

Asian Development Bank

ENVIRONMENTAL ASSESSMENT GUIDELINES

2003

ABBREVIATIONS

ADB	–	Asian Development Bank
BME	–	Benefits Monitoring and Evaluation
CBD	–	Convention on Biological Diversity
CCO	–	Chief Compliance Officer
CEA	–	country environmental analysis
CP	–	cleaner production
CSP	–	country strategy and program
DMC	–	developing member country
EA	–	environmental assessment
EIA	–	environmental impact assessment
EMP	–	environmental management plan
ERP	–	environmentally responsible procurement
IEE	–	initial environmental examination
IPDP	–	Indigenous People's Development Plan
ISA	–	initial social assessment
LTSF	–	Long-term Strategic Framework
MEA	–	multilateral environmental agreement
MRM	–	Management Review Meeting
NGO	–	nongovernment organization
OM	–	Operations Manual
PAM	–	Project Administration Memorandum
PCR	–	project completion report
PPTA	–	project preparatory technical assistance
PSOD	–	Private Sector Operations Department
RD	–	regional department
REA	–	rapid environmental assessment
RRP	–	Report and Recommendations to the President
RSDD	–	Regional and Sustainable Development Department
RSES	–	Environment and Social Safeguard Division
SDP	–	Sector Development Program
SEIA	–	summary environmental impact assessment
SIEE	–	summary initial environmental examination
SME	–	small- and medium-scale enterprise
SRC	–	Staff Review Committee
TA	–	technical assistance
TOR	–	terms of reference

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PART 1: OVERVIEW OF ENVIRONMENTAL ASSESSMENT REQUIREMENTS AND PROCEDURES

I. INTRODUCTION

A. ADB's Environmental Assessment Mandate

1. Rapid population growth, dramatic changes in production and consumption patterns, and massive rural to urban migration have all contributed to environmental degradation. Unless environmental degradation is arrested, the growth rates necessary to reduce poverty will not be sustained and the millennium development goals will not be achieved. The Long-term Strategic Framework (LTSF) 2001-2015 of the Asian Development Bank (ADB) emphasizes the need to increase efforts to address environmental degradation. Environmental concerns are to be reflected in all ADB initiatives, whether at the project, sector, or national level.

2. The *ADB's Environment Policy* mandates the consideration of environment in all aspects of ADB's operations. The *Environment Policy and Operations Manual (OM) 20: Environmental Considerations in ADB Operations* outline ADB's environmental assessment procedures and requirements. These environmental assessment guidelines were prepared to facilitate the implementation of the Environment Policy and the OM 20.

B. Purpose

3. These guidelines are designed for use by ADB staff and its Borrowers to provide guidance on how to fulfill ADB's environmental assessment requirements. These guidelines were also prepared to guide consultants who need to know ADB's policies and procedures in preparation of an initial environmental examination (IEE) or an environmental impact assessment (EIA) report for a project under consideration. Guidance is also provided on more strategic tools such as country environmental analysis (CEA) and strategic environmental assessment (SEA). The guidelines may also be of use to nongovernment organizations (NGOs) and academe that are interested in ADB's environmental requirements and review processes. The current version of the Guidelines has also taken into account the need to harmonize, to the extent appropriate and possible, the procedures of the multilateral development banks.

C. Changes from Previous Environmental Assessment Guidelines

4. The guidelines update the existing environmental assessment guidelines adopted in the early 1990s. They take into account the lessons learned from implementing ADB's existing and previous guidelines. ADB's previous guidelines were a useful tool for environmental assessment for project loans. They served as useful guide for identifying impacts, and designing mitigation measures and monitoring requirements for specific projects in the industrial, energy, social infrastructure, agriculture and natural resources, and transport sectors. As the practice of environmental assessment evolved and the expectations for the environmental assessment process increased, it became clear that ADB's environmental assessment needs had also evolved. Past experience identified needs to (i) better integrate environmental concerns into the development of the country strategy and program, (ii) have a more transparent procedure for determining the environment category, (iii) formalize approaches for ADB's lending activities to financial intermediaries, (iv) refine approaches to sector lending where the subprojects and specific the locations may not be known in advance, and (v) strengthen requirements for environmental management plans.

