
EIA: INTRODUCTION AND EXPERIENCE IN EGYPT

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Aims and objectives of EIA

EIA can:

- ☞ modify and improve design
 - ☞ ensure efficient resource use
 - ☞ enhance social aspects
 - ☞ identify key impacts and measures for mitigating them
 - ☞ inform decision-making and condition-setting
 - ☞ avoid serious and irreversible damage to the environment
 - ☞ protect human health and safety
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Environmental impacts

- ☞ type and nature
- ☞ magnitude
- ☞ extent
- ☞ timing
- ☞ duration
- ☞ uncertainty
- ☞ reversibility
- ☞ significance

Integration within EIA

The EIA process addresses the following environmental effects:

- ☞ biophysical and resource use
- ☞ social and cultural
- ☞ health and safety
- ☞ economic and fiscal
- ☞ landscape and visual
- ☞ indigenous peoples' rights and traditional areas

US National Environmental Policy Act (proclaimed in 1970)

NEPA called for:

- ☞ consideration of environmental values in decision making
- ☞ use of a systematic, interdisciplinary approach
- ☞ a detailed statement on:
 - the environmental impact of proposals
 - any adverse effects which cannot be avoided
 - alternatives to the proposed action
- ☞ making the statement available to the public.

This process became known as
Environmental Impact Assessment

Evolution of EIA

- ☞ early 1970s — initial development
- ☞ 1970s to 1980s — increasing scope
- ☞ mid to late 1980s — process strengthening and policy integration
- ☞ mid 1990s — towards sustainability (SEA, Biodiversity)

EIA—Three core values

- ☞ **integrity** - the EIA process will conform to agreed standards
- ☞ **utility** - the EIA process will provide balanced, credible information for decision-making
- ☞ **sustainability** - the EIA process will result in environmental safeguards

Source: Sadler, 1996

EIA — guiding principles

The EIA process should be:

- ☞ **purposive – meeting its aims and objectives**
- ☞ **focused – concentrating on the effects that matter**
- ☞ **adaptive – responding to issues and realities**
- ☞ **participative – fully involving the public**
- ☞ **transparent – clear and easily understood**

Source: Sadler, 1996; IAIA/IEMA 1999

EIA — guiding principles

(continued)

- ☞ rigorous – employing ‘best practicable’ methodology
- ☞ practical – establishing mitigation measures that work
- ☞ credible – carried out with objectivity and professionalism
- ☞ efficient – imposing least cost burden on proponents

Source: Sadler, 1996; IAIA/IEMA 1999

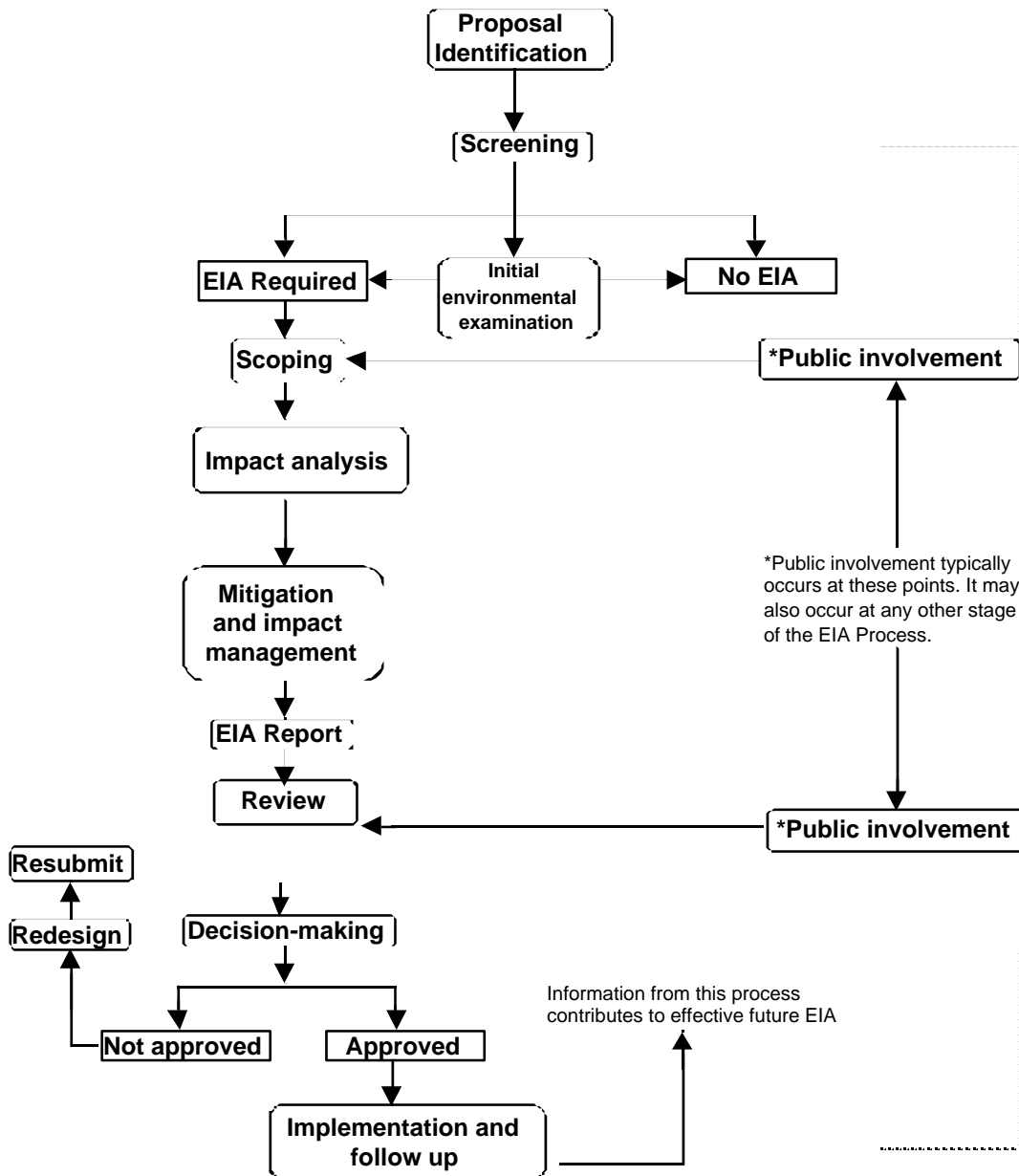
Key operating principles of good EIA practice

