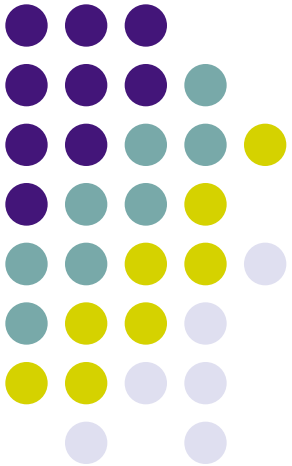
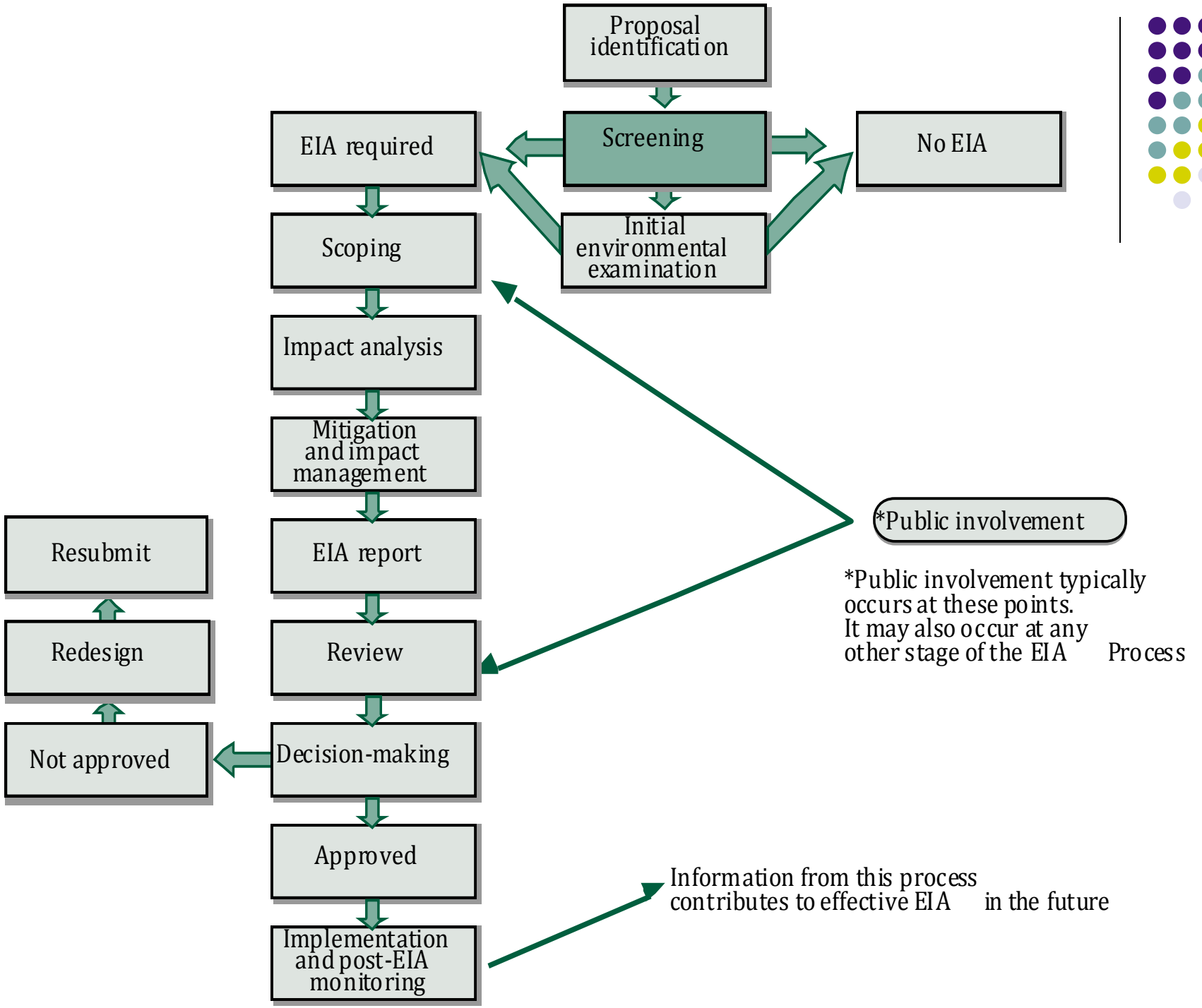
Steps in EIA




