ENVIRONMENTAL IMPACT ASSESSMENT

Ms. Preeti Sharma

Department of IT

AP

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INTRODUCTION

Environmental Impact Assessment (EIA) is a process which ensures that all environmental matters are taken into account quite early in the project at planning process itself.

It takes into consideration not only technical and economic considerations but also, traditional aspects like impact on local people, biodiversity etc.

- An environmental impact assessment (EIA) is an assessment of the possible positive or negative impact that a proposed project may have on the environment, considering natural, Social and Economic aspects.

According to **The International Association of Impact Assessment (IAIA)-**

The process of identifying, predicting, evaluating and mitigating the biophysical, social, and other relevant effects of development proposals prior to major decisions being taken and commitments made.

- EIAs began to be used in the 1960s as part of a rational decision making process.

- It involved a technical evaluation that would lead to objective decision making.

- EIA was made legislation in the US in the National Environmental Policy Act (NEPA) 1969.

EIA "..a systematic process of identifying future consequences of a current or proposed action"

Transparency

Certainty

Participation

Practicability

Flexibility

Cost-effectiveness

Credibility

Accountability

WHY EIA?

Environment Impact Assessment or EIA can be defined as the study to predict the effect of a proposed activity/project on the environment. A decision making tool, EIA compares various alternatives for a project and seeks to identify the one which represents the best combination of economic and environmental costs and benefits.

IA systematically examines both beneficial and adverse consequences of the project and ensures that these effects are taken into account during project design. It helps to identify possible environmental effects of the proposed project, proposes measures to mitigate adverse effects and predicts whether there will be significant adverse environmental effects, even after the mitigation is implemented.

HISTORY OF EIA IN INDIA

The Indian experience with Environmental Impact Assessment began over 20 years back. It started in 1976-77 when the Planning Commission asked the Department of Science and Technology to examine the river-valley projects from an environmental angle. This was subsequently extended to cover those projects, which required the approval of the Public Investment Board. Till 1994, environmental clearance from the Central Government was an administrative decision and lacked legislative support.

On 27 January 1994, the Union Ministry of Environment and Forests (MEF), Government of India, under the Environmental (Protection) Act 1986, promulgated an EIA notification making Environmental Clearance (EC) mandatory for expansion or modernisation of any activity or for setting up new projects listed in Schedule 1 of the notification. Since then there have been 12 amendments made in the EIA notification of 1994.