EIA should:

- ☞ be applied to all proposals with significant impacts
- ☞ begin early in the project cycle
- ☞ address relevant environmental, social and health impacts
- ☞ identify and take account of public views
- ☞ result in a statement of impacts and mitigation measures
- ☞ facilitate informed decision making and condition setting

Source: Sadler, 1996

Generalised EIA Process Flowchart



The EIA process

The EIA process comprises

- ☞ screening - to decide if and at what level EIA should be applied
- ☞ scoping - to identify the important issues and prepare terms of reference
- ☞ impact analysis - to predict the effects of a proposal and evaluate their significance
- ☞ mitigation - to establish measures to prevent, reduce or compensate for impacts

The EIA process

(continued)

- ☞ reporting - to prepare the information necessary for decision-making
- ☞ review - to check the quality of the EIA report.
- ☞ decision-making - to approve (or reject) the proposal and set conditions
- ☞ follow up – to monitor, manage and audit the impacts of project implementation
- ☞ public involvement - to inform and consult with stakeholders

Benefits of EIA include:

- ☞ environmentally sound and sustainable design
- ☞ better compliance with standards
- ☞ savings in capital and operating costs
- ☞ reduced time and costs for approvals
- ☞ increased project acceptance
- ☞ better protection of the environment and human health

Delays are caused during EIA when:

- ☞ the EIA is commenced too late in the project cycle
- ☞ the terms of reference are poorly drafted
- ☞ the EIA is not managed to a schedule
- ☞ the EIA report is inadequate and needs to be upgraded
- ☞ there is a lack of technical data

Ensuring fairness in the EIA process

- ☞ register consultants' names and terms of reference
- ☞ name consultants and their expertise in the EIA report
- ☞ publish the terms of reference in the EIA report
- ☞ make EIA reports available to the public
- ☞ publish lists of screening and final decisions along with conditions for approval

EIA in Egypt

INTRODUCTION

- Law 4/94, increase in awareness for EIA and requirements for capacity building on the Central Government level.
- The EIA system has three principle components; EIA preparation, EIA review and post-project monitoring. The EIA system depends to a great extent on; project proponents and regulators.
- The proponent is responsible for the preparation of the EIA according to the conditions and guidelines set by the regulator.
- The regulator reviews the EIA and conduct post project monitoring to ensure the incorporation of approved mitigation measures
- Effective contribution and cooperation between the two players is a must for efficient system

EIA in Egypt

EIA SYSTEM IN EGYPT

- Objectives of law 4/94 were not only addressing pollution measures and control, but also involved new developments and projects including expansions of the existing ones.
- EEAA is the responsible authority for implementing the law.
- New establishments are required to carry out an EIA before construction.