Proposal identification
Screening
EIA required
No EIA
Initial environmental examination
Scoping
Impact analysis
Mitigation and impact management
EIA report
Review
Decision-making
Not approved
Redesign
Resubmit
Approved
Implementation and post-EIA monitoring
*Public involvement
*Public involvement typically occurs at these points.
It may also occur at any other stage of the EIA Process
Information from this process contributes to effective EIA in the future

Step 1: Screening

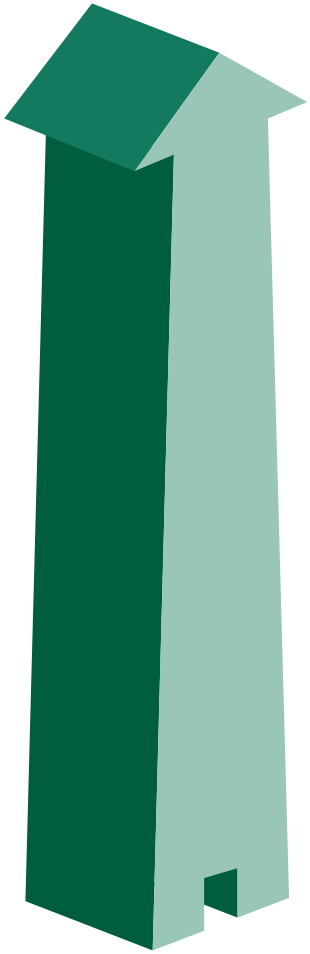
- This step determines:
  - whether or not EIA is required for a particular project
  - what level of EIA is required

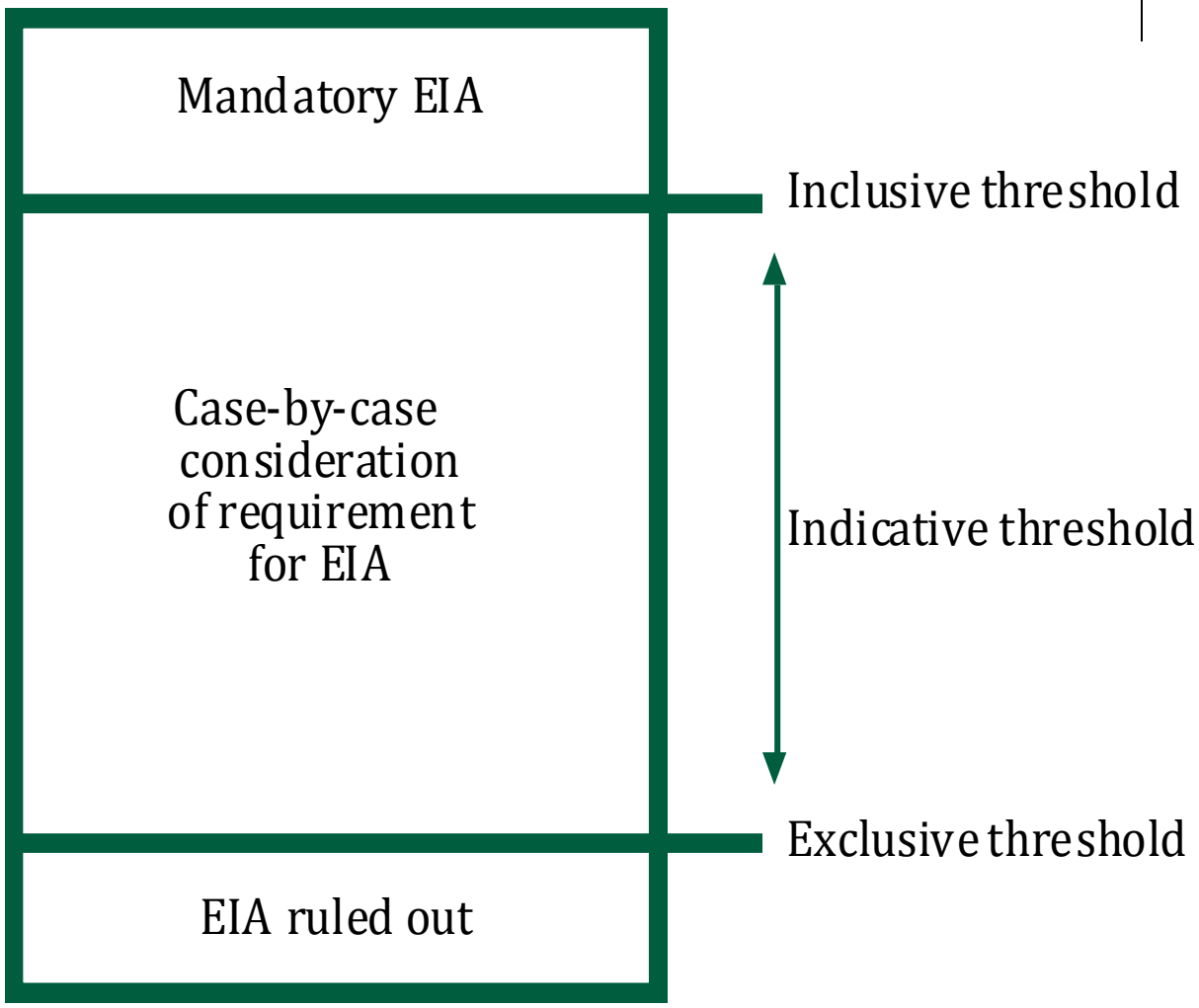
- Screening Outcomes:
  - Full or comprehensive EIA required
  - Limited EIA required
  - No EIA required

