

1.4-Environmental Impact Assessment

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1.4-Environmental Impact Assessment

Environmental Impact Assessment is a step to be carried out before any major activity undertaken to ensure that it will not harm to the environment.

The environment impact process was introduced with the purpose of identifying the impacts of development projects on the environment, taking in to account. It predicts how the project could harm to surroundings. After predicting, the EIA identifies measures to minimize the impacts and suggests ways to improve the project viability.

- **Objectives**

1. Identifying, predicting, and evaluating economic, environmental, and social impacts of development activities.

- 2. Providing information on the environmental consequences for decision making. An impact can be defined as any change in the physical, chemical, biological, cultural or socio-economic environmental system as a result of activities relating to a project.

EIA planning tool, helps planner in predicting future impacts of different developments.

EIA must be conducted for projects like highways, airports, canals, dams, power plants etc. which disturb environment.

Applicable for developmental activities which involves plans, programs and policies.

Salient features of EIA

- It identifies the possible positive and negative impacts which may be short term and long term.
- It provides a plan which will reduce the negative impacts of a project.
- This plan may be a project alternative or project modification or environmental protection measures which reduces negative impacts

- It measures the level of plan implementation and the degree of effectiveness of environmental protection measures.

Purpose/ Need of EIA

- When a new project starts in an area, it will disturb the environmental equilibrium, so that EIA is necessary to know whether the project should be started or not.
- To maintain quality of environment it is essential to study impacts of project on environment.
- EIA also suggests remedial measures for the pollution caused by the project, thereby we can implement pollution control methods(eg. Treatment units) along with the project.
- The opinion of public is considered for conducting EIA, so the decision taken about the commencement of new project will be more environment friendly.

Goals of EIA

- Resources conservation
- Waste minimization
- Recovery of byproduct
- Efficient use of equipment
- Sustainable development

Advantage of applying EIA:

- Systematic approach
- Information to the public
- Information to the decision maker
- Consistency of approach
- Improved design

- Provides systematic methods of impact assessment
- Estimates the cost/benefit trade-off of alternative actions

Disadvantage of applying EIA:

- Adds to complexity
- Adds to delay
- Costly
- Requires multidisciplinary team

1.5 -Historical Development

First introduced in United States of America through its National Environmental Protection Act (NEPA) of 1969.

Canada, Australia, the Netherlands and Japan adopted EIA legislation in 1973, 1974, 1981 and 1984, respectively.

In July 1985, the European Community (EC) issued a directive making environmental assessments mandatory for certain categories of projects.

In Asia and the Pacific region, Thailand and the Philippines have long established procedures for EIA.

EIA was made mandatory in Sri Lanka in 1984.

The EIA process in Africa is sketchy, although a number of nations including Rwanda, Botswana and Sudan have some experience of EIA.

The Organization for Economic Co-Operation and Development (OECD) issued recommendations on EIA to its constituent States in 1974 and 1979, and for development aid projects in 1986.

OECD issued guidelines for good practices in EIA in 1992

United Nations Environment Programme (UNEP) in 1980 provided guidance on EIA of the development proposals and supported research on EIA in developing countries.

UNEP, in 1987, set out goals and principles of EIA for the member countries and provided guidance on basic procedures for EIA in 1988.

The World Conservation Strategy pinpointed the need to integrate environmental considerations with development in 1980.

EIA became an integral part of World Bank policy in 1987.

Asian Development Bank in 1990 published guidelines for EIA importance.

Evolution of EIA in India

India participated in the Stockholm Conference or the 'First Earth Summit', in 1972. Consequently, in 1976, the 42nd amendment to the Indian Constitution was made by the introduction of Article 48 A, which binds "states to protect and improve the environment and to safeguard the forest and wildlife of the country"

EIA in India was started in 1976-77, when the Planning Commission asked the Department of Science and Technology to examine the river-valley projects from the Environmental angle.

This was subsequently extended to cover those projects, which Required approval of the Public Investment Board. These were administrative decisions, and lacked the legislative support.

