

ENVIRONMENT AND VALUATION

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Environment and Valuation

- Differences between the ‘Market Price and the Negative Value Consequent on Environmental Impact.
- Environmental Issues of Air Pollution,
- Water Pollution, Environmental Factors and their effects,
- Measures to Restore the Damage, Cost to Cure.
- - Outlines of Environmental Legislations: The Forest Act,1927,
- Laws related to Industrial Health & Safety.
- - The Water (Prevention and Control of Pollution) Act, 1974, The Air (Prevention and Control of Pollution) Act, 1981,
- The Environment (Protection) Act, 1986

Location: Physical and Environmental Factors in Real Estate

The phrase “location” is a phrase used over and over again in the discussion of real estate markets. It continues to be as relevant today because location is ultimately what brings value to a piece of real estate. For example, a high-rise office building in suburban of a City would have comparatively little value in the middle of City. Value is not only a function of the component parts but of the market demand for that particular structure in that particular place. Location itself is what makes real estate assets completely unique. Since no two structures can occupy the exact same location, each asset’s value characteristics are one-of-a kind.

Physical Factors in Real Estate Analysis

Physical factors of a property are important because they can be the driving factor behind a community’s economy. For example, a location next to a protected harbor would be expected to develop industries related to shipping. Physical factors can determine whether a location is feasible for development at all based on the soil conditions and topography. They can also drive the market demand for specific types of real estate development in the location. A market analysis should consider these physical factors for the subject property and their potential impact on current value and future cash flows. Physical characteristics that both limit and encourage new development are key to understanding the demand for and value of real estate in all market segments.

Physical factors important to real estate market analysis may include:

- **Location** – Define the property boundaries and consider the neighboring properties as well. How does this location fit in with the surrounding properties? Is the property being used in a way that makes financial sense given the surrounding property types and property mix? Do the neighboring properties add value to the location or not?
- **Natural geographic boundaries** – Some properties have natural geographic boundaries such as rivers, lakes, and oceans. While these natural boundaries limit the availability of land for development, they can also add value to neighboring properties if utilized appropriately. So, the market analysis should consider the impact on development options and value drivers for the subject due to the natural geographic boundaries.
- **Topography** – The topography of an area can have a huge impact on real estate development and can be a crucial factor in a market analysis. Topography can influence issues such as runoff and flooding hazards as well as availability of land for development. Areas having flat plots of land would be easy to develop.
- **Soil conditions** – The market analysis may also contain information about the soil conditions of the subject property, especially when they are relevant to the planned use or value of the property. Soil conditions are most important when the planned land use involved growing crops or other vegetation. Ideal soil types should also provide adequate drainage and be able to support the structure without slippage that can cause cracks in the foundation.

- **Climate** – To a certain extent, climate is important in any market analysis. Climate may be directly relevant to income if the subject property is a resort or entertainment facility. Climate, however, is also important to understanding the demand for real estate and economic drivers of an area. Locations with warmer weather and mild winters tend to attract people and businesses. Therefore, population and economic growth tend to be higher in these areas.
- **Natural resources** – Historically, cities grew in locations with important natural resources. Today, natural resources are still major economic drivers of industry and employment opportunities. Natural resources can serve as an important economic factor for transportation (rivers or seaports), mining (natural gas, coal, oil, etc.), or tourism (beaches and mountains).
- **Water availability** – Water availability is not only important for factories or farmlands requiring water for business but also for all economic stability in an area. A city without adequate water resources and water quality faces poor economic growth prospects. This in turn influences the overall real estate market forecasts for a location.

Transportation patterns– Current transportation patterns and proposed changes to those patterns are critical components of a market analysis. Traffic patterns determine the travel paths for the population and thus the areas that will receive the highest concentration of potential client activity. Traffic patterns are especially important for tenants whose business requires a high amount of foot traffic and visibility. A location along a major roadway can represent a much higher demand than the neighboring population would otherwise suggest

Environmental Factors in Real Estate Analysis

Environmental factors refer to the interaction between people and urban development with the natural environment. Every piece of real estate development impacts the environment in some way because development changes the natural interaction among land, water, and animals. In many cases, development occurs specifically because people desire to utilize the natural environmental resources of a location. A market analysis should consider the property's interaction with and impact on the surrounding natural environment to the extent it will influence the project's feasibility and value. The overall impact on the environment is usually proportional to the size of the development, but there may be other considerations due to the specific location or proposed use of the property.