Tools for Screening

- Project lists:
  - Inclusive — listed projects must undergo EIA
  - Exclusive — listed projects exempted from EIA
- Case-by-case examinations:
  - determine whether projects may have significant environmental effects
  - if so, project should undergo EIA
- Combination of above

Screening Process





Step 2: Scoping

- begins once screening is completed
- the most important step in EIA
- establishes the content and scope of an EIA report

Outcome:

- identifies key issues and impacts to be considered
- lays the foundation of an effective process, saves time and money, and reduces conflict

Types of Scoping

Closed scoping:

wherein the content and scope of an EIA Report is pre-determined by law and modified through closed consultations between a developer and the competent authority

Open or Public scoping:

a transparent process based on public consultations

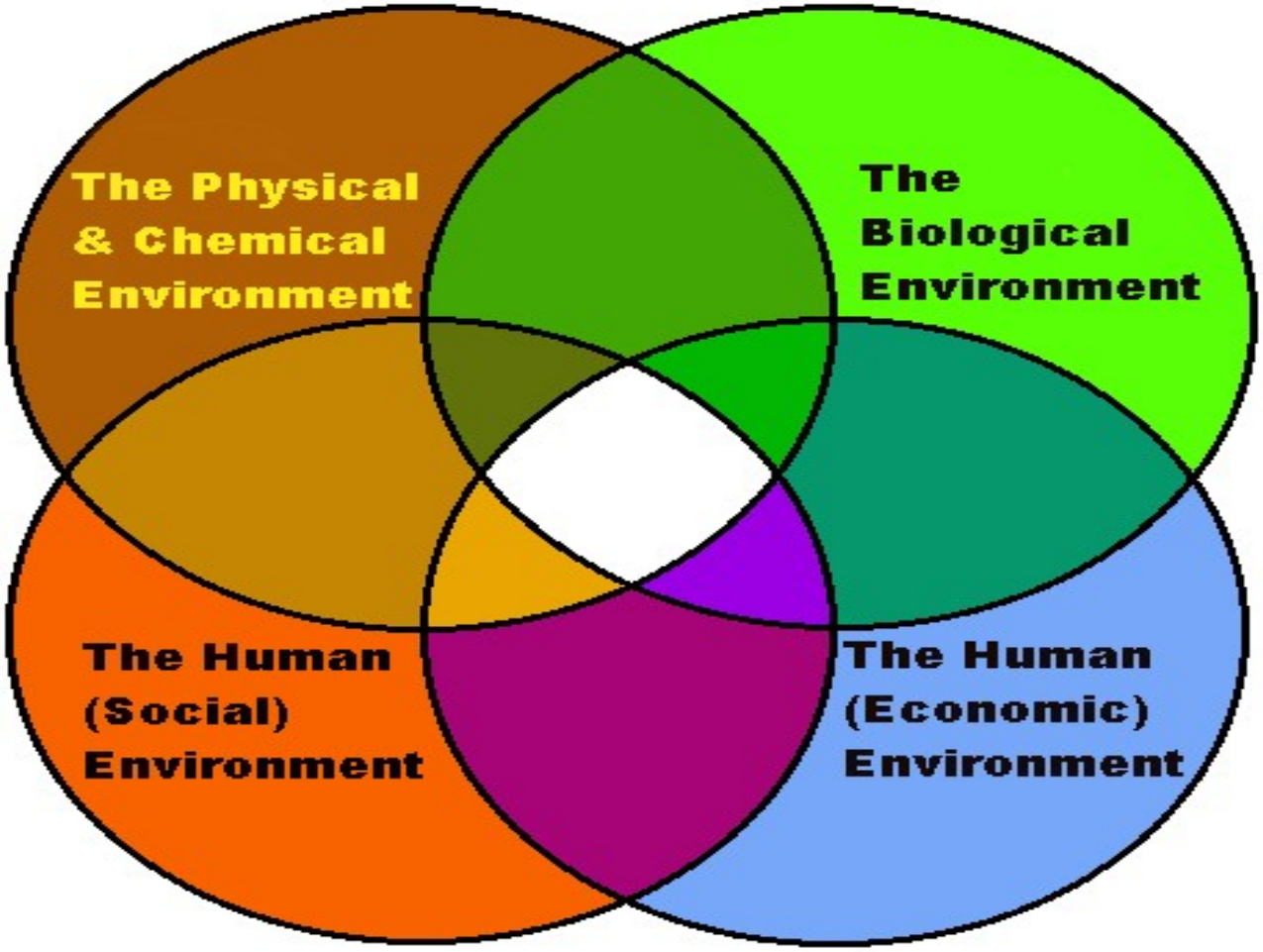
Actors

proponent, EIA consultant, supervisory authority for EIA, other responsible agencies, affected public and interested public

The scoping process

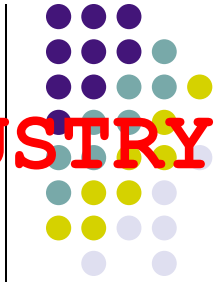
- prepare a scope outline
- develop the outline through informal consultation with environmental and health authorities
- make the outline available
- compile an extensive list of concerns