The MoEF recently notified new EIA legislation in September 2006. The notification makes it mandatory for various projects such as mining, thermal power plants, river valley, infrastructure (road, highway, ports, harbours and airports) and industries including very small electroplating or foundry units to get environment clearance. However, unlike the EIA Notification of 1994, the new legislation has put the onus of clearing projects on the state government depending on the size/capacity of the project.
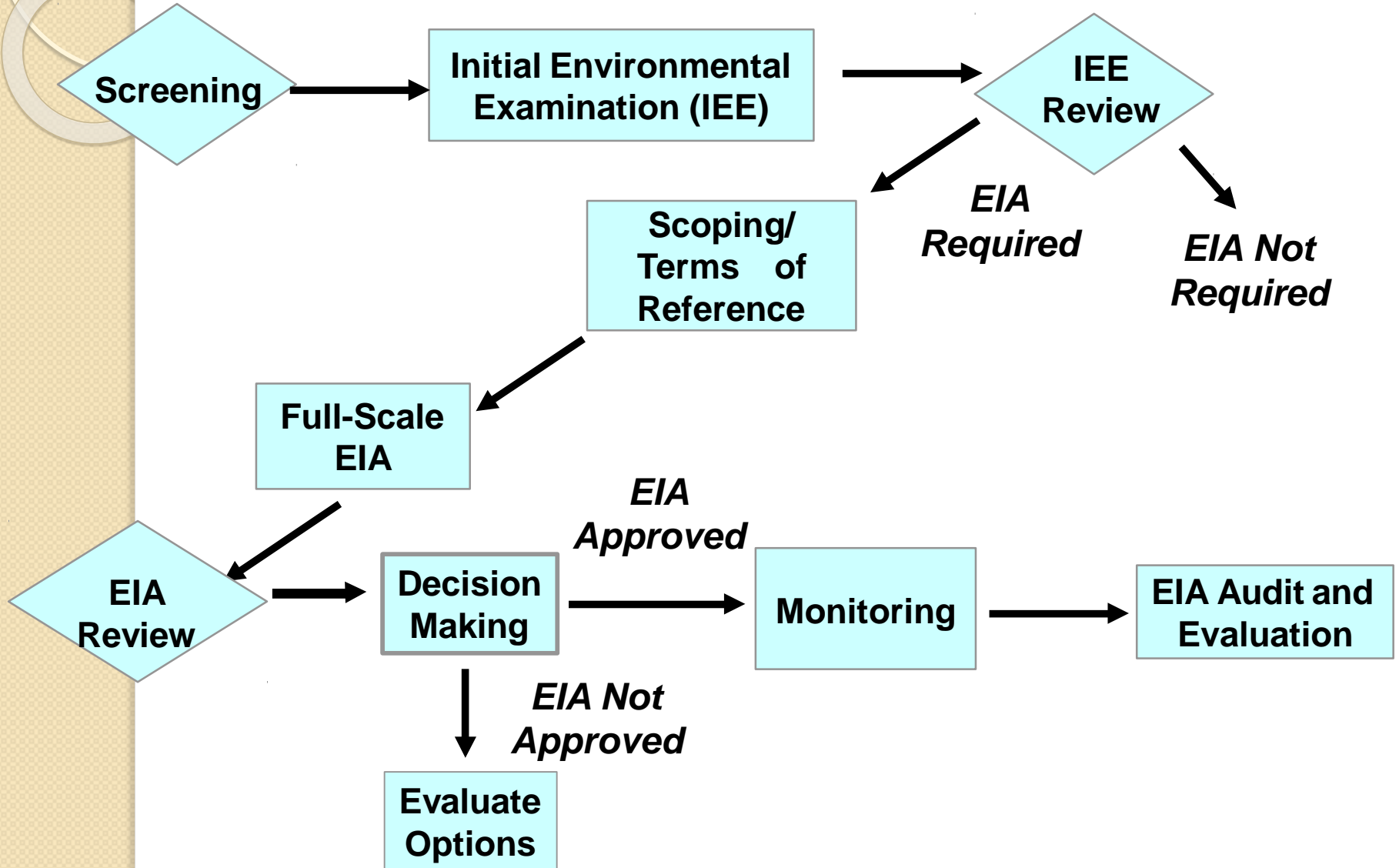
Environment Impact Assessment

EIA Clearance required

Total EIA clearance is required for 32 categories of developmental works broadly categorized into following industrial sectors:

