

# **ENVIRONMENTAL IMPACT ASSESSMENT TRAINING RESOURCE MANUAL**

**Forum for Energy and Development  
DANIDA Fellowship Programme**

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## **INTRODUCTION TO THE EIA TRAINING MANUAL**

This Environmental Impact Assessment (EIA) training manual has been developed by DANIDA Fellowship Programme and Forum for Energy and Development (FED) based on the EIA training workshop that was organised and conducted at the MS Training Centre for Development Co-operation (TCDC), Arusha, Tanzania over the period 3rd -14th April 2000 and 18th - 22nd September 2000. Between these periods was a practical field study exercise during which each participant carried out a practical Environmental Impact Assessment exercise on a project of his/her choice. The content of this training manual has therefore largely been derived from the proceedings of the initial ten day training workshop as well as contributions and recommendations made by the participants based on lessons learnt from their experiences during the field work.

The content covered in this manual has been developed to provide reference material and training guide for trainers to use in preparing training programmes aimed at exposing the trainees to EIA concepts and processes, and therefore be able to develop an appreciation for the need for EIA as it relates to their day-to-day work, as well as its role in development planning. In view of this, it is hoped that this training manual will be a useful template for other DANIDA EIA training programmes, although trainers using this manual will be free to add on other topics to suit their training needs as this manual is not intended to be a static guidebook.

Presentations on the major topics identified in this manual are intended to take on average thirty minutes of presentation time. In order to make the training programmes as participatory as possible, it is recommended that each presentation session is followed by a twenty minute discussion during which the participants can ask questions, seek clarifications, make comments or share their experiences on the topic under discussion.

For purposes of making the training programmes as interactive and participatory as possible, this manual has also provided room for group work sessions where the participants will be able to put into practice various elements involved in the conduct of EIA. For the group work sessions to be effective and meaningful to the participants, it is recommended that the case studies for group work sessions should be relevant and designed to suit the specific needs of the individuals attending the training, or the organisations and countries they represent. It is also recommended that field trips to project sites where tools of the training course can be applied should be an integral part of the course and the field projects visited can be used as case studies for group work discussions. The group work sessions should last on average two hours so as to allow ample time for debate and exchange of views. Each group work session should be followed by

group presentations where the outcome of the group work is presented and discussed in plenary sessions.

In general, the manual has been designed with the purpose of building capacity for Environmental Impact Assessment as a planning tool. Specific objectives of the training manual, however, include:

- to introduce participants to EIA and EIA procedures,
- to enable participants acquire basic EIA knowledge and understanding of EIA,
- to build capacity to conduct EIAs as well as carry out EIA review,
- to equip participants with basic EIA procedures for identification of environmental impacts and how to minimise them,
- to understand sources of impacts and the roles of stakeholders in addressing them,
- to acquire techniques for monitoring environmental impacts,
- to expose participants to the participatory methodologies of EIA.
- to use EIA case studies to expose participants to hands-on exercises.
- to share experiences from the participants on EIA applications for environment management.

## STRUCTURE OF THE TRAINING MANUAL

The manual is structured into four parts:

**Part 1**, lasting the first day, provides a general introduction to the course, and includes the following elements:

- an orientation to the course that gives opportunity to introduce the training programme in general, including introduction of participants and overview of the course content and programme as well as giving room for feedback on participant expectations from the training.
- the last parts of Part 1 provide a general introduction and overview of EIA and purpose and objectives for EIA.

**Part 2**, running from day 2 to day 5, presents the main elements of the EIA process, including screening, scoping, assessing impacts, impact mitigation, EIA reporting, EIA review, EIA decision making, EIA monitoring, environment audit and strategic environmental assessment.

**Part 3**, which runs from day 6 to day 8, contains tools relevant for conduct of an effective EIA system, including principles, methodologies, public participation in EIA, lobby and advocacy for EIA, gender considerations in the conduct of EIAs, law, policy and institutional framework for EIA application in development planning

**Part 4**, which lasts from day 9 to day 10 is intended to introduce participants to the practical EIA field study exercise which is a follow-up of the initial theory part of the course. Therefore, part 4 presents lessons learnt and information drawn from the practical field experience and is provided for the benefit of future trainees who will need to be acquainted with field issues prior to commencement of their field study.

The manual also contains annexes which include a sample ten day training programme in Annex 1, although each training course programme may have its own variations based on the participants and the depth of training required. Examples of illustrative case study projects which can be used for group work sessions is also presented in the Annex 2. These case studies have been included for illustration purpose only as each trainer should have the flexibility to prepare and use any other case studies of his choice to suit his/her training needs and taking into account the trainees backgrounds and interests as appropriate.

## **DEFINITION OF TERMS USED IN THIS MANUAL**

**Environment:** "the physical factors of the surroundings of the human beings including land, water, atmosphere, climate, sound, odour, taste, the biological factors of animals and plants and the social factor of aesthetics and includes both the natural and the built environment".

An **Impact:** is the effect of any action that affects one or more elements of the natural, social or economic environment, either adversely or beneficially.

**Cumulative Impacts:** Those impacts that result from the incremental impact of the proposed action added to the impacts of other past, present, and foreseeable future actions.

**Developer:** means a person, group of persons or agency developing a project which is subject to an environmental impact assessment process.

**Direct Impacts:** Those impacts that are caused by the action and which generally occur at the same time and place as the action.

**Indirect Impacts:** Those impacts that induce changes in the natural environment, population, economic growth, and land use.

**Environment Impact Assessment:** A systematic examination conducted to determine whether or not a project will have any adverse impacts on the environment.

**Environmental Impact Statement:** The written report which presents the results of an Environment Impact Study.

**Environmental Monitoring:** the continuous determination of the actual and potential effects of any activity or phenomenon on the environment whether short-term or long-term.

**Mitigation measures:** Actions which reduce, avoid or offset the potential adverse environmental consequences of a project.

**Participation:** A process through which stakeholders influence and share control over development initiatives and decisions on resources that affect them.

**Project:** a set of planned activities designed to achieve specific objectives within a given area and time frame. (In the National Environment Statute, 1995, Project includes both project and policy that leads to projects with an impact on the environment.

**Scoping:** Early, open identification of potentially significant environmental impacts and de-emphasis or elimination of insignificant impacts or impacts which have already been covered by other environmental impact assessments.

**Screening** Determination of the level of environmental impact assessment required for a particular proposed activity/project.

**Significance** is an expert evaluation/judgement of the magnitude of impact or the degree to which a proposed activity or project may (potentially) impact on the environment if implemented.

**Significant effect** on the environment means: "a substantial, or potentially substantial, adverse change in any of the physical factors of the surroundings of the human beings including land, water, atmosphere, climate, sound, odour, taste, the biological factors of animals and plants and the social factor of aesthetics and includes both the natural and the built environment".

**Stakeholders:** those affected by the outcome of a project or can affect the outcome of a proposed project either negatively or positively.

## ACRONYMS

EIA	Environmental Impact Assessment
NGOs	Non Governmental Organisations
MS-TCDC	MS Training Centre for Development Co-operation
SEA	Strategic Environment Assessment

## **PART 1**

### **Day 1:**

#### **1.0 Introduction to the Training course**

The first and introductory session of the EIA Training programme should be devoted to:

- Introducing the participants so that they get to know one another as well as to know the trainers,
- Providing an opportunity to the workshop organisers to make a welcome statement,
- Obtaining participant expectations in order to highlight areas of interest especially in as far as these expectations may be tailored to suit individual work requirements and demands,
- Introducing the training curriculum to acquaint the participants with the course content.

#### **1.1 Introduction of Participants**

In order to give the trainers information on the background of the persons participating in the training programme, it is necessary that introduction of the participants and their training and work backgrounds and areas of interests be carried out at the very start of the training. This initial introduction has also other advantages that may include, among others, providing the participants with an opportunity to know one another.

Depending on the number of participants, this introduction should normally last 15 -30 minutes. In general, however, each participant should be given about three minutes for the introduction. The lead trainer may, however, be at liberty to utilise any other approach suitable to establish initial acquaintances among the participants.

#### **1.2 Welcome Statement by workshop organisers**

The inclusion of a welcome statement by organisers of a course is important in reassuring the participants of the importance the organisers attach to the training programme, and also gives the organisers an opportunity to emphasize major issues regarding the training programme which may be of benefit to the participants. This initial interaction also provides the first opportunity for the participants to hear from the organisers, who may have up-to this stage corresponded with the organisers only through electronic mail or by telephone.

During this session, the organisers may outline the following:

- History of the training programme,
- Structure of the training programme,
- Organisers expectations from the training programme,
- Expected way forward after the training.

During this session, participants may also get an opportunity to ask questions that may be of value to the organisers during the course of the training.

### **1.3 Participants expectations**

In most training programmes, the course curriculum is often designed by course organisers without any direct input from the course participants. Providing an opportunity for the participants to express their expectations has the following advantages, among others:

- Gives participants an opportunity to contribute to the course content,
- Participants are able to guide the trainers to focus on areas which may require more emphasis in the course of the training programme,
- Trainers will be able to initially gauge the level of understanding that the participants have on the subject at hand.

### **1.4 Introduction and overview of the workshop content and objectives**

This session, to be conducted by the lead course trainer, is designed to help orientate the participants to the course by running through the course objectives and the entire course programme so that right from the start, the participants have a good idea of the scope of the course content and its major elements.

#### **Discussion**

At the end of this session and after highlighting the major elements of the training programme, participants should normally be given an opportunity to ask questions and discuss the objectives and content in case other important elements and areas of interest may be missing in the outline and may necessitate inclusion in the course content and programme.

## **1.5 What is the Environment? A brief overview of environmental problems in the region**

In order to be able to carry out a comprehensive EIA, it is important that participants have a clear understanding of the scope of the term "Environment". This is particularly important as most often participants come from different backgrounds and some may not have had

opportunity to get acquainted with the concept "environment" and its entirety. It is important that the trainer gives the participants an opportunity to attempt to define the term "Environment" in their own understanding.