- evaluate relevant concerns to establish key issues
- organise key issues into impact categories (study list)
- amend the outline accordingly
- develop ‘Terms of reference’ (ToR) for impact analysis
- monitor progress against the ToR, revising as necessary

SCOPING



THE 4 FACETS OF THE ENVIRONMENT

EXAMPLE : SCOPING
IMPACT OF A PROPOSED PAPER INDUSTRY



A PAPER INDUSTRY IS PROPOSED TO BE ESTABLISHED IN A LOCALITY AND THE EFFLUENT IS PROPOPED TO DISCHARGE IN ADJACENT RIVER

- ETP WILL BE INSTALLED TO BRIING THE DISCHARGE DOWN TO PERMISSIBLE LIMIT
- THERE ARE FEW OTHER INDUSTRIES ALREADY ESTABLISHED DISCHARGING EFFLUENT TO THE RIVER AT ALLOWABLE LIMIT
- PEOPLE BATH IN RIVER WATER AND DRINK AFTER TREATMENT
- SIGNIFICANT NUMBER OF PEOPLE DEPEND ON FISHING FOR OCCUPATION

MAJOR ISSUES (SCOPING)

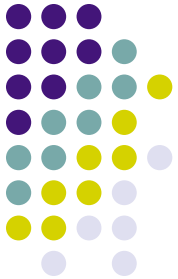
PHYSICAL AND CHEMICAL ENVIRONMENT

- THE LEVEL OF INCREASE GASEOUS AIR POLLUTANTS
- POSSIBLE CHANGE IN NOISE LEVEL
- CHANGE IN DOWNSTREAM DO DUE TO DISCHARGE OF AQUEOUS EFFLUENT (ORGANIC MATTER)

BIOLOGICAL ENVIRONMENT

- EUTROPHICATION (EFFLUENT CONTAINING N ,P)
- PUBLIC HEALTH IMPACT
- FISH KILLS

MAJOR ISSUES (SCOPING)



THE HUMAN (SOCIAL) ENVIRONMENT

- AFFECT ON FISHERIES AND AQUACULTURE AS A LIVLIHOOD FOR THE COMMUNITY
- URBANIZATION TREND AND RELATED PROBLEM
- SCOPE OF JOB CREATION

