

CONTENT AND FORMAT INITIAL ENVIRONMENTAL EXAMINATION (IEE)

Introduction

IEE is an important tool for incorporating environmental concerns at the project level. IEE should be carried out as early as the project planning stage as part of feasibility thus it can assure that the project will be environmentally feasible. The general objectives of IEE study should at least cover the following:

- (i) to provide information about the general environmental settings of the project area as baseline data;
- (ii) to provide information on potential impacts of the project and the characteristic of the impacts, magnitude, distribution, who will be the affected group, and their duration;
- (iii) to provide information on potential mitigation measures to minimize the impact including mitigation costs;
- (iv) to assess the best alternative project at most benefits and least costs in terms of financial, social, and environment. It is not always necessary to change location of the project, but it can be changed in project design or project management; and
- (v) to provide basic information for formulating management and monitoring plan

The IEE is conducted if the project is likely to have minor or limited impacts, which can easily be predicted and evaluated, and for which mitigation measures are prescribed easily. However, the IEE is also used to confirm whether this is, indeed, requires an EIA (see Appendix 2) as a follow up.

The Process in Preparing IEE

An early step is to determine the scope of the IEE study. This activity is known as “scoping” as a procedure designed to establish the terms of reference (TOR) for the IEE. The scoping procedure should at least produce the following outputs:

- (i) identify the likely environmental impacts or other environmental concerns and consideration that need to be further investigated in IEE study
- (ii) identify environmental component which need detailed or further study
- (iii) determine the general approach and methodology required to carry out the IEE study
- (iv) identify in general all affected interest to be consulted in carrying out IEE study
- (v) identify the need to fit the outputs of IEE into the project context especially on environmental management and monitoring plan

The next step is undertaking IEE study, and the following are key important activities:

1. Describing Environmental Condition of the Project Area

Collection of baseline information on biophysical, social and economic aspects of the project area is the most important reference for conducting IEE study. The description of environmental settings includes the characteristic of area in which the activity of proposed project would occur and it should cover area affected by all impacts including potential compensation area, and potential area affected by its alternatives. Normally, information is

obtained from secondary sources when there is a facility of maintaining database, or other existing documentation, and through field sampling. Collection of baseline data should be designed to satisfy information requirements and should be focused on relevant aspects that are likely to be affected by the proposed project. Therefore, the level of detail in this description of study area should be sufficient to convey to readers the nature of environmental and social resources condition of the affected areas.

2. Assessing Potential Impact

The "technical heart" of the environmental assessment process involves the prediction of changes over time in various environmental aspects as a result of a proposed project. The prediction of the nature, extent, and magnitude of environmental changes likely to result from a proposed project is aided by various tools and techniques, the choice of which depends upon the impacts of concern, data availability or lack thereof, and the appropriate specificity of quantitative models. However, the choice of the appropriate method for conducting an environmental assessment can only be guided by certain criteria, but no single method will meet all the necessary criteria. In addition, the prediction has to be based on established scientific knowledge that is still very limited in ecosystems in most DMCs. For this reason, the prediction of ecological changes and their impacts often does not generate concrete conclusions on the magnitude of the impacts.

3. Formulating Mitigation Measures

Once the impacts have been analyzed, their significance will be determined, i.e., whether they are acceptable, require mitigation, or are unacceptable. Subsequently, measures will be devised to mitigate anticipated environmental changes and consequential impacts during project implementation and operation, or further reduce the residual environmental changes inherent in the selected project design. They normally include technical, social, and institutional measures to be implemented as integral elements of the project. Examples are sound operating rules of a reservoir to ensure minimum impacts on downstream water users, and installation of an electrostatic precipitator to remove fly ash in a coal-fired power plant project, and adequate drainage system in an irrigation project.