5. The guidelines feature a number of changes to ADB's environmental assessment procedures and practices (Table 1):

- (i) introduction of rapid environmental assessment (REA) checklists for determining the environment category;
- (ii) introduction of CEA as a requirement in preparation of the country strategy and program (CSP);
- (iii) introduction of SEA as an optional tool for environmental assessment for program loans, sector development program loans, and sector loans;
- (iv) establishing a new category FI for lending activities to financial intermediaries and other intermediaries and outlining environmental assessment requirements to apply to this category;
- (v) strengthening the requirements of environmental management plans (EMP);
- (vi) recommending environmentally responsible procurement; and
- (vii) strengthening public consultation as in integral part of environmental assessment and management.

D. Organization of the Guidelines

6. The guidelines are organized into 2 parts. Part 1 is an Overview of Environmental Assessment Requirements and Procedures. It provides a description of procedural environmental requirements for the preparation of the country strategy and program, and in lending operations. Part 2 provides the technical guidance on:

- (i) Country Environmental Analysis,
- (ii) Determination of the Environment Category,
- (iii) Environmental Management Plans,
- (iv) Environmental Assessment for Program Loans,
- (v) Environmental Assessment for Sector Loans,
- (vi) Environmental Assessment of Financial Intermediation Loans and Equity Investments,
- (vii) Public Consultation and Information Disclosure
- (viii) Environmental Standards and Emission Levels,
- (ix) Social Dimensions and Environment Assessment,
- (x) Environmentally Responsible Procurement,
- (xi) Cultural Heritage,
- (xii) Strategic Environmental Assessment,
- (xiii) Cumulative Effects Assessment in Environmental Assessment,
- (xiv) Managing and Administering an Environmental Assessment Study,
- (xv) Economic Analysis in Environmental Assessment,
- (xvi) Multilateral Environmental Agreements, and
- (xvii) Environmental Auditing.

Table 1: Summary of Changes to Guidelines

	1993 Guidelines	New Guidelines
Country Program and Strategy	Required to take into account environmental concerns, but no tool was suggested	Requirement to conduct CEA for systematically taking into account environmental concerns at the country programming level
Determining the Environment Category	Employs 3 environmental categories (A, B, and C) based on the type of environmental impact of proposed projects	Employs 4 environment categories (A,B,C, and F)
Process to Classify Proposed Projects	Undertaken by Environment Division by using available information provided by the project division	Undertaken by Regional Department sector divisions by using the REA checklist
Sector Loans	Required to take into account the environmental concerns in selecting subprojects, but no tool was suggested. If sub-projects identified, initial environmental examination (IEE) or an environmental impact assessment (EIA) for sample core subproject required	Provides more specific guidance and recommends the use of SEA for systematically taking into account environmental concerns and to develop environmental selection criteria for subprojects, as well as to evaluate cumulative impacts. If subprojects have been identified, an IEE or EIA for sample projects is required
Program and SDP Loans	Required to take into account environmental concerns in formulating program and sector development program (SDP) loans by providing environmental policy matrix, but no tool was suggested	Provides more specific guidance and recommends use of SEA to assess the environmental implications of policy interventions to support formulation of the environmental of the policy matrix.
Environmental Management Plan (EMP) as Part of an IEE and EIA Report	Very little guidance was provided to formulate an EMP	Detailed guidance on how to formulate an EMP is provided, and therefore, it can be interpreted easily for implementation in all stages of project processing and operation
Environmentally Responsible Procurement	Very little guidance on procurement	Provides more specific guidance and recommends use of environmentally responsible procurement as part of the EMP
Public Consultation	Little guidance on consultation	Strengthened requirements for public consultation and specific guidance provided

7. Part 2 is supported by technical appendixes providing more detailed guidance including

- (i) Rapid Environmental Assessment Checklists,
- (ii) Content and Format for EIA reports,
- (iii) Content and Format for IEE reports,
- (iv) Environmental Assessment of Policy Matrix,
- (v) Environmental Assessment of Sector Loans,
- (vi) Environmental Assessment and Review Procedures, and
- (vii) Environmental Assessment of Financial Intermediation Loans and Equity Investments.

E. Commitment to Improvement

8. In preparation of these guidelines, effort was made to reflect the current implementation of the ADB environmental assessment procedures, and to provide knowledge on international good practice in environmental assessment. The practice of environmental assessment is still evolving and new methods and approaches are being developed within the ADB and in environmental assessment community outside of ADB. The Environment and Social Safeguard Division (RSES) of the Regional and Sustainable Development Department (RSSD) and the ADB Environment Committee are committed to improve the guidelines through regular review of the effectiveness of the guidelines and the systematic incorporation of new knowledge on best practices in environmental assessment.

