Environmental Policy, Legislation & Environment Impact Assessment

THE ENVIRONMENT (PROTECTION) ACT (EPA)

An Act to provide for the protection and improvement of environment and for matters connected there with:
Whereas the decisions were taken at the United Nations Conference on the Human Environment held at Stockholm in June, 1972, in which India participated, to take appropriate steps for the protection and improvement of human environment

The Environment (Protection) Act, 1986 not only has important constitutionals implications but also an international background. This Act may be called the Environment (Protection) Act, 1986. It extends to the whole of India.

ENVIRONMENTAL LAWS

Following is a list of major Environmental Acts and Rules applicable in India.

- The Water (Prevention & Control of Pollution) Act 1974 (as amended upto 1998).
- The Water (Prevention &control of Pollution) cess Act, 1977 (as amended by Amendment Act(1991).
- The Air (Prevention & Control of Pollution) Act 1981 as amended by Amendment Act 1986
- Environment (Protection) Act 1986.
- Hazardous Waste (Management & Handling) Rules 1989.
- The Public Liability Insurance Act 1991.
- Environment Protection Amendment Rule 1983.
- Manufacture, Storage and Import of Hazardous Chemicals (Amendment) Rules 1984.
- The Forest Conservation Act 1980.
- The Notification on Environment Impact Assessment 1994.

Air Act 1981

The Air (Prevention and Control of Pollution) Act of 1981, or the Air Act, in short, was a law passed by the Parliament of India to prevent and control the harmful effects of air pollution in India.
The Air Act consists of 54 sections that aims to define the terms associated with air pollution and related aspects

Definitions:
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 other living creatures or plants or property or environment.

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

Section 2(j) Emission means any solid or liquid or gaseous substance coming out of any chimney, duct or flue or any other outlet.

Section 2(m) occupier in relation to any factory or premises, means the person who has control over the affairs of the factory or the premises, and includes, in relation to any substance, the person in possession of the substance.

The main objectives of the Act are as follows

- **To provide for the prevention, control and abatement of air pollution.**
- **To provide for the establishment of central and State Boards with a view to implement the Act.**
- **To confer on the Boards the powers to implement the provisions of the Act and assign to the Boards functions relating to pollution**

- The Act specifically empowers State Government to designate air pollution areas and to prescribe the type of fuel to be used in these designated areas.
- According to this Act, no person can operate certain types of industries including the asbestos, cement, fertilizer and petroleum industries without consent of the State Board.
- The Board can predicate its consent upon the fulfillment of certain conditions.
- The Air Act apparently adopts an industry wide “best available technology” requirement.
- As in the Water Act, courts may hear complaints under the Act only at the instigation of, or with the sanction of, the State Board.

The Government passed this Act in 1981 to clean up our air by controlling pollution. It states that sources of air pollution such as industry, vehicles, power plants, etc., are not permitted to release particulate matter, lead, carbon monoxide, sulfur dioxide, nitrogen oxide, volatile organic compounds (VOCs) or other toxic substances beyond a prescribed level.

To ensure this, Pollution Control Boards (PCBs) have been set up by Government to measure pollution levels in the atmosphere and at certain sources by testing the air. This is measured in parts per million or in milligrams or micrograms per cubic meter. The particulate matter and gases that are released by industry and by cars, buses and two wheelers is measured by using air-sampling equipment.

However, the most important aspect is for people themselves to appreciate the dangers of air pollution and reduce their own potential as polluters by seeing that their own vehicles or the industry they work in reduces levels of emissions. This Act is created to take appropriate steps for the preservation of the natural resources of the Earth which among other things includes the preservation of high quality air and ensures controlling the level of air pollution.

Powers and Functions of the Boards

Central Pollution Board

- **The main function of the Central Board is to implement legislation** created to improve the quality of air and to prevent and control air pollution in the country.
- The Board advises the Central Government on matters concerning the improvement of air quality and also coordinates activities, provides technical assistance and guidance to State Boards and lays down standards for the quality of air.
- It collects and disseminates information in respect of matters relating to air pollution and performs functions as prescribed in the Act.

