Chapter 2

2. The **Basic** environmental impact assessment process

- In EIA systems there are sequence of activities implemented in project in a logical sequence and are termed as EIA process.
- EIA is a systematic process that examines the environmental consequences of development actions, in advance.
- The emphasis, compared with many other mechanisms for environmental protection, is on ***prevention***.
- Of course, planners have traditionally assessed the impacts of developments on the environment, but invariably not in the systematic, holistic and multidisciplinary way required by EIA.
- Therefore, the process involves a number of steps

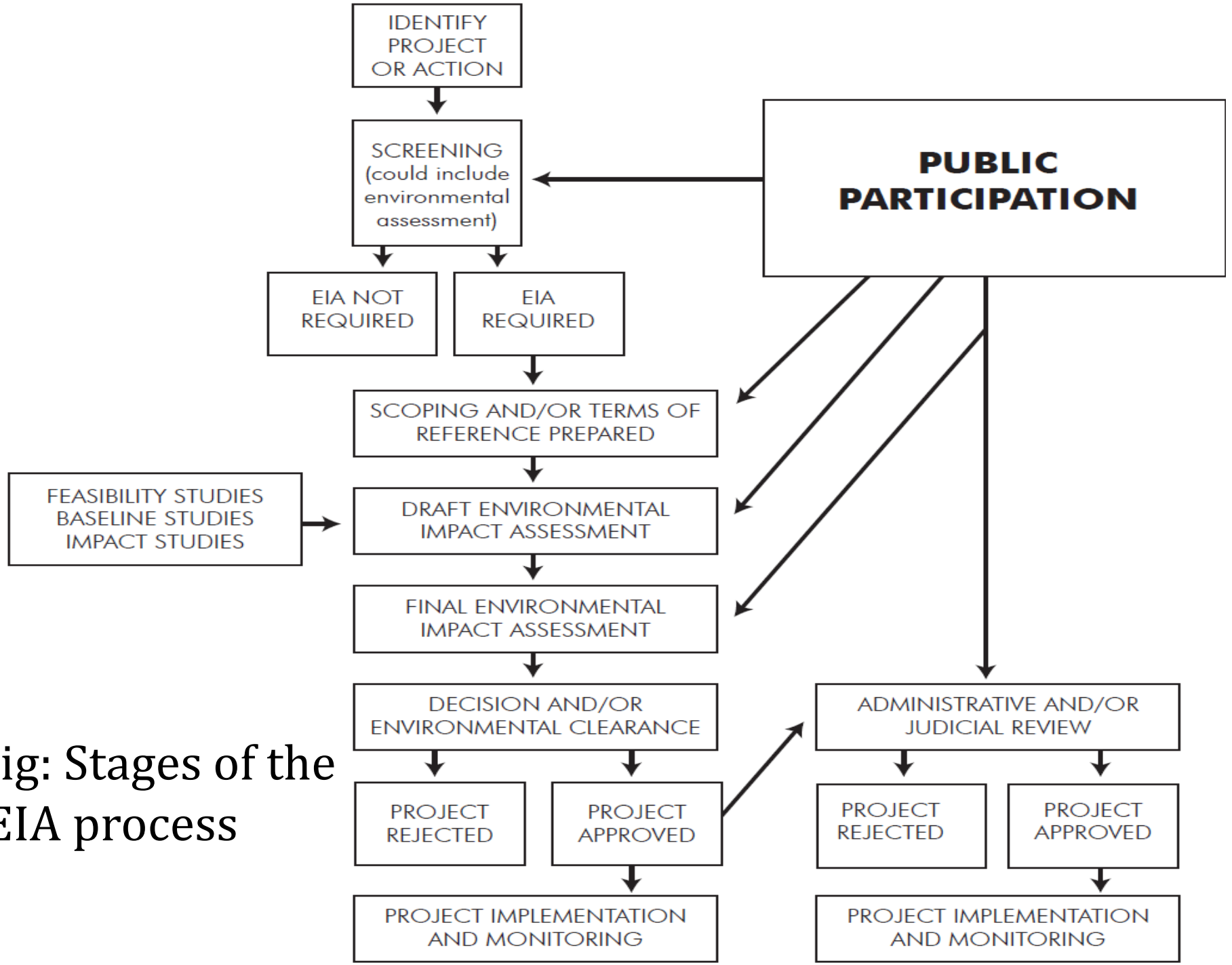


Fig: Stages of the EIA process

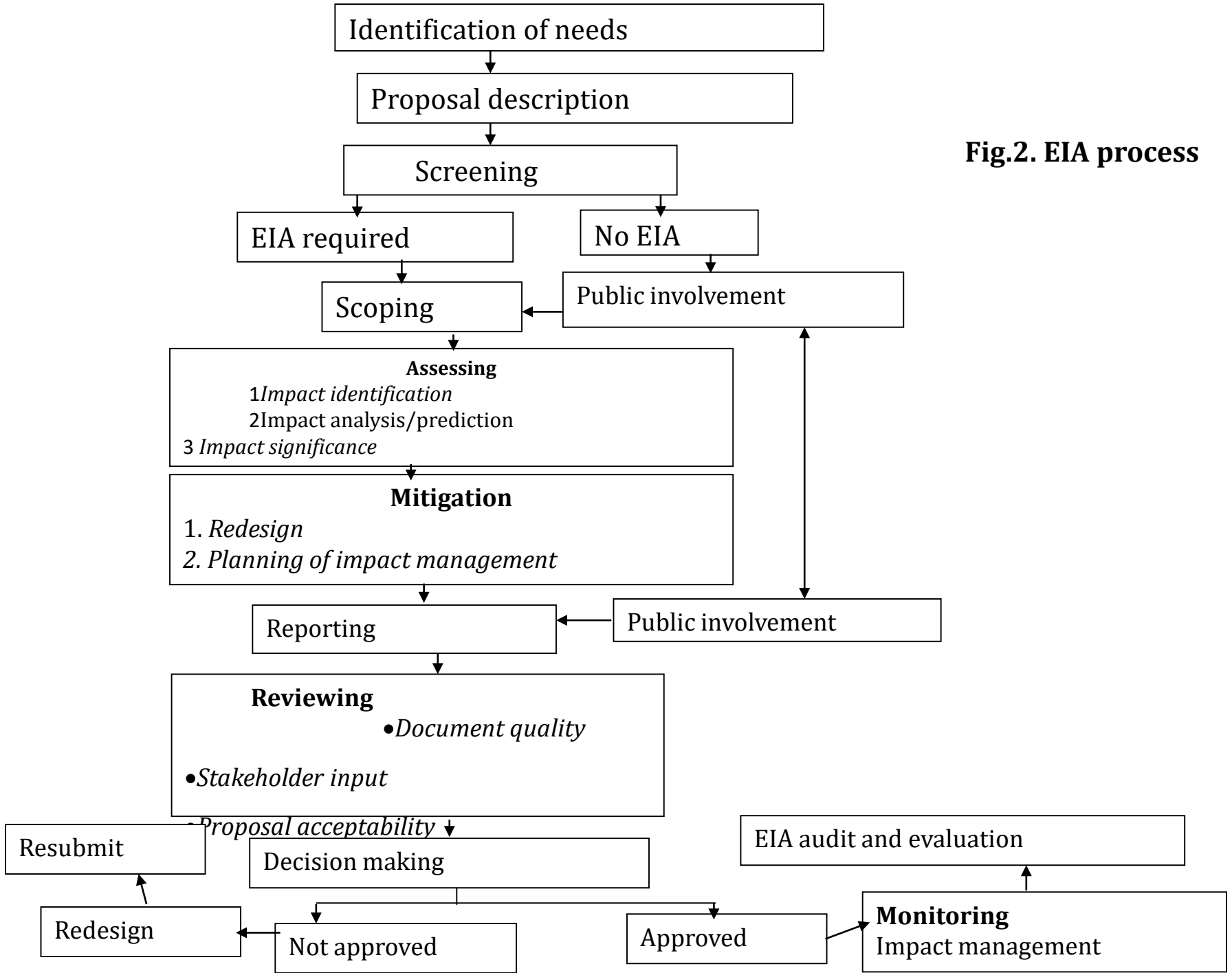


Fig.2. EIA process

2.1. Early information collection

- In best practice, EIA proponents should begin research early in the life of the project.
- This can include the collection of baseline data on local environment***(both primary and secondary data)***, which can be in the EIA document.
- Early identification of a potential problem can help the proponent **to minimize the impact by taking it in to account in planning, in materials handling, and in site layout.**
- As well as helping prepare the EIA, much of the data collected could often be a primary source of environmental information in the area.

2.2. Prescreening consultation

•Prescreening is not normally taken as a part of a stage in the EIA process.

• However, its application is recommended in recognition of its importance to enhance the over all effectiveness of the EIA system.

•Prescreening is a stage where the proponent and the respective environmental (Competent Agency) and other sectoral agencies established contact and hold consultation on how best to precede with EIA.