F. Need to Adapt Guidelines to Fit the Circumstances

9. No set of guidelines can provide a comprehensive set of tools and techniques for conducting environmental assessment. And no set of guidelines can include all the potential impacts and mitigation measures for every possible case. Each individual assessment is expected to consider the specific aspects of the project, the environment, and institutional context. The key is to identify all relevant environmental issues, focus the assessment on the most significant issues, and develop a plan to address the environmental issues. The guidelines provide recommended approaches and formats that are to be adapted to fit the circumstances of the assessment.

G. Harmonization

10. These guidelines have been developed within the context of the overall efforts of multilateral development banks efforts at harmonization of environmental assessment procedures. The guidelines are also designed to be flexible enough for use in ADB's DMCs.

II. ADB's ENVIRONMENTAL ASSESSMENT PROCESS

A. Integrating Environmental Considerations into ADB Operations

11. ADB's Environment Policy requires that environmental considerations be incorporated into ADB operations. Environmental assessment is the primary administrative tool to integrate environmental considerations into decision-making of all types of development initiatives such as formulating policies, programs, and development plans or projects to ensure that proposed development will have minimal environmental impacts and be environmentally sound.

12. Environment is considered at all stages of the ADB's business processes from country strategy and program development through Project Preparation Technical Assistance and Loan (PPTA/Loan) processing to completion and post evaluation (Figure 1). ADB requires the use of CEA to integrate environmental concerns at the programming level. In PPTA/Loan Preparation, all loans are subject to environmental categorization, impact assessment, safeguard compliance, and preparation of loan covenants. During loan implementation and supervision, ADB review missions are undertaken to review the progress on implementation of the mitigation and monitoring requirements outlined the environmental management plan. During project completion and project evaluation, reports are prepared to document the actual environmental impacts, the degree of implementation of the environmental management plan, and to evaluate the overall effectiveness of the EMP in reducing and preventing adverse environmental impacts.

Figure1: Environmental Requirements in ADB's Business Processes

Business Process	Key Stage	Environmental Assessment Requirements
Country Strategy and Program	CSP	Country Environmental Analysis
PPTA/Loan Processing	Project Identification	Environmental Categorization Rapid Environmental Assessment
	Pre Design	
	Project Design	Environmental Assessment
	Loan Processing	Safeguard Compliance
		Formulation of Loan Covenants
Loan Implementation and Supervision	Loan Inception	Review of Environmental Management Plan Implementation
	Mid-term Loan Review	
Project Completion and Evaluation	Project Completion Report	Review of Actual Impacts and Environmental Management Plan Effectiveness
	Post Evaluation Report	

B. Integrating Environmental Considerations into the Country Strategy and Program

1. Country Environmental Analysis

13. The ADB's new business processes require an assessment of environmental considerations as a fundamental part of the supporting thematic analyses for the CSP.

14. A CEA will be prepared as an input to the CSP exercise. It will provide the necessary background information for informed decision making on environmental constraints, needs, and opportunities in a developing member country (DMC), including those that impinge upon poverty partnership agreements. The CEA will outline environmental issues that are most important to a DMC's development strategy and describe ADB's role in helping remove the environmental constraints on the DMC's sustained development. The assessment is directed at the policy, program, and sector levels, although it may highlight issues associated with environmental sensitive projects in the pipeline. The CEA is envisaged as a participatory process that is initiated before the CSP, and continues through CSP preparation to assess potential environmental issues associated with the CSP.

15. The CEA is prepared by the regional department (RD) concerned, and will focus specifically on relevant sectors and institutional analysis of direct concern to ADB operations. The analysis will be tailored to the requirements of each DMC, and will purposefully build on complementary work undertaken by other agencies. In addition to enhancing the consideration given to environmental factors in formulating policies, plans, and programs, the information and analysis contained in the CEAs will support and facilitate the downstream environmental assessment of individual ADB-financed projects. The CEA will also provide a basis for monitoring country environmental performance.