A few of the environmental factors that a real estate market analysis may consider include:

- **Air and water quality** – The quality of air and water can have a huge impact on property valuation. Cities with poor air quality or poor water quality are less desirable and may over the longer-term experience decline in population and valuation. Areas with clean air and water are highly desirable, and as a result, those areas may experience higher than average growth in population and value in the future. Of course, that growth also comes at a price, and the quality of the environment must be protected. As a result, local governments may require stringent permitting procedures for large real estate development that could negatively impact the natural environment.

- **Soil conditions** – The soil present on a particular property can have a varying degree of impact on the value and suitability for development. The property's soil classification is important because it has potentially huge implications to the cost and feasibility of future use and development. Issues related to soil classification are important because they determine the hydrology, the soil's interaction with water, of the land. If the soil does not allow for adequate drainage, additional measures may need to be implemented to properly account for runoff and erosion due to rainfall. Soil classification can also determine whether or not the land has the ability to hold the weight of a structure without slipping or cracking.
- **Wildlife** – All real estate development impacts the area wildlife in some way. The impact may be something small related to cutting down trees in which birds and insects lived. On the other hand, real estate development may impact some type of endangered or protected plants and animals. In these cases, development may be prohibited entirely. The market analysis may need to consider the potential impact on surrounding wildlife and the cost associated with remediation efforts (such as a detailed environmental analysis report or purchase of redevelopment credits in another location).
- **Wetlands** – Soil that is covered by water all or part of the time may be classified as wetlands. There are wetlands areas located throughout the country, and they are important to the local ecology because they protect and improve water quality, store floodwaters, maintain surface water flow during dry seasons, and provide habitats for fish and wildlife. Development in wetlands areas may be limited by state regulators and the Environmental Protection Agency (EPA). In some wetlands areas, development may not be feasible at all due to the continual presence of water. Real estate projects located in or near wetlands areas should consider the potential costs of preparing the land for development along with the purchase or restoration credits.

Environmental Impact and Sustainability in Real Estate

State law as part of a real estate development project may require environmental impact studies. The actual regulations and requirements differ by state, but may include anything from an analysis of additional traffic conditions on roadways to the impact on native plant and wildlife. Environmental impact considerations include both the construction phase and the completed project. So, environmental impact applies to existing structures as well as proposed new development projects.

The regulations and requirements of the environmental impact study are important in a real estate market analysis because of the feasibility implications. The cost of complying with environmental regulations may make construction or renovation plans too expensive to pursue. Alternatively, compliance with environmental regulations could make a proposed use of existing construction so expensive or restrictive that the project is no longer financially feasible. The market analysis should address issues related to environmental impact, the potential costs up-front and over the expected holding period, and any influence environmental factors may have on expected cash flows from the property.

Sustainability is an increasingly important concept in global real estate development. Rather than focusing simply on direct environmental impact to the property and immediate surrounding area, sustainability considers the impact of development on the larger regional and global environment as well as human interaction with the construction. More than simply the impact of traffic or development on local air, water, or wildlife, sustainability considers the impact of building materials from their sourcing to final use. Sustainability focuses on the use of renewable, local building materials and healthier environments for living and working.

Issues of sustainability matter for market analysis because they influence the cost, risk, marketability, and value of the property. Although the initial cost of construction and development can be slightly higher, there are many long-term benefits as well. Those benefits include lower risk premiums and lower operating costs. The desirability of and demand for sustainable real estate development in the market also allows these properties to charge a rent premium and command a price premium in the marketplace. As the demand for sustainability in the market grows, these properties may experience higher than average growth rates, lower vacancy rates, and lower overall operating expense ratios. All of these factors then influence proforma cash flow expectations and property valuations.

Environmental matters

Potential or actual constraints on the enjoyment and use of property caused by environmental factors may result from natural causes (such as flooding), from non-natural causes (such as contamination) or sometimes from a combination of the two (such as subsidence resulting from historic minerals extraction). Despite the considerable diversity of circumstances, the key question is always the extent to which the factors identified affect value. Particular care should be taken when assessing or commenting on environmental factors, as valuers may not have the specialist knowledge and experience that is often required. In appropriate cases the valuer may recommend the making of further enquiries and/or the obtaining of further specialist or expert advice in respect of environmental matters. The following paragraphs consider the matter in more detail.

a) Natural environmental constraints

(i) Some properties will be affected by environmental factors that are an inherent feature either of the property itself or of the surrounding area, and which have an impact on the value of the property interest. Examples include ground instability issues (such as swelling and shrinking clay, subsidence consequent on historic or current mineral extraction, etc.) and the risk of flooding from any mechanism.