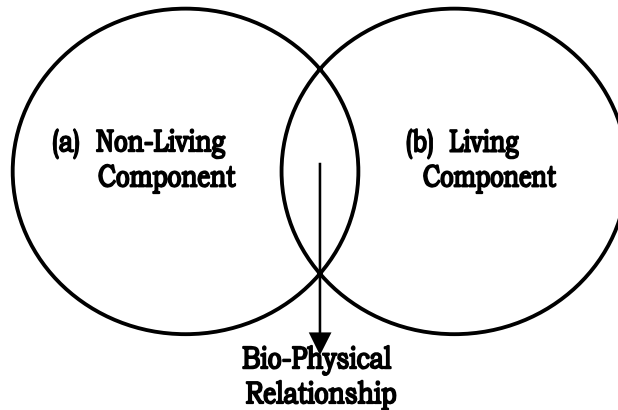
During this session, the following topics shall be covered:

- i. Standard definition of the term "Environment" from the lead trainers point of view,
- ii. Presentation of definitions of "environment" as presented by different agencies and literature,
- iii. Explanation of the scope of the term "environment", including the different elements that make up the environment,
- iv. Importance of proper understanding of the term "environment" to the conduct of satisfactory Environment Impact Assessments,
- v. Environment and the development process: Linkages and emerging issues,
- v. Overview of environmental problems in the region,
- vi. Underlying causes of environmental degradation,
- vii. Global environmental issues, including, among others;
  - ozone depletion,
  - global climate change,
  - pollution of international waters,
  - transportation of hazardous waste.

This session should conclude with a discussion during which participants should also be given opportunity to present and discuss environmental problems they are familiar with.

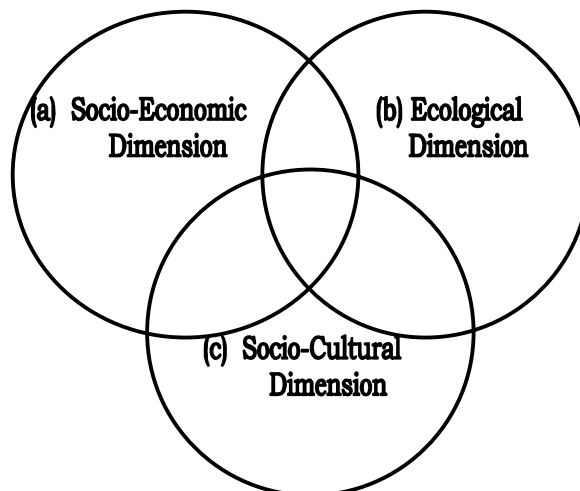
**Figure 1: Diagram Showing Classification of the main Components of the Environment**

(i)



- (a) Living Component includes: plants, animals (natural ecosystems).
- (b) Non-living Components includes: soils, rocks, air, built-environment including infrastructure, and water.

(ii)



- (a) Ecological dimension includes: plants and animals; and, natural ecosystems.
- (b) Socio-economic dimension includes: the built-environment including infrastructure.
- (c) Socio-cultural dimension includes: social attributes and cultural elements and values of the environment.

Note that the three components do not necessarily exist as distinct and isolated components, but often exist in an inter-related manner.

## 1.6 Introduction to EIA: What is EIA ? The need for EIA

In most training programmes, some individuals among the participants may have a fair idea about the subject matter for the training. Some participants, however, will be participating in formal training on EIA for the first time. In view of this, it is important that the trainer assumes that none in the training has had any EIA training what so-ever and attempts to introduce the subject as simply as possible. Of-course the presence of those who may have had opportunity to know about the subject should be useful during discussion.

Before the trainer presents a definition of EIA, it is important to give the participants an opportunity to make presentations on their understanding of what EIA is.

During this session the following content should be covered:

- i. Introduce the concept of EIA within the framework of sustainable development,
- ii Give a brief history of EIA,
- iii. Theory and Practice of EIA,
- iv. The purpose, benefits and justification for doing EIAs, including:
  - EIA as an aid to selection of environmentally sound projects,
  - EIA for improving decision making,
  - EIA to ensure sound and sustainable project design and implementation,
  - EIA for identifying improvements to avoid adverse environmental effects,
  - EIA to prevent costly remedial measures.
- v. Linkage between EIA and International Conventions,
- vi. EIA in National and International Development Institutions,
- vii. EIA in banking and lending institutions,
- viii. Common misconceptions about EIA, including:
  - EIA is "anti-development",
  - EIA is too expensive and a waste of money,
  - EIA is ineffective and a waste of time.

## **1.7 EIA in the Project cycle**

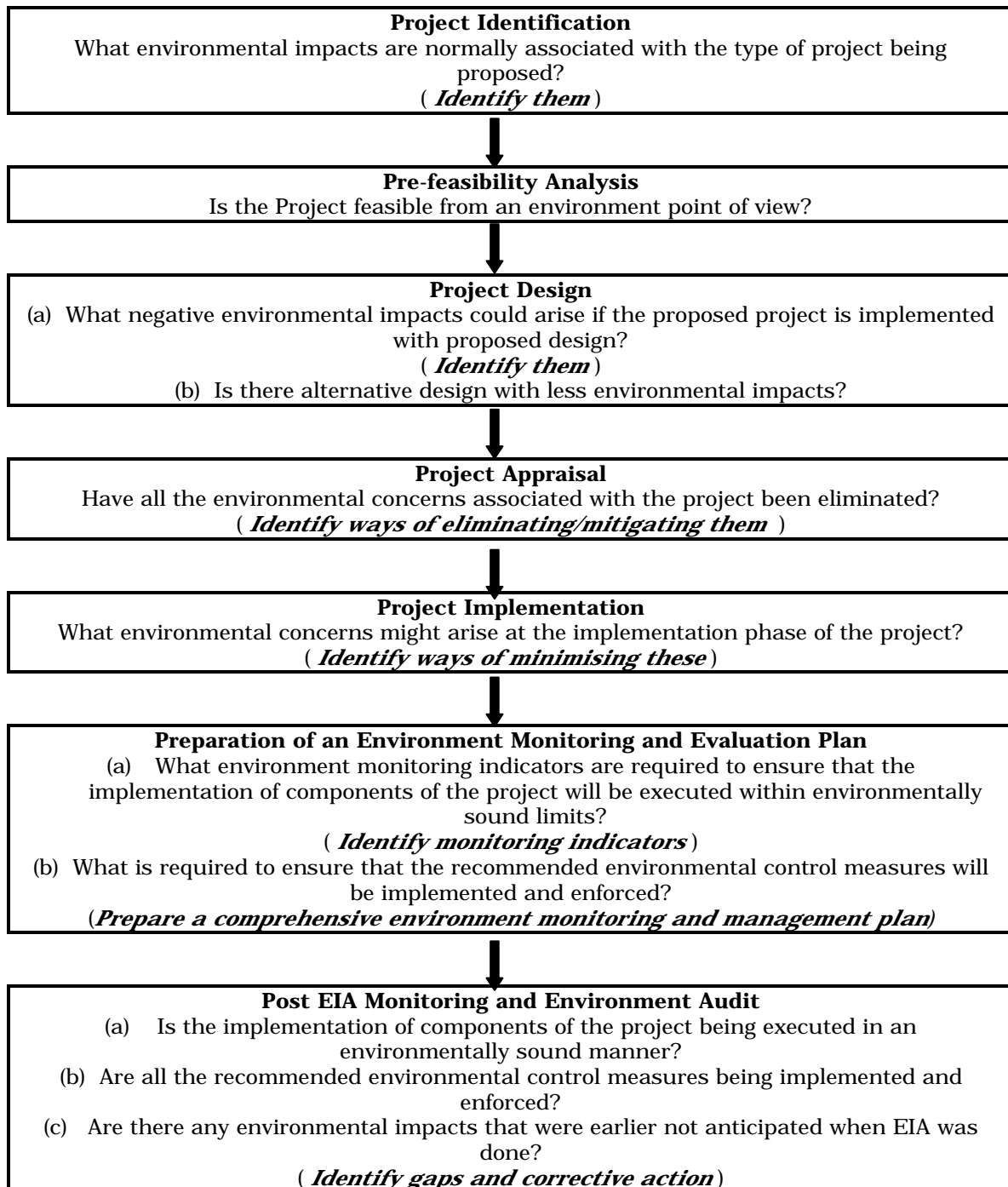
Because of the importance of EIA as a planning tool, and given that traditional planning approach still concentrates and puts emphasis on other economic aspects other than environment, it is important to introduce participants to the techniques of integrating EIA within the project cycle as a means of making EIA an integral part of the planning process.

Topics to be covered include:

- i. Introduction to the project cycle,
- ii. EIA in the project planning process: Integration of EIA in the planning process,
- iii. Relevance and justification for integrating EIA in the project cycle,
- iv. Benefits and value of integrating EIA in the Project cycle,
- v. EIA as it relates to other assessment methodologies in the project cycle,
- vi. EIA as related to other technical, financial, institutional and social assessments.

The chart below shows how EIA fits in the analysis of project feasibility, design options, appraisal, monitoring and evaluation.

**Fig. 2: Simple EIA Application in Project Planning**



## **1.8 The role of NGOs in Environment Management**

Depending on the target group being trained, this session aims at linking the subject under discussion (EIA) to the day-to-day work of the participants. Since this manual has been prepared based on the initial training involving NGOs, the content of this session has been tailored to NGOs as a target group. The content can, however, be tailored to suit any other target group as the case may be.

Topics to be covered may include:

- i. Importance of involving NGOs in EIA: why involve NGOs in the EIA process,
- ii. The roles that NGOs can play in the EIA process,
- iii. Challenges of integrating EIA in the activities of NGOs,
- iv. Capacity and legitimacy of NGOs to conduct EIAs,
- v. NGO-Government interaction in the EIA process,
- vi. EIA review as an important aspect of civil society/NGO participation in the development process.