•The consultation may take the form of formal meeting, a telephonic conversation or correspondence by means of electronic mail.

•Undertaking of prescreening consultation is advisable because it saves time by avoiding delays caused by requests from the authority requiring additional information occurring at a later stage, and fosters a mutual understanding.

• It also allows the authority to register the application (by opening a file or capturing the information on computer).

2.3. Screening- Is an EIA needed?

- Before starting the screening phase of the EIA, it is recommended that the proponent must appoint an independent consultant to assist in the process.
- Screening is a process of determining whether or not a proposal should be subject to EIA and, if so, at what level of detail.
- The screening phase of the EIA should decide the following:
  - the need for and level of assessment
  - level of government to be responsible for the project
  - other necessary permits or approval process
  - acceptability of the consultant to assist the proponent
  - the public participation process; and
  - the total life cycle of the project

•In the screening process the proponent should submit to the Competent Agency a screening report that contains the following:

- the title of the proposed activities;
- the name of the proponent and the consultant(s);
- the address of the proponent and the consultant(s);
- location of the proposed development;
- the extent of the proposed activity; and
- any potential environmental issues identified by the proponent

•***To screen a project, the decision maker needs the following information:***

a) Initial Environmental Examination (IEE) as it provides:

✓information about the proposal

✓identifies and addresses the potential environmental effects

✓describes the proposal and examine alternatives

✓identifies and addresses the concerns of the community i.e. degree of public interest

✓mitigates adverse effects and enhances potential benefits

✓contains environmental monitoring and management plan

b) Project list

It is establish a set of specific criteria that can be used to determine which projects will under go EIA

2.3.1. Screening criteria

•Different countries and donors use different criteria for screening project.

However, projects should be "screened in" based on

- ***the project scale*** (type or thresholds size of the characteristics of the receiving environment, society or a mixture of these).
- ***the project sectors***
- ***the sensitivity of the project location and***
- ***the expectation of adverse environmental impacts.***
- ***The attitude of the society*** i.e. degree of public interest
- ***Initial Environmental Examination (IEE) as it provides:***

✓information about the proposal

✓describes the proposal and examine alternatives

✓identifies and addresses the concerns of the community

✓mitigates adverse effects and enhances potential benefits

2.3.2 What are the outcomes of screening reports?

- ***No EIA required***
- ***preliminary assessment***–preliminary assessment is applied to
  - projects with limited impacts which are not included in the project design
  - project proposals with inadequate information
- **3. Full EIA**

• The output from the screening process is often a document called an Initial Environmental Examination or Evaluation (IEE).

• For proposals which require EIA the next step in the process is to agree on the issues that need to be analyzed in the EIA. This process is called **scoping**.