EIA in Egypt

EIA CATEGORIES

The list approach stated in the Egyptian guidelines depends on screening projects into three categories.

- A white list (A), A grey list (B), and A black list project (C).
- The guidelines (EEAA, 1996) guidelines had included a screening form A for the white list projects, a screening form B for the gray list projects and a brief outline for the full-fledged EIA.
- The law had specified that the proponent should submit the EIA form or study to the EEAA through the Competent Administrative Authority (CAA). The EIA must then be reviewed by the EEAA.
- A maximum of 60 days for review
- Appealing committee
- The reviews of the (white) list projects were delegated by the agency to the branch offices.

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REVIEW OF EIA

- EEAA relied on international experience as well as national consultants.
- Upon the start of the law 4 in 1994, the EEAA was faced with lack of trained staff for review
- Increase of the number of EIA and EIA submitted to EEAA.
- For capacity building: training courses financed by DANIDA and Dfid (Curran, 2002).
- With the increase of the number of studies and the limited duration allowed for review, building the capacity of internal employees were found to be essential for building up a sustainable and trusted system within the agency.

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EVOLUTION OF THE EIA SYSTEM IN EGYPT

- The Egyptian EIA system is recognized as a dynamic system that is continuously improved through undertaking incremental modifications.

- A number of approaches had been adopted between 1998 and 2001.

- Improvements were made totally by the local expertise of employees whom had build their capacity; first in the EIA as a global requirement; second by the needs on the national requirements, and third by tailoring this to the existing legislation.

- Evolution of the system included:

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Standardization

- Standard tools for review are developed including completeness checklists and standard conditions.
- A new comprehensive lists for categories was proposed in 1999.
- New screening forms had been prepared for categories A and B.
- Guidelines (C) had been issued for sectoral activities.
- New system was approved in June 2001 and implemented January 2002.

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Decentralization

- In 1998 and with the increase of the EIA, it was realized the need for decentralization.

- Branch offices are in better position to detect any system leakage.

- Branch offices can review screening forms A, and later when they develop the needed knowledge they can review form B and perhaps the dull-fledged EIA studies.

- In 2000, the EIA Central department had played a major role in the training and capacity building for the officers working in the branch offices and the EMUs to handle EIA review.

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Quality of the EIA

- The quality of the EIA is reflected in its comprehensiveness, robustness of its technical content.
- In Egypt, the dominant reason for EIAs rejection is the inappropriateness of the project location, which reflects the lack of thorough investigation.
- In 1998, two independent college professors or experts were reviewing the studies presented to the agency for quality assurance and transparency in decision-making.
- The main positive side of relying on external reviewers was to build the capacity of the EIA internal staff;
- The main negative side was the time constraint defined by law 4/94.

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Verification of Information

- field visits are conducted to ensure that the rejection is well justified.
- Meetings are held with proponents when there is a need to clarify issues.
- This approach was introduced in 1999 to expedite the review process.
- This verification of information however is not the same as the inspection.

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Appeal system

- Objection to the EEAA decision should be made within 30 days in writing through the CAA.
- A Permanent Appeal Committee is the competent committee to consider the objections to assessment results
- Due to the large number of objections (about 200 cases per month) this was found not to be an easy process. In practice this process was found not so easy to apply mainly because of the large number of cases received.
- Experience had dictated the following steps to ease the work of the committee:
 - (1) Setting up a regular schedule for the committee, which is two times a month instead of ad-hoc schedule of meetings.
 - (2) Having a separate database for the committee and link it to the EIA database.
 - (3) Standardizing the regulations for the Committee

Guidelines

Introduction

In 1999, the EEAA had issued EIA guidelines for municipal wastewater treatment works. A high priority should be given to:

- Considering environmental factors in site selection
- Evaluating alternative sites and alternative technologies.
- Ascertaining the suitability of the intended location

Early evaluation of alternatives, including , processing and management practices.

The assessment process should focus on key environmental issues including biophysical, health, social and economic and costs and benefits of the proposal.

The aim of the EIA is to enable decision making and mitigation measures to be included in the design.

The analysis should focus on key issues and should be emphasis on quality and not quantity.

Guidelines

THE EIA PROCESS

The EIA process should proceed logically through two levels:

- (1) Technical work undertaken by specialist contributors to the assessment.
- (2) A guiding principle for the EIA overall, providing a structure for the EIA report and coordinating the technical contributions;

Each step in the EIA process requires consultation to ensure that all relevant views are being taken into account throughout the EIA process.