- Mining

- Thermal power plant

- River valley

- Infrastructure (Road, highway, ports, harbour, airports,

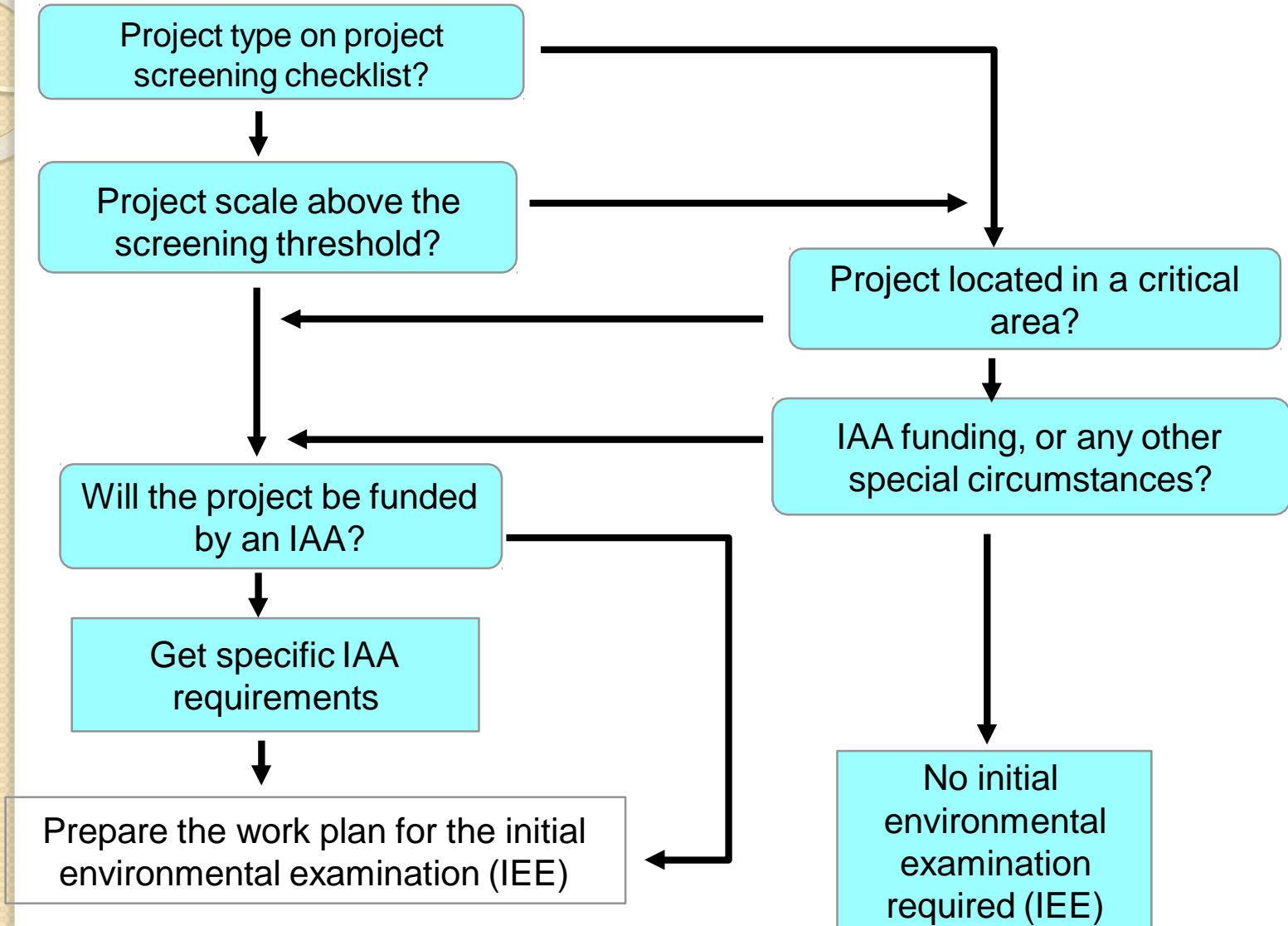- Industries including very small electroplating or foundry units)

Flow chart representing the process of EIA

Screening → **Initial Environmental Examination (IEE)** → **IEE Review**

IEE Review → *EIA Required* → **Scoping/ Terms of Reference**

IEE Review → *EIA Not Required*

Scoping/ Terms of Reference → **Full-Scale EIA**

Full-Scale EIA → **EIA Review** → **Decision Making**

Decision Making → *EIA Approved* → **Monitoring** → **EIA Audit and Evaluation**

Decision Making → *EIA Not Approved* → **Evaluate Options**

Screening

• It would be time consuming and a waste of resources for all proposed projects and activities to undergo EIA

• Not all development projects require an EIA, as some projects may not pose an environmental threat