(ii) Although detailed commentary on both the risks and the effects may be outside the realm of the valuer's direct knowledge and expertise, the presence, or potential presence, of these factors is something that can often be established in the course of a valuation *inspection* through normal enquiries or by local knowledge. It is not just the risk of a particular event occurring that needs to be considered, but also the various consequences. For example, if the property has suffered a recent event such as flooding this may affect the availability of insurance cover, which, if material, should be reflected in the *valuation*.

(iii) The valuer should be careful to state the limits that will apply to the extent of the investigations and the *assumptions* that will be made in relation to environmental matters, and should state any sources of information relied upon

b) Non-natural constraints (contamination and hazardous substances)

(i) A valuer will not normally be competent to advise on the nature or risks of contamination or hazardous substances, or on any costs involved with their removal, except in the more straightforward cases. However a valuer who has prior knowledge of the locality and experience of the type of property being valued, can reasonably be expected to comment on the potential that may exist for contamination and the impact that this could have on value and marketability.

(ii) The nature and risks may of course be directly attributable to the use of the property itself. For example, a number of businesses depend on activities that involve the use of hazardous substances or operate waste management activities that may be regarded as a nuisance by *third parties*. Although detailed commentary on such effects will normally be outside the realm of the valuer's expertise, their presence, or potential presence, is something that can often be established in the course of a valuation *inspection* through normal enquiries or by local knowledge.

(iii) The pace at which *sustainability* is feeding directly or indirectly into value is showing some wide jurisdictional variations.

The role of valuers is to assess value in the light of evidence normally obtained through analysis of comparable transactions. While valuers should reflect markets, not lead them, they should be aware of *sustainability* features and the implications these could have on property values in the short, medium and longer term. The issues may change configuration and design including use of materials and concepts increasingly associated with ‘wellness’ • accessibility and adaptability, including access and use by those with disabilities • energy efficiency, building ‘intelligence’ and other ‘costs in use’ fiscal considerations.

(iv) Notwithstanding its current bearing on value, within the context of their instructions valuers are actively encouraged to identify and collect *sustainability* related data, as and when it becomes available, for future comparability

(iii) The valuer should state the limits on the investigations that will be undertaken and state any sources of information or *assumptions* that will be relied on. Any historic or existing use matters observed can again be recorded on the relevant Property Observation .

c) Sustainability – assessing the implications for value

(i) valuation on context with *sustainability* encompasses a wide range of physical, social, environmental and economic factors that can affect value and of which valuers should be aware.

(ii) The range of issues includes, but is not limited to, key environmental risks, such as flooding, energy efficiency and climate, as well as matters of design, configuration, accessibility, legislation, management and fiscal considerations. As commercial markets in particular become more sensitised to *sustainability* matters, so they may begin to complement traditional value drivers, both in terms of occupier preferences and in terms of purchaser behaviour

(v) Only where market evidence would support this, should *sustainability* characteristics be built into a report on value.

(vi) Valuers are often asked to provide additional comment and strategic advice.

In these cases it may be appropriate to consult with the client as to the use and applicability of *sustainability* metrics and benchmarks that are applicable in each case. For example, when preparing *valuations* on the basis of *investment value* or *worth*, *sustainability* factors that could influence investment decision-making may properly be incorporated, even though they are not directly evidenced through transactions.

(vii) Where appropriate, in order to comply with best practice in reporting, valuers are recommended to:

- assess the extent to which the subject property currently meets *sustainability* criteria typically expected within the context of its market standing and arrive at an informed view on the likelihood of these impacting on value, i.e. how a well-informed purchaser would take account of them in making a decision as to offer price
- provide a description of the *sustainability*-related property characteristics and attributes that have been collected, which may, where appropriate, include items not directly reflected in the final advice as to value
- provide a statement of their opinion on the relationship between *sustainability* factors and the resultant *valuation*, including a comment on the current benefits/risks that are associated with these *sustainability* characteristics, or the lack of risks and
- provide an opinion on the potential impact of these benefits and/or risks to relative property values over time.