16. Guidance for conducting CEA, which will provide a systematic, replicable approach, is being developed.¹ A suggested method and approach to country environmental analysis is provided in Part 2, Chapter IV. In general, a CEA should include:

- (i) description of role of environment and natural resources in the economy;
- (ii) identification of environmental issues, problems, constraints and opportunities that are directly relevant to the DMCs development strategy;
- (iii) institutional analysis for environment and natural resource management;
- (iv) review of country's record in environmental matters;
- (v) environmental indicators and monitoring requirements;
- (vi) an overview ADB sectoral strategies and work programs, and links between ADB strategies and work program with the Government, bilateral and multilateral funding agencies operating in the country;
- (vii) needs for technical or financial support for priority and unfunded environmental projects, if any;
- (viii) assessment of environmental consequences of CSP; and
- (ix) conclusions on environmental benefits and adverse implication of CSP; and
- (x) recommendations to ensure environmentally sustainability of CSP

¹ Methods and approaches for CEA are being developed and tested as part of ongoing preparation of the country and strategy programs in cooperation with other multilateral development banks and development assistance agencies in order that commonly required information can be of high quality, efficiently collected and analyzed, and result in consistent policy and program recommendations.

C. Environmental Requirements in PPTA/Loan Processing

17. ADB requires environmental assessment of all project loans, financial intermediation loans, program loans, sector loans, sector development program loans, and private sector investment operations.² ADB's environmental assessment process starts as soon as potential projects³ for ADB financing are identified, and covers all project components whether financed by ADB, cofinanciers, or the Government. Potential projects in a DMC are normally identified and conceived in the technical assistance and lending programs as presented in the CSP or CSP update.

1. Overview of Lending Modalities

18. **Project Loans (OM 3, OM 4).** Project loans are given by ADB to assist a DMC for project-related investments. Among other things, project lending is aimed at developing energy, agriculture, transport and communications, and other basic infrastructure as well as health and education..

19. **Sector Lending (OM 5).** Sector lending is a form of ADB assistance to a DMC for project-related investments based on considerations relating to a sector or subsector as a whole in the DMC. The purpose of a sector loan is to assist in the development of a specific sector or subsector by financing a part of the investment in the sector, planned by the DMC. Such lending is appropriate particularly when a large number of subprojects in the sector or subsector are to be financed. A sector loan is expected to improve sector policies and strengthen institutional capabilities.

20. **Program Lending and Sector Development Programs (OM 6).** Program loans are given by ADB to assist a DMC in developing a sector (or subsector) as a whole and improving a sector's performance through appropriate policy and institutional improvements over the medium to long term. Program loans are given only to DMC governments. A broad-based sector reform and development plan that will enhance sector efficiency and performance, comprising in particular policy changes and institutional enhancement, is the basis for program lending. Program loans, as well as SDPs, should be targeted at sectors where the government is firmly committed to reform, but where significant economic, financial, or social costs are associated with the reform program are likely to hinder its smooth and timely implementation without the additional support and inducement provided by a program loan. Strong government ownership of the reform program is essential.

21. **Rehabilitation Assistance After Disasters (OM 25).** ADB's policy is to assist in the rehabilitation efforts of its DMCs after they are struck by disasters. These may be natural and sudden in their impact (e.g., floods, earthquakes, windstorms, tidal waves, volcanic eruptions, wildfires, landslides, and avalanches), slow in materializing (e.g., crop failures, environmental degradation, and droughts), or caused by human action (e.g., civil strife). ADB's assistance seeks to enable DMCs to continue their development expenditures that otherwise would have to

² Emergency rehabilitation loans are subject to the same environmental assessment requirements.

³ In the context of describing the environmental assessment of projects, the term "project" is defined here as a Borrower's planned undertaking and the recommended environmental assessment activities refer to project loans and to program loans, sector loans, sector development program loans, financial intermediation loans, and private sector loans and investment operations, unless otherwise stated.

be reallocated for disaster rehabilitation. ADB's rehabilitation loan finances immediate needs for specific repairs that are aimed at rapid restoration of infrastructure and production facilities subsequent to the disaster. ADB does not finance relief operations such as providing emergency food, temporary shelter, medical supplies, etc.

22. Emergency Rehabilitation Assistance Loans for Small DMCs (OM 24). ADB has a special facility to assist small island DMCs in speedily restoring vital economic infrastructure and social services following damage caused by natural disasters. The emphasis is on financing urgent rehabilitation requirements, primarily to re-establish the status quo ante, leaving any more substantial expansion and modernization needs to be addressed in a potential future loan proposal.

23. Financial Intermediation Loans and Equity Investments. DMCs use financial intermediaries to manage funds received from government, multilateral development banks (including ADB), other donors, and the financial markets. The financial intermediaries act as intermediaries in providing loans and equity contributions to public or private sector organizations in sectors, or subsectors, such as agriculture, industry, and small-scale or medium-scale enterprises. Financial intermediaries include commercial banks and other financial institutions. ADB can support financial intermediary operations in both the public and the private sectors.