• Screening is the process used to determine whether a proposed project or activity requires an EIA and, if so, what level of environmental review is necessary.
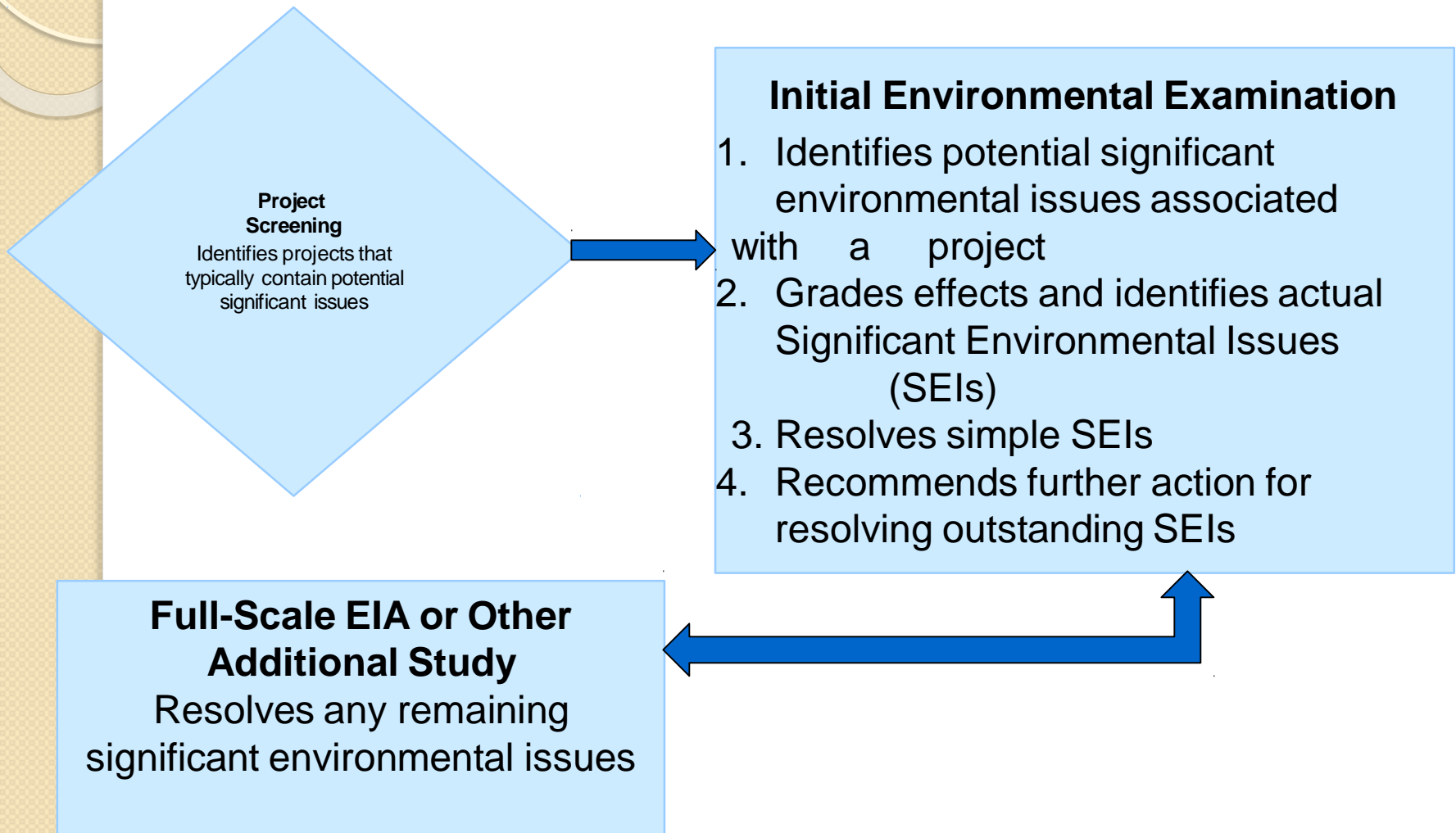
Screening Flow Chart

Initial Environment Examination

- intended as a low-cost environmental Initial environmental examination (IEE) is evaluation that makes use of information already available.

