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Environmental Impact Assessment

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Introduction

- Environmental Impact Assessment (EIA) - process to evaluate the likely environmental impacts of a proposed project or development, considering inter-related socio-economic, cultural and human-health impacts, both beneficial and adverse
- EIA (in India) backed by the **Environment Protection Act in 1986**, containing provisions on EIA methodology and process

The EIA process

- **Screening:** The project plan is screened for scale of investment, location and type of development and if the project needs statutory clearance
- **Scoping:** The project's potential impacts, zone of impacts, mitigation possibilities and need for monitoring
- **Collection of baseline data:** baseline-environmental status of study area
- **Impact prediction:** Positive and negative, reversible and irreversible and temporary and permanent impacts
- **Mitigation measures and EIA report:** should include the actions and steps for preventing, minimizing or by passing the impacts or else the level of compensation for probable environmental damage or loss
- **Public hearing:** On completion of the EIA report, public and environmental groups living close to project site may be informed and consulted
- **Decision making:** Impact Assessment Authority, experts, the project-in-charge along with consultant to take the final decision, keeping in mind EIA and EMP (Environment Management Plan)
- **Monitoring and implementation of environmental management plan:** The various phases of implementation of the project are monitored
- **Assessment of Alternatives, Delineation of Mitigation Measures and Environmental Impact Assessment Report**
- **Risk assessment:** Inventory analysis and hazard probability and index also form part of EIA

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procedures

Steps in preparation of EIA Report

- ❑ Collection of baseline data from primary and secondary sources
- ❑ Prediction of impacts based on past experience and mathematical modelling
- ❑ Evolution of impacts versus evaluation of net cost benefit
- ❑ Preparation of environmental management plans to reduce the impacts to the minimum
- ❑ Quantitative estimation of financial cost of monitoring plan and the mitigation measures

Stakeholders in the EIA Process

There are six main players:

- ❑ Those who propose the project
- ❑ The environmental consultant who prepare EIA on behalf of project proponent
- ❑ Pollution Control Board (State or National)
- ❑ Public has the right to express their opinion
- ❑ The Impact Assessment Agency
- ❑ Regional centre of the Ministry of Environment and Forest

Salient Features of 2006 Amendments to EIA Notification

- ❑ Decentralized the environmental clearance projects by categorizing the developmental projects in two categories:
 - **Category A (national level appraisal)**
 - **Category B (state level appraisal)**
- ❑ **Category A projects** require mandatory environmental clearance; don't undergo the screening process
- ❑ **Category B projects** undergo screening process. Classified into two types:
 - **Category B1 projects (Mandatorily requires EIA)**
 - **Category B2 projects (Do not require EIA)**
- ❑ **After 2006 Amendment the EIA cycle comprises of four stages:**
 - Screening
 - Scoping
 - Public hearing
 - Appraisal

Importance of EIA

- ❑ Links environment with development for environmentally safe and sustainable development
- ❑ Provides cost effective method to eliminate or minimize the adverse impact of developmental projects
- ❑ Enables the decision makers to analyse the effect of developmental activities on the environment well before the developmental project is implemented
- ❑ Encourages the adaptation of mitigation strategies in the developmental plan
- ❑ Makes sure that:
 - developmental plan is environmentally sound
 - within the limits of the capacity of assimilation and regeneration of the

assimilation and regeneration of the ecosystem

Shortcomings of EIA Process

- ❑ Limited Applicability; exemptions given to several types of projects
- ❑ Lack of necessary expertise in conducting EIA studies
- ❑ Various projects with significant environmental and social impacts excluded from the mandatory public hearing process
- ❑ The data collectors pay no respect to the indigenous knowledge of local people
- ❑ Lack of Credibility; several cases of fraudulent EIA studies
- ❑ Opaqueness and confidentiality associated with certain strategic industries
 - e.g.- Nuclear projects is another area of concern regarding EIA studies

Way Forward

- ❑ Need for an independent EIA authority
- ❑ Creation of a centralized baseline data bank
- ❑ Dissemination of all information related to projects from notification to clearance to local communities and the general public
- ❑ Projects likely to have a significant alteration of ecosystems need to
 - go through the process of environmental clearance, without exception
- ❑ No ind. developmental activity to be permitted in ecologically sensitive areas
- ❑ Public hearings need to be applicable to all hitherto exempt categories of projects having environmental impacts
- ❑ EIA's focus should shift from utiliz'n and exploit'n to conserv'n of natural resources
- ❑ The EIA notif.
 - Needs to build within it, an automatic withdrawal of clearance (if the same is being violated)
 - introduce more stringent punishment for noncompliance
- ❑ NGOs, civil society groups and local communities => build their capacities to use the EIA notification towards better decision making on projects



For TTP