



## **EIA**

### **What is EIA?**

Environmental impact assessment (EIA) is an environmental decision-making tool that provides decision makers with information on the potential impacts of development projects on whether the project should be approved. The purpose of an EIA is to determine the potential environmental, social, and health effects of a proposed development, so that those who take the decisions in developing the project and in authorizing the project are informed about the likely consequences of their decisions before they take those decisions and are thereby more accountable. EIA relates to specific projects, Environmental Assessment is a generic term, which also incorporates strategic environmental assessment (SEA) of policies, plans, and programs, and other forms of assessment. The distinction between these processes is highlighted in the definitions provided below.

#### **1. What is the objective of EIA?**

The objective of EIA is (i) to identify, predict and evaluate the economic, environmental and social impact of development activities (ii) to provide information on the environmental consequences for decision making and (iii) to promote environmentally sound and sustainable development through the identification of appropriate alternatives and mitigation measures.

#### **2. Write about the First Environmental Legislation?**

The first comprehensive environmental legislation (Section 102) in United States came into force on 1st January 1970 in the form of National Environmental Policy Act (NEPA). In India, the Central Ministry of Environment and Forests issued a Notification on 27th January, 1994



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making EIA statutory for 29 specified activities falling under sectors such as industries, mining, irrigation, power and transport etc.

This Notification was amended on 4th May, 1994 and the amended version includes a self-explanatory note detailing the procedure for obtaining environmental clearance, technical information, documents required to be submitted for getting environmental clearance from the Ministry of Environment and Forests.

### **3. Write the stages of Environmental Impact Assessment.**

The following points highlight the ten main stages of environmental impact assessment. The stages are:

#### **1. Identification**

The first step is to define a project and study all the likely activities involved in its process so as to understand the range and reach of the project. This helps in deciding the possible zones of environmental impacts.

#### **2. Screening**

Screening is done to see whether a project requires environmental clearance as per the statutory notifications. Screening criteria are based upon:

- (i) Scales of investment
- (ii) Types of development
- (iii) Location of development

A project will have several ramifications biophysical or environmental, economic and social. Hence, it requires some degree of public participation. The law for EIA varies from country to country. If screening shows that a project necessitates EIA, it moves to the next stage.

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### **3. Scoping and consideration of alternatives**

Scoping is the procedure of identifying the key environmental issues and is possibly the most important step in an EIA. Scoping means the scope or range of the EIA report.

It undertakes the project's effect on the air, water, soil, noise level, air quality and physical impact.

It identifies issues and concerns, decides the assessment methods, identifies affected parties and invites public participation for agreement on debatable issues. In which public participation involves interactions of all stakeholders including project beneficiaries, local people, private sectors, NGOs, scientists and other.

It is on-going process and is likely to continue in the planning and design phases of the project.

Scoping is important because it is possible to bring changes in the project in the early stages of the cycle of the project and it ensures the study of all possible important issues.

In this stage there is an option for cancelling or revising the project. After crossing this stage, there is little opportunity for major changes to the project.

### **4. Impact Prediction**

**There are two steps in impact analysis**

#### **(i) Identification**

Identification of the impacts would have been initiated in the scoping stage itself. These initial identifications may be confirmed, and new ones are added as and when the investigations reveal.

#### **(ii) Prediction of Impacts**

Predication of impacts is both qualitative and quantitative. The scale and severity of an impact is determined by whether it is reversible or irreversible.



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If the impact is reversible, then it may be taken as low impact. If the adverse impact cannot be reversed then the impact is said to be high.

### **5. Mitigation**

This stage includes recommended actions that can offset the adverse impacts of the project. This is done with the idea of lessening the negative effects and improving the scope for project benefits.

#### **Mitigating measures may be**

- (i) Preventive: public awareness programs
- (ii) Compensatory: to reduce potential reactions
- (iii) Corrective: putting into place devices and installations

### **6. Reporting To Decision-Making Body**

The project authorities have to furnish the following documents for environmental appraisal of a development project.

- (i) Detailed project report (DPR)
- (ii) Filled in questionnaire
- (iii) Environmental impact statement (EIS): EIS should provide the possible impact (positive and negative) of the project.

#### **Some of the issues to be included are**

1. Impact on soil, water (hydrologic regime, ground water and surface water) and air quality
2. Impact on land use, forests, agriculture, fisheries, tourism, recreation etc.
3. Socio-economic impact including short and long-term impact on population.
4. Impact on health.

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5. Impact on flora, fauna and wildlife, particularly endemic and endangered species, and
6. Cost benefits analysis including the measures for environmental protection.

#### **(iv) Environmental Management Plan (EMP)**

##### **It covers the following aspects**

1. Safeguards and control measures proposed to prevent or mitigate the adverse environmental impact
2. Plans for habitation of project outers
3. Contingency plans for dealing with accidents and disasters
4. Monitoring and feedback mechanisms on implementation of necessary safeguards.

#### **(v) Human Exposure Assessment Location (HEAL)**

The concept of Human Exposure Assessment Location (HEAL) was developed as a part of the health-related monitoring program by WHO in cooperation with UNEP, and the project has three components, viz., air quality monitoring, water quality monitoring and food contamination monitoring on a global basis.

In our country, Chembur and central Bombay city have been identified for such study of human exposure with reference to pollutants such as chlorinated pesticides (DDT and BHC), heavy metals (lead, cadmium) and air pollutants (nitrogen oxides).

### **7. Public Hearing**

After the completion of EIA report the law requires that the public must be informed and consulted on a proposed development after the completion of EIA report.



### **8. Review (EIA Report)**

Once the final report is prepared, it may be reviewed based on the comments and inputs of stakeholders.

### **9. Decision-Making**

The final decision is based on the EIA to approve or reject the project. This is open to administrative or judicial review based on procedural aspects.

### **10. Post Project Monitoring & Environment Clearance Condition**

Once a project is approved, then it should function as per the conditions stipulated based on environmental clearance. These conditions have to be strictly monitored and implemented.

Monitoring should be done during both construction and operation phases of a project. This is not only to ensure that the commitments made are complied with, but also to observe whether the predictions made in the EIA reports were correct or not.

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References:

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(All the information is collected from above references and will be used only for teaching and learning purposes)