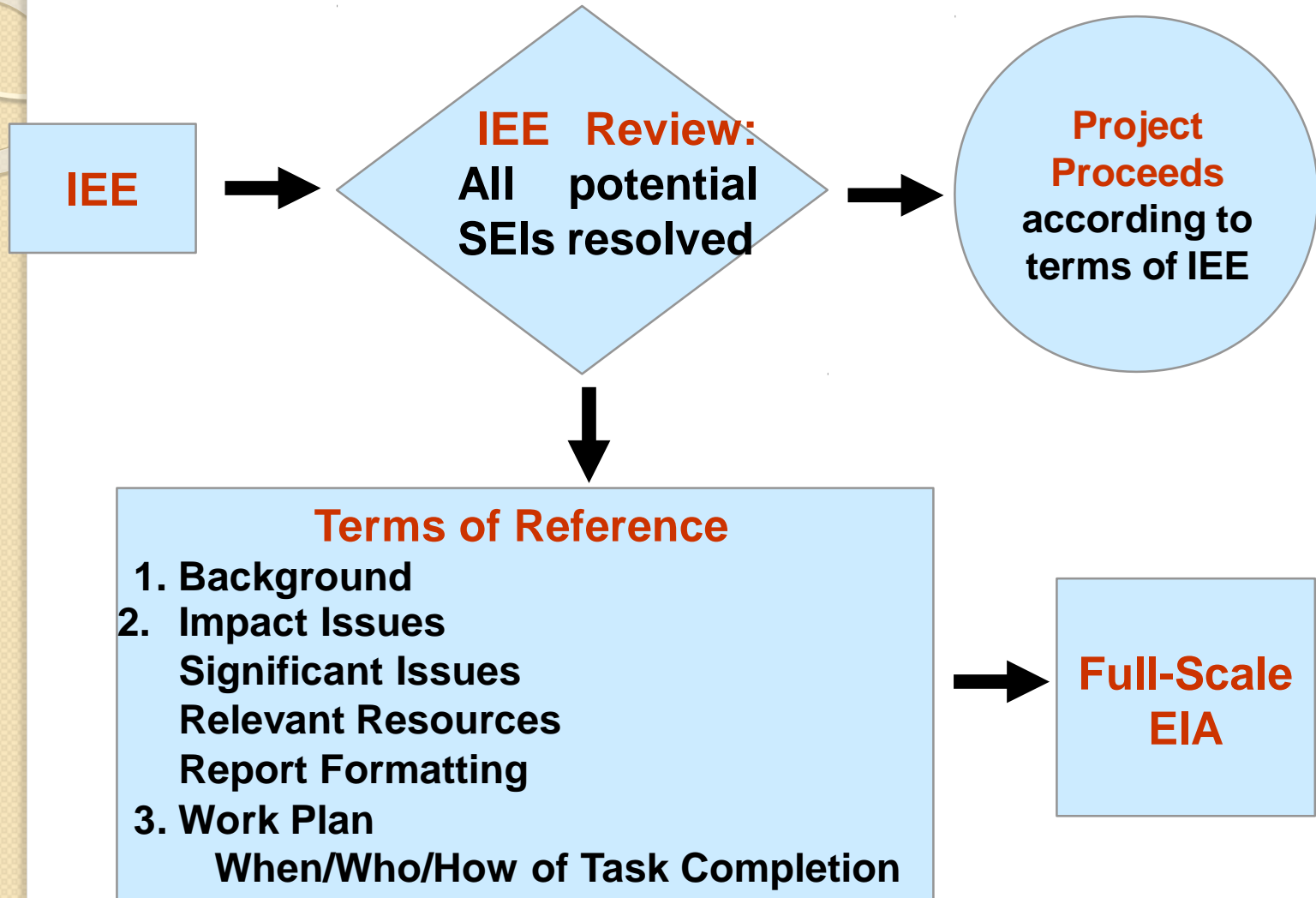- Itboost up the process of EIA and lead the matter to further assistance.