Environment-related to plant and machinery valuers:

1. the location in relation to the source of raw material and market for the product. The suitability of a location *may* also have a limited life, eg, where raw materials are finite or where demand is transitory,
2. the impact of any environmental or other legislation that either restricts utilisation or imposes additional operating or decommissioning costs,
3. radioactive substances that *may* be in certain machinery and equipment have a severe impact if not used or disposed of appropriately. This will have a major impact on expense consideration and the environment,
4. toxic wastes which *may* be chemical in the form of a solid, liquid or gaseous state *must* be professionally stored or disposed of. This is critical for all industrial manufacturing, and
5. licences to operate certain machines in certain countries *may* be restricted.

Conclusion

Analyzing the physical and environmental factors in a real estate market analysis benefits the financial analysis in a number of ways. A thorough analysis of the location's physical and environmental factors provides accurate estimates of development costs. Property owners and developers can better determine the financial feasibility of any project. The analysis also allows owners to create better pro forma financial statements because they understand the conditions that ultimately influence the neighborhood rental rates. Paying attention to the physical and environmental factors of a property can help owners and developers to make the best financial decisions possible.

Impact of environment on real estate projects: The magnitude of the environmental impact will be the difference between the quality of environment without the project minus the quality environment with the project. Positive values indicate an adverse impact, whereas negative values indicate a beneficial impact on the environment.

If the value is positive i. e. if it has adverse impact on environment will result in reduction in value of project which is called Negative Value Consequent due to Environmental Impact.

Negative value consequent on Environment Impacts

- 1. Fall in Demand:** The demand of the contaminated property falls because no buyer will be interested to purchase such property when non contaminated property is available in market. Fall in price is due to stigma, a non measureable factor in terms cost to remediation or cost to cur but certainly affect market price.
- 2. Fall of Price:** Fall in demand leads to fall in price.
- 3. Assets off the Market:** Some companies in the absence of data on contaminated assets believe that asset would not be sold at any price and such companies keeps the assets off the market.
- 4. Risk of Law Suits :** There will be a general fear that buying contaminated assets may create contingent liabilities associated with law suits.
- 5. Reduced Market Value:** Whenever stigma is attached the property remains in less demand even though complete clean-up has been established. This create situation similar to obsolescence.
- 6. Difficult in getting finance:** It is difficult to get finance on contaminated properties, and there won't be any possibility of getting mortgage.
- 7. Difficult in getting funds for remediation:** For a contaminated property remediation i.e. process of elimination of environmental contamination from on, in or under the asset is most essential to enhance its utility. It is difficult to obtain funds for remediation

Cost of Curing

The first cost associated with environmental contamination is the cost of discovering the presence or extent of any problem. For this an environmental assessment report must be obtained. And then the cost to cure a particular problem must be determined

Costs are often not fully recognized when contamination is discovered. Difficulty in estimating costs is greater in certain types of environmental problems, groundwater contamination being more difficult than soil contamination.

- i) If initial estimates are low and additional or ongoing expenses are involved, the effect on value may be greater.
- ii) Costs may result in capital improvement; a more efficient, less polluting system may be installed, and residual property value may increase.
- iii) The potential for either decreasing or increasing value must be recognized
- iv) The cost to cure a contamination problem includes all costs necessitated by and associated with the clean-up. These can include costs for physical clean-up, monitoring, legal fees, and ongoing costs.
- v) Complete clean-up may be impossible; costs to control contamination may be substituted for costs to cure the problem.

Cost of Physical Clean-up: Actual costs must be ascertained. Some times more time for clean-up may lead to reduce in current costs, although the present value of the property may also be reduced.

Continued Costs of Monitoring: The costs of testing and monitoring may be added to the expenses; thus the costs are subtracted from the income of property subject to clean-up. These costs may be substantial and should be established.

Legal Costs The contaminated property may incur legal costs in dealings with regulatory agencies and other potentially responsible parties. In addition, lawsuits may be filed by other affected property owners or by third parties seeking to share their own liability. Ordinary legal costs can be viewed as part of management and not as an influence on property value. Legal costs associated with contamination may be considered part of the cost to cure the problem. However, to be considered, these costs must exceed costs of customary legal advice. The potential for litigation or pending litigation may affect marketability and value by deterring prospective buyers.