## PART 2

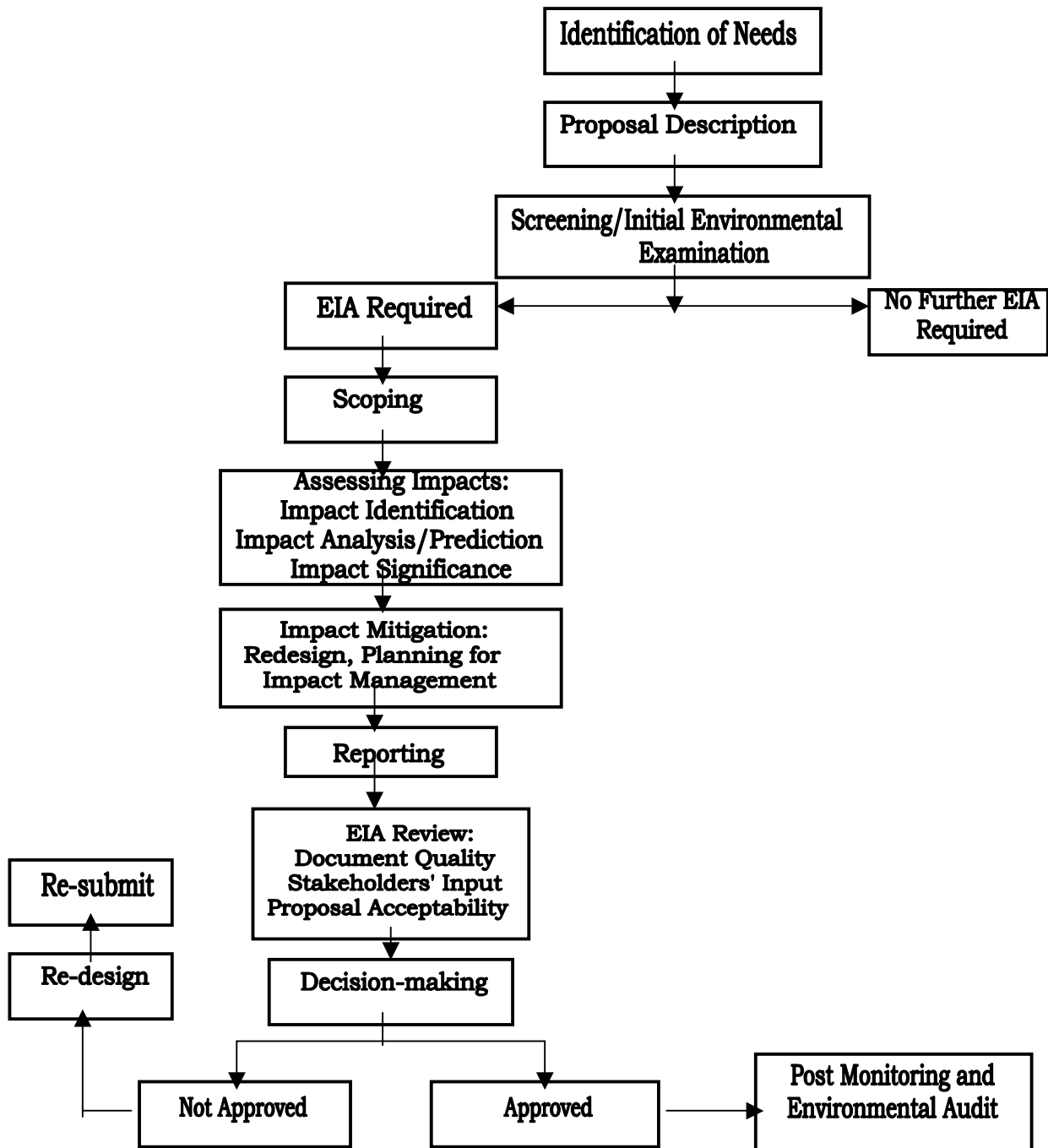
### Day 2:

#### **2.0 Introduction to the EIA process**

As an introduction, the lead trainer should highlight the following:

- i. Different EIA procedures for different countries and development/aid institutions,
- ii. Institutional requirements for implementation of EIA process, including:
  - identification of agency roles and capabilities,
  - institutional responsibility for implementation of the EIA process.
- iii. Overview of different types of Environmental Assessments, including:
  - Project specific EIAs,
  - Sectoral/strategic EIAs.
- iv. Overview and outline of steps in a typical EIA process flow:
  - Screening,
  - Scoping,
  - Preparation of TORs for EIA,
  - Preparation of EIA workplan,
  - Environmental impact study,
  - EIA reporting,
  - EIA review,
  - EIA decision making,
  - Post EIA monitoring and audit.

**Figure 3: The Basic Format of a Generalised EIA Process Flow Chart Indicating the main Components of the EIA Process**



## 2.1 Screening

This session introduces the initial steps for delineating the level of EIA required. The screening stage is an important step in the EIA process because it determines how much time and resources may be required to fulfil the outcome and recommendations of the screening stage.

Because EIA is best done by the developer as part and parcel of the planning process, it is important that the criteria for determining the level of EIA required are understood by the developer so that he can plan accordingly to meet the requirements of the level of EIA required.

During this session, participants should be introduced to the range of methods for evaluating activities that should be subject to EIA and determination of the different levels of EIA.

This session should also introduce participants to the concept of "impact significance" and the techniques for its determination.

Topics to be covered include:

- i. What is screening,
- ii. Reasons for screening projects,
- iii. When is screening done ?
- iv. Different levels of EIA as determined during screening of proposals,
- v. Outline of different categories of projects requiring different levels of EIA, including legal requirements for mandatory EIAs and categorical exclusions,
- vi. Impact significance and its determination: Various tools and criteria for determination of impact significance.
- vii. The use of different tools for screening, including:
  - Checklists
  - field visits
  - baseline information gathering
  - expert knowledge and experience
  - questionnaires.

- viii. Type and nature of information required to aid the screening process, including:
- description of the project,
  - characteristics of the proposed project site,
  - level of public concern about the proposed project,
  - nature and severity of anticipated impacts.
- ix. Outcome of the screening process.
- x. The role of different actors in the screening process:
- the developer
  - Government agencies,
  - NGOs and other interest groups
- xi. The distinction between screening, preliminary EIA and detailed EIA.
- xii. The relationship between screening and Initial Environmental Examination (IEE).

## **2.2 Scoping**

In order to be able to carry out a comprehensive EIA, it is critical that the issues to be addressed during the study are sufficiently defined. The definition of the issues to be addressed is what in EIA terms is called scoping.

In this session, participants will be introduced to the following topics:

- i. What is scoping ?
- ii. The role scoping in EIA, including providing opportunity to:
- consider reasonable and practical alternatives,
  - inform potentially affected people ,
  - identify possible project environmental impacts,
  - understand local values,
  - define the boundaries of the EIA study,
  - give an initial insight into the analytical methods and consultation procedures necessary to accomplish the study,
  - establish the Terms of Reference (TORs) for the study.
- iii Purpose of scoping: rational and need for clear determination of scope of work for EIA study,

- iv. Basic requirements for comprehensive scoping, including:
  - Need for clear understanding of the entire scope of the project under study, including all its geographical boundaries,
  - Need for clear definition of project components, purpose and objectives,
  - Need for comprehensive stakeholder identification,
  - Need for and value of baseline environmental survey of project area during scoping process,
  - Need for clear identification of the different phases of the activity /project
- viii. Methodology for identification of stakeholder concerns during scoping: Common methods/techniques and procedures for scoping.
- ix. Outcome from scoping process,
- x. Roles of various stakeholders in the scoping process
  - the developer,
  - the environment authorities,
  - NGOs,
  - the affected communities,
  - the wider public,
  - EIA Practitioners.
- xi. The relationship between screening and scoping
- xii. Various tools that can be used to aid the scoping process, including, among others:
  - use of checklists,
  - field surveys,
  - expert knowledge and experience,
  - available literature on related subject.
- xiii. Determination of impact significance during scoping.
- xiv. Preparation of Terms of reference for EIA study.
- xv. Nature of information required for defining Terms of Reference for EIAs.

During this session, the trainer can also present to the participants sample scoping documents and Terms of Reference for specific projects subjected to EIA.

### **2.2.1 Introducing Group work session on scoping**

In order to give hands-on experience on how to carry out scoping, participants will be divided into groups to carry out practical EIA scoping sessions on simulated case study projects.

Thus, to facilitate the scoping exercise, it is recommended that the lead trainer prepares handouts on sample case studies describing projects and different project scenarios for which the

participants will practice the scoping exercise. These case studies should be selected bearing in mind the target groups involved in the training but should to the extent possible be kept as simple as possible and relevant to the backgrounds and work interests of the participants.

As an alternative, the choice of the case studies for the group work sessions can be based on selected field case studies, where these are readily available, and which the participants can visit to acquaint themselves with the project area and its surroundings. However, transport and logistical requirements for this have to be planned in advance.

In order to give opportunity to participants to exercise scoping from different points of view, it is recommended that individual participants represent different stakeholders with different roles and stakes in the project. The participants may thus represent the following categories of stakeholders, among others:

- the developer,
- environment agency,
- community likely to be affected by the project,
- NGO group,
- representative of other relevant interest groups, such as environment pressure groups, etc.

During the group work sessions, the trainer should endeavour to ensure that the groups are well guided to successfully carry out the required tasks. The trainer should also be readily available to assist the groups in case of any clarifications, providing further information and ensuring proper concentration and sticking to the time schedules.

To provide ample time for the group work exercise, it is recommended that the group work can take up-to 2 hours.

### **2.2.2 Case Study presentation of scoping**

In order to enhance the participants understanding of scoping, a case study highlighting issues identified based on an example of project for which scoping was done and relevant to the participants' background can be presented. The participants can then brainstorm on the level of identification of impacts that was done. It is therefore recommended that the lead trainer makes a presentation of a sample EIA scoping exercise and its outcome.

Participants can also be provided with hand-outs on scoping that may have been carried out for some projects and they can discuss the level of impact identification done.

**Day 3:**

**2.4 Assessing Impacts: Sources of Impacts and Impact Significance**

One of the most critical techniques in the conduct of EIA is the ability to identify, assess and evaluate the potential environmental impacts of development proposals and projects, as well as to identify the sources of any such anticipated impacts. This session aims at providing participants with an overview of the variety of impact identification techniques and methodologies, as well as their sources or causes. Basic questions to ask in assessing environmental impacts include:

- what are the components of the proposed action or project,
- what is likely to happen to the environment as a result of the project,
- What will be the extent and severity of the changes,
- Will the changes matter so much,
- If so what can be done to minimise the changes,
- How can the perceived changes and actions to be minimised be used for decision making?

Topics to be covered shall include:

- i. identification and definition of anticipated impacts that the EIA will address,
- ii. nature and variety of impacts,
- iii. analysis of significance of impacts for further investigation,
- iv. Analysis of impact significance and the link between scoping and screening,
- v. Impact analysis and prediction: basic steps in assessing impacts, including:
  - Determining the project components,
  - evaluating the baseline environmental conditions,
  - Considering a range of alternatives,
  - identifying and predicting impacts,
  - determining impact significance,
  - comparing and evaluating alternatives,
  - considering options to mitigate or compensate for impacts,
  - communicate findings.
- v. Range of different impact identification techniques, including:
  - collection of baseline data ,
  - use of expert/professional knowledge and experience,
  - use of checklists and matrices,
  - Application of Environment Economics,

- use of quantitative mathematical models.
- vi Identification of impacts using a consultative approach.
- vii. Important factors to consider in determination of impacts:
- Nature of project,
  - Location of project,
  - Nature of anticipated impacts,
  - Risk factors,
  - Legal and policy considerations.
- viii. Criteria for determination of impact significance, including:
- Ecological importance,
  - Social importance,
  - Economic considerations,
  - Environmental standards,
  - Positive versus negative aspects.