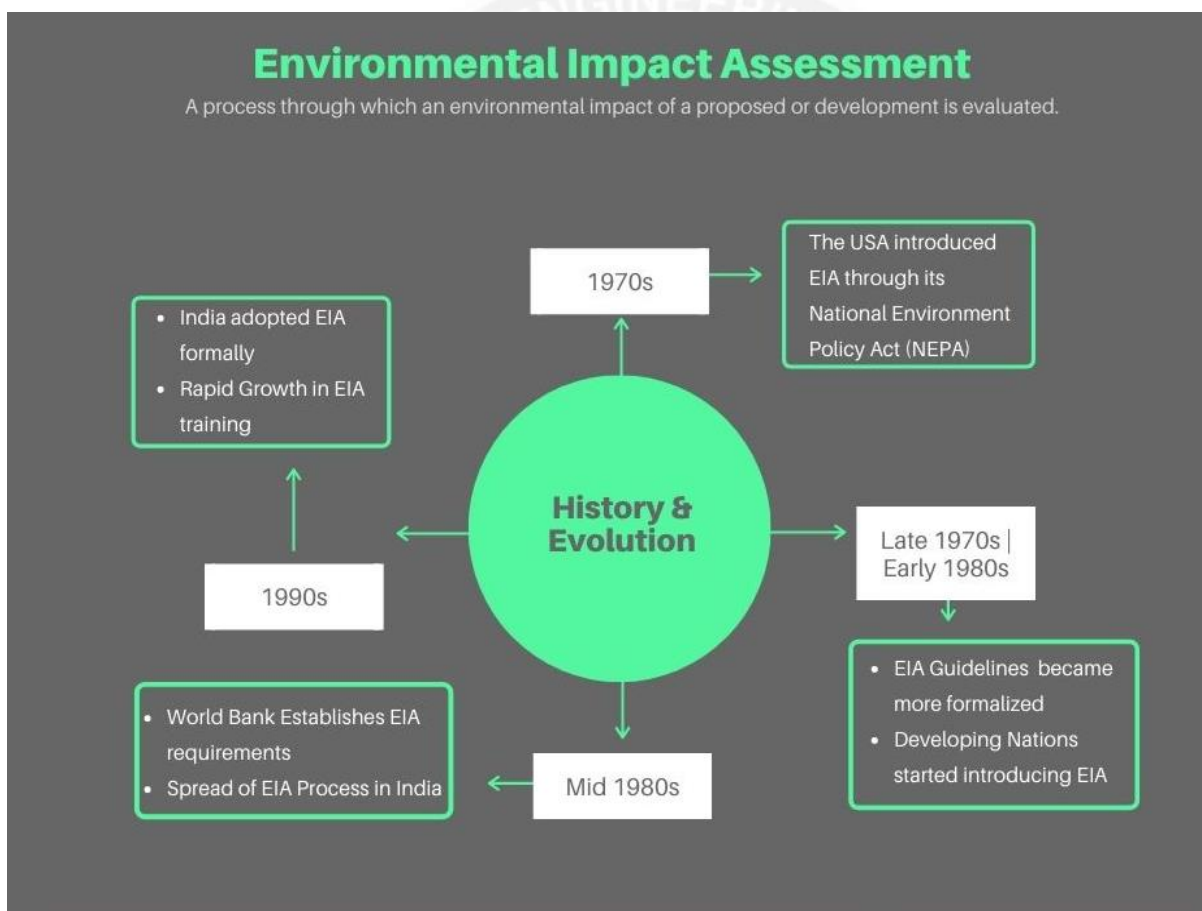
The Government of India enacted the Environment (Protection) Act on 23rd May 1986. To achieve the objectives of the Act, one of the decisions taken was to make EIA statutory. After following the legal procedure, a notification was issued on 27th January 1994.

The Government of India under Environment (Protection) Act 1986 issued a number of notifications, which are related to the environmental impact assessment Revised EIA Notification in September 2006.

Administrative aspects- India is the first country in the world to provide protection and improvement of the environment in its Constitution.

Unfortunately industrial development has had adverse impact on the environment. Most of the developmental activities such as building of dams, roads, airports, industries, railway tracks, cities etc. use enormous amounts of natural resources as raw material and they may generate waste, which is disposed off into the environment. Waste disposal causes damage to air, soil and water, and brings about depletion of natural resources.

The protection of the global environment is in the interest of all of us living on this planet. Various measures have been taken at national and international levels to correct a number of environmental problems. In light of the above it is important to anticipate the likely environmental problems and threats that may arise out of the proposed developmental activities and human actions. Such an anticipation is termed “Environmental Impact Assessment” (EIA). EIA is a tool that improves decision making and ensures that the project under consideration is an acceptable option. The image below to have an idea of major developments around Environmental Impact Assessment in history:



Source: online sources

1.6 -Types of EIA

Environmental assessments could be classified into four types i.e., strategic environmental assessment, regional EIA, sectoral EIA and project level EIA. These are precisely discussed below:

Strategic environmental assessment

Strategic Environmental Assessment (SEA) refers to systematic analysis of the environmental effects of development policies, plans, programs and other proposed strategic actions. SEA represents a proactive approach to integrating environmental considerations into the higher levels of decision-making beyond the project level, when major alternatives are still open.

Regional EIA

EIA in the context of regional planning integrates environmental concerns into development planning for a geographic region, normally at the sub-country level. Such an approach is referred to as the economic-cum-environmental (EcE) development planning. This approach facilitates adequate integration of economic development with management of renewable natural resources within the carrying capacity limitation to achieve sustainable development. It fulfils the need for macro-level environmental integration, which the project-oriented EIA is unable to address effectively. Regional EIA addresses the environmental impacts of regional development plans and thus, the context for project-level EIA of the subsequent projects, within the region. In addition, if environmental effects are considered at regional level, then the cumulative environmental effects of all the projects within the region can be accounted.

Sectoral EIA

Instead of project-level-EIA, an EIA should take place in the context of regional and sectoral level planning. Once sectoral level development plans have the integrated sectoral environmental concerns addressed, the scope of project-level EIA will be quite minimal. Sectoral EIA will help in addressing specific environmental problems that may be encountered in planning and implementing sectoral development projects

Project level EIA

Project level EIA refers to the developmental activity in isolation and the impacts

that it exerts on the receiving environment. Thus, it may not effectively integrate the cumulative effects of the development in a region. From the above discussion, it is clear that the EIA shall be integrated at all level i.e., strategic, regional, sectoral and project level. Whereas, the strategic EIA is a structural change in the way the things are evaluated for decision-making, the regional EIA refers to substantial information processing and drawing complex inferences. The project-level EIA is relatively simple and reaches to meaningful conclusions. Therefore, in India, project-level EIA studies take place on an large-scale and are being considered. However, in the re-engineered Notification, provisions are incorporated for giving a single clearance for the entire industrial estate for e.g., Leather parks, pharma cities, etc., which is a step towards the regional approach.