4. Preparing the Institutional Requirements and Environmental Monitoring Plan

Environmental management involves the implementation of environmental protection and mitigation measures and monitoring for significant environmental impacts. Environmental protection measures are taken to: (i) mitigate environmental impacts, (ii) provide in-kind compensation for lost environmental resources, or (iii) enhance environmental resources. These measures are usually set out in a plan, which covers all phases of the project from pre-construction through decommissioning, and outlines mitigation and other measures that will be undertaken to ensure compliance with environmental regulations and reduce or eliminate adverse impacts. The basic implementation arrangements should be presented - taking account of the local conditions. Responsibilities for mitigation and monitoring shall be defined along with arrangements for information flow, and for coordination between agencies responsible for mitigation. A plan should specify who/which agency is responsible for undertaking the mitigating and monitoring measures, e.g., for enforcement of remedial actions, monitoring, training, and financing. A third party may be contracted in case the local authorities' capacity is limited. Institutional strengthening activities may be proposed, including establishment of appropriate organization arrangements; appointment of key staff and

consultants; and arrangements for counterpart funding.

Environmental monitoring involves: (i) planning a survey and sampling program for systematic collection of data/information relevant to environmental assessment and project environmental management; (ii) conduct of the survey and sampling program; (iii) analysis of samples and data/information collected, and interpretation of data and information; and (iv) preparation of reports to support environmental management. Environmental monitoring is normally carried out before and during planning to establish baseline data needed for Environmental assessment and evaluating environmental impacts during project implementation. It continues through project operation to detect changes in the key environmental quality parameters, which can be attributed to the project. The results of the monitoring program are used to evaluate the following: (i) extent and severity of the environmental impacts against the predicted impacts; (ii) performance of the environmental protection measures or compliance with pertinent rules and regulations; (iii) trends in impacts; and (iv) overall effectiveness of the project environmental protection measures.

Environmental monitoring should have clear objectives, and the survey and sampling program custom-designed to focus on data/information actually required to meet the objectives. In addition, the design of the monitoring program has to take into account its practicability considering the technical, financial, and management capability of the institutions that will carry out the program and period of monitoring that will be needed to achieve the objectives (see Table 1). The monitoring program should include action or emergency plans so that appropriate action can be taken in the event of adverse monitoring results or trends. It should also be constantly reviewed to make sure that it is effective, and determine when it can be stopped.

Table 1: Features of an Effective Environmental Monitoring Plan

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| <ul style="list-style-type: none">• Realistic sampling program (temporal and spatial)• Sampling methods relevant to source• Collection of quality data• Comparable new data with other relevant data used in environmental assessment• Cost-effective data collection• Quality control in measurement and analysis• Innovations (e.g., in tracing contaminants and automated stations)• Appropriate databases• Multidisciplinary data interpretation to provide useful information• Reporting for internal management and external checks• Allowance for, and response to, input from third parties• Presentation in the public arena (external assessment) |
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Both the environmental management and monitoring plans need to include who will implement them, when, and where. The capacity of the executing agency, local government, and community organization should be reviewed to identify feasible approach for implementing the plans. The project lifecycle should be taken into account in setting the timing of implementation. For example, plans should environmental mitigation measures should be implemented in the engineering design for the contract documents, and materials to be avoided in procurement, among others. On the other hand, the location for monitoring should be selected based on where the impacts would occur, and the areas to be affected. To ensure that the environmental management and monitoring plans will be implemented, it is necessary to identify the key management issues to be included as a requirement either as a loan covenant or conditions for implementing the project.

Documenting IEE Studies

IEE reports and their summaries (SIEE) should be presented in certain way to meet the requirements of ADB and the DMC. However, wherever possible, ADB requests that the Borrower follow ADB-prescribed format for IEE. This is to ensure that environmental assessment results are presented in a clear and concise fashion to contribute most effectively to decision-making. However, if several other financial institutions fund the proposed Project in the form of co-financing modality, it is necessary for ADB to come up with an agreement with those institutions on IEE reporting requirement. In this context, it is necessary to ensure that the content of the IEE reports cover all issues required by ADB. Although the presentation of the IEE report may not follow ADB's standard, it is necessary to ensure that the SIEE should be formulated and presented in accordance to ADB's guideline.