The determination of significance can also be based on the use of **indicators** and "**weighing**" techniques where impacts are evaluated against threshold values, where these exist. Such threshold values may be determined based on:

- Existing standards for various environmental parameters,
  - Impact ratings dependent on prediction analysis, depending on magnitude, extent and duration of impacts.
  - Impacts significance based on quantitative or qualitative analysis,
  - Impacts significance based on the use of existing facts and data related to the nature of project.
  - Use of existing literature and data on related past studies and/or projects
  - Use of other tools for quantitative assessment, such as environmental economics may be used to determine the level of impact significance
- x. Scientific indicators versus community/layman indicators of environmental impacts.

The method adopted to quantify the impacts will vary from project to project.

### **2.4.1 Introducing levels of Environmental Impact Assessment for different projects**

During this session, participants should be introduced to the following basic principles that determine the level of EIA required:

- i. An EIA required shall be appropriate to:
  - Nature of the project
  - Scale of the project
  - Possible effects of the project, and
  - Nature of the proposed site for its location.

Sufficient understanding of these factors is necessary for the initial screening decision on the level of EIA required.

- ii. The level and number of stages the assessment will pass through will depend on the extent and gravity of the environmental impacts.
- iii. The level of EIA required for a particular project will vary on a project by-project basis.
- iv. In general the levels of EIA required will include the following three major categories:
  - a. Small scale projects whose potential adverse environmental impacts can readily be identified and for which mitigation measures can readily be prescribed
  - b. Projects for which there is some level of uncertainty on the nature and level of impacts, thus requiring a more in-depth Environmental Impact Evaluation (EIE)
  - c. Projects which clearly will have significant impacts whose mitigation measures cannot readily be prescribed unless a detailed Environmental Impact Study (EIS Study) is conducted.

### **2.4.2 Impact analysis and prediction**

During this session the following topics will be covered:

- i. Variability of impacts, including:
  - nature and types of impacts, including;
    - Direct Vs indirect impacts
    - Short-term Vs long term impacts,
    - Positive Vs negative impacts,
    - Cumulative impacts.

- synergistic impacts,
  - magnitude,
  - extent/location (area/volume covered where impact occurs)
  - timing (during construction,
  - Duration (short term, long term, continuous)
  - reversibility,
  - likelihood (risk and uncertainty),
  - significance (local, regional, global).
  
- ii. Methods for impact analysis, including:
  - professional and expert judgement,
  - experiments and analytical tests,
  - baseline surveys,
  - use of quantitative mathematical models,
  
- iii. Key elements for assessing impact significance, including:
  - a). Level of public concern (social importance), including:
    - potential effects on human health,
    - potential loss of farm land,
    - loss of aesthetic and recreational value
    - competition and demand on existing public resources,
    - demographic effects,
    - demands on infrastructure and other utilities.
    - negative impact on social values and quality of life.
  
  - b). Ecological importance, including:
    - effects on plant and animal habitats,
    - potential threat to endangered species,
    - ecosystem sensitivity,
    - disturbance/disruption of valued ecological systems
  
  - c). Scientific and professional judgement.
  
  - d). Conformity to environmental standards.

### **2.4.3 Cumulative Impacts: Prediction and Assessment**

This session seeks to introduce participants to the concept of cumulative impacts as different from the readily identifiable direct impacts.

In this session, the following topics will be covered:

- i. Definition of "Cumulative Impacts",
- ii. need for Cumulative Impact Assessment and fulfilment of the "full disclosure"
- iii. nature and categories of cumulative impacts,
- iv. criteria for delineating cumulative impacts,
- v. basic questions to be addressed in cumulative impact analysis, including analysis of what other activities or project may come up within or near the proposed project area and which could contribute to potential "accumulation" of environmental effects,
- vi. limitations to cumulative impact assessment, including, among others:
  - uncertainty about future actions in the project area,
  - uncertainty associated with complexity of pathways by which perceived cumulative impacts accumulate,
  - heavy reliance on the experience and knowledge of the study team to predict cumulative impacts.

**Example of simple checklist which can be used in impact analysis**

<b>Nature of proposed project:</b>	.....	
<b>Scope of proposed project activities</b>		
<b>Construction Phase</b>		
Site clearing		X
Cut/fill		X
Drainage		X
Blasting		-
Displacement of people		-
<b>Operational Phase</b>		
Solid waste generation		X
Effluent discharge		-
Heat, dust and noise emissio		-
<b>Environmental components likely to be affected</b>		
<b>Physical environment</b>		
air quality		-
water quality		X
water flow		X
Landscape degradation		-
<b>Biological environment</b>		
Fish spawning grounds		X
Endangered species		-
Biodiversity loss		-
Sensitive ecosystem		-
<b>Socio-economic environment</b>		
Loss of fishing grounds		X
Displacement of communities		X
Emergence of other economic activities in surroundings		X

## 2.5 Impact Mitigation and Management

Besides the identification of impacts and their sources, the basic premise of an EIA is the ability to provide mitigation measures for the identified impacts. The trainee should endeavour to highlight the purpose of mitigation, including:

- finding better ways of doing things,
- minimising or eliminating negative impacts,
- enhancing project benefits,
- protecting public and individual rights to compensation.

This session therefore seeks to introduce participants to techniques of impact mitigation, and to the range of methods for mitigating and managing environmental impacts of projects.

Topics to be covered include:

- i. Definition of mitigation and its aims in EIA,
- ii. Link between impact identification (scoping) and mitigation,
- iii. Methods and approaches to impact mitigation, including feasible changes in the following, among others:
  - project design
  - project location
  - change in proposed management practices
  - compensating for environmental damage (in kind or monetary terms)
  - relocating project,
  - restoring/rehabilitating environmental damage
  - improving monitoring and management,
- iv. Criteria for identification of mitigation measures.
- v. Implementation and enforcement of EIA mitigation measures: What kind of approach can achieve effectiveness?
- vi. Approaches to mitigating social impacts.
- vii. Elements of a resettlement Plan
  - Baseline information,
  - Establishment of compensation requirements,

- Policy and legal framework for resettlement,
- Resettlement and development plans for new sites,
- Resettlement implementation schedule,
- Budget and financial arrangements.

vii. Characteristics of a good mitigation plan:

- contains measures to prevent, offset or minimise anticipated environmental impacts,
- includes actions needed to implement the plan,
- identifies responsible actors, including institutional responsibility for implementation of the mitigation measures,
- provides technical details for each mitigation measure,
- identifies an implantation schedule for various elements of the mitigation plan,
- identifies monitoring and reporting procedures,
- resources required for implementation of the mitigation plan.

As in the previous session, the participants can be given a case study for review to evaluate adequacy of the proposed mitigation measures for a particular project.

### **2.5.1 Case study Presentation on Impact Mitigation**

To provide participants with further insight into impact mitigation, it is recommended that the Lead Trainer presents a sample case study of an EIA mitigation programme and thereafter give the participants an opportunity to discuss and make comments on adequacy and shortcomings of the mitigation measures identified.

### **2.5.2 Group work on Impact Mitigation**

To further give hands-on practice on EIA mitigation, this session should provide opportunity for the course participants to practice EIA mitigation based on the same projects for which scoping and impact identification was carried out. For purposes of continuity, it is recommended that the composition of the groups remains as for the previous group work. The identification of the mitigation measures can make use of the impact mitigation criteria outlined during the previous sessions.

**Day 4:**

**2.6 Alternatives Analysis in EIA**

One of the techniques in conduct of EIA is ability to explore and examine different alternative options that can be applied to ensure that the project, if implemented can proceed in an environmentally sound manner.

During this session, topics to be covered will include:

- i. Purpose for conduct of alternatives analysis during EIA study process and determination of the preferred option,
- ii. Scope of alternatives which can be examined, including:
  - project design alternatives,
  - location alternatives,
  - process alternatives,
  - input alternatives.
  - technology alternatives
  - the "no project" alternative

The analysis and discussion of alternatives should include an evaluation of the merits of each alternative with respect to:

- nature of the alternative sites/locations of project;
- feasibility of the alternative;
- the trade-offs of advantages and disadvantages of each alternative;
- Cost effectiveness, including associated environmental costs and benefits of each alternative;
- A comparison of the environmental losses and gains associated with the various alternatives, together with the economic costs and benefits to provide a balanced and full picture for each alternative.
- Technology and engineering design;
- interference and/or harmony with the surroundings and future plans;
- construction practices for each alternative;
- operations, including associated demands for energy and other inputs by the various alternatives;
- future/foreseeable impacts and/or constraints, and benefits of each alternative;
- risks associated with the alternative, including potential risks to human health;
- existence of important cultural and sensitive ecological systems and habitats in the proposed project area;

- presence of endangered, rare and/or threatened species that may be at risk if the project is implemented.
- Conformity to existing policies, plans, laws, regulations etc;
- the "No project" alternative and its justification.
- A recommendation and indication of the preferred alternative and why it was chosen.

## **2.7 EIA Study/Data Collection Procedure**

### **2.7.1 Preparing EIA work plans**

During this session, participants will be introduced to the planning techniques necessary to conduct a detailed and comprehensive EIA.

Because various national laws and policies provide for fulfilment of certain requirements during the conduct of EIA and which requirements therefore have a bearing on the EIA work plan, it is important that the attention of the participants is drawn to the legal and policy requirements within the relevant countries whose elements may be important for inclusion in the EIA work plans.

Other important considerations in the preparation of EIA work plans which should be highlighted in this session include:

- allocation of time for sourcing and review of literature and being aware of bureaucratic obstacles during consultations,
- nature of the consultative process to be adopted and time requirements for its fulfilment,
- allocation of time for public and stakeholder consultations,
- organising and designation of assignments for the EIA study team,
- scheduling of time for data collection by team members, including time for baseline surveys,
- allocation of time for report writing,
- allocation of time for team review of the draft report and any further consultations,
- allocation of time for preparation of final Environmental Impact Statement.