Ongoing Costs Final costs are often unknown before completion of clean-up. These costs often exceed original estimates, especially when future, more stringent regulations are anticipated. In addition, perceived or actual risks remaining after completion of clean-up may result in higher insurance costs and reduced ability to use the property as security for loans. **Indirect Costs** These can include anything that affects the property's income-producing ability during or after the clean-up. For example, tenants may not be able to live in a rental unit during lead paint removal. Another income restriction would occur if one portion of an industrial plant could not be used because of toxic contamination, and an intermediate product manufactured in that area could no longer be created on site. Additional expenses could be incurred, and the plant's earnings could suffer accordingly. Although this impact would be somewhat transient, it should be included in the same manner as other costs.

Financing: Financing is known to affect property value. The impact is particularly significant when favourable or unfavourable financing is obtained because the market has **already** accepted the influence of typical financing costs. In the case of environmentally contaminated properties, two types of financing effects need to be considered: the ability of a prospective buyer to finance the purchase of the property and the terms for financing the actual costs to cure contamination problems. If prospective buyers cannot obtain typical financing due to the problem, the cash equivalency value of the property will be diminished.

Liability: Liability for costs associated with environmental contamination often lies with property owners. Liability may affect the use of the property and its future sale and may contribute to any stigma

The Air (Prevention and Control of Pollution) Act, 1981

The Air (Prevention and Control of Pollution) Act, 1981 (the "Air Act") is an act to provide for the prevention, control and abatement of air pollution and for the establishment of Boards at the Central and State levels with a view to carrying out the aforesaid purposes.

To counter the problems associated with air pollution, ambient air quality standards were established under the Air Act. The Air Act seeks to combat air pollution by prohibiting the use of polluting fuels and substances, as well as by regulating appliances that give rise to air pollution. The Air Act empowers the State Government, after consultation with the SPCBs, to declare any area or areas within the State as air pollution control area or areas. Under the Act, establishing or operating any industrial plant in the pollution control area requires consent from SPCBs. SPCBs are also expected to test the air in air pollution control areas, inspect pollution control equipment, and manufacturing processes.

The Water (Prevention and Control of Pollution) Act, 1974

The Water Prevention and Control of Pollution Act, 1974 (the "Water Act") has been enacted to provide for the prevention and control of water pollution and to maintain or restore wholesomeness of water in the country. It further provides for the establishment of Boards for the prevention and control of water pollution with a view to carry out the aforesaid purposes. The Water Act prohibits the discharge of pollutants into water bodies beyond a given standard, and lays down penalties for non-compliance. At the Centre, the Water Act has set up the CPCB which lays down standards for the prevention and control of water pollution. At the State level, SPCBs function under the direction of the CPCB and the State Government.

Further, 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 cess is collected with a view to augment the resources of the Central Board and the State Boards for the prevention and control of water pollution constituted under the Water (Prevention and Control of Pollution) Act, 1974. The Act was last amended in 2003.

THE INDIAN FOREST ACT 1927

It is one of the many surviving colonial statutes. It was enacted to 'consolidate the previous laws relating to forests that were passed before the 1920s, the transit of forest produce, and the duty leviable on timber and other forest produce'.

The Act gave the State Government 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.

This led to the Forest Conservation Act of 1980 and its amendment 1988.

THE FOREST (CONSERVATION) ACT 1980 and Rules 1981

The principal objective of this Act is protection of and the conservation of the forests. It strictly restricts and regulates the de-reservation of forests or use of forest land for non-forest purposes without the prior approval of Central Government. To this end, the Act lays down the pre-requisites for the diversion of forest land for non-forest purposes.

The Act was amended in 1988 and Rules were amended in 1992.

Forest conservation is the planned management of the forest environment to prevent its exploitation, destruction or neglect. There is a need for conservation of forests as population increases rapidly, resources are constantly exploited, pollution is dramatically increasing with respect to time and damages caused by the development activities are irreversible.

