To reward good initiatives companies take in order to reduce the adverse environmental impact of their products.

- To encourage consumers to be more environmentally aware in their day-to-day lives and urge them to take into account environmental factors also before making a purchase decision.

- To promote environmentally-safe products among citizens.

- To improve environmental quality and promote sustainable management of resources.

Eco mark Logo

- An earthen pot is Eco mark logo. It uses a renewable resource like earth and does not produce hazardous waste and consumes little energy in making. It represents both strength and fragility, indicative of the ecosystem.

Eco mark criteria

- The products that come up for certification will be assessed for the following main environmental impacts:
- They have substantially less potential for pollution when compared to similar products in terms of usage, production and disposal.

- They are recycled, recyclable or made from recycled or biodegradable materials.

- They make a significant contribution towards preserving non-renewable resources.

- They must contribute to the decrease in the adverse primary criteria that has the highest environmental impact associated with the product's use.

Points to be considered while determining the primary criteria for a product:

- The process of production including the source of raw material.
- The case of natural resources.
- Likely impact on the environment.
- Energy conservation in the product's production.
- Effect and extent of the waste emanating out of the process of production.
- Product and product container disposal.
- Use of waste and recycled materials.
- Sustainability for recycling or packaging.
- Biodegradability

Functions of Bureau of Indian Standards

- Assessment of the product for ECO Mark, certification of the product for award of ECO Mark.
- Renewal, suspension and cancellation of the license.

- Products certified as eligible for the ECO Mark shall also carry the ISI Mark (except for leather) for quality, safety and performance of the product and shall be licensed to carry the ECO Mark for a prescribed time period after which it shall be reassessed.
- Undertaking inspections and taking samples for analysis of any material or substance.

Setbacks

- There is cost and expenses involved in obtaining eco mark labeling.
- There is no much consumer awareness about eco mark label and there is practice of fake and vague logos.

Conclusion

If the eco mark label scheme is properly implemented it would be great step in environmental protection. It encourages manufactures and consumers to manufacture and consume eco friendly products.

ENVIRONMENTAL AUDIT

- Introduction
- Origins of Environmental Auditing
- Definitions
- Objectives of Environmental Auditing
- Benefits of Environmental Auditing
- Terminology
- Conclusion

INTRODUCTION

Environmental auditing is essentially an environmental management tool for measuring the effects of certain activities on the environment against set criteria or standards. Depending on the types of standards and the focus of the audit, there are different types of environmental audit. Organisations of all kinds now recognise the importance of environmental matters and accept that their environmental performance will be scrutinised by a wide range of interested parties.

These are used to help improve existing human activities, with the aim of reducing the adverse effects of these activities on the environment. An environmental auditor will study an organisation's environmental effects in a systematic and documented manner and will produce an environmental audit report. There are many reasons for undertaking an environmental audit, which include issues such as environmental legislation and pressure from customers.

Origins of Environmental Auditing

Environmental safety and health auditing developed in the early 1970s, largely among companies operating in environmentally intensive sectors such as oils and chemicals. Since then environmental auditing has spread rapidly with a corresponding development of the approaches and techniques adopted. Several factors have influenced this growth.

- *Industrial accidents*. Major incidents such as the Bhopal, Chernobyl and *ExxonValdez* disasters have reminded companies that it is not sufficient to set corporate policies and standards on environmental health and safety matters without ensuring that they are being implemented. Audits can help reduce the risk of unpleasant surprises.

- *Regulatory developments.* Since the early 1970s regulations on environmental topics have increased substantially. This has made it steadily more difficult for a company to ascertain whether a specific plant in a particular country is complying with all of the relevant legislation.

- *Public awareness.* The public has become increasingly aware of, and vocal about, environmental and safety issues. Companies have had to demonstrate to the public that they are managing environmental risks effectively.

- *Litigation*. The growth of legislation has led to a corresponding explosion of litigation and liability claims, particularly in the United States. In Europe and elsewhere, there is growing emphasis on the responsibilities of individual directors and on making information available to the public.

Definitions

The term 'audit' has its origins in the financial sector. Auditing, in general, is a methodical examination - involving analyses, tests, and confirmations - of procedures and practices whose goal is to verify whether they comply with legal requirements, internal policies and accepted practices.

Objectives of Environmental Auditing

The overall objective of environmental auditing is to help safeguard the environment and minimize risks to human health. Clearly, auditing alone will not achieve this goal (hence the use of the word help); it is a management tool. The key objectives of an environmental audit therefore are to:

- determine how well the environmental management systems and equipment are performing
- verify compliance with the relevant national, local or other laws and regulations
- minimize human exposure to risks from environmental, health and safety problems.

Benefits of Environmental Auditing

If environmental auditing is implemented in a constructive way there are many benefits to be derived from the process. The auditing approach described in this paper will help to:

- safeguard the environment
- verify compliance with local and national laws
- indicate current or potential future problems that need to be addressed
- assess training programmes and provide data to assist in training

- enable companies to build on good environmental performance, give credit where appropriate and highlight deficiencies
- identify potential cost savings, such as from waste minimization
- assist the exchange and comparison of information between different plants or subsidiary companies
- demonstrate company commitment to environmental protection to employees, the public and the authorities.

Terminology

Environmental auditing should not be confused with environmental impact assessment (EIA). Both environmental auditing and EIA are environmental management tools, and both share some terminology, for example, 'impact', 'effect', and 'significant', but there are some important differences between the two.

Environmental impact assessment is an anticipatory tool, that is, it takes place before an action is carried out (*ex ante*). EIA therefore attempts to predict the impact on the environment of a future action, and to provide this information to those who make the decision on whether the project should be authorised. EIA is also a legally mandated tool for many projects in most countries.
Environmental auditing is carried out when a development is already in place, and is used to check on existing practices, assessing the environmental effects of current activities (*ex post*). Environmental auditing therefore provides a 'snap-shot' of looking at what is happening at that point in time in an organisation.

The International Organization for Standardization (ISO) has produced a series of standards in the field of environmental auditing. These standards are basically intended to guide organisations and auditors on the general principles common to the execution of environmental audits. These are addressed elsewhere in this module.

Environmental auditing means different things to different people. Environmental auditing is often used as a generic term covering a variety of management practices used to evaluate a company's environmental performance. Strictly, it refers to checking systems and procedures against standards or regulations, but it is often used to cover the gathering and evaluation of any data with environmental relevance - this should actually be termed an environmental review.

Conclusion

It can be concluded that Environmental Audit evaluates the performance and compliance of an organization with the prescribed environmental standards to assess the harm caused to the environment or a potential to cause environmental harm.

ENVIRONMENT PROTECTION ACT, 1986

The Environment Protection Act was enforced in the year 1986 with the aim to protect and improve the environment and matters associated with it. The Environmental Laws (Amendment) Bill is a

draft of the proposed amendment in Environment protection Act 1986 and the National Green Tribunal Act of 2010. The amendments are done with an objective of providing for an effective deterrent penal provisions and introducing the concept of a monetary penalty for violations and contraventions.

Objectives of this Environment Protection Act

- To protect and improve the environment and environmental conditions.
- To implement the decisions made at the UN Conference on Human Environment that was held in Stockholm in the year 1972.
- To take strict actions against all those who harm the environment.
- To enforce laws on environment protection in the areas that is not included by the existing laws.
- To give all the powers to the Central Government to take strict measures in favour of environmental protection.

In the wake of the Bhopal tragedy, the government of India enacted the Environment Act of 1986. The purpose of the Act is to implement the decisions of the United Nations Conference on the Human Environment of 1972. The decisions relate to the protection and improvement of the human environment and the prevention of hazards to human beings, other living creatures, plants and property.

The Act is an "umbrella" for legislations designed to provide a framework for Central Government, coordination of the activities of various central and state authorities established under previous Acts, such as the Water Act and the Air Act.

In this Act, main emphasis is given to "Environment", defined to include water, air and land and the inter-relationships which exist among water, air and land and human beings and other living creatures, plants, micro-organisms and property.
"**Environmental pollution**" is the presence of pollutant, defined as any solid, liquid or gaseous substance present in such a concentration as may be or may tend to be injurious to the environment.

"**Hazardous substances**" include any substance or preparation, which may cause harm to human beings, other living creatures, plants, microorganisms, property or the environment. Through this Act Central Government gets full power for the purpose of protecting and improving the quality of the environment.

Main Provision of the Act

- The Act empowers the centre to "take all such measures as it deems necessary".
- By virtue of this Act, Central Government has armed itself with considerable powers which include coordination of action by state, planning and execution of nationwide programmes, laying down environmental quality standards, especially those governing emission or discharge of environmental pollutants, placing restriction on the location of industries and so on. Authority has power to issue direct orders, included orders to close, prohibit or regulate any industry. power of entry for examination, testing of equipment and other purposes and power to analyse the sample of air, water, soil or any other substance from any place.
- The Act explicitly prohibits discharges of environmental pollutants in excess of prescribed regulatory standards. There is also a specific prohibition against handling hazardous substances except those in compliance with regulatory procedures and standards.

- The Act provides provision for penalties. For each failure or contravention, the punishment included a prison term up to five years or fine up to Rs. 1 lakh, or both.
- The Act imposed an additional fine of up to Rs. 5,000 for every day of continuing violation
- If a failure or contravention occurs for more than one year, offender may be punished with imprisonment which may be extended to seven years.
- Section 19 provides that any person, in addition to authorized government officials, may file a complaint with a court alleging an offence under the Act.

ENVIRONMENTAL IMPACT ASSESSMENT

- Environmental Appraisal Committees (EAC)
- Environmental Appraisal Procedure
- Short comings of EIA

The crux of the EIA Notification is that it requires a pre-determined set of projects to obtain prior environmental clearance before under-taking construction - in the case of new projects - or initiating expansion or modernization activities - in the case of existing projects. The Schedule to the Notification details the categories of projects or activities which require prior environmental clearance. This includes inter alia thermal, hydro and nuclear power projects, mining projects, oil and gas exploration projects, industries, infrastructure projects and construction projects. These project categories are defined by different criteria such as area, capacity, product mix and location. The proposed construction of any project listed in the Schedule; or the expansion or modernization of any existing project in a manner that would cross the limits set out in the Schedule; or any change in the product-mix in an existing manufacturing unit included in the Schedule beyond the specified range, would require a prior environmental clearance in accordance with the EIA Notification.

The Schedule further divides each category into Category A and Category B projects "based on the spatial extent of potential impacts and potential impacts on human health and natural and manmade

resources". For example, river valley projects with capacity greater than 50 MW fall under Category A, and those between 25 and 50 MW fall under Category B. Certain categories of projects fall under only one category and not the other, notwithstanding size or capacity. Proponents of Category A projects have to approach the Central Government (i.e. the MoEF) for an EC, while applicants of Category B projects have to approach a State-level body - State level Environment Impact Assessment Authority ('SEIAA') of the State in which the project is situated.

The Central Pollution Control Board ('CPCB') does not have a direct role to play in the EC process. However, some of its activities are relevant to the EC process. For instance, the CPCB has identified a list of critically polluted areas/ industrial clusters and a moratorium has been declared on grant of ECs for projects proposed in these areas/clusters. Furthermore, in accordance with the General Conditions in the Schedule, Category B projects located within ten kilometres of critically polluted areas as identified by the CPCB, have to be considered as Category A projects.

Environmental Appraisal Committees (EAC)

With a view to ensure multi-disciplinary input required for environmental appraisal of development projects, Expert Committees have been constituted for the following sectors:

1. Mining Projects
2. Industrial Projects
3. Thermal Power Projects
4. River Valley, Multipurpose, Irrigation and H.E. Projects
5. Infrastructure Development and Miscellaneous Projects

6. Nuclear Power Projects

Environmental Appraisal Procedure

Once an application has been submitted by a project authority along with all the requisite documents specified in the EIA Notification, it is scrutinized by the technical staff of the Ministry prior to placing it before the Environmental Appraisal Committees. The Appraisal Committees evaluate the impact of the project based on the data furnished by the project authorities and if necessary, site visits or on-the-spot assessment of various environmental aspects are also undertaken. Based on such examination, the Committees make recommendations for approval or rejection of the project, which are then processed in the Ministry for approval or rejection. In case of site specific projects such as Mining, River Valley, Ports and Harbours etc., a two stage clearance procedure has been adopted whereby the project authorities have to obtain site clearance before applying for environmental clearance of their projects. This is to ensure avoiding areas which are ecologically fragile and environmentally sensitive. In case of projects where complete information has been submitted by the project proponents, a decision is taken within 90 days.

Monitoring

After considering all the facets of a project, environmental clearance is accorded subject to implementation of the stipulated environmental safeguards. Monitoring of cleared projects is undertaken by the six regional offices of the Ministry functioning at Shillong, Bhubaneshwar, Chandigarh, Bangalore, Lucknow and Bhopal. The primary objective of such a procedure is to ensure adequacy of the suggested safeguards and also to undertake mid-course corrections required, if any. The procedure adopted for monitoring is as follows:

1. Project authorities are required to report every six months on the progress of implementation of the conditions/safeguards stipulated, while according clearance to the project.

2. Field visits of officers and expert teams from the Ministry and/ or its Regional Offices are undertaken to collect and analyse performance data of development projects, so that difficulties encountered are discussed with the proponents with a view to finding solutions.

3. In case of substantial deviations and poor or no response, the matter is taken up with the concerned State Government.

4. Changes in scope of project are identified to check whether review of earlier decision is called for or not.

Coastal Area Management

Coastal States/UTs are required to prepare Coastal Zone Management Plans (CZMPs) as per the provisions of the Coastal Regulation Zone (CRZ) Notification 1991, identifying and categorising the coastal areas for different activities and submit it to the Ministry for approval. The Ministry has constituted a Task Force for examination of these plans submitted by Maharashtra and Gujarat States have been discussed in the meetings of the Task Force and these need to be modified. The Government of Orissa has submitted a partial plan covering only a part of their coastal area. In respect of West Bengal, a preliminary concept document of the CZMP has been submitted. Revised CZMP/clarifications have been received from the State of Goa and UTs of Daman & Diu, Lakshadweep and Andaman & Nicobar Islands.

During the year, the Task Force had seven meetings and two site visits for consideration of the plans. Once the plans of the different States/UTs are finalised, the development activities in the coastal belt would be more forcefully regulated to ensure non-violation of CRZ Notification.

Island Development Authority (IDA)

The 9th meeting of IDA was held on 22.1.96 under the Chairmanship of the Prime Minister to decide on various policies and programmes aimed at integrated development of the islands, keeping in view the relevant aspects of environmental protection, and also to review the progress of implementation and impact of the programmes of development.

STUDIES ON CARRYING CAPACITY

Natural resources are finite and are dwindling at a fast pace. Optimization of natural resources for achieving the objective of sustainable development is therefore, self evidents, this can be done only when environmental considerations are internalized in the development process. It has often been observed that one or more natural resource(s) becomes a limiting resource in a given region thereby restricting the scope of development portfolios. The Ministry of Environment & Forests has been sponsoring Carrying Capacity Studies for different regions. The studies involve:

1. Inventorisation of the natural resources available;

2. Preparation of the existing environmental settings;

3. Perspective plans and their impact on natural resources through creation of "Business As Usual Scenario";

4. Identification of "Hot Spots" requiring immediate remedial action to overcome air, water or land pollution;

5. Formulation of alternative development scenarios including a Preferred Scenarios. A comparison between "Business As Usual" and the "Preferred Scenario" would indicate the future course of action to be adopted for development of the region after the package has been discussed with the local people as well as the planners.

A few problem areas such as the Doon Valley – an ecologically sensitive area, the National Capital Region (NCR) which is suffering from air and water pollution as well as congestion, Damodar River Basin which is very rich in natural resources and yet has extensive environmental degradation and Tapi estuary which represents the problems in the coastal region both for water and land development, have been selected for carrying out such studies.

A multi-disciplinary and multi-institutional approach has been adopted for conducting these studies. Draft reports are ready for Doon Valley and the NCR and are being discussed with the NGOs and the local people for finalising the same. Work relating to Damodar Basin and Tapi Estuary is continuing with respect to secondary data collection and analysis so as to identify the requirements of primary data collection and modification in the development scenarios.

Shortcomings of EIA

Applicability

- There are several projects with significant environmental impacts that are exempted from the notification either because they are not listed in schedule I, or their investments are less than what is provided for in the notification.

Composition of expert committees and standards

- It is being found that the team formed for conducting EIA studies is lacking the expertise in various fields such as environmentalists, wild life experts, Anthropologists and Social Scientists (to study the social impact of the project).

Public hearing

- Public comments are not considered at the early stage, which often leads to conflict at the later stage of project clearance.

- A number of projects with significant environmental and social impacts have been excluded from the mandatory public hearing process.

- The documents which the public are entitled to are seldom available on time.

- The data collectors do not pay respect to the indigenous knowledge of local people.

Quality of EIA

- One of the biggest concerns with the environmental clearance process is related to the quality of EIA report that are being carried out.
- The reports are generally incomplete and provided with false data.

- Many EIA reports are based on single season data.

- The EIA document in itself is so bulky and technical, which makes it very difficult to decipher so as to aid in the decision making process.

Lack of Credibility

- It is the responsibility of the project proponent to commission the preparation of the EIA for its project.

- The EIA is actually funded by an agency or individual whose primary interest is to procure clearance for the project proposed.

- There is little chance that the final assessment presented is un biased, even if the consultant may provide an unbiased assessment that is critical of the proposed project.

- There are so many cases of fraudulent EIA studies where erroneous data has been used, same facts used for two totally different places etc.

- There is no accreditation of EIA consultants, therefore any such consultant with a track record of fraudulent cases cannot be held liable for discrepancies.

- It is hard to imagine any consultant after being paid lakh of rupees, preparing a report for the project proponents, indicating that the project is not viable.

CRZ (COASTAL REGULATION ZONE)

Under the Environment (Protection) Act, the MoEF issued the Coastal Regulation Zone Notification 1991 (CRZ 1991 or 1991 Notification) for the protection of the coastal areas. The regulatory approach of the CRZ 1991 was rather simplistic: it was aimed primarily at permitting only those activities that are absolutely dependent on being located in the coastal environment and to keep out the rest. Accordingly, various activities were restricted, while others were permitted but subjected to specific obligations and conditions. In addition, the entire Coastal Regulation Zone was classified into different zones, i.e., CRZ-I, CRZ-II, CRZ-III and CRZ-IV based on ecological considerations and the extent of the development of human settlement (urban or rural).

The zones differed with regard to which activities would be allowed within their geographical scope. Under the 1991 Notification, the responsibility for implementation was primarily assigned to the State Governments. The 1991 Notification stated that the respective coastal State Government should identify, classify, and record all the CRZ areas in the State Coastal Zone Management Plans (SCZMP) and have them approved by the MoEF. Throughout the following years, however, it

became obvious that the CRZ 1991 faced severe implementation deficits. Some of these challenges were due to various factors:

- The notification stipulated uniform regulations even for unique and ecologically sensitive areas such as the islands of Andaman and Nicobar.
- There were no appropriate clearance procedures for high-impact activities around the coast.
- There was a lack of monitoring mechanisms and enforcement mechanisms to check violations.
- Pollution from land-based activities was not taken into account.
- Interests of traditional coastal communities living in ecologically sensitive areas were not taken into account.
- Frequent amendments to the law (25 times in 19 years). Particularly many amendments of the CRZ 1991 are indicative of the fact that the MoEF has been constantly attempting to (re)balance the evolving and increasing use and conservation conflicts in coastal areas. Several critics and analysts have pointed out that these amendments have rather lowered conservation standards and legal certainty, and made room for lobbying groups that favored industrial interests over environmental standards.

The biggest problem, however, was that the existence of the CRZ Notification was almost completely ignored by the State Government's authorities responsible for implementation. This particularly came to light through a proceeding before the Indian Supreme Court, ***Indian Council for Enviro-Legal Action* v. *Union of India***. The petitioner was a non-profit organisation working for the cause of environmental protection. The petitioner primarily contended, in this 'Public Law, Environment and Development Journal Interest Litigation (PIL)' that the CRZ Notification, 1991 had not been implemented or enforced for several years after being formulated. The petitioners

argued that due to the non implementation of the CRZ Notification,1991, developmental activities within the coast remained unregulated, thus allowing further environmental degradation.
The Union of India in this case responded that they had experienced practical difficulties in implementing the Notification. The Supreme Court in its judgment concluded that 'Even though, laws have been passed for the protection of environment, the enforcement of the same has been tardy, to say the least. With the governmental authorities not showing any concern with the enforcement of the said Acts, and with the development taking place for personal gains at the expense of environment and with disregard of the mandatory provisions of law.

***S. Jagannath* v. *Union of India,* AIR 1997 SC 811**- In this case the petitioner (again, a non-profit organisation) sought the enforcement of the CRZ Notification, 1991 before the Supreme Court of India. The petitioner argued that intensive and semi-intensive shrimp farming in the ecologically fragile coastal areas must be prohibited under Para 2 of the CRZ Notification 1991. Para 2(i) of the 1991 Notification bans the 'setting up of new industries and expansion of existing industries, addition, the petitioner sought the establishment of a National Coastal Zone Management Authority to safeguard the marine and coastal areas. On the other side, the representative of the shrimp industries primarily claimed that shrimp farms are directly related to the waterfront and cannot exist without foreshore facilities.

The Court held in favour of the petitioner that shrimp farms do not need waterfront facilities. Further, the Court observed that the purpose of the CRZ Notification is to protect the fragile coastal areas, and those activities that cause environmental degradation cannot be permitted.64 Most importantly, the Court ordered the Central Government to 'constitute an authority under Section 8(3) of the Environment (Protection) Act, 1986 and to confer on the said authority all the powers necessary to protect the ecologically fragile coastal areas, seashore, waterfront and other coastal areas and specially to deal with the situation created by the shrimp culture industry in the coastal States/Union Territories'.

In the aftermath of these decisions, the National Coastal Zone Authority (NCZMA) and State Coastal Zone Authorities (SCZMA) were set up in order to administer and implement the CRZ

Notification.66 As will be shown below, several steps have been taken under the CRZ Notification, 2011 to improve monitoring, control, and enforcement, as well as to increase transparency. Except those directly related to waterfront or directly needing foreshore facilities'.

The petitioner argued that the shrimp culture industry was not directly related to water or directly needing foreshore facilities. However, executing the provisions laid down in the CRZ Notification has generally shown to pose serious challenges. For example, in the recent case of a newly constructed 31-floor high-rise in the city of Mumbai (Adarsh Housing Society), the builders violated the CRZ Notification on many counts, including constructing 25 extra floors for which they were not given permission. More recently, on 6 January 2011, yet another amended CRZ Notification was published in the Gazette of India.With regard to drafting the amended Notification, the MoEF has relied extensively on scientific input and wide stakeholder involvement.

In 2009, the MoEF established a committee under the leadership of the renowned scientist M.S. Swaminathan to review the scientific, legal, and policy provisions of the CRZ Notification, 1991.The committee consisted of policy and legal experts, as well as other experts from various fields such as marine science and engineering, and environmental planning. Following a scientific report, a draft Notification was issued by the MoEF in May 2010. Between May 2010 and January 2011, the MoEF held public consultations and deliberations with stakeholders representing different sectors and various regions. In comparison to the 1991 Notification, the 2011 Notification has in particular the following new features:

- It extends the scope of the Notification to include territorial waters within the CRZ.

- The islands of Andaman and Nicobar and Lakshadweep, owing to the unique and ecologically sensitive nature of their environment, and the marine areas surrounding these islands up to their

territorial limits have been separately covered under the purview of the Island Protection Zone Notification.

• The Notification introduces the concept of a 'hazard line' that would be demarcated by the MoEF. Natural disasters such as tsunamis and floods cause major devastation in the coastal zone; the main purpose of defining a hazard line is to indicate threatened areas and thus to protect the life and property of the coastal communities as well as the coastal infrastructure. Accordingly, the guidelines for the preparation of Coastal Zone Management Plans suggest that, 'no developmental activities other than those listed above shall be permitted in the areas between the hazard line and

500 m or 100 m or width of the creek on the landward side

BASIC UNDERSTANDING OF CRZ

- The **coastal zone** is a **transition area between marine and territorial zones**. It includes shore ecosystems, wetland ecosystems, mangrove ecosystems, mudflat ecosystems, sea grass ecosystems, salt marsh ecosystems, and seaweed ecosystems.
- CRZ Rules thus, **govern human and industrial activity close to the coastline**, in order to protect the fragile ecosystems near the sea.
- They seek to **restrict certain kinds of activities**, like large constructions, setting up of new industries, storage or disposal of hazardous material, mining, or reclamation and bunding, within a certain distance from the coastline.
- The basic idea is: As areas immediately next to the sea are extremely delicate, home to many marines and aquatic life forms, and are also threatened by climate change, they need to **be protected against unregulated development.**
- In all CRZ Rules, the regulation zone has been defined as the **area up to 500 m** from the **high-tide line**.

EVOLUTION OF CRZ

- The Rules, mandated under the **Environment Protection Act, 1986,** were first framed in **1991**. However**,** it failed to take into account the concerns of coastal communities. Also, despite several amendments, states found the **1991 Rules to be extremely restrictive.** The 1991 Rules created hurdles for showpiece industrial and infrastructure projects such as the POSCO steel plant in Odisha and the proposed Navi Mumbai airport.
- After a series of reviews and amendments, it was eventually replaced with a **new notification in 2011**. The Centre notified fresh CRZ Rules in 2011, which addressed some concerns. An exemption was made for the construction of the Navi Mumbai airport.
- **District Level Coastal Committees (DLCC)**, space for coastal communities to participate in some aspects of regulatory decision-making on the coasts were created.
- After even these Rules were found inadequate, the Environment Ministry in 2014 set up a committee under **Shailesh Nayak** to give suggestions for a new set of CRZ Rules.

SALIENT FEATURES OF CRZ NOTIFICATION, 2018

Allowing FSI as per current norms in CRZ areas: As per CRZ, 2011 Notification, for CRZ-II (Urban) areas, Floor Space Index (FSI) or the Floor Area Ratio (FAR) had been frozen as per 1991 Development Control Regulation (DCR) levels. In the CRZ, 2018 Notification, it has been decided to de-freeze the same and permits FSI for construction projects.

Densely populated rural areas to be afforded greater opportunity for development: For CRZ-III (Rural) areas, two separate categories have now been stipulated as below:

(a) CRZ-III A - These are densely populated rural areas with a population density of 2161 per square kilometer as per 2011 Census. Such areas shall have a No Development Zone (NDZ) of 50 meters from the HTL as against 200 meters from the

High Tide Line stipulated in the CRZ Notification, 2011 since such areas have similar characteristics as urban areas.

(b) CRZ-III B - Rural areas with a population density of below 2161 per square kilometer as per 2011 Census. Such areas shall continue to have an NDZ of 200 meters from the HTL.

Tourism infrastructure for basic amenities to be promoted: Temporary tourism facilities such as shacks, toilet blocks, change rooms, drinking water facilities, etc. have now been permitted in Beaches. Such temporary tourism facilities are also now permissible in the "No Development Zone" (NDZ) of the CRZ-III areas as per the Notification. However, a minimum distance of 10 m from HTL should be maintained for setting up of such facilities.

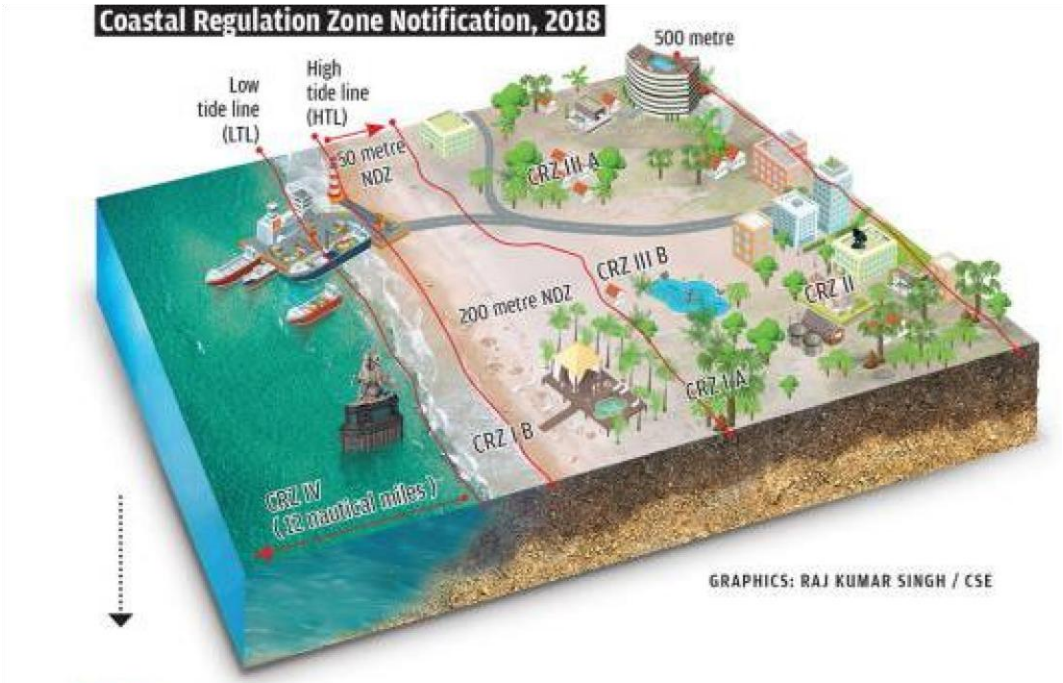
CRZ Clearances streamlined: Only such projects/activities, which are located in the CRZ-I and CRZ IV shall be dealt with for CRZ clearance by the Ministry of Environment, Forest and Climate Change. The powers for clearances with respect to CRZ-II and III have been delegated at the State level with necessary guidance.

A No Development Zone (NDZ) **of 20 meters has been stipulated for all Islands:** For islands close to the mainland coast and for all Backwater Islands in the mainland, in wake of space limitations and unique geography of such regions, bringing uniformity in treatment of such regions, NDZ of 20 m has been stipulated.

All Ecologically Sensitive Areas have been accorded special importance: Specific guidelines related to their conservation and management plans have been drawn up as a part of the CRZ Notification.

Pollution abatement has been accorded special focus: In order to address pollution in Coastal areas treatment facilities have been made permissible activities in CRZ-I B area subject to necessary safeguards.

- Boost tourism
- Enhanced employment opportunities
- Opportunities for affordable housing
- Promotion of economic growth
- Rejuvenation of the coastal areas while reducing their vulnerabilities.



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CRZ I A: Eco-sensitive areas
CRZ I B: Inter-tidal areas
CRZ II: Areas which have been developed up to or close to the shore
CRZ III A: CRZ-III areas, where the population density is more than 2,161 sq km as per 2011 Census
CRZ III B: Areas with population density of less than 2,161 per sq km, as per 2011 Census
CRZ IV A: 12 nautical miles from the Low Tide Line towards the sea
CRZ IV B: Tidal influenced waterbodies
NDZ: 50 metres from High Tide Line in CRZ III A areas, 200 m from HTL in CRZ-III B areas

CRITICISMS

Facilitate Flagship Projects: The government has declared Sagarmala, Bharatmala, and CEZs as "strategic projects", which have a blanket exemption from CRZ provisions.

Enhanced Coastal Vulnerabilities: Studies by the Indian National Centre for Ocean Information Services, says the sea level along India is rising at 0.33-5.16 mm per year and predict that the

frequency and intensity of unseasonal and extreme weather events will increase in the coming decades.

Enhanced Risk to Inhabitants: Providing housing facilities just 50 m from the coastline would expose the inhabitants to severe weather events, that too without any buffer.

Increased Coastal Erosion: According to the Central Water Commission's Shoreline Change Atlas, India has lost 3,829 km, or 45 percent of the coastline, in just 17 years till 2006. While coastal erosion is a natural phenomenon carried out by waves, tidal and littoral currents and deflation, the report says these factors get exacerbated by activities like land reclamation and other structures on the coast.

Disregard to Fragile Coastal Ecology: The controversial land reclamation, in which new land is created from oceans or lake beds and is known to have strong impacts on coastal ecology, has been allowed in intertidal or CRZ-IB areas, for ports and sea links.

Increased Pollution Levels: Increasing nutrients in the coastal water may lead to ecological disturbances affecting the coastal ecosystem processes and services.

Unscientific Approach: Government has relied on satellite imagery to demarcate CRZ categories with little or no corroboration on the ground.

Local Communities Further Distanced: New notification brings clearance in CRZ-IV areas under the purview of the Centre. Earlier, the area was under the state government. Now, it will be difficult for communities to get their voices heard in Delhi.

Non-Empirical Approach: No study is available to show the carrying capacity of coastal areas to accommodate such increased development or the projected impact of such a change on the coastal communities.

SOLID WASTE MANAGEMENT IN INDIA

Rapid and widespread industrial development, unplanned urbanization, regular flow of persons from rural to urban areas and improper and inadequate action of the authorities entrusted with the work of pollution control and environmental protection have largely contributed to unhealthy and degraded environment. Unplanned and alarming rate of urbanization has given rise to many environment related problems, such as problem of health and hygiene, sewage, disposal of solid waste, air, water and land pollution, slums, housing, basic amenities and others.

Solid Waste management is the collection, transport, processing or disposal, managing and monitoring of waste materials. The term usually relates to materials produced by human activity, and the process is generally undertaken to reduce their effect on health, the environment or aesthetics. Solid Waste management is a distinct practice from resource recovery which focuses on delaying the rate of consumption of natural resources.

Image Clearly Points the segregation in India

Management of Municipal Solid Waste in Old India

Since Vedic time, the prime motto of Indian social life was to live in harmony with nature and in an hygienic environment. Vedas, Upanishads, Smiritis and Dharmashastras preach in one way or another a worshipfull attitude towards plants, trees, mother earth, sky, vayumandal (sky), water and animals (all living creatures). Thus, polluting air, water or land was regarded as sin as they were to be respected and regarded as God and Goddesses. Maintaining them pure was considered to be the duty of everyone.

Manusmiriti—first systematic treatment of Hindu Law, also prohibited the throwing of garbage, dust, rubbish, pieces of meat etc. on the highway and in water bodies and made it punishable. It

emphasized to maintain clean, hygienic and unpolluted atmosphere near dwelling houses and around towns and villages.

Proper sanitation and keep the public places clean was maintained as a duty of everybody and violation of such duty was considered to be punishable. Kautilya in his Arthshastra has mentioned that maintaining sanitation of habitat was essential and inviable. The great epic Mahabharata also identified environmental pollution and that whole society may suffer from various diseases because of it. The Charak—doyen of Ayurveda also emphasized on the wholesomeness of water and pure air as the pollution of both causes many type of diseases. Other scriptures also cautioned against disposal of civic waste and industrial refuge into rivers as they are considered to be sacred and respectable by the Hindus. Thus, Hindu culture and scriptures cautioned against those activities which were detrimental in any way to the quality of environment.

Criminal Laws and the Waste Management

There are two major criminal laws dealing with solid waste management—(a) The Indian Penal Code, 1860; and (b) The Criminal Procedure Code, 1973.

The Indian Penal Code and Solid Waste Management

The Indian Penal Code of 1860 has dealt with solid waste management under Chapter XIV ‘of offences affecting the public health, safety, convenience, decency and morals’. Since, solid waste gives rise to various type of diseases and is dangerous to public health, it has been treated as ‘public nuisance’ and has been made punishable. But there is no direct section in the Code which deals with the problem of solid waste.

WASTE SEGREGATION

Waste Segregation Waste segregation is the biggest obstacle for effective solid waste management. It is common in developed countries like U.S., Europe and Japan; but countries like India most

often collect MSW in a mixed form. It is mainly because of lack of public awareness and advancements in source separation techniques. However, paper and certain type of plastics are separately collected at source level by waste pickers or waste buyers. Source separation increases recycling efficiency. It also improves performance of waste treatment units due to good quality of feed and lesser amount of impurities.

3R Concept Reduce: The term 'Reduce' can be defined as a reduction in the amount and/or toxicity of waste entering the waste stream. Use of green elements as raw materials, extension of product life cycle, optimum process design, reducing energy and heat losses, replacing raw materials by lighter material can help to reduce the amount of waste generation. 'Reduce' is the top ranking component of solid waste management hierarchy because it represents most effective means of reducing economical costs and environmental impacts associated with handling waste. Life cycle assessment is very important for effective source reduction of waste.

Reuse: The term 'Reuse' means usage (or utilization) of a product in the same application for which it was originally used. For example, a plastic bag can carry groceries home from the market over and over again, a tin can be used as a multi-purpose container. A product can also be reused for some other purpose, such as occurs when glass jars are reused in a workshop to hold

Small objects such as screws or nails. Remanufacturing is often used in this regard which means restoring a product to like new condition. It involves disassembling the product, cleaning and refurbishing the useful parts and stocking those parts in inventory. While repair means only those parts that have failed are replaced.

Recycling: The recovery of materials for recycling is given second highest priority in the solid waste management hierarchy after source reduction. 'Recycling' simply means use of waste as raw materials for other products. It includes collection and separation of recyclables and processing

them to useful raw materials for other products. It can be classified as preconsumer and postconsumer recyclable materials. Preconsumer materials consist of scrap that is recycled back into manufacturing process without having been turned into a useful product. Postconsumer recyclables are products that have been used by consumers, such as newspaper or plastic bottles. Glass, aluminium, heavy metals, construction and World Scientific News demolition debris are another example of recyclables.

THE BIO-MEDICAL WASTE (MANAGEMENT AND HANDLING) RULES 1998

- Introduction
- Risk of Biomedical Waste to Human Health
- Bio Medical waste Management
- On-site Versus Off-site disposal
- Generation and Accumulation of waste
- Handling
- Treatment
- The Bio-medical Waste Handling Rules

INTRODUCTION

Biomedical waste is waste that is potentially infectious. Biomedical waste may also include waste associated with the generation of biomedical waste that visually appears to be of medical or

laboratory origin (e.g., packaging, unused bandages, infusion kits, etc.), as well research laboratory waste containing bio molecules or organisms that are restricted from environmental release. Discarded sharps are considered biomedical waste whether they are contaminated or not, due to the possibility of being contaminated with blood and their propensity to cause injury when not properly contained and disposed of. Biomedical waste is a type of bio-waste.

Biomedical waste may be solid or liquid. Examples of infectious waste include discarded blood, sharps, unwanted microbiological cultures and stocks, identifiable body parts, other human or animal tissue, used bandages and dressings, discarded gloves, other medical supplies that may have been in contact with blood and body fluids, and laboratory waste that exhibits the characteristics described above. Waste sharps include potentially contaminated used (and unused discarded) needles, scalpels, lancets and other devices capable of penetrating skin.

Biomedical waste is generated from biological and medical sources and activities, such as the diagnosis, prevention, or treatment of diseases. Common generators (or producers) of biomedical waste include hospitals, health clinics, nursing homes, medical research laboratories, offices of physicians, dentists, and veterinarians, home health care, and funeral homes. In healthcare facilities (i.e., hospitals, clinics, doctors' offices, veterinary hospitals and clinical laboratories), waste with these characteristics may alternatively be called medical or clinical waste.

Biomedical waste is distinct from normal trash or general waste, and differs from other types of hazardous waste, such as chemical, radioactive, universal or industrial waste. Medical facilities generate waste hazardous chemicals and radioactive materials. While such wastes are normally not infectious, they require proper disposal. Some wastes are considered multi hazardous, such as tissue samples preserved in formalin.

Risk of Biomedical Waste to Human Health

Disposal of this waste is an environmental concern, as many medical wastes are classified as infectious or bio-hazardous and could potentially lead to the spread of infectious disease. A 1990 report by the U.S. Agency for Toxic Substances and Disease Registry concluded that the general public is not likely to be adversely affected by biomedical waste generated in the traditional healthcare setting. They found, however, that biomedical waste from those settings may pose an injury and exposure risks via occupational contact with medical waste for doctors, nurses, and janitorial, laundry and refuse workers. Further, there are opportunities for the general public to come into contact medical waste, such as needles used illicitly outside healthcare settings, or biomedical waste generated via home health care.

Biomedical waste must be properly managed and disposed of to protect the environment, general public and workers, especially healthcare and sanitation workers who are at risk of exposure to biomedical waste as an occupational hazard. Steps in the management of biomedical waste include generation, accumulation, handling, storage, treatment, transport and disposal.

On-site Versus Off-site

Disposal occurs off-site, at a location that is different from the site of generation. Treatment may occur on-site or offsite. On- site treatment of large quantities of biomedical waste usually requires the use of relatively expensive equipment, and is generally only cost effective for very large hospitals and major universities who have the space, labor and budget to operate such equipment. Off- site treatment and disposal involves hiring of a biomedical waste disposal service (also called a truck service) whose employees are trained to collect and haul away biomedical waste in special containers (usually cardboard boxes, or reusable plastic bins) for treatment at a facility designed to handle biomedical waste.

Generation and Accumulation

Biomedical waste should be collected in containers that are leak-proof and sufficiently strong to prevent breakage during handling. Containers of biomedical waste are marked with a biohazard symbol (pictured). The container, marking and/or labels are often red. Discarded sharps are usually collected in specialized boxes, often called needle boxes. Specialized equipment is required to meet OSHA 29 CFR 1910.1450 and EPA 40 CFR 264.173 standards of safety. Minimal recommended equipment includes a fume hood and primary and secondary waste containers to capture potential overflow. Even beneath the fume hood, containers containing chemical contaminants should remain closed when not in use. An open funnel placed in the mouth of a waste container has been shown to allow significant evaporation of chemicals into the surrounding atmosphere, which is then inhaled by laboratory personnel, and contributes a primary component to the threat of completing the fire triangle. To protect the health and safety of laboratory staff as well as neighbouring civilians and the environment, proper waste management equipment, such as the Burkle funnel in Europe and the ECO Funnel in the U.S., should be utilized in any department which deals with chemical waste. It is to be dumped after treatment.

Handling

Handling refers to the act of manually moving biomedical waste between the point of generation, accumulation areas, storage locations and on- site treatment facilities. Workers who handle biomedical waste should observe *standard precautions.*

Treatment

The goals of biomedical waste treatment are to reduce or eliminate the waste's hazards, and usually to make the waste unrecognizable. Treatment should render the waste safe for subsequent handling and disposal. There are several treatment methods that can accomplish these goals. Biomedical waste is often incinerated. An efficient incinerator will destroy pathogens and sharps. Source materials are not recognizable in the resulting ash. An autoclave may also be used to treat biomedical waste. An autoclave uses steam and pressure to sterilize the waste or reduce its

microbiological load to a level at which it may be safety disposed of. Many healthcare facilities routinely use an autoclave to sterilize medical supplies. If the same autoclave is used to sterilize supplies and treat biomedical waste, administrative controls must be used to prevent the waste operations from contaminating the supplies. Effective administrative controls include operator training, strict procedures, and separate times and space for processing biomedical waste.

For liquids and small quantities, a 1-10% solution of bleach can be used to disinfect biomedical waste. Solutions of sodium hydroxide and other chemical disinfectants may also be used, depending on the waste's characteristics. Other treatment methods include heat, alkaline digesters and the use of microwaves. For autoclaves and microwave systems, a shredder may be used as a final treatment step to render the waste unrecognizable.

In India, the Bio-medical Waste (Management and Handling) Rules, 1998 and further amendments were passed for the regulation of bio-medical waste management. Each state's Pollution Control Board or Pollution Control Committee will be responsible for implementing the new legislation.

The Bio-medical Waste Handling Rules lays down that:

1. It shall be the duty of every occupier (u/r. 4) of an institution generating biomedical waste to take all steps to ensure that such waste is handled without any adverse effect to human health and the environment. The institution includes a hospital, nursing home, clinic, dispensary, veterinary institution, animal house, pathological laboratory, and blood bank by whatever name called.

2. Bio-medical waste shall be treated and disposed of in accordance with schedules attached to the Bio-Medical Waste Management Rules. Every occupier, where required, shall set up requisite bio-medical waste treatment facilities like incinerator, autoclave, and microwave system for the treatment of waste (u/r.5). In the alternative, he should ensure requisite treatment of waste at a common waste treatment facility or any other waste treatment facility.

3. Bio-medical waste shall not be mixed with other wastes, but segregated (u/r.6) into containers/ bags at the point of generation prior to its storage, transportation, treatment and disposal. The containers shall be labeled with sufficient information of its contents.

4. Untreated bio-medical waste shall be transported only in such vehicle as may be authorised for the purpose by the competent authority (u/r.7). No untreated biomedical waste shall be kept stored beyond a period of 48 hours.

5. The municipal body of the area shall continue to pick up and transport segregated non- biomedical waste generated in hospitals and nursing homes, as well as duly treated bio-medical wastes for disposal (u/r.5) at municipal dumpsites.

6. The local bodies shall be responsible for providing suitable common disposal/incineration sites for the biomedical wastes generated in the area under their jurisdiction, and in areas outside the jurisdiction of any municipal body.

7. It shall be the responsibility of the occupier generating bio-medical waste/operator of a biomedical waste treatment facility to arrange for suitable sites individually or in association, so as to comply with the provisions of these rules.

8. Schedule I of the rules prescribes the categories of bio-medical waste and the manner in which it should be treated and disposed. These rules also prescribe methods for segregation, packaging, transportation and storage.

BIO MEDICAL WASTE MANAGEMENT RULES

Biomedical waste is defined as any waste, which is generated during the diagnosis, treatment or immunization of human beings or animals, or in research activities pertaining thereto, or in the production or testing of biologicals.

Categories of Biomedical Waste, There are ten defined categories

- Human anatomical waste: (tissues, organs, body parts) ○ Animal waste: (including animals used in research and waste originating from veterinary hospitals and animal houses)
- Microbiological and biotechnology waste: (including waste from lab cultures, stocks or specimens of microorganisms, live or attenuated vaccines, wastes from production of biologicals, etc.)
- Waste sharps: (used/unused needles, syringes, lancets, scalpels, blades, glass etc.)
- Discarded medicines and cytotoxic drugs.
- Solid wastes: (items contaminated with blood and body fluids, including cotton dressings, linen, plaster casts, bedding etc.)
- Solid wastes: (wastes generated from disposable items other than waste sharps such as tubing, catheters, i.v. sets, etc.)
- Liquid waste: (waste generated from washing, cleaning, housekeeping and disinfection activities including these activities in labs).

- Incineration ash: (from incineration of any biomedical waste) ○ Chemical waste: (chemicals used in production of biological and disinfection)

In ***T. Damodhar Rao* v *Municipal Corporation, Hyderabad* case A.I.R. 1987 A.P. 171**, the Court held that "the enjoyment of life and its attainment and fulfillment guaranteed by Article 21 of the Constitution embrances the protection and preservation of nature's gift without which life cannot be enjoyed. There can be no reason why practice of violent extinguishments of life alone should be regarded as violative of the Constitution. The slow poisoning by the polluted atmosphere caused by environmental pollution and spoilation should also be regarded as amounting to violation of Article 21 of the Constitution. In this instant case, the petitioner prayed that the land kept for recreational park under the development plan ought not to be allowed to be used by the Life

Insurance Corporation or Income Tax Department for constructing residential houses. Accordingly, the LIC of India and Income Tax Department were forbidden from raising any structures or making any constructions or otherwise using the land referred to move for residential purposes.

In ***Indian Council for Enviro-Legal Action* v *Union of India,* (1996) 3 SCC 212** (popularly known as H-Acid case) a public interest litigation was filed by an environmentalist organization, not for issuance of writ, order or direction against the industrial units polluting the environment, but against the Union of India, State Government and State Pollution Control Board concerned to compel them to perform their statutory duties on the ground that their failure to carry on such duties violated the rights guaranteed under Article 21 of the residents of the affected area. The Supreme Court further pointed out that if it finds that the government/authorities concerned have not taken the action required of them by law and that their inaction is jeopardizing the right to life of the citizens of this country or of any section thereof, it is the duty of the Supreme Court to intervene.

The Court also rightly rejected the contention that the respondents being private corporate bodies and not "State" within the meaning of Article 12, a writ petition under Article 32 would not lie

against them. If the industry is continued to be run in blatant disregard of law to the detriment of the life and liberty of the citizens living in the vicinity, the Supreme Court has power to intervene and project the fundamental right to life and liberty of citizens of this country.

In ***Sushanta Tagore* v *Union of India*, (2005) 3 SCC 16,** the question related to construction of residential and commercial complexes by developers and promoters in the territorial area comprising Shantiniketan in utter disregard of, inter alia, environmental and pollution control laws and requirements which had endangered the very purpose tradition and objective with which Visva-Bharti was established and which was thereafter sought to be preserved by the Act. The Supreme Court observed that it is the duty of the State and the Development Authority not to allow activities in the territorial limits which may damage environmental ambience of the area contrary to the ideals, of Visva-Bharti. It is imperative that the ecological balance be maintained keeping in view the provisions of both Directive Principles of State Policy read with Article 21 of the Constitution.

In ***K.K.* v *State of Punjab and Others*, CWP No. 19627 of 2012** petitioner seeks a direction to the respondents to shift/remove the Garbage Dumping Ground situated in between the residential area and adjacent to Government School. To say that the solid waste material is being dumped in the open area, reference was made to the photographs placed on record. It was further stated that due to non-cleaning of the sewerage lines, dirty water is coming out and is accumulating next to the residential houses. An affidavit of Dr. Sumeet Kumar, IAS, Additional Commissioner, Municipal Corporation, Ludhiana has been placed a record.

The over-flow of sewer was due to plugging in of the sewerage pipes as the main sewer pipe was being cleaned. Since the plugs have now been removed, the problem of overflowing of sewer is no more subsisting. It was mentioned here that the Corporation is already in the process of setting up a Municipal Solid Waste Treatment Plant at Garbage dump at village Jamalpur. The contract has been given to M/s A2Z Company who is now managing the garbage within the city area and transporting it to the garbage dump for its treatment." It is also stated that one company has been

engaged to remove the solid waste from open areas and taking it to an appropriate place for dumping.

CONCLUSION

Right from the Environment protection Act to Solid waste Management, there is a common line with respect to protection of the environment; checks and balance are emphasized now and then. Every right should be enjoyed consciously; there is everything to satisfy the needs of the Individual and not the desire. It's the need of the hour everyone should understand the duties and should protect the environment

Questions

1)"Central government can take such measures as it deems necessary for the purpose of improving quality of environment". Discuss

2) Explain "occupier", "Hazardous substance" and "Handling" as defined under Environment Protection Act, 1986.

3) Examine the powers of Central Government to take measures to protect and improve environment under S. 3 of Environment Protection Act, 1986

4) Write a short note on Environmental Audit

5) What is Environmental Impact Assessment?

6) What are the Objectives of Environment Protection Act, 1986

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