Functions of the Central Board

Section 16 lays down the functions of the Central Board-

- The Board shall make efforts for the prevention, abatement and control of air pollution in the country and may advise the Central Government on the same.
- It shall plan and implement a nationwide programme for the prevention, control and abatement of air pollution.
- The Central Board may establish or recognize a laboratory to enable the Central Board to perform its functions under this section efficiently.
- It shall coordinate the activities of the States and shall resolve the disputes that arise between them.

State Pollution Control Boards:

The State Boards have the power to advise the State

- Government on any matter concerning the prevention and control of air pollution.
- They have the right to inspect at all reasonable times any control equipment, industrial plant, or manufacturing process and give orders to take the necessary steps to control pollution.
- They are expected to inspect air pollution control areas at intervals or whenever necessary.
- They are empowered to provide standards for emissions to be laid down for different industrial plants with regard to quantity and composition of emission of air pollutants into the atmosphere.
- A State Board may establish or recognize a laboratory to perform this function.
- The State Governments have been given powers to declare air pollution control areas after consulting with the State Board and also give instructions to ensure standards of emission from automobiles and restriction on use of certain industrial plants.

Functions of the State Pollution Control Boards

Section 17 lays down the functions to be performed by the State Boards-

- The State Board shall plan and implement comprehensive programmes for prevention, control or abatement of air pollution. It shall also advise the State Government on such matters.
- It shall collect and disseminate information regarding air pollution. It shall organize training and mass awareness programmes regarding air pollution control, prevention and abatement.
- It shall inspect, at reasonable times, any control equipment, industrial plant or manufacturing process and give orders to the people in charge to further the purposes of combating air pollution.
- It shall inspect and assess the air quality at designated air pollution control areas as it may think necessary.
- It shall lay down standards for the emission of air pollutants into the atmosphere from automobiles or industries, or any other pollutant from any source. However, a ship or aircraft cannot come into the ambit of a source.
- The State Boards shall also advise the State Government regarding the suitability of any location which is to be used for setting up any industry, keeping in mind the air quality which would be impacted if that industry is set up.
- The Boards shall also set up labs in their States, to enable the State Board to perform its functions effectively.

Penalties

Under Section 37, whoever fails to comply with the provisions of Section 21, 22 and the directions issued under Section 31A, can be sentenced to imprisonment for a term of one year and six months. This sentence can be extended to six years and with fine

Under Section 38, penalties for certain acts are laid down. These acts are-

Failure to inform about the excess release of emissions than the standard set by the State Board.

Damaging any property belonging to the Board

These are offences that shall be punishable with imprisonment which may extend to three months with fine, which may extend to ten thousand rupees or both.

Under Section 39, any order or direction which has been flouted, and for which there is no punishment anywhere in the Act, shall be punishable with three months imprisonment or fine of three thousand rupees or both. If failure continues, there shall be a fine of an additional five thousand rupees every day.

Section 40 of this Act talks about offences by companies. If an offence is committed by a company, every such person shall be deemed to be guilty, who is directly in charge of the company, who was responsible to the company for the conduct of its business as well as the company itself. He shall be punished according to the provisions of this Act. However, where such an offence was committed without the knowledge of such person, or where he had made full efforts and due diligence to stop these offences, this person shall not be held liable

Section 41 talks about offences committed by governmental departments. Where any government department has committed an offence under this Act, then the head of that department shall be liable to be proceeded and accordingly punished. However, if the Head of Department had no knowledge of the committing of these offences, or had practised due diligence to prevent these offences from happening, he shall not be held liable.

Water (Prevention and Control of Pollution) Act of 1974

- The Water (Prevention and Control of Pollution) Act was enacted in 1974 to provide for the prevention and control of water pollution, and for the maintaining or restoring of wholesomeness of water in the country.
- The Act was amended in 1988.
- The Water (Prevention and Control of Pollution) Cess Act was enacted in 1977, to provide for the levy and collection of a cess on water consumed by persons operating and carrying on certain types of industrial activities.