2.4. Scoping – which impacts and issues to consider?

Scoping is the process of identifying and narrowing down the potential environmental impacts associated with the intended development project. The level of scoping will depend on

•the nature and scale of the development proposal and its complexity; and-the sensitivity of the environment.

2.4.1. Objectives of scoping

The objectives of scoping are to:

•identify key environmental concerns and set priorities
•identify significant effects and factors to be considered
•consider reasonable and practical alternatives
•outline overall study process and requirements
•understand local values, traditions and cultures
•obtain agreement methods and techniques
•define project design alternatives
•define the boundaries of EIA study
•inform potential affected people
•identify the necessary information for decision making
•establish terms of reference

The process of scoping is that of deciding, from all of a project's possible impacts and from all the alternatives that could be addressed, which are the significant ones. An initial scoping of possible impacts may identify those impacts thought to be potentially significant, those thought to be not significant and those whose significance is unclear. Further study should examine impacts in the various categories. Those confirmed by such a study to be not significant are eliminated; those in the uncertain category are added to the initial category of other potentially significant impacts. This refining of focus on to the most significant impacts continues throughout the EIA process. Good scoping has been shown to be a key factor in good environmental impact statement.

2.4.2. Who should be involved in scoping?

- the proponent/abba qabenya.
- the administering agency /
- others agencies
- environmental practitioners/workers.
- those affected and interested parties
- the wider community

2.4.3. Steps in the scoping

The following scoping steps are indicative:

1. prepare an outline of the scoping / terms of references
    1. background and objective description of the project proposal
    2. required information
    3. the context and setting of the proposals
    4. constraints
    5. alternatives
    6. issues/analysis of impacts

7. institutions and public involvement
8. mitigation and monitoring
9. conclusions and recommendations
10. time table
11. requirement for managing EIA

2. Further develop the outline of the scope through discussion with the proponent, the EIA authority and other key stakeholders assembling information, and identifying information gaps.

3.Make the outline and supporting information available to those whose views are to be obtained

4.Identifying the issues of concern and evaluate the concerns from both a technical and subjective perspective, seeking to assign priority to the most important issues

5. Amend the outlines to incorporate the agreed suggestion

6. Develop a strategy for addressing and resolving each key issues, including information requirements and terms of references for further studies

7. Provide feedback on the way comments have been incorporated

2.5. Impact assessment study

- Screening determines whether or not an EIA is required.
- Scoping identifies the issues that are most important to investigate in details.
- The assessment phase of EIA is the time when most of the work involved in impact assessment is carried out. It includes:
  - Identifying impacts more specifically
  - Analyzing impacts
  - Determining impact significance or acceptability.

- The outcome of assessment is ***EIA document***.

2.6. Identification of mitigation measures and alternatives

Mitigative measures can be taken before or after the occurrences of the impacts to rehabilitate or compensate the negative impact already occurred. Mitigative measures should be clearly spelt out in the EIA. Mitigative measures aim to minimize or eliminate negative impacts and enhance the benefits. The mitigative measures should be prepared as an operational management plan and could include a combination of the following mitigation options.

- alternative ways of meeting the needs
- changes in planning and design
- improving monitoring and management
- compensation in different forms (e.g. monetary)
- replacing, relocating, rehabilitating, etc.

➢Alternatives are generated and examined to determine the best method of achieving project objectives, while minimizing environmental impacts. They can be grouped as follows:

- Demand alternatives e.g. using energy more efficiently versus building more generating capacity
- Activity alternative e.g. providing public transport rather than increasing road capacity
- Location alternatives either for the entire proposal or for components e.g. the location of the processing plant for a mine
- Process alternative e.g. the reuse of processed water in an industrial plant, waste minimizing or energy efficiency technology
- Input alternative e.g. raw materials, energy sources

2.7. Reporting

•Once impacts have been interpreted and mitigative measures have been set, it is essential that the ***information be presented in a form that enables non-experts to comprehend.***

• It is important that the information in this report is ***as comprehensive as possible since a decision regarding whether the project should go ahead or not, and whether an EIA is required to further investigate issues and alternatives, will be made on the basis of this report***.