24. Private Sector Loans (OM 7). ADB's Private Sector Operations Department (PSOD) provides loans or equity investments directly or indirectly to private enterprises, private equity funds, and financial intermediaries. ADB assistance may be provided in one or more of the following forms: (i) loans to financial institutions to finance small and medium scales private enterprises; (ii) direct loans to medium and large scale enterprises; (iii) equity investments in private enterprises including private financial institutions; underwriting of issues of debt instruments on national or international security markets; (v) assistance of infrastructure projects; (vi) guarantees of debt service obligations of private enterprises with or without counter-guarantees of DMC governments.

2. Determining the Environment Category

25. All loans and investments are subject to classification for the purposes of determining environmental assessment requirements. Environment categories are to be determined (see Chapter V for a detailed description) using REA. REA uses sector-specific checklists developed based on the ADB's past knowledge and experience. These checklists consist of a set of questions relating to (i) the sensitivity and vulnerability of environmental resources in project area, and (ii) the potential for the project to cause significant adverse environmental impacts. Checklists have been developed for many sectors and are included in Appendix 1.

26. The process of determining a project's environment category is to be initiated by the RD sector division, which will prepare a REA screening checklist, taking into account the type, size, and location of the proposed project. Through REA, a project is classified as one of the environmental categories (A, B, C, or FI). The RD sector division director will submit proposed environment category and the checklist to the Director, RSES for concurrence or further discussion as required. Final categorization will be the responsibility of the chief compliance officer (CCO). As defined in OM 20, Projects are classified into

- (i) Category A: Projects with potential for significant adverse environmental impacts. An environmental impact assessment (EIA) is required to address significant impacts.
- (ii) Category B: Projects judged to have some adverse environmental impacts, but of lesser degree and/or significance than those for category A projects. An initial environmental examination (IEE) is required to determine whether or not significant environmental impacts warranting an EIA are likely. If an EIA is not needed, the IEE is regarded as the final environmental assessment report.
- (iii) Category C: Projects unlikely to have adverse environmental impacts. No EIA or IEE is required, although environmental implications are still reviewed.
- (iv) Category FI: Projects are classified as category FI if they involve a credit line through a financial intermediary or an equity investment in a financial intermediary. The financial intermediary must apply an environmental management system, unless all subprojects will result in insignificant impacts.

27. **The Environment Category is based on the Most Sensitive Component.** The determination of the environment category is to be based on the most environmentally sensitive component of the project. This means that if one part of the project is with potential for significant adverse environmental impacts, then project is to be classified as Category A regardless of the potential environmental impact of other aspects of the project. Similarly, if the most sensitive component is classified B, then the project is to be classified B. Of course only those aspects of the project with potential for significant adverse environmental impacts need to be assessed in detail. The scoping for the environmental assessment and the terms of reference (TOR) for the environmental assessment report should focus on the significant environmental issues.

28. **Confirmation of Categorization.** Projects are tentatively assigned a category during an initial screening of anticipated potential environmental impacts on the basis of a concept document. This category is reconfirmed by the chief compliance officer at the time of the management review meeting.⁴ However, categorization is an ongoing process, and the environment category can be changed at any time with the approval of the chief compliance officer as more detailed information becomes available and project processing proceeds.

3. Environmental Assessment Reporting

29. The Borrower prepares EIA reports⁵ for category A projects and IEE reports⁶ for category B projects. The Borrower also prepares the summary EIA (SEIA) or summary IEE (SIEE) reports highlighting the main findings of the IEE or EIA. ADB recognizes that

⁴ The classification is reconfirmed in the safeguard policy compliance memorandum issued by the chief compliance officer.

⁵ A typical EIA report includes the following major elements: (i) description of the project, (ii) description of the environment, (iii) anticipated environmental impacts and mitigation measures, (iv) alternatives, (v) economic assessment, (vi) an environmental management plan that includes institutional requirements and environmental monitoring program, (vii) public consultation and disclosure, and (viii) conclusion. The report is prepared by the Borrower and reviewed and cleared by the EIA regulatory agency of the borrowing country and ADB.