### **2.7.2 Methodologies and approaches to EIA data collection**

The participants should be introduced to the following topics, among others:

- Budgeting for EIA study,
- Typical data sources during EIA study, including:
  - Baseline information gathering and direct observation during site reconnaissance,

- Local population,
  - University/training centres,
  - Local consultants,
  - Relevant and related reports,
  - GIS data bases.
- Value of photography, sketches and visual aids in EIA study,
  - Nature of consultative process,
  - Identification of key stakeholders to be consulted during the study,
  - Methodology for public/stakeholder consultation during EIA, including methodology for evaluation of gender concerns,
  - Tools and approaches for public / stakeholder consultation and information gathering during the EIA study, including use and application of:
    - Questionnaires
    - simple checklists
    - meetings for stakeholder consultation
    - literature review
    - use of expert knowledge and experience, etc.
  - Criteria for evaluation of impact significance (Methodology and techniques for determination of impact significance).

### **2.7.3 Group work on preparation of EIA work plans**

For purposes of hands-on practice on preparation of EIA work plans, participants will break up in their groups and carry out preparation of work plans for EIA for their respective field studies. Once completed, each group undertakes to present their work plans to the plenary for discussion.

## **2.8 EIA reporting**

Because EIA should provide a basis for decision making, the information generated during the study must be presented in a manner that is clear enough to take an informed decision on the project subjected to EIA. It is therefore important that participants are introduced to techniques of EIA report preparation. This session therefore is aimed at equipping participants with skills for writing satisfactory EIA reports which can be of value to decision makers.

However, in view of the fact that the basic elements of EIA reporting often vary depending on the different policy and legal requirements under different jurisdictions, the lead trainer has to be mindful of the different policy and legislative requirements for EIA reporting in the countries where the participants come from.

### **2.8.1 EIA report format: Basic elements of an EIA report.**

The Lead Trainer shall outline the contents of a typical EIA report, including:

Environmental Impact Assessment Training Resource Manual, 2001

- a. Executive Summary,
- b. Project description,
- c. Description of proposed project site and its surroundings, including clear description of baseline environmental conditions in the project area and its immediate surroundings, including other economic activities in the project area,
- d. Assessment of significant environmental impacts and risks,
- e. Available project alternatives,
- f. Proposed mitigation measures: focusing on achievable, pragmatic, environmentally sound and cost effective mitigation measures,
- g. Monitoring and Environment Management Programme and recommendations,
- h. Bibliography.

Appendices:

- i. List of individuals and agencies/organisations consulted,
- j. Terms of reference for the study,
- k. Other relevant information.
- ii. Roles of different actors in EIA reporting.

During the EIA reporting session, the trainer shall endeavour to cover the following topics, which are critical elements of good EIA reporting:

- Description of baseline environmental conditions in the project area and its surroundings, including other economic activities in the project area,
- Elaboration of the real environmental implications of the identified impacts,
- Value of stakeholder-by-stakeholder analysis of environmental concerns, use of tabulation,
- Separation of positive and negative impacts etc.
- Classification of impacts into social, ecological and socio-economic,
- Different categories of EIA reports as required by different legal jurisdictions.

### **2.8.2 Case study presentation on EIA reporting**

To give participants more insight into EIA reporting techniques, the lead trainer should prepare and present highlights of previous EIA reports focusing on good attributes, and weaknesses.

During this session, the trainer may also give opportunity to participants to discuss areas where the case study reports could have been improved.

Participants can also be given sample EIA reports to acquaint themselves with structure, coverage and content of different EIA reports.

**Day 5:**

**2.9 EIA Review and the role of the public and stakeholders**

As an introduction, the Lead Trainer can provide an outline of the purpose and objective for EIA review which seeks to achieve the following key objectives, among others:

- to assess the quality of the EIA report,
- to obtain stakeholder input,
- to determine whether the EIA report (EIS or Project brief) provides an adequate assessment of the potential significant environmental impacts likely to result from implementing the project as earlier identified during scoping and/or during the course of the study,
- to assess the technical soundness, relevance and adequacy of the proposals and mitigation measures contained in the report,
- to assess the validity of the information ie; whether it is technically correct, and scientifically sound,
- to assess whether reasonable alternatives and mitigation measures have been suggested to the proposed project or activities,
- to assess the conformity of the project proposals and mitigation measures to existing plans, policies, laws, regulations and standards governing such activity,
- to identify any further information that is required or any other issues, if any, requiring further mitigation or study.

**Topics to be covered under the EIA review session shall include:**

- i. EIA report review and its role in the EIA process,
- ii. Need for consistency and standardisation in EIA report review process,
- iii. Factors to consider in EIA report review, including:
  - Time allocation for EIA review,
  - Time allocation for report distribution for review,
  - Proper identification of stakeholders for EIA review,
- iv Steps and approaches to EIA report review,

- v. Stakeholders involvement in EIA review,
- vi. EIA review criteria, including:

**Location of the project:**

- does the proposed location of the project conform to existing policies, plans, laws and regulations,
- does the proposed location of the project pose any risk to sensitive ecological, cultural or economic resources or to neighbouring communities ?

**Significant impacts:**

- is there a clear statement of significant beneficial/adverse impacts ?
- has the study addressed all the significant impacts identified during scoping ?
- (a report of the scoping exercise may assist during the review);
- have the risks been evaluated ?
- has attention been paid to off-site, indirect, and cumulative impacts ?
- has consideration been given to any future/planned activities that may be impacted upon or will impact upon the proposed project ?
- Does the EIS reveal unacceptable environmental impacts?

**Mitigation measures:**

- do the proposed mitigation measures sufficiently address the impacts ?
- are the proposed mitigation measures and alternatives technically feasible ?
- is adequate consideration given to provision for compensation for loss or damage of property, or for resettlement ?
- are the proposed mitigation measures precise and clear enough to provide sufficient basis for decision making ?
- do the proposed mitigation measures address the aggregate public and stakeholder concerns, particularly of those likely to be directly affected ?
- have the concerned parties/stakeholders consented to the proposed mitigation measures ?

**Technical soundness and validity of the EIS**

- consistency of presentation: are there no contradictions of facts and issues in the document ?
- was the scope of the project accurately described to provide sufficient basis for the study ?
- are the recommendations and mitigation measures proposed in the EIS technically sound and adequate to address identified impacts ?

- does the EIS conform to requirements in the national and sectoral guidelines ?

**Procedures:**

- has the study procedure complied with national and sectoral guidelines and regulations, or where there any procedural deficiencies in the process of conducting the assessment and preparing the EIS?
- were concerned populations and stakeholders adequately involved/consulted and have they consented to the proposed mitigation measures that require their input?
- was the scoping procedure adequate ?

**Implementation:**

- are institutional arrangements adequate to implement recommended mitigation measures ?
- does the EIS specify who will be responsible for the monitoring and the standards enforcement programme ?
- are the proposed mitigation measures administratively acceptable and implementable by the developer ?

**Other topics that should be covered will include:**

- Factors to consider in EIA review eg. consistency of presentation, comprehensiveness of the mitigation measures,
- Practicability and suitability of identified mitigation measures,
- Technical soundness of the proposed mitigation measures,
- Acceptability of proposed mitigation measures to the developer, implementing agency / party.

**2.10 The role of EIA in decision making**

Because EIA should be integral to the decision making process, it should therefore:

- provide, in a simple and clear form, information necessary to take a decision whether to allow, disallow, modify or improve, the proposed action, and
- highlight conditions under which project implementation may proceed,
- highlight recommendations under which the project may be allowed.

Topics to be covered during this session shall include:

- i. Concept of decision making and its place in EIA process,

- ii. Roles and responsibilities of the decision-maker in the EIA process,
- iii. Roles of different actors in EIA decision making,
- iv. Legal framework for EIA decision making,
- v. The legal and Policy requirements for EIA decision making under different national jurisdictions,
- vi. The powers for decision making on EIAs as vested on the decision making agencies,
- vii. The EIA decision as a "balance" or a "trade-off" between different decisions by different reviewing agencies,
- viii. Checks and balances built into the EIA process to ensure a fair and just decision, including:
  - a comprehensive EIA review and consultative process involving a wide range of stakeholders,
  - right of appeal against the decision by any aggrieved party,
  - making the decision and the reasons for it public,
- ix. Information considered to be important for decision making, including:
  - Background on the project: location, size etc,
  - Policy context,
  - Alternative options considered,
  - Adequacy of public & stakeholder consultations and address of their concerns,
  - Whether entire range of impacts has been addressed and analyzed,
  - Identification of appropriate and feasible mitigation measures
  - Whether a monitoring mechanism to ensure implementation and compliance to identified mitigation measures has been elaborated,
  - Conclusions and recommendations summarizing key findings and "judgement"
  - Identification of relevant information for decision making,
  - Enforcement and implementation mechanisms for proposed mitigation measures
- x. Some limitations to EIA as a decision making tool, including:
  - EIA applied mostly to only projects.
  - EIAs have also sometimes failed to "stop" or modify certain aspects of the projects that otherwise would not be acceptable.
  - Decisions based on EIA have sometimes failed to contribute to sound environmental management where there is no adequate enforcement mechanisms.
  - EIAs have so far not been participatory enough.
  - EIAs are sometimes done on projects whose implementation has already started, thus sometimes using EIA to justify environmental abuses already committed.

- EIA has often been mistaken to be the "magic tool" that settles all environmental problems.
  - Inadequate EIAs with gaps and uncertainties cannot be useful for decision making and may in-fact lead to taking of wrong decisions.
  - The purpose and aims of EIA is often not well perceived. Some do it just to "praise" the project.
  - The "urgency" for the decision has often undermined value of EIA in decision making tool.
  - Some EIAs present highly sophisticated and technical information difficult to understand for decision making purposes.
  - Other "overriding considerations" have often undermined the value of EIA as a decision making tool.
- xi. Different types of possible outcomes and decisions that can be taken on EIA findings, include:
- outright approval,
  - approval with conditions,
  - approval subject to on-going investigations,
  - Approval deferred for further investigations on critical issues,
  - Rejection if there are no other available options/alternatives.
- xii. Important factors and issues to consider in decision making.
- xiii. Challenges in EIA decision making.
- xiv. The place of the views of the disadvantaged groups in decision making.
- xvi. Formal and informal steps in decision making.

### **2.10.1 Group work: Simulated decision making exercise**

In order to give the participants hands on practice on decision making, groups will be formed and asked to take a decision based on the outcomes of the previous group sessions.

### **2.11 Environment monitoring and roles of various stakeholders**

The purpose of this session is to explain to the participants the role of post-EIA monitoring within the EIA process. These include:

- i. To ensure that anticipated impacts are mitigated and that they do not get out of hand during implementation,
- ii. to provide regular information and updates on the level of conformity of project implementation to recommended mitigation measures.