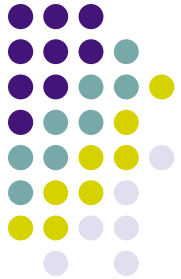
THE HUMAN (ECONOMIC) ENVIRONMENT

- POSSIBILTY OF INCREASING DRINKING WATER TREATMENT COST
- PRODUCTIVE HOUR LOSS DUE ENVIRONMENTAL DEGRADATION
- HEATH TREATMENT COST

Step 3: Impact Analysis

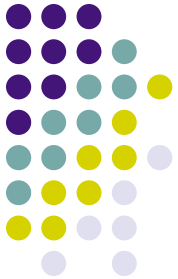
→ **Type**	biophysical, social, health or economic
→ **Nature**	direct or indirect, cumulative, etc.
→ **Magnitude or severity**	high, moderate, low
→ **Extent**	local, regional, trans-boundary or global
→ **Timing**	immediate/long term
→ **Duration**	temporary/permanent
→ **Uncertainty**	low likelihood/high probability
→ **Reversibility**	reversible/irreversible
→ **Significance***	unimportant/important

Tools for Impact Analysis



- checklists
- matrices
- networks
- overlays and geographical information systems (GIS)
- expert systems
- professional judgement

Step 4: Impact Mitigation

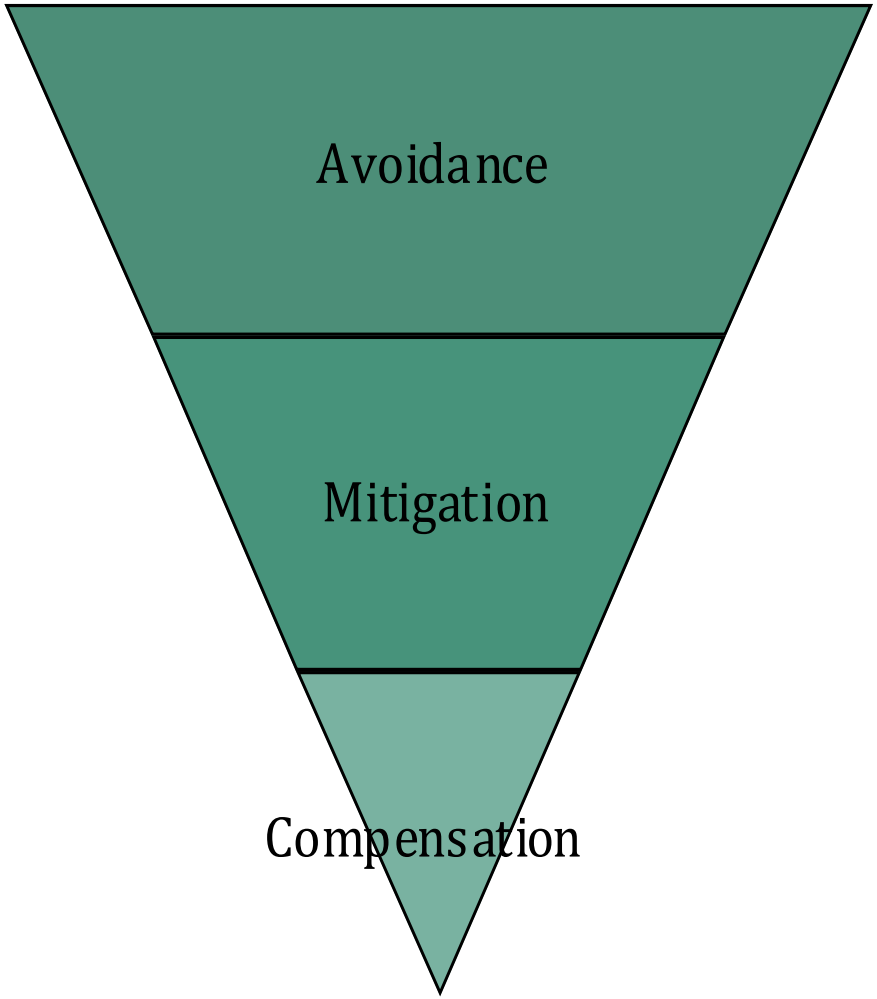


- to avoid, minimise or remedy adverse impacts
- to ensure that residual impacts are within acceptable levels
- to enhance environmental and social benefits

Framework for Impact Mitigation

Common (desirable)

Rare (undesirable)



Alternative sites or technology to eliminate habitat loss

Actions during design, construction and operation to minimise or eliminate habitat loss

Used as a last resort to offset habitat loss

Step 5: Reporting

Different name of EIA reports

- Environmental Impact Assessment Report (EIA Report)
- Environmental Impact Statement (EIS)
- Environmental Statement (ES)
- Environmental Assessment Report (EA Report)
- Environmental Effects Statement (EES)

Contents of the Report

- a description of the project;
- an outline of the main alternatives studied by the developer, and an indication of the main reasons for this choice,
- a description of the aspects of the environment likely to be significantly affected by the proposed project;
- a description of the likely significant environmental effects of the proposed project;
- measures to prevent, reduce and possibly offset adverse environmental effects;
- a non-technical summary;
- an indication of any difficulties (technical deficiencies or lack of know-how) encountered while compiling the required information.

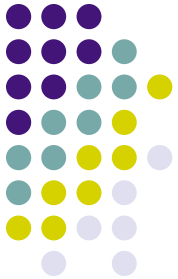
Step 6: Review

- Review the quality of the EIA report.
- Take public comments into account.
- Determine if the information is sufficient.
- Identify any deficiencies to be corrected.

Who Perform the review?

- environmental agency — Canada (comprehensive studies), standing commission — Netherlands, inter-agency committee — USA, planning authority — UK
- independent panel — Canada (public inquiries)
- Public comment and input

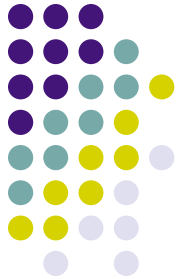
Step 7: Decision Making



- To provide key input to help determine if a proposal is acceptable

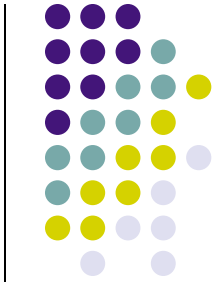
- To help establish environmental terms and conditions for project implementation

Step 8: Monitoring



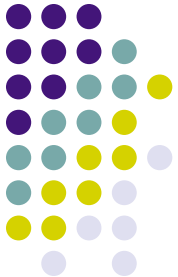
- Ensure the implementation of conditions attached to a decision.
- Verify that impacts are as predicted or permitted.
- Confirm that mitigation measures are working as expected.
- Take action to manage any unforeseen changes.

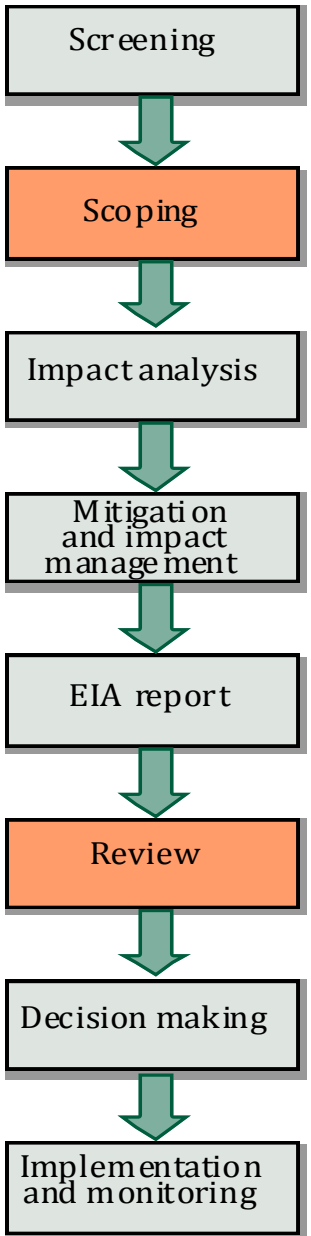
Key components of Monitoring



- Establish baseline conditions.
- Measure impacts of a project as constructed.
- Verify conformity with established with conditions and acceptable limits.
- Establish links to environmental management plans.
- Carry out periodic checks and third-party audits.

Public Involvement in the EIA Steps





To consult people likely to be affected by proposal.

To ensure that significant issues are identified; project related information is gathered, alternatives are considered.

To avoid biases/inaccuracies in analysis; identify local values/ preferences; assist in consideration of mitigation measures; select best alternative.

To consider and comment on EIA Report

To monitor the implementation of EIA Report's recommendations and decision's conditions.