⁶ A typical IEE includes the following major elements: (i) description of the project, (ii) description of the environment, (iii) potential environmental impacts and mitigation measures, (iv) institutional requirements and environmental monitoring program, (v) public consultation and disclosure (vi) findings and recommendations, and (vii) conclusion.

conventional project-focused EIA has limited application to policy-based lending instruments, like program loans. The format of the environmental assessment report for program loans is therefore flexible, but includes a matrix describing the environmental consequences and mitigation measures for the policy actions underpinning the program loan. For sector loans, the content of the environmental assessment report will include a description of the institutional arrangements and process to be followed for environmental assessment of subprojects to be approved during implementation. For projects that are classified as category FI, the environmental assessment report will include a description of the environmental management system to be applied by the financial intermediary. The results described in environmental assessment reports, including environmental management plans, should be reflected in the report and recommendations of the President (RRP).

4. Public Consultation and Information Disclosure

30. **Public Consultation.** ADB requires public consultation in the environmental assessment process. For category A and B projects, the Borrower must consult with groups affected by the proposed project and local nongovernment organizations. The consultation should be carried out as early as possible in the project cycle so that views of affected groups are taken into account in the design of the project and its environment mitigation measures. Such consultation will also take place during project implementation to identify and help address environmental issues that arise. For category A projects, the Borrower will ensure that consultation will take place at least twice: (i) once during the early stages of EIA field work; and (ii) once when the draft EIA report is available, and prior to loan appraisal by ADB. The public consultation process needs to be described in the EIA and SEIA reports. Chapter X describes the best practice for consulting stakeholders and providing access to information.

31. In cases where the environmental assessment report for a project has been completed prior to ADB involvement in that project, ADB will review the public consultation and disclosure carried out by the project sponsor during and after preparation of the environmental assessment report. If necessary, ADB and the project sponsor should then agree on a supplemental public consultation and disclosure program to meet the requirements of OM 20 and address any deficiencies identified by ADB. If the project is classified as category A, and no consultation whatsoever has been carried out⁷, then the sponsor should agree to (i) consult with stakeholders on the draft EIA and incorporate their views in a revised EIA; and (ii) consult stakeholders on the revised EIA, and how it addresses their concerns.

32. **Information Disclosure.** Environmental assessment reports for ADB projects are accessible to interested parties and the general public. The SIEE and SEIA reports are required to be circulated worldwide, through the depository library system and on the ADB web site. The full EIA or IEE reports are also made available to interested parties on request. ADB's "120 day rule" requires that the SEIA, or in the case of category B projects that are deemed environmentally sensitive⁸, the SIEE, is available to the general public at least 120 days before

⁷ No or limited public consultation would be contrary to good practice and inconsistent with most DMC's environmental assessment requirements.

⁸ Category B projects that are deemed by ADB's Chief Compliance Officer to be environmentally sensitive for the purposes of (i) the 120 day rule, and (ii) the environmental management plan requirements could involve: projects that are near environmentally sensitive areas; projects that involve deforestation or loss of biodiversity; projects that involve involuntary resettlement issues; projects that involve the processing, handling and disposal of toxic and hazardous substances; or projects that involve other environmentally sensitive activities that also may be of concern to a wide group of external stakeholders.

ADB's Board of Directors considers the loan, or in relevant cases, before approval of significant changes in project scope or subprojects. The 120-day rule applies to all public and private sector category A projects and to those category B projects deemed to be environmentally sensitive. To facilitate the required consultations with project-affected groups and local nongovernment organizations, the Borrower will provide information on the project's environmental issues in a form and language(s) accessible to those being consulted.

33. **Environmental Management Plans and Loan Covenants.** Category A and category B projects deemed to environmentally sensitive require, as part of the environmental assessment process, the development of EMPs that outline specific mitigation measures, environmental monitoring requirements, and related institutional arrangements, including budget requirements. Loan agreements include specific environmental covenants that describe environmental requirements, including the EMPs. The provisions for the EMPs must also be fully reflected in the project administration memorandums.

5. Environmental Assessment and Review for Project Loans

34. Environment must be considered at all stages of the project cycle from project identification through implementation. This section provides a detailed description of the environmental assessment and review process for project loans in terms of activities that take place during the project cycle. The environmental assessment requirements depend on the environment category (Table 2). Category A projects have the most stringent requirements and need the highest level of effort and resources; category B have less stringent requirements, and category C, has the minimum requirements.