**Topics to be covered shall include:**

- i. What environmental monitoring is,
- ii. The role and purpose of monitoring in the EIA process,
- iii. Factors and elements to be considered in monitoring, including,
  - monitoring objectives,
  - description of performance indicators which provide linkages between pre and post implementation phases of any activity or programme,
  - description of parameters to be measured, methods to be employed, sampling locations, frequency of measurements, definition of thresholds that will signal the need for remedial actions,
  - design and implementation of a monitoring plan, including institutional responsibilities, timing and time schedules for monitoring,
  - reporting arrangements,
  - costs and financing provisions for post EIA monitoring,
  - baseline information and its value in monitoring.
- iv. Issues to consider in post-EIA monitoring and inspections
  - Selecting facilities and/or activities for monitoring and inspection,
  - Announced versus unannounced monitoring inspections
  - Frequency of monitoring and inspection
  - Who should monitor/inspect,
  - Legal Authority for monitoring and inspection,
  - Role of the monitoring agencies and Inspectors,
  - Comprehensiveness of the inspection,
  - Objectivity of the monitoring and inspections,
  - Documenting the violation during monitoring,
  - Data Quality,
  - Consistency of sampling and analytical procedures,
  - Support resources as an important component of any monitoring and inspection programme (Transport, sampling and analytical equipment, financial resources etc.)
- v. Tools for Environmental Monitoring, including:

- Environmental Inspections,
- Environment Audits,
- Environment Standards,
- EIA reports.

**Other important aspects that should be covered in this session:**

- Identification of responsible actors for implementation of identified mitigation measures,
- Identification of appropriate implementation framework for implementation and management of identified mitigation measures,
- Mechanism for monitoring to ensure compliance to EIA recommendations (eg; case of monitoring performance of an incinerator in a military facility),
- Definition of a monitoring plan, including short-term and long-term monitoring programmes plus identification of responsible parties for monitoring,
- Identification of requirements for post EIA monitoring eg; identification of training / capacity building needs for implementation of mitigation measures and for post EIA monitoring,
- The use and value of monitoring indicators,
- Problems associated with Environmental monitoring.

**Preparation of a monitoring and Environment Management Plan (EMP):.**

For effective monitoring and management of anticipated environmental impacts, the trainer should introduce participants to the need for preparation of Environment Management Plans (EMP) as a basis for ensuring that the identified mitigation measures are actually implemented.

Topics to be covered shall include:

- i. State policy on EMPs,
- ii. Basic elements of an EMP, including:
  - designation of responsibility and tasks for implementation of EMP,
  - reporting schedules
  - definition of specific monitoring protocols and environment management protocols.

**2.12 Strategic Environment Assessment (SEA)**

As a departure from the traditional project specific EIAs, and in view of the fact that many different levels of policy-making and planning have implications for environmental management, the Lead Trainer should introduce participants to the concept of Strategic Environment Assessment (SEA) which involves the application of Environmental Impact Assessment to development policies, plans

and programmes to ensure that environmental issues are taken into consideration at higher levels of planning. The Lead Trainer shall also explain that such SEAs should normally be followed by individual and project specific EIAs for sub-components/individual projects conceived under such policies or development programmes.

Topics to be covered shall include:

- i. What is Strategic Environment Assessment (SEA),
- ii. Difference between project EIAs and SEA,
- iii. The relationship between impact identification and mitigation at SEA level and at project specific level,
- iv. Applications of SEA, including:
  - for projects where sub-project details are not known at appraisal
  - For bigger development projects involving many small project components each of which could have different environmental implications,
- v. Advantages and justification for conducting SEA before project specific EIAs.

For further insight into the use and application of SEA, the Lead Trainer can present a case study of a typical SEA study carried out on a major development programme.

### **2.13 Environmental Audit**

As a follow-up on EIA, participants should be introduced to Environment Audit as a post EIA environment management tool. Topics to be covered shall include:

- i. What is Environment Audit
- ii. Relationship between EIA and Environment audit
- iii. Concept and Practice of environment audit
- iv. Principles and procedures
- v. Overview of what Environment audit entails
- vi. Essential elements of Environment Audit
- vii. Functions of Environment Audit

- viii. Purpose of Environment Audits
- ix. Aims of Environment Audit
- x. Pressures for Environment Auditing
- xi. Benefits of Environment Audit
- xii. Parties involved in Environment Audit
- xiii. Justification for Environment Audit
- xiv. Different types of Environment Audits
- xv. Stages in conducting an environmental audit

## PART 3

### Day 6:

#### **3.1 Community/Public participation in the EIA process**

This session is aimed at developing an understanding of how community and stakeholder participation can be achieved during the conduct of EIA. Participants will be introduced to different participation methodologies and how they are used. Data collection methods and community mobilisation techniques will be highlighted. Participants will develop strategies on how to involve the community in the EIA exercises that they will conduct. Participants will also be given an opportunity to discuss their own experiences in public participation in EIA.

In this session, the following topics shall be covered:

- i. the need and justification for public involvement in the EIA process,
- ii. principles, origins and reasons for community participation the EIA process,
- iii. the advantages of involving the community in the process of environmental impact assessment,
- iv. whom to involve in "public participation" in the EIA process: the range of stakeholders involved in the EIA process, including, among others:
  - local/affected communities,
  - developers,
  - NGOs,
  - Government agencies.
- v. methodologies and approaches for public involvement the EIA process, including:
  - public hearings,
  - target group consultative meetings,
  - use of other social investigative research tools/methodologies such as Participatory Rural Appraisal etc,
- vi. different forms of public involvement in the EIA process, including, among others:
  - participation in scoping,
  - participation in EIA review,
  - advocacy for EIA
- vii. different stages for public involvement in the EIA process,
- viii. rational and requirements for holding public hearings,

- ix. factors affecting effectiveness of public participation in the EIA process,
- x. problems and challenges associated with involving the public in environmental impact assessment process,
- xi. public participation as legal requirement.

### **3.1.1 Case study presentation on Public involvement in the EIA process**

To illustrate the practical applications of public participation methodologies in EIA, participants can be given a presentation of an example of a case study where public participation was successfully accomplished during the conduct of EIA. Where available, audio-visual recordings of public participation sessions in EIA can be a very useful aid during this session. The trainer may also present a case study where public/stakeholder participation was not adequate and participants can be asked how this could have been improved.

Other tools such as video documentary on public participation in EIA can be useful training aids during this session.

### **3.2 Gender Analysis and considerations in the conduct of EIA**

This session explores gender roles and responsibilities, ie; the activities assigned to men and women and the basis of the gender differences in as far as they apply to the participatory requirements for EIA. The question of gender division of labour will be examined as well as the roles of men and women (gender roles) is as far they relate to productive, reproductive and other responsibilities in community affairs.

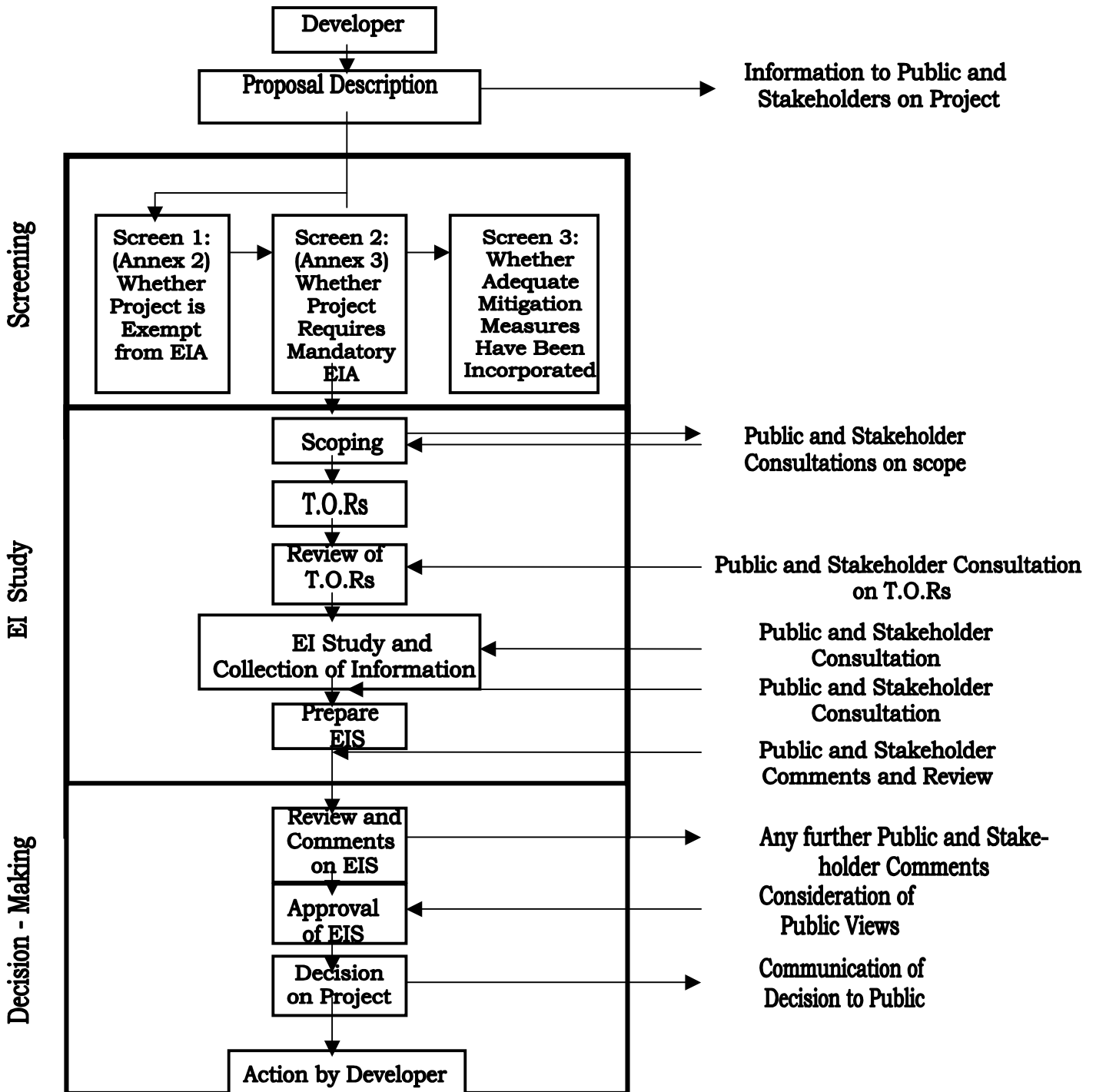
Participants will also discuss the possible ways in which they can involve both men and women during the conducted of EIA in the field.

During this session, participants should also be given an opportunity to define gender using their own life experiences, and bringing in societal expectations of men and women. The session will also emphasise the different implications and impact on men and women of the different interventions and mitigation measures proposed for environmentally sound project implementation.

Topics to be covered shall include:

- i. What is Gender?
- ii. *Gender* and its applications to EIA,
- ii. Gender analysis and its role in the EIA process,
- iii. Gender considerations, roles and responsibilities in the EIA process, taking into consideration the differing interests of men and women on environmental issues,
- iv. Gender analysis tools
- v. The use and application of *gender analysis* tools in involving both men and women in EIA.

**Figure 4: EIA Process Flow Chart Showing Stages when Public Participation and Involvement Occurs**



**Day 7:**

**3.3 Lobby and Advocacy in EIA**

For effective public and stakeholder participation in EIA, it is important that appropriate advocacy and public consultation strategies are employed. This session therefore seeks to demonstrate and create an understanding of the relationship between projects and activities to the policy and decision making processes, and thus develop Advocacy strategies for influencing decision-makers. It is therefore important that participants are introduced to the following topics:

- i. Defining *Advocacy*, including:
  - what is advocacy,
  - highlighting the basic elements of an advocacy strategy,
  - importance of advocacy in bringing about change and popularising EIA as a planning tool,
  - purpose and role of advocacy in development,
  - basic elements of the advocacy process.
- ii. EIA and advocacy: Advocacy strategies.
- iii. Identifying advocacy issues and objectives.
- iv. Importance and role of advocacy in EIA
- v. Methodology and approaches for advocacy and awareness raising for EIA promotion, including but not limited to the following:
  - community consultation meetings,
  - workshops,
  - public meetings,
  - Local radio, newspaper, and television media,
  - Local opinion leaders.
- vi. Integration of lobby and advocacy and public participation in the EIA process,
- vii. Identification of target groups for lobby and advocacy in EIA,
- viii. Requirements for enhancement of advocacy for EIA, including:
  - communication and personnel requirements for effective lobby and advocacy,
  - training in advocacy skill and identification of partnerships.
- ix. Tools for advocacy and public participation in EIA, including PRA, RRA
- x. How to deal with bureaucratic bottlenecks to EIA implementation through lobby and advocacy.

- xi. Approaches and strategies for lobby and advocacy for EIA eg;
- use of media,
  - Government / NGO partnership,
  - Documentation and dissemination of good /benefits of EIA
  - Development of alliances for lobby and advocacy for EIA
  - (Networking),
  - Community empowerment,
  - Institutional concerns for lobby and advocacy for EIA
- xii. The role of advocacy in formal and informal decision making.
- xiii. Developing a plan for influencing decision making.

### **3.3.1 Discussion and identification of advocacy issues and objectives**

In this session participants will look at their own reality and identify certain issues, which are seen as lobby and advocacy issues. Based on this they will formulate lobby and advocacy strategies and objective(s). All this will be done in the context of the level that suits the participants work environment.

### **3.3.2 Group work on identification of advocacy objectives**

In this session participants will analyze the formal and informal steps in the decision making process, map out that process and examine the different alternatives to the formal process. They will examine their advocacy objectives and find out which policy body they should best influence and describe the decision-making stages of that body.

Based on the above they will develop a plan on how and what they can do to influence that body.

## **Day 8**

### **3.4 Law, Policy and Institutional framework for EIA**

Although the basic EIA Procedures tend to be standard in approach, most countries have developed country-specific EIA legislation to suit their own local country needs. It is therefore important that participants are introduced to the different policy, legal and institutional systems for operationalisation of the different EIA systems. Ideally this session should be presented by resource persons well conversant with the policies and laws as well as the EIA process in the countries from which the participants have been drawn.

During this session, the following content should be covered:

- Overview of the existing range of different EIA systems,
- different national EIA systems and the different approaches and directions in which EIA is developing,
- overview of the different legal, policy and institutional frameworks for EIA in the region.

Topics to be covered include:

- i. EIA process and systems in different countries,
- ii. Law, Policy and institutional framework for EIA in different countries,
- iii. Institutional requirements for EIA implementation at all levels (national, local, NGOs, developers),

In order to provide practical insight into the differences in EIA systems, the following should be incorporated during this session:

- Case study presentations within the local context which the participants are familiar with (one case study per country)
- Problem identification in EIA implementation in each country (participant brainstorming).

Participants should also be given opportunity to discuss their own experiences in the EIA systems they operate in.

### **3.4.1 Presentation on existing sectoral guidelines for EIA**

During this session, presentations should be made on existing EIA sectoral guidelines available in the participants' countries, and which could be of value as reference material when executing various elements of the EIA process.

## **PART 4**

### **Day 9:**

#### **4.1 Introducing participants to the country practical EIA exercise**

In order to give opportunity to participants to get hands-on exposure and use of EIA practical skills, the theoretical part of the training should be followed by a practical field work exercise when participants chose projects which they can subject to EIA, and during which various elements of the EIA process discussed during the theory course are put into practice.

#### **4.2 EIA Case study presentations (One case study per country)**

To provide country specific examples of EIA practice and implementation, and for purposes of enriching the participants' insight into what will be expected of them during the field work, the National Resource Persons should prepare case studies that should illustrate the fulfilment of country-specific EIA requirements, as well as highlight and emphasize the methodologies and techniques employed to fulfil the various elements of the EIA process which the participants will be expected to make use of during the field work exercise. In the case study presentations, focus should also be made to illustrate the extent to which various tools for conduct of a good EIA, such as public participation and EIA review requirements were met in the case studies.

For purposes of this session, adequate time should be allocated for presentations as well as for discussion and clarifications on issues which the participants may wish to raise.

##### **4.2.1 Identification of strengths, weaknesses and problems in EIA implementation in each country (participant brainstorming)**

As a follow-on to the country case study presentations, participants should be in position to discuss and identify strengths, weaknesses, problems as well as required improvements to the various country EIA systems presented.

#### **4.3 Continue briefing participants on Country EIA practical exercise**

In view of the importance of the field work exercise to the overall objectives of the EIA training programme, and because of the need for the participants to be fully clear of what will be expected of them while carrying out the practical field exercises, it is recommended that more time be provided during which further briefing is made on the field work and participants given opportunity to seek clarifications.

#### **4.4: Lessons learnt and recommendations based on experiences gained during the EIA field study exercise**

In order to prepare participants for the field work exercise, it is important that certain critical aspects regarding the field work exercise should be highlighted. During this session, the experiences and lessons learnt by the previous participants can be introduced to the participants. This will serve to alert the participants to the kind of problems and constraints they are likely to encounter and thus be in position to prepare to overcome them.

Based on the experience of the previous participants, the main constraints and lessons learned during EIA field work and how to overcome them could include:

- i. **Funding:**  
The funding for the field work must be adequate
- ii. **Need for clear understanding of the project scope:**  
Participants must have a clear understanding of the project under study
- iii. **Time limitations during field work:**  
The field work exercise must be given adequate time that provides sufficient scheduling of activities.

Where time and other constraints become unavoidable, delegation of some tasks eg; questionnaire distribution and administration should be considered.

The scope of the project to be chosen for study should be manageable within the time available for the field work exercise.

The scope of the project to be studied should to the extent possible match the resources available for the study.

- iv. **Bureaucracy:**  
The participants should endeavour to promote public relations with relevant Government officials.

Participants must endeavour to involve and consult relevant officers and local leaders at all levels.

- v. **Transport Constraints:**  
Participants should use cost effective means of acquiring data during field work.

- vi. **Suspicion by local communities:**  
During field work, the use of community leaders as an entry point during public consultations should be explored.

Effort should also be made to sensitize communities on the planned projects

The use of social investigative tools such as PRA should be encouraged to obtain improved public participation.

vii. **Cultural constraints**

Participants should be aware of possibilities of cultural constraints that should be born in mind during public consultations.

viii. **Simplification of highly technical project concepts.**

In order to give local communities better understanding of complex projects, effort should be made to simplify technical terms and where possible these should be translated into local language.

**Constraints and experiences during the EIA field work**

Time was a major constraint.

Some projects covered a wide area and consultation was not very easy.

Bureaucracy in government offices especially when sourcing literature.

Transport problems.

Stakeholder demands for incentives for participation.

Suspicion among stakeholders regarding intent of the EIA and suspicions surrounding the sensitivity of environmental issues.

Difficult to determine and agree on real issues of environmental concern.

Sensitivity of some project areas due to security concerns.

Sometimes project is highly technical to be understood by lay people.

Difficulties in accessing information.

Interesting to see how EIA is actually conducted in the field.

Interesting to see how two different Government Departments on environment are not informed of each others activities.

Co-ordination with other members of the EIA study team was difficult.

Negative co-operativity.

Pecuniary demands.

Inadequate facilitation.

**Other issues to be pursued by the relevant Government institutions responsible for EIA implementation.**

Institutionalisation of EIA in various sectors so that official consultations during EIA can be carried out without much hindrance. The EIA process should be complemented by strong environmental awareness and education to develop a sense of environmental accountability among policy makers, leaders and communities.

**Other important tips for field work that future EIA course participants should be aware of.**

- i. Choose small projects to fit within budget limits and time limits,
- ii. Make use of all available communications channels, including telephone and contacts to overcome bureaucratic delays,
- iii. Plan time accordingly to accommodate bureaucratic delays
- iv. National Resource Persons to be of help in overcoming bureaucratic bottlenecks eg; through providing introductory letters,
- v. Allocate specific funds for transport,
- vi. Plan to overcome stakeholder demands for incentives during the consultative process,
- vii. To avoid suspicion, endeavour to make the importance and benefits of EIA and its purpose understood by key stakeholders to be consulted,
- viii. Facilitate as much dialogue and interaction among stakeholders,
- ix. Different team members involved in EIA field work must have clear activity schedules which should be adhered to.
- x. Need to negotiate field work schedule with participants
- xi. Improved communication between participants and National resource persons and the

- xii. Highly technical information should be simplified to suit the target group, and use of simplified language in EIA reports should be encouraged,
- xiii. Team leaders to ensure TORs are clearly understood and should select study teams based on competency.
- xiv. Study team to ensure accurate identification of stakeholders and issues.
- xv. Need for systematic presentation of issues and findings, including use of good visual aids such as photographs, sketch maps,
- xvi. Provide precise conclusions and recommendations.

## **Day 10:**

### **4.5 Preparing TOR and work plans for the country EIA practical exercise**

As a follow up of the briefing on the field work exercises, and before departure to their respective places of work, participants are expected to prepare TOR and work plans for their field work exercises so that this are discussed and any necessary adjustments made. The preparation of the TOR and work plans before departure should also lead to a common understanding on when the exercise is expected to be concluded and reports prepared ready for reconvening for the second part of the training session during which field work reports are discussed and lessons learned shared with others participants.

### **4.6 Concluding remarks on challenges of EIA capacity development in the region**

In order to provide further insight into the EIA implementation framework in the areas where the participants will carry out their field work exercises, it is important to draw their attention to some of the broader challenges that face EIA capacity development in the region. These include, among others:

- i. Need to create more awareness on the value of EIA not merely as a legal requirement but as a planning tool.
- ii. How to cover the broad range of stakeholders in creating awareness and capacity for EIA.
- iii. Need to gain political support for use and application of EIA at national, district and local levels.
- iv. Need for development of EIA tools that facilitate the operationalisation of the EIA requirement. These include:
  - EIA guidelines,
  - EIA Regulations,
  - EIA resource manuals and other awareness kits.
- v. How to ensure effective public participation in EIA.
- vi. How to win recognition of EIA as a planning tool both in Government and among developers.
- vii. Need to create EIA networks for promotion of EIA.
- viii. Need to promote lobby, advocacy and litigation for EIA.

In view of the ever changing challenges as the EIA implementation and awareness gains ground, the resource person should feel free to include any other challenges that are not necessarily reflected above.

### **4.7 Wrap up, workshop evaluation and closure**

A standard DANIDA evaluation form and a form provided by the course management will be used to evaluate the course.





**ANNEX 1: OVERVIEW OF A SAMPLE EIA TRAINING PROGRAMME**

Part 1	Part 2	Part 3	Part 4
<p><b>Day 1</b></p> <p>Introduction of Participants</p> <p>Welcome statement by workshop organisers</p> <p>Participants expectations</p> <p>Introduction and overview of the workshop content and objectives.</p> <p>What is the Environment? A brief overview of environmental problems in the East African Region.</p> <p>Introduction to EIA: What is EIA ? The need for EIA</p> <p>The role of NGOs in Environment Management.</p> <p>Individual experiences with EIA</p> <p>EIA in the Project cycle.</p> <p>The Role of NGOs in Environmental Management</p>	<p><b>Day 2:</b> Introduction to the EIA Process: - Screening - Scoping</p> <p>Group work on scoping Case Study on scoping</p> <p><b>Day 3:</b> Assessing Impacts: Sources of Impacts and Impact Significance</p> <p>Introducing different levels of EIA</p> <p>Impact Analysis and Prediction</p> <p>Impact Mitigation and Management</p> <p>Case study on Impact Mitigation</p> <p>Group work on Impact Mitigation</p> <p><b>Day 4:</b> Alternatives Analysis in EIA, EIA work plans Group work: Preparation of EIA work plans EIA reporting Case study on EIA reporting</p> <p><b>Day 5:</b> EIA Review</p> <p>The role of EIA in decision making</p> <p>Group work on decision making</p> <p>Environment monitoring and stakeholder roles.</p> <p>Strategic Environment Assessment (SEA). Environmental Audit</p>	<p><b>Day 6:</b></p> <p>Principles of community participation in the EIA process</p> <p>Methodologies for community participation in the EIA process</p> <p>- What is Gender? - Gender analysis tools - Gender and EIA. - Gender roles and responsibilities in EIA</p> <p><b>Day 7:</b></p> <p>EIA and advocacy: Advocacy strategies</p> <p>Identifying advocacy issues and objectives</p> <p>Formal and informal steps in decision-making.</p> <p>Developing a plan for influencing decision making.</p> <p><b>Day 8:</b> Law, Policy and Institutional framework for EIA.</p> <p>Case study presentations (One case study per country)</p> <p>Problem identification in EIA implementation in each country.</p> <p>Presentation on existing EIA sectoral guidelines</p>	<p><b>Day 9:</b></p> <p>Introducing participants to the country practical EIA exercise</p> <p>Country case study presentations.</p> <p>Continue briefing participants on Country EIA practical</p> <p>Lessons learned and recommendations based on experience gained during previous EIA field exercises</p> <p><b>Day 10:</b></p> <p>Preparing work plans for the country EIA practical exercise</p> <p>Challenges of EIA capacity development in the region.</p> <p>Continue preparing EIA practical exercise</p> <p>Wrap up, workshop evaluation and closure.</p> <p><b>DEPARTURE</b></p>



## **ANNEX 2: EXAMPLES OF SIMPLE CASE STUDY PROJECTS FOR GROUP WORK SESSIONS**

The case studies presented here have been designed to provide participants with an opportunity to practice and follow-through the various elements of the EIA process from scoping to impact mitigation, preparation of EIA work plans and making recommendations and decisions regarding approval or disapproval of the projects in the said locations.

### **GROUP I**

**Nature of project: Bakery**

#### **Context and setting of the project**

A project to develop a medium scale bakery has been proposed in one of the residential neighbourhoods in your city. Because of constant power cuts, the project has arranged to install an emergency generator. In order to develop this project, the developer has sought a loan from a bank which has indicated willingness to support development of only the basic infrastructure for the project including:

- purchase and installation of equipment,
- construction of the factory building, and
- Installation of emergency generator.

However, in order to fulfil the national legal requirements for EIA, the developer has been notified by the Environment agency that for a project of this type, an environmental Impact assessment is required.

On receipt of this, the developers first reaction is that s/he does not have resources to carry out the EIA. However, s/he is also aware that failure to carry out the EIA may cause failure of the project if approval of the environment agency is not obtained.

Within this urban centre, local pressure groups have recently been agitating for all industries to be located in the new industrial area recently gazetted by the town board.

In order to realise maximum production capacity, the developer intends to carry out 24 hour production with a day and night shifts.

Most of the workers are expected to commute to the factory and therefore there will be no accommodation provided by the developer.

In order to comply with the national requirements, the developer has decided to undertake an Environmental Impact Assessment.

You are therefore asked to imagine that within your group there is a developer who is also going to be supported by two consultants to carry out scoping for this project.

Within your group you also have a member of the local community resident in the immediate impact area and who has some concerns about the project.

In fulfilling the EIA requirement, the Environment Agency requires that all those with concerns should be consulted so that their concerns can be addressed during the study. In this regard one member of the group will be from the local NGO groups.

One member of the group is a member of the environment agency whose interests is to ensure that all issues of environmental concern are addressed before the project can be allowed to proceed.

The group is required to carry out scoping for the project to identify environmental issues for inclusion in an environmental impact study.

## **GROUP II**

### **Nature of Project: Car Washing Bay**

#### **Context and setting of the project**

A womens' group has intentions to develop a car washing bay close to a river running through a municipality. The womens group has justified their project by arguing that there is demand for car washing services and the only place to locate the car washing bay is close to the shores of the river to facilitate easy access to water.

In executing this project, however, there are a lot of actors whose consent has to be obtained if this project has to go a head. These include the Local Municipal authorities, the Environment agency, and the downstream communities.

Within the same municipality, there are several other car washing bays whose potential for revenue generation has recently been a major cause of proliferation of this type of project. The womens group therefore argues that their proposal to get this project executed is not a unique case and should therefore be permitted to go a head. The Local authorities and the environment agencies, however, insist that before the project can be allowed to go ahead, an environmental impact study must be carried out.

#### **Task**

In order to comply with the requirement for EIA you are therefore asked to imagine that within your group there is a representative of the developer (womens' group) who is also going to be supported by two consultants to carry out scoping for this project.

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Within your group you also have a member of the local community resident in the downstream impact area and who has some concerns about the project.

In fulfilling the EIA requirement, the Environment Agency requires that all those with concerns should be consulted so that their concerns can be addressed during the study. In this regard one member of the group will be from the local NGO groups. One member of the group is a member of the environment agency whose interests is to ensure that all issues of environmental concern are addressed before the project can be allowed to proceed.

The group is required to carry out scoping for the project to identify environmental issues for inclusion in an environmental impact study.

### **GROUP III**

#### **Nature of project: A garage for repair and servicing of motor vehicles**

#### **Context and setting of the project**

The project will essentially involve servicing and repair of cars.

A group of youths who have finalised training in motor vehicle mechanics have found themselves without jobs for some time. They decide that it might be more appropriate for them to set up their own garage so that they effectively become self employed.

The Youths henceforth approach the local municipal authorities for a plot of land on which to set up the garage. In allocating them the plot for the project, the local municipal authorities are interested to know what kind of project they intend to set up so that an appropriate location is identified.

The youths are subsequently allocated a plot of land, but before they can proceed to implement the project, the environment laws require them to get clearance for environmental aspects of their project before project implementation commences. The interesting thing, however, is that the planning of this municipality is such that areas earmarked for this kind of project and for industrial development are those areas close and running along a river and in the marshy wetland zone.

#### **Task**

Within your group, imagine that one member of the group is an official of the local municipality, one is an official of the environment agency, the other is the owner of milk processing plant located next to the plot proposed for the garage. The rest of the members of the group are those intending to set up the garage project.

The group is required to carry out scoping for the project to identify environmental issues for inclusion in an environmental impact study.

## **GROUP IV**

**Nature of project: Establishment of a market**

### **Context and setting of the project**

A womens' group which has been engaged in commercial activities for along time has finally decided that it needs to set up a properly organised marketing facility to enhance its business. The group is engaged in sale of all sorts of merchandise including food items (both raw and boiled), vegetables, clothes, and a wide assortment of goods.

The group has approached the local administration in a rural neighbourhood and their request to be allocated a block of land has met positive response. In-fact the local authorities area excited that this project is likely to be of immense benefit to the local people. The only available and sizable plot of land, however, is far from a highway which would have been preferred by the group for purposes of getting the customers. The Plot happens to be in a relatively waterlogged area and there is a well where the local community uses as a drinking water source.

### **Task**

Before this market can be established, the environment authorities require that an environmental impact assessment must be carried.

Within your group, you are therefore required to imagine one of your in an official from the environment agency, the other is a chief form the local authority, the other is a planner from central government, while the rest of the members are the women intending to set up the project.

The group is required to carry out scoping for the project to identify environmental issues for inclusion in an environmental impact study