This contains 8 chapters and 64 sections.

Some significant Definitions under Water Act

- Sewage effluents: These include effluents from any sewage system or sewage disposal work and include open drains.
- Trade Effluents:- It is any disposal from any process, operation or from any treatment from an Industry
- Stream:- It includes rivers, flowing or dry water course, natural or artificial inland water, subterranean water or sea or tidal water

Section 16. Functions of Central Board

- Advice the Central Government on matters concerning prevention and control of water pollution
- Coordinate the activities of the State Boards and resolve any disputes between them.
- Provide technical assistance and guidance to State Board and Sponsor Research and Investigation in to water pollution and suggest measures for prevention, control and abatement of such pollution.
- Plan and organize training programs for persons engaged in the prevention, control and abatement of water pollution.
- Organize public awareness programs through mass media for the prevention and control of water pollution
- Collect, compile, publish technical and substantial data related to water pollution and measures devised for effective prevention and control, prepare manuals, code or guides related to treatment and disposal of sewage and trade effluents.
- Plan and execute nationwide programs for the prevention, control and abatement of water pollution. 8. The board may establish or recognize a laboratory or laboratories to assist the board in performing its function.
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Functions of State Board:-

- The State Board shall under Section 17 perform the following functions
- Plan a comprehensive program for prevention, control and abatement of pollution of streams and wells in the state.
- Advice the State Government on matters concerning prevention, control and abatement of water pollution.
- Conduct and participates in investigations and research related to prevention, control and abatement of water pollution.
- Collaborate with the Central Board to organize training program for persons engaged in prevention, control and abatement of water pollutions.
- To inspect sewage or trade effluents and to review plans relating to plants set up for treatment of water and for purification and disposal of water and trade effluent.
- To evolve economic and reliable methods for the treatment of sewage and trade effluents while considering the peculiarities of soil, climate, and water resources of the area
- To evolve methods to utilize sewage and trade effluents from agriculture
- .To lay down standards for the treatment of sewage and trade effluents to be discharged in to streams.
- To lay down effluents standard to be complied with by persons while causing discharge of sewage or sullage.
- To advice the State Government with respect to location of any industry which is likely to pollute water bodies.
- The State Board may establish or recognize laboratories for the analysis of water samples. The Central or State Government may give directives to the State Board under Section 18 of the Act.

Penalty for offences

1.Imprisonment for a term extending to 3 months or fine (not more than Rs. 10,000/- or both, with an additional fine of Rs. 5000/- for continuance of failure to comply with any direction given under sub-sector (2) or (3) of Section 20.

2. Imprisonment for a term not less than 1 year and 6 months and not more than 6 years with fine (additional fine of Rs. 5000/- per day) for failure to comply with the order issued under clause (c) of sub-section (1) of Section 32 or under sub-section (2) of Section 33 or under Section 33-A

3. Imprisonment for a term not less than 2 years and not more than 7 years with a fine for continuance of failure to comply with sub-section (2) for a period of one year.

Section 42 lists down penalties for other acts, with an imprisonment for a term up to 3 months or with a fine up to Rs. 10,000/- or both (as follows):

- Damage to property of the Board.
- Failure to report information to the officer under the act
- Failure to report accidents to the authorities.
- Giving false material information knowingly to the authorities

WILD LIFE PROTECTION ACT

The Act is adopted by all states in India.
The act is aimed to protect and preserve wild life.
Wild life refers to all animals and plants that are not domesticated. India has rich wild life heritage; it has 350 species of mammals, 1200 species of birds and about 20,000 known species of insects.
Some of them are listed as 'endangered species' in the Wild life (Protection) Act.

The Act envisages national parks and wild life sanctuaries as protected areas to conserve wild life. Wild life populations are regularly monitored and management strategies formulated to protect them.

The Act covers the rights and non-rights of forest dwellers too,- it provides restricted grazing in sanctuaries but prohibits in national parks.
It also prohibits the collection of non-timber forest produce which might not harm the system.