Table 2: Environmental Assessment Requirements for Project Loans

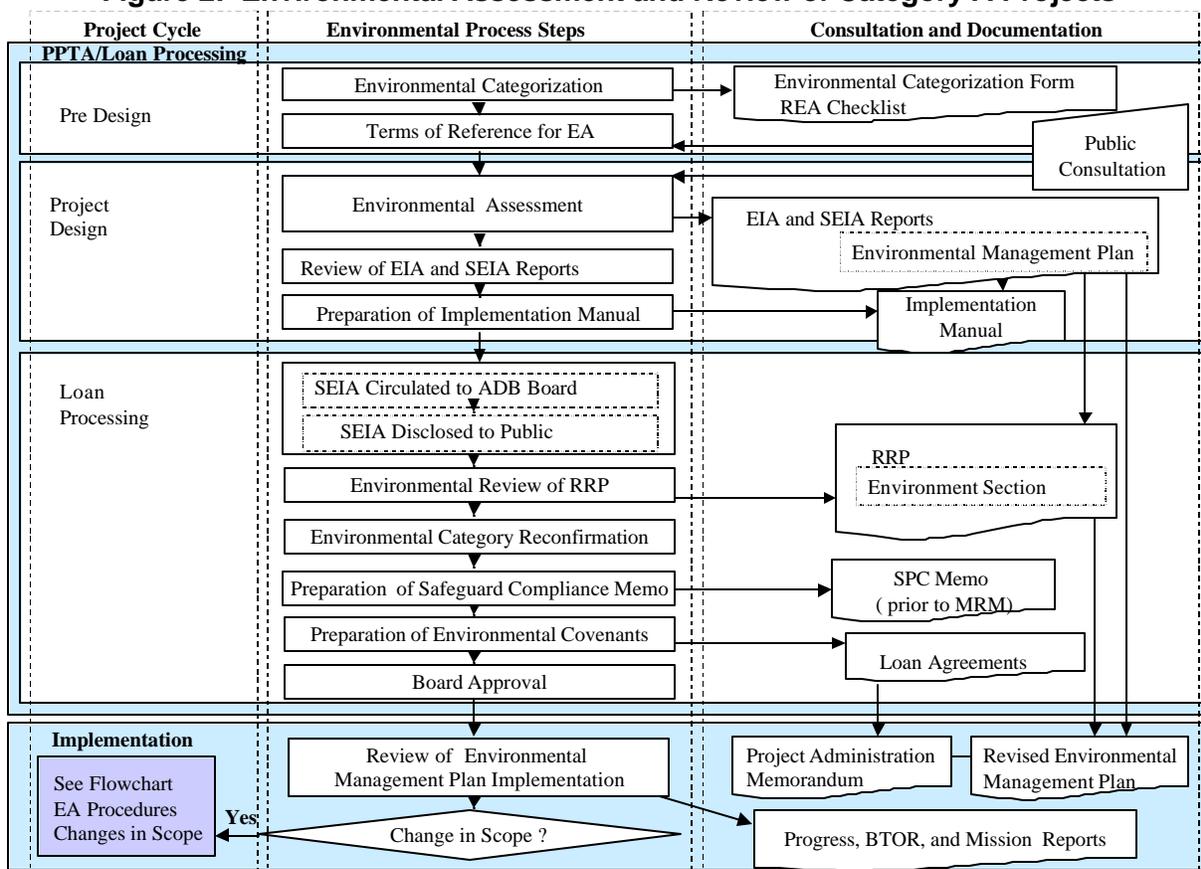
Category	Basic Environmental Assessment Requirements
A. Projects with potential for significant adverse environmental impacts (OM 20)	<ul style="list-style-type: none"> • EIA • Public consultation (at least twice) • EIA report to be prepared (see Appendix 2 for contents) • Environmental management plan and budget to prepared • SEIA to be circulated to the Board 120 days prior the Board consideration • SEIA to be disclosed to public • EIA available to public on request

Category	Basic Environmental Assessment Requirements
B. Projects judged to have some adverse environmental impacts – but of lesser degree and/or significance than category A (<i>OM 20</i>)	<ul style="list-style-type: none"> • IEE • Public consultation • IEE report to be prepared (see Appendix 3 for contents) • For projects deemed to be environmentally sensitive, <ul style="list-style-type: none"> (i) SIEE to be circulated to the Board 120 days prior to Board consideration (ii) SIEE to be disclosed to public (iii) Environmental management plan and budget to be prepared • IEE available to public on request • if it is not circulated, the SIEE is normally to be attached as a core appendix to the RRP
C. Projects unlikely to have adverse environmental impacts (<i>OM 20</i>)	<ul style="list-style-type: none"> • No IEE or EIA • Environmental implications to be summarized in the RRP

a. Category A

35. In ADB's business processes, environmental categorization during project design is the first step in the environmental assessment of a project loan (Figure 2). Because a category A project has potential for significant adverse environmental impacts, it is necessary that a rigorous scoping to determine the TOR for the EIA be undertaken at this early stage in project preparation.