• In many cases where there are no major issues identified, the scoping report will be sufficient for a decision to be made and no further studies will be required.

How do we make it comprehensive? To do so the report should reflect at least the following:

- a brief description of the project;
- all the alternatives identified during the scoping process;
- all issues raised by interested and affected parties and how these will be addressed; and
- a description of the public participation process including a list of interested and affected parts , and minutes of meeting

2.8. Reviewing

The EIA report should be submitted to the Competent Agency for review. The Competent Agency should review the document to determine whether ***the process followed in preparing the report has been adequate and that there has been sufficient consultation with interested and affected parties.***

➢Impacts identified in the document should be reviewed in terms of:

- socio-economic context and potential benefit
- effect on public health or risk to life
- scale, geographic extent such as regional, national or international importance
- duration and frequency
- reversibility or irreversibility
- ecological context
- degree of uncertainty

➢The review should also contain an analysis of the information provided to determine whether due attention has been paid to possible project alternatives and whether the issues identified have been afforded appropriate attention.

➢ When the review has been completed, the competent agency should decide whether to accept the application as it stands, reject the application or request that the document be amended.

2.9. Record of decision and appeal

- An application may be accepted or refused by the competent agency after the screening, scoping or EIA phases. Competent agency must provide a record of decision report which should be provided to the proponent be made available to any interested and affected party on request. The record of decision report may form the basis of an environmental clearance certificate if the project is approved and may contain the details of the conditions of approval.
- A proponent or other interested party who is dissatisfied may object to actions, opinions or decision made no later than four weeks after receipt of such a decision. Appeal should be submitted in writing, clearly specifying the grounds for the appeal to the general manager of the EPA depending on the competent agency for the EIA. The head of the competent agency should make his decision with in two weeks following the receipt of the appeal.

2.10. Condition of approval

The conditions of approval may be included into the record of decision but are typically prepared as a separate document. The authority, in approving a proposal may wish to make implementation of mitigation measures on condition of approval. The proponent may then require submitting a detailed Environmental Management Plan (EMP). The EMP would describe in detail how each mitigation measure should be undertaken. Monitoring criteria should also be supplied and responsibilities clearly defined. Regular independent monitoring would be undertaken at the cost of the proponent.