Section 2 of this Act requires the approval of Central Government before a State Government “de-reserves” a reserved forest, uses forest land for non-forest purposes, assigns land to private person or corporation or clears forest land for the purpose of reafforestation. In other words, the Act provides restriction on the de-reservation of forest or use of forest land for non-forest purpose. Here, non-forest purpose means breaking up or clearing of any forest land or portion thereof for cultivation of tea, coffee, spices, rubber, palms, oil bearing plant, horticultural crops or medicinal plants or for any purpose other than reafforestation.

An Advisory Committee constituted under section 3 of this Act advises the Government with regard to the grant of approval under Section 2 and any other matter connected with conservation of forests.

Whoever contravenes or abets the contravention of any of the provisions of section 2 of this Act, shall be punishable under Section 3A with simple imprisonment for a period which may extend to fifteen days.

Section 4 empowers the Central Government to make rules for carrying out the provisions of this Act by notification in the official gazette.



INDUSTRIAL SAFETY AND OCCUPATIONAL HEALTH LAWS

The basic aim of the concerned law making and amending authorities is to devise laws which provide safety standards to protect the basic needs of workers and take care of their welfare. Legislation on occupational health and safety has existed in India for several decades. The principal health and safety laws are based on the British Factories Act.

The Factories Act 1948, the Mines Act 1952, The Dock Workers (Safety, Health & Welfare) Act 1986 and The Building & Other Construction Workers (Regulation of Employment and Conditions of Service) Act 1996 are some of the laws which contain provisions regulating the health of workers in an establishment whereas the Employees' State Insurance Act 1948 and the Workmen's Compensation Act 1923 are compensatory in nature.

Some of the other relevant legislations dealing with occupational safety and health (OSH) are:

- Explosives Act, 1884;
- Dangerous Machines (Regulations) Act, 1923;
- Indian Boilers Act, 1923;
- Petroleum Act; 1934;
- Plantation Labour Act, 1951;
- Indian Atomic Energy Act, 1962;
- Insecticides Act, 1968;
- Radiological Protection Rules; 1971;
- Electricity Act 2002

THE FACTORIES ACT, 1948

The Factories Act, 1948 (amended in 1987) was enacted with the object of protecting factory workers from subjecting to unduly long hours of bodily strain or manual labour. It lays down that employees should work in healthy and sanitary conditions so far as the manufacturing will allow and that precautions should be taken for their safety and for the prevention of accidents.

The Factories Act, however, is applicable only to factories that employ 10 or more workers; it covers only a small proportion of workers.

The Act defines a 'worker' as any person employed directly or through any agency (including a contractor), whether for remuneration or not in any manufacturing process or in any work incidental to or connected with the manufacturing process. It is required that work performed should be connected with the product which is produced in the manufacturing process.

This Act is enforced by the State Governments through factory inspectors

THE BUILDING AND OTHER CONSTRUCTION WORKERS (REGULATION OF EMPLOYMENT AND CONDITIONS OF SERVICE) ACT, 1996

This is an Act to regulate the employment and conditions of service of building and other construction workers and to provide for their safety, health and welfare measures and for other matters connected therewith or incidental thereto Section 47 contains penal provisions for contravention of provisions regarding safety measures under the Act.

Whoever contravenes the provisions of any rules made under section 40 shall be punishable with imprisonment for a term which may extend to three months, or with fine which may extend to two thousand rupees, or with both, and in the case of a continuing contravention, with an additional fine which may extend to one hundred rupees for every day during which such contravention continues after conviction for the first such contravention

1. If any person who has been convicted of any offence punishable under sub-section (1) is again guilty of an offence involving a contravention or failure of compliance of the same provision, he shall be punishable on a subsequent conviction with imprisonment for a term which may extend to six months or with fine which shall not be less than five hundred rupees but which may extend to two thousand rupees or with both:

Provided that for the purposes of this sub-section, no cognizance shall be taken of any conviction made more than two years before the commission of the offence for which the person is subsequently being convicted.

ENVIRONMENT PROTECTION ACT AND RULES, 1986

The background features a gradient from light blue at the top to light green at the bottom. On the right side, there are several parallel white lines that start from the top right and extend towards the bottom left, creating a sense of movement or a design element.

Introduction

- The period of 1970s experienced an ascend globally in industrialisation leading to degradation of the environment at a very high pace.
- The need was felt for a combined effort towards environment conservation from all over the world.
- The result of these combined efforts was The United Nations Conference on the Human Environment i.e. **The Stockholm Conference**, 1972 from 5 to 16 June 1972.
- In India, the Bhopal Gas Tragedy of 1984 called for urgent legislation in the field of environment.
- In this background the Parliament passed the **Environment Protection Act, 1986** and the **Environment Protection Rules, 1986**.