1. Initial Environmental Examination

The content and format of the IEE report is in Table 2. If the approved IEE concludes that the project will not have any significant adverse environmental impacts, then the environmental assessment is deemed complete. If there are unresolved issues, the recommendation should be either that further studies be undertaken to resolve the issues, or that a full EIA is required.

Table 2: Outline of an IEE Report

A.	Introduction
B.	Description of the Project
C.	Description of the Environment
D.	Screening of Potential Environmental Impacts and Mitigation Measures
E.	Institutional Requirements and Environmental Monitoring Plan
F.	Public Consultation and Information Disclosure
G.	Findings and Recommendation
H.	Conclusions

a. Introduction

1. This section usually includes the following:

- (i) purpose of the report, including (a) identification of the project and project proponent; (b) brief description of the nature, size, and location of the project and of its importance to the country; and (c) any other pertinent background information; and
- (ii) Extent of the IEE study: scope of study, magnitude of effort, person or agency performing the study, and acknowledgement.

b. Description of the Project

2. Furnish sufficient details to give a brief but clear picture of the following (include only applicable items):

- (i) type of project;
- (ii) category of Project;
- (iii) need for project;
- (iii) location (use maps showing general location, specific location, and project site);
- (iv) size or magnitude of operation;
- (v) proposed schedule for implementation; and
- (vi) descriptions of the project, including drawings showing project layout, and project components. This information should be of the same type and extent as is included in feasibility reports for proposed projects to give a clear picture of the project and its operations.

c. Description of the Environment

3. Furnish sufficient information to give a brief but clear picture of the existing environmental resources in the area affected by the project, including the following (to the extent applicable):

- (i) **Physical Resources:** (e.g.)
 - atmosphere (e.g. air quality and climate)
 - topography and soils,
 - surface water
 - groundwater
 - geology/seismology.

- (ii) **Ecological Resources:** (e.g.)
 - fisheries
 - aquatic biology
 - wildlife
 - forests
 - rare or endangered species
 - protected areas
 - coastal resources

- (iii) **Economic Development:** (e.g.)
 - industries
 - infrastructure facilities (e.g. water supply, sewerage, flood control)
 - transportation (roads, harbors, airports, and navigation)
 - land use (e.g. dedicated area uses)
 - power sources and transmission
 - agricultural development, mineral development, and tourism facilities

- (iv) **Social and Cultural Resources:** (e.g.)
 - population and communities (e.g. numbers, locations, composition, employment)
 - health facilities
 - education facilities
 - socio-economic conditions (e.g. community structure, family structure, social well being)
 - physical or cultural heritage
 - current use of lands and resources for traditional purposes by Indigenous Peoples
 - structures or sites that are of historical, archaeological, paleontological, or architectural significance.

d. Screening of Potential Environmental Impacts and Mitigation Measures

4. Using the checklist of environmental parameters for different sector projects, this section will screen out “no significant impacts” from those with significant adverse impact by reviewing each relevant parameter according to the following factors or operational stages. Mitigation measures, where appropriate, will also be recommended environmental problems due to project location, and related to project design, construction, and operations. Potential environmental enhancement measures and additional considerations will also be covered.

e. Institutional Requirements and Environmental Monitoring Plan

5. This section should state the impacts to be mitigated, and activities to implement the mitigation measures, including how, when, and where they will be implemented. Institutional arrangements for implementation should be described. The environmental monitoring plan will describe the impacts to be monitored, and when and where monitoring activities will be carried out, and who will carry them out. The environmental management and monitoring costs should also be described.