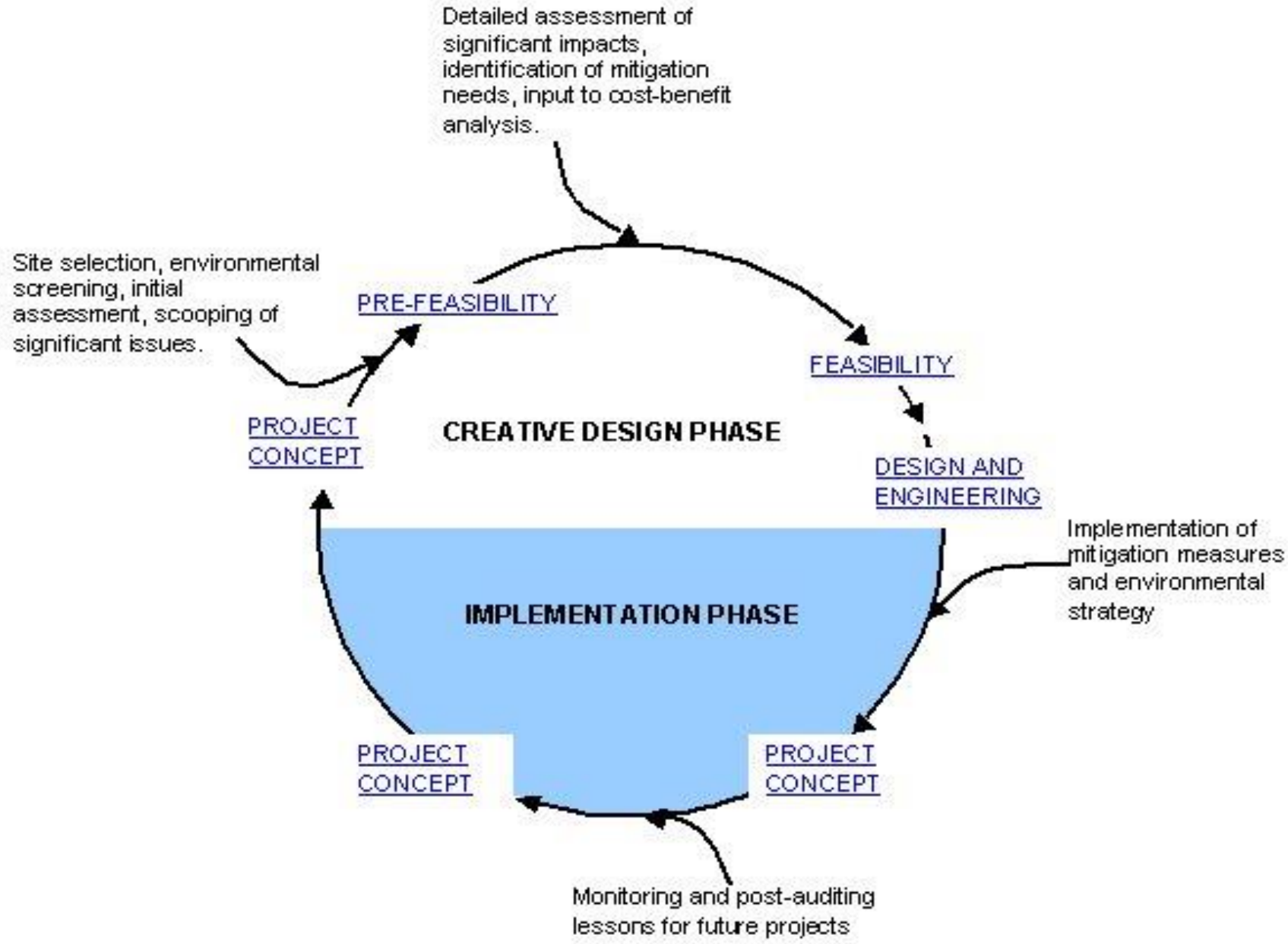
2.11. Internal monitoring and auditing

- It is the responsibility of the proponent to conduct regular internal monitoring and auditing of the environmental performance of the operation.
- The audits should be a systematic evaluation of the activities of the operation in relation to the specified criteria of the condition of approval.
- The auditing and monitoring results may be prepared in the form of an environmental performance report, which should be submitted to the competent agency.
- The auditing of the competent agency would be in the form of verification of internal reports.

2.12. EIA and the project cycle

- The fundamental premise is that the stage in the EIA process should be linked to the corresponding stages in the project cycle.
- The schematic diagram below would indicate the sequence of events EIA process in the project.

Environmental Impact Assessment Project Cycle and Project Management



Baseline Data Collection

- Baseline information is important reference point for conducting EIA.
- The term "baseline" refers to the collection of background information on the biophysical, social and economic settings proposed project area.
- Normally, information is obtained from secondary sources when there exists a facility of database, or the acquisition of new information through field samplings.
- The task of collecting baseline data starts right from the period of project inception, however, a majority of this task may be undertaken during scoping.

Baseline data are collected for two main purposes:

- to provide a description of the status and trends of environmental factors (e.g., air pollutant concentrations) against which predicted changes can be compared and evaluated in terms of importance, and
- to provide a means of detecting actual change by monitoring once a project has been initiated.
- Collection of baseline data should be designed to satisfy information requirements and should be relevant to EIA analysis.
- Only baseline data needed to assist prediction of the impacts contained in the TOR should be collected.