ENVIRONMENT PROTECTION ACT, 1986

- The Act came into force on Nov. 19, 1986 and extends to the whole of India.
- The Act was passed to provide for the protection and improvement of environment and for matters connected there with.
- The Act gives certain powers to the Central Government to take measures for the purpose of protecting and improving the quality of the environment and to prevent environmental pollution.
- The Act is an "umbrella" legislation designed to provide a framework for Central Government coordination of the activities of various central and state authorities established under previous laws, such as the Water Act and the Air Act.



IMPORTANT DEFINITIONS

"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. **[S-2(a)]**

"Environmental Pollutant" means any solid, liquid or gaseous substance present in such concentration as may be, or tend to be, injurious to environment **[S-2(b)]**

"Environmental Pollution" means the presence in the environment of any environmental pollutant **[S-2(c)]**

The central Govt. may appoint officers and may entrust them such powers and functions as it may deem fit (S-4)

The Central Government is empowered to issue directions to any person, officer or any authority . **(S-5)**

- Closure direction

(with power to disconnect electricity and water supply)

The Central Government is empowered to make rules to regulate environmental pollution on the following matters: **(S-6)**

- the standards of quality of air, water or soil

- the maximum allowable limits of pollutants

- the procedures for the handling of hazardous substances

- the prohibition and restriction on the location of industries

- the procedures and safeguards for the prevention of accidents

PREVENTION, CONTROL, AND ABATEMENT OF ENVIRONMENTAL POLLUTION UNDER EP ACT, 1986

- ▶ No person/industry is allowed to pollute the environment. **(S-7)**
- ▶ Procedures and processes are laid down to control pollution. **(S-9)**
- ▶ Monitoring authority can carry out inspections. **(S-10)**
- ▶ Power to take samples (As per prescribed procedure). **(S-11)**
- ▶ Samples are tested in environmental laboratories. **(S-12)**

STRINGENT PENALTIES AND PUNISHMENTS

- Whoever contravenes the provisions of the Act- maximum punishment up to 7 years and penalty up to Rs. 1 lakh or Rs. 5000 per day for continued offence. **(S-15)**
- For defaulter Companies or Body Corporates- Directors or partners are prosecuted. **(S-16)**
- This Act is also applicable to Government Departments and HOD is prosecuted. **(S-17)**



SALIENT FEATURES OF THE ACT

- ▶ This Act deals with criminal jurisdiction.
- ▶ Central Government is most powerful.
- ▶ Environmental labs are established or authorised by Central Govt., State Govt., CPCB or State PCB.
- ▶ Standards are laid down by Central Govt., State Govt., CPCB or State PCB.
- ▶ Stringent penalties and punishments.
- ▶ Person having highest authority is prosecuted.
- ▶ Hazardous wastes are defined and special procedure is laid down.
- ▶ Locus standi is relaxed. Any person can file a case.
- ▶ This Act is also applicable to Government Department.
- ▶ This is an Umbrella Legislation.



UMBRELLA LEGISLATION

There are several Rules laid down under the EP Act. Few of the important Rules are as under-

- Environment Protection Rules, 1986
- Hazardous Waste Rules, 1989 (Now 2016)
- Bio Medical Waste Rules, 1998
- Municipal Solid Waste Rules, 2000
- Noise Pollution Rules, 2000
- Ozone Depleting Substances Rules, 2000
- Battery Waste Rules, 2001
- Plastic Waste Rules, 2011
- Electronic waste Rules, 2011



Umbrella Legislation

There are several Notifications issued under EP Act, 1986. Few important notifications are as under-

- ▶ Notification for restricting industries in Doon Valley area, 1989.
- ▶ CRZ Notification, 1991 (Now 2011).
- ▶ Notification for declaration of Dahanu Taluka as eco-sensitive zone, 1991.
- ▶ Notification for declaration of Matheran as eco-sensitive zone, 1992.
- ▶ Notification for declaration of Mahabaleshwar as eco-sensitive zone, 1993.
- ▶ Notification on Fly ash, 2000.
- ▶ EIA Notification, 2006.



Thank
You!

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