Consultation with the regulatory authorities and also with the public, should be initiated at the scoping stage of the EIA, and thereafter carried out as appropriate.

The developer is ultimately responsible for ensuring compliance with the statutory requirements for EIA preparation. and may employ a firm of consultants to carry out the assessment. he should verify the competence of the firm recruited to prepare the EIA.

Guidelines

TEAM OF CONSULTANTS

Project manager, whose ultimate responsibility is to coordinate the inputs of individual specialists and to provide an overview of the report.

Socio-economics specialist,

Health specialist,

Freshwater biologist,

Microbiologist or biochemist,

Terrestrial fauna and flora specialist,

Hydrologist, hydro geologist,

Development planner or landscape architect,

Air quality specialist,

Transport/roads specialist,

Antiquities specialist,

Process engineer in wastewater treatment.

Guidelines

THE STEPS IN THE EIA PROCESS ARE BROADLY DESCRIBED AS FOLLOW;

(1) OUTLINE OF IMPORTANT CHARACTERISTICS OF THE PROPOSED PROJECT

Minimum details required for the project;

- Proposed location of works;
- General layout;
- General unit process and description digram(s);
- Size in terms of population and population equivalents, present and projected; Number and type of connected industries;
- Anticipated influent and effluent characteristics,
- annual or monthly average discharge data;
- Pre-construction, construction, operation and maintenance activities,
- estimated staffing and support facilities and services;
- Required off site investments; and
- Life expectancy of major components.

Guidelines

(2) SCREENING

The EEAA guidelines classify projects based on Law 4 into three groups, reflecting severity of possible environmental impacts:

(a) White list projects: those with minor environmental impact Wastewater treatment plant of 1000 PE (Population equivalent) or less fall within this category.

(b) Grey list projects: those, which may result in significant environmental impact. Wastewater treatment plant with a capacity of 1000 to 1 million PE fall within this category.

(c) Black list projects: those projects, which require complete EIA due to their potential impacts. Wastewater treatment plant with a capacity of more than 1 million PE falls within this category.

Guidelines

(3) SCOPING

Scoping or identification of potential impacts, is an important early stage of the EIA process to ensure that the EIA is properly carried out.

A site visit and preliminary consultations with relevant regulatory authorities must be included.

Consultations should involve exchange of information related to identifying regional and local issues. the consultant must:

- Identify the characteristics of the proposed development that are likely to give rise to impacts;
- Identify the type of impacts may arise, and;
- Determine which environmental resources and people likely to be affected

The identification and prioritization process should result in:

- (a) A list of all issues with a preliminary estimate of the relative significance of their impacts;
 - (b) Identification of the key issues;
 - (c) Alternative site of scheme.
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Guidelines

(4) BASELINE ENVIRONMENTAL CONDITIONS

Collating existing data is always the first step in collection of baseline information.

Original site surveys are almost always bound to be required for most categories

Published information and surveying are made.

Consideration of likely monitoring requirements should be borne in mind during survey planning so that the data collected is suitable for use as a baseline to monitor impacts or success/ failure of mitigation measures in the future .

The need for long-term sampling should also be assessed as early as possible. This will maximize the time available for this to be carried out.

Data needs to be collected over a sufficiently wide area to make sure that any effects likely to be caused by the development can assessed.

Guidelines

(5) PREDICTION OF IMPACTS.

Impact prediction must encompass both construction and operation of the works.

The following should be considered: Magnitude of impact; Duration and extent; Whether impacts are reversible or permanent; Direct and indirect effects.

Beneficial as well as adverse impacts on the following specific aspects of the physical, socio-cultural and biological environment must be assessed:

- Water quality;
- Social, economic and cultural environment;
- Waste management;
- Air quality;
- Flora and fauna;
- Transport and access;
- Hydrology and groundwater;
- Visual environment and landscape;
- Risk and hazards.

Impacts of the scheme assuming recommended mitigation is implemented (“residual” impacts) should be identified separately.

Guidelines

(6) EVALUATION OF IMPACTS

Criteria for evaluation of impacts must be stated where possible, legislative standards or international standards should be followed

If no suitable standards exist, descriptive criteria may be used, but must be fully explained.

The consultant should identify and quantify the level of uncertainty associated with these predications.

Guidelines

(7) MITIGATION

Mitigation strategies are considered in relation to individual impacts and collectively for all impacts.

Many mitigation measures can be incorporated into the early design stages of the project.

Mitigation measures should be included as recommendations, and should be clearly identified as such.

Recommendations for monitoring impacts in the form of an environmental management plan (EMP) should be outlined and included.

THANK YOU

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