Figure 2: Environmental Assessment and Review of Category A Projects



36. **Scoping⁹ during PPTA Fact Finding.** In many projects, project preparation is supported by a PPTA¹⁰. During the PPTA Fact-finding Mission, participation by an Environment Specialist from the RD is desirable to: (i) to inform the borrower of the environmental category and corresponding environmental assessment requirements, and (ii) to discuss and agree with the borrower and environmental agencies on a TOR for the EIA. Based these discussions the environment category should be confirmed or the project reclassified, if necessary. The Mission's environmental assessment activities usually involve: (i) collection of information in the field, (ii) conducting reconnaissance surveys of the potential sites for projects, and (iii) holding discussions with all concerned agencies. The Mission assesses the environmental policy, management system, and capacity of the executing agency and determines the need for any institutional strengthening. Through consultation, where appropriate, the Mission discloses the project information¹¹ to project-affected people and local NGOs to solicit their views and concerns - taking account of their comments and suggestions.

⁹ Scoping is a process for determining the issues to be addressed, the information to be collected, and the analysis required to assess the environmental impacts of a project.

¹⁰ Note private sector projects do not use PPTAs for project preparation.

¹¹ The information disclosed includes the project's objective, description, and potential impacts

37. The findings of the Mission may include:

- (i) an evaluation of the environmental soundness of the concept, approach, and prospective sites of the project;
- (ii) an evaluation relevant environmental legislation including environmental standards,
- (iii) a review of the DMC's administration of the EIA process and degree of participation in multilateral environmental agreements;
- (iv) an identification of major environmental concerns;
- (v) an exploration of other feasible technology and design alternatives;
- (vi) a determination of the level and scope of environmental assessment; and
- (vii) an assessment of the environmental management capability of the executing agency.

38. **Terms of Reference for the EIA.** The findings of the mission are used to prepare the draft TOR, cost estimates, and implementation arrangements for the EIA. The draft TOR are to be discussed and agreed to with the national environmental agency. ADB, the executing agency, and the national environmental agency then agree on the level of effort and TOR for the environmental assessment.

39. The TOR defines the scope of the environmental assessment, the responsibilities or obligations of the environmental assessment team, and the expected outputs, and may include:

- background of the project;
- objectives, scope, and size of the project;
- delineation of the area(s) to be covered by the environmental assessment;
- brief description of the potential environmental problems and possible alternatives to address the environmental problems that the consultants will be required to investigate;
- description of the expected outputs, including information to be collected, analysis of environmental impacts of alternative project sites and designs, mitigation measures, monitoring programs, an EMP, and action plan for implementing the EMP;
- estimates of inputs required for the environmental assessment;
- institutional involvement/strengthening;
- public consultation and information disclosure action plan; and
- arrangements for implementing the environmental assessment.

40. The TOR for EIA are incorporated into the draft PPTA paper. At this stage, RSES reviews and provides comments, with particular emphasis on the TOR. After the TA paper is approved and early in the field work of the PPTA, the environment assessment team is to disclose the TOR to the affected people and local NGOs to seek additional views and concerns to be included as part of the EIA study. In addition, the final TOR for the EIA should be discussed and agreed to by the executing agency, and the national environmental agency.

41. **Environmental Impact Assessment.** During the project design, the EIA should be undertaken as part of the feasibility study. The environmental assessment team should work closely with the technical planning and design group to ensure that environmental considerations are integrated into the project design. Representatives of the executing agency should participate as members of the environmental assessment team. Their participation in field work, public consultations and report writing will increase their understanding of the environmental issues and will help build institutional capacity in EIA. In general, the environmental assessment team will:

- (i) coordinate with government concerned and environment agencies;
- (ii) prepare a project description, define the study area, collect environmental baseline data, prepare site maps, and other relevant maps for the study area;
- (iii) identify potential environmental impacts based on the information obtained on the proposed project and the baseline environmental conditions of the study area;
- (iv) identify alternatives and analyze the environmental impacts of each alternative and propose measure to avoid or prevent impacts;
- (v) estimate the magnitudes of environmental impacts and assess the significance of the impacts;¹²
- (vi) recommend environmental mitigation measures and