IEE in the Overall EIA Process

Project Screening
Identifies projects that typically contain potential significant issues

Initial Environmental Examination
1. Identifies potential significant environmental issues associated with a project
2. Grades effects and identifies actual Significant Environmental Issues (SEIs)
3. Resolves simple SEIs
4. Recommends further action for resolving outstanding SEIs

Full-Scale EIA or Other Additional Study
Resolves any remaining significant environmental issues

Scoping

- Aprocess of interaction between government agencies and project proponents

- Identifies:
  - spatial and temporal boundaries for the EIA
  - important issues and concern
  - information necessary for decision making
  - significant effects and factors to be considered
  - Establishes terms for reference of full scale EIA

Scoping

IEE → **IEE Review:** **All potential SEIs resolved** → **Project Proceeds according to terms of IEE**

Terms of Reference
1. **Background**
2. **Impact Issues**
   Significant Issues
   Relevant Resources
   Report Formatting
3. **Work Plan**
   When/Who/How of Task Completion

→ **Full-Scale EIA**

Full-Scale EIA Overview

Input = Outstanding SEIs from IEE(initial environment examination).

Assessment phase:
  – Qualitative/quantitative analysis of SEI
  – SEI impact significance

Mitigation development phase
  – Select appropriate mitigation measures
  – Residual impact significance

EIA overview

- Checklists
- Matrices
- Risk Assessment
- Network
- Overlays/GIS
- Expert Systems
- Risk assessment

Decision Making

•The challenge of making the final decision on implementing a project is observed.

•Decision are taken at all stages during the EIA process and the outcome will be based on these decisions.

•If a large scale project falls under the jurisdiction of countries with comparable national EIA procedures,it should be feasible to be more ambitious in organising EIA Transboundary.
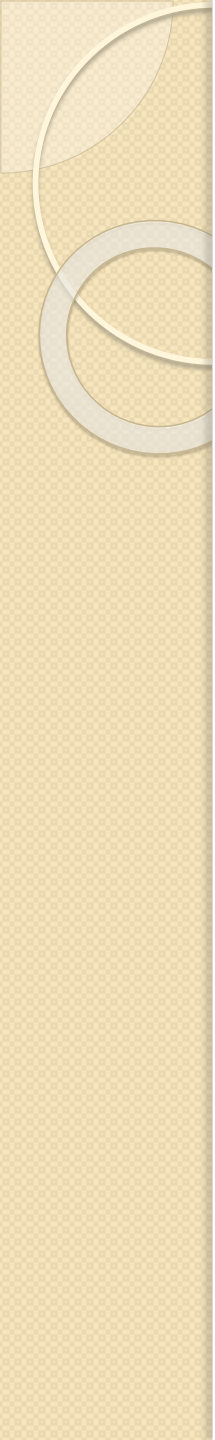
Monitoring

•In legislation there is a often demand for environmental reporting when treating permits to activities with large EIA.

•This stage involves improvement and mitigational measures to put forward EIA.

•It also involves elements of assessing risks and hazard management.

Audit and Evaluation

• This is the final stage of EIA.

•Audit consists opinions and corrections of the report which are submitted in front of decision making committee.

•It also reveals that whether EIA is necessary or not for the report submitted,if necessary what are the measures taken in order to overcome the drawbacks and hazards.

Uses of EIA

o Systematic evaluation of a eco friendly project.

o   Risk and hazard assessment.

o   Impact identification.

o   Monitoring of impact and advice.

o   Development control

o   Project development

o SEA(strategic environmental assessment) and permit.

THANK YOU