f. Public Consultation and Information Disclosure

21. This section will describe the process undertaken to involve the public in project design and recommended measures for continuing public participation; summarize major comments received from beneficiaries, local officials, community leaders, NGOs, and others, and describe how these comments were addressed; list milestones in public involvement such as dates, attendance, and topics of public meetings; list recipients of this document and other project related documents; describe compliance with relevant regulatory requirements for public participation; and summarize other related materials or activities, such as press releases and notifications. This section will provide of summary of information disclosed to date and procedures for future disclosure.

g. Findings and Recommendations

22. This section will include an evaluation of the screening process and recommendation will be provided whether significant environmental impacts exist needing further detailed study or EIA. If there is no need for further study, the IEE itself, which at times may need to be supplemented by a special study in view of limited but significant impacts, becomes the completed environmental assessment for the project and no follow-up EIA will be needed. If an EIA is needed, then this section will include a brief terms of reference (TOR) for the needed follow-up EIA, including approximate descriptions of work tasks, professional skills required, time required, and estimated costs. The Bank's Environment Guidelines provides a guide for preparing the TOR for different projects.

h. Conclusions

23. This section will discuss the result of the IEE and justification, if any, of the need for additional study or EIA. If an IEE, or an IEE supplemented by a special study, is sufficient for the project, then the IEE with the recommended institutional and monitoring program becomes the completed EIA.

2. Summary Initial Environmental Examination Report

6. The summary IEE (SIEE) report is the executive summary of the IEE report. It describes the significant findings of the IEE report, and recommendations to manage them. The SIEE report should be presented clearly and concisely as a stand-alone document (see Table 3) for submission to the Board and disclosure to the public.

Table 3: Outline of an SIEE Report

A. Introduction (1/2 page)

This section will include the purpose of the report, extent of the IEE study and brief description of any special techniques or methods used.

B. Description of the Project (1/2 page)

This section will include the type of and need for the project; and project location, size or magnitude, operation, and proposed schedule for implementation.

C. Description of the Environment (2 pages)

This section will include the physical and ecological resources, human and economic development, and quality of life values.

D. Forecasting Environmental Impacts and Mitigation Measures (2-4 pages)

This section will identify "no significant impacts" from those with significant adverse impacts and will discuss the appropriate mitigation measures, where necessary.

E. Institutional Requirements and Environmental Monitoring Plan (1 page)

This section will describe the impacts to be mitigated, and activities to implement the mitigation measures, including how, when, and where they will be implemented. The environmental monitoring plan will describe the impacts to be monitored, and when and where monitoring activities will be carried out, and who will carry them out.

F. Public Consultation and Disclosure

This section will describe the process undertaken to involve the public in project design and recommended measures for continuing public participation; summarize major comments received from beneficiaries, local officials, community leaders, NGOs, and others, and describe how these comments were addressed; list milestones in public involvement such as dates, attendance, and topics of public meetings; list recipients of this document and other project related documents; describe compliance with relevant regulatory requirements for public participation; and summarize other related materials or activities, such as press releases and notifications. This section will provide of summary of information disclosed to date and procedures for future disclosure.

G. Findings and Recommendations (1-2 pages)

This section will include an evaluation of the screening process, and recommendation will be provided whether significant environmental impacts exist needing further detailed study or EIA. If there is no need for further study, the IEE itself, which at times may need to be supplemented by a special study in view of some small significant impacts, becomes the completed EIA for the project and no follow-up EIA will be needed.

If further additional study is needed, then this section will include a brief terms of reference (TOR) for the needed follow-up EIA, including approximate descriptions of work tasks, professional skills required, time required, and estimated costs. The Bank's Environment Guidelines provides a guide for preparing the TOR for different projects.

H. Conclusions (1/2 page)

This section will discuss the result of the IEE and justification if any of the need for additional study or EIA. If an IEE or an IEE supplemented by a special study is sufficient for the project, then the IEE with the recommended institutional requirements and monitoring program become the completed EIA.