The rights of forest dwellers recognized by the Forest policy of 1988 are taken away by the Amended Wild life Act of 1991.

The act, a landmark in the history of wildlife legislation in our country by which wildlife was transferred from State list to concurrent list in 1976, thus giving power to the Central Government to enact the legislation.

In India, nearly 134 animal species have been regarded as threatened.

A National Wildlife action plan has been prepared whose objective is to establish a network of scientifically managed areas such as national parks, sanctuaries and biosphere reserves, to cover representative and viable samples of all significant bio-geographic subdivisions within the country.

DEFINITIONS OF SOME TERMS USED UNDER THE ACT

- "**Animal**" includes amphibians, birds, mammals, and reptiles

- "**Animal article**" means any article made from any captive or wild animal .

Snake and crocodile skin products

Ivory articles

- "**Hunting**" includes capturing, killing, poisoning, trapping, injuring animals , birds or reptiles.

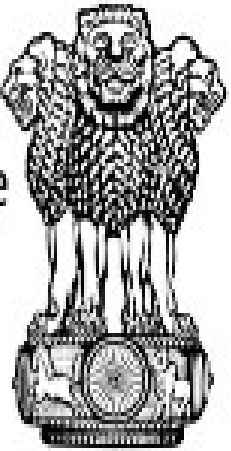
- "**Trophy**" means the whole or any part of any captive or wild animal which has been kept or preserved by any means.

HUNTING OF WILD ANIMALS

- Hunting of animals specified in Schedule I, II, III and IV is prohibited.

- Hunting of wild animals is **permitted** in certain cases:
  a) If the animal has become **dangerous** to human life or disabled beyond recovery.
  b) Killing or wounding in good faith in **defence** of oneself or any other person.

- Any wild animal killed or wounded in defence of any person shall be Government property.



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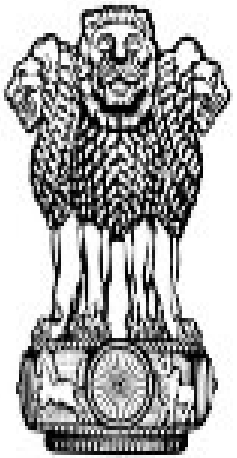
HUNTING OF WILD ANIMALS

- Grant of permit for special purposes:
  a) Education.
  b) Scientific research, Scientific management.
  c) Collection of specimen for zoos, museums and similar institutions.
  d) Derivation, collection or preparation of snake-venom for manufacture of **life-saving drugs**.
- Previous permission required of the Central Government for wild animals specified in schedule I before grant of permit.
- For any other wild animals, previous permission of State Government required before grant of permit.



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The major activities and provisions in the act can be summed up as follows:

1. It defines the wildlife related terminology.
2. It provides for the appointment of wildlife advisory board, wildlife warden, their powers, duties etc
3. Under the Act, comprehensive listing of endangered wildlife species was done for the first time and prohibition of hunting of the endangered species was mentioned
4. Protection to some endangered plants like Beddome cycad, Blue Vanda, Ladies Sliper Orchid, Pitcher plant etc. is also provided under the Act.
5. The act provides for setting up of National Parks, Wild life Sanctuaries etc.
6. The Act provides for the constitution of Central Zoo Authority.
7. There is provision for trade and commerce in some wildlife species with license for sale, possession, transfer etc.
8. The Act imposes a ban on the trade or commerce in scheduled animals.
9. It provides for legal powers to officers and punishment of offenders.
10. It provides for captive breeding programme for endangered species. Several conservation projects for individual endangered species like lion (1972), tiger (1973), crocodile (1974), and brown antlered deer (1981) were started under this Act.

FOREST CONSERVATION ACT

The Indian Forest Act of 1927 consolidated all the previous laws regarding forests that were passed before the 1920s. The Act gave the Government and Forest Department the power to create Reserved Forests, and the right to use Reserved Forests for Government use alone.

It also created Protected Forests, in which the use of resources by local people was controlled.Some forests were to be controlled by the village community, and these were called village Forests.

The Act remained in force till the 1980s when it was realized that protecting forests for timber production alone was not acceptable. The other values of protecting the services that forests provide and its valuable assets such as biodiversity began to overshadow the importance of their revenue earnings from timber.

The Forest Conservation Act of 1980 was enacted to control deforestation, It ensured that forestlands could not be de-reserved without prior approval of the Central Government, This was created as some states had begun to dereserve the Reserved Forests for non-forest use. These states had regularized encroachments and resettled ‘project Affected people’ from development projects such as dams in these de-reserved areas. The need for a new legislation became urgent. The Act made it possible to retain a greater control over the frightening level of deforestation in the country and specified penalties for offenders.

Penalties for offences in Reserved Forests:

• No person is allowed to make clearing or ser fire to a reserved forest. Cattle are not permitted to trespass into the reserved forest, cutting, collecting of timber, bark or leaves, quarrying or collecting any forest products is punishable with imprisonment for a term of six months or with a fine which may extended to Rs 500 or both.

Penalties for offences in protected Forests:

• A person who commits any of the following offences like cutting of trees, stripping the bark or leaves of trees, set fire to such forests or permits cattle to damage any tree, shall be punishable with imprisonment for a term which may extended to six months or with a fine which any extended to Rs 500 or both.

• Any forest officer even without an order from the magistrate or a warrant can arrest any person against whom a reasonable suspicion exists.

Wastes Disposal

They may be regulatory bodies for waste disposal, waste collection. These should also be directives relating to waste on the disposal of waste oil, the disposal of polychlorinated biphenyl, and polychlorinated phenyls.

After the united Nation's Conference on Human Environment in 1972 the Environmental legislation got a fresh impieties Indian first systematic approach in dealing with the environmental issues started from water Act of 1974. This Act was amended in 1988 and a new section 33 A was introduced which empowers state boards to issue directives to any person to close any industry and to stop or regulate supply of water and electricity. Because of the continuing environmental degradation and the Bhopal gas tragedy in 1974 the central government enacted fresh legislation for adopting more strict environmental policies.

Environmental Protection Act 1986 is one of the most significant legislation to protect the environment. Under Article 48A, the addition was made to the directive principles of state policy as the state shall endeavors to protect and improve the environment and safeguard the forests and wildlife of the country. Article 51A (g| imposes high responsibility on every citizen to protect the environment and improve natural resources, including forests, lakes, rivers and wildlife.

Every citizen has a choice of few records to mitigate pollution.
These are
(1) a common law and action
(2) a writ petition for completing the agency to enforce the law and
(3) a citizen suit.

An upcoming industry must submit No Objection Certificate in respect of pollution before it starts the implementation process. In case of a large project, it should submit Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) to the Govt. of India for final clearance of the project.

ENVIRONMENTAL IMPACT ASSESSMENT

Definition of Environmental Impact Assessment:

The United Nations of Environmental Programme (UNEP) defined that EIA is a tool used to identify the environmental and economic impacts of a project prior to decision making regarding the project planning, design, adverse impacts, etc.. For all proposed and development projects, whether Government or Private, the Ministry of Environment and Forests (MoEF) requires an Environmental impact assessment report related to the following parameters

The report must define what impact it would have on water; soil and air including flora and fauna. Affect on the lives of local people.

Why is EIA important?

By identifying potential alternatives and adverse impacts, Nations can better achieve goals for sustainable development; avoid adverse environmental; social and cultural impacts; reduces cost, provides better plan for infrastructure etc...

For example to construct a major project:
Direct impacts are related to:
(a) Aesthetics in the area (understanding of beautiful things);
(b) Traffic at nearby junctions,
(c) Removal of natural vegetation;
(d) Interference with natural water ways;
(e) Additional housing or commercial shops to support employees.

SIGNIFICANCE OF EFFECTS:

Significant effects are likely to occur where valuable resources are subject to impacts of severity.EIA is recognized by adopting the five levels of significance as described in the draft to good practice and procedures. These five levels of significances are::

Severe: Sites of national importance and unique resources (to exist in only one place) if lost, cannot be replaced or relocated.

Major: These effects are to be important considerations at a regional or district scale during the decision making process..

Moderate: These effects at a local scale are likely to be key decision making issues.

Minor: These effects may be raised as local issues but are unimportant in the decision making process.

Neutral: No effect, not significant.

BASELINE DATA

Baseline information is important reference point for conducting EIA. The term "baseline" refers to the collection of background information on the biophysical, social and economic settings proposed project area.

Baseline data are collected for two main purposes:

• To provide a description of the status and trends of environmental factors (e.g., air pollutant concentrations) against which predicted changes can be compared and evaluated in terms of importance, and

• To provide a means of detecting actual change by monitoring once a project has been initiated

Land features include topography; climatology (temperature, rainfall)

Geology & Hydrogeology (Lithology of rock formations, drainage pattern, ground water table)

Air environment (study of SPM, SOx; NOx)

Noise environment

Water Environment (PH; TDS; F; dissolved Oxygen; BOD etc..)

Soil quality Soil analysis reflect the presence of nutrients like N, P, K, Ca, Mg, Fe, Mn and Al

Flora and Fauna of the proposed area

Socio economic study include Population density; Literacy rate; Category of workers viz., cultivators, agriculture laborers, etc); Medical facilities; Main sources of availability of water . rivers, canals, hand pumps, taps etc..

ENVIRONMENTAL MANAGEMENT PLAN (EMP)

Preparation of environmental management plan is required for formulation, implementation and monitoring of environmental protection measures during and after commissioning of projects.

The plans should indicate the details as to how various measures have been or are proposed to be taken including cost components as may be required. Cost of measures for environmental safeguards should be treated as an integral component of the project cost and environmental aspects should be taken into account at various stages of the projects:

- Conceptualization: preliminary environmental assessment
- Planning: detailed studies of environmental impacts and design of safeguards
- Execution: implementation of environmental safety measures
- Operation: monitoring of effectiveness of built-in safeguards

The management plans should be necessarily based on considerations of resource conservation and pollution abatement, some of which are:

- Liquid Effluents
- Air Pollution
- Solid Wastes
- Noise and Vibration
- Occupational Safety and Health
- Prevention, maintenance and operation of Environment Control Systems(Adequate safety precautions should be taken during preventive maintenance and shut down of the control systems.)
- House-Keeping
- Human Settlements
- Transport Systems
- Recovery - reuse of waste products
- Vegetal Cover (Industries should plant trees and ensure vegetal cover in their premises. This is particularly advisable for those industries having more than 10 acres of land.)
- Disaster Planning(Proper disaster planning should be done to meet any emergency situation arising due to fire, explosion, sudden leakage of gas etc. Firefighting equipment and other safety appliances should be kept ready for use during disaster/emergency situation including natural calamities like earthquake/flood.)
- Environment Management Cell(Each industry should identify within its setup a Department/Section/Cell with trained personnel to take up the model responsibility of environmental management as required for planning and implementation of the projects)

Scope of EMP

- It covers:
- Management and mitigation measures;
- Institutional arrangements;
- Implementation and supervision responsibilities;
- Monitoring and evaluation requirements;
- Implementation schedule;
- Training needs; and Budget.
- Includes measures to consider during project implementation and operation; and
- Provides actions to be taken to implement these measures.

Importance of EMP

- An instrument for implementing environmental management commitments, conditions, and requirements of project.
- Promotes self-regulation & integration of environmental issues in planning and operations.
- Addresses relevant environmental management issues,
- Can be drafted in a consultative manner.
- Incorporates regulatory requirements.
- Facilitates environmentally sustainable development and decision-making process. It is:
  - Able to forms the basis for consultation and negotiation of outcomes;
  - Flexible;
  - Comprehensive;
  - Updatable; and
  - A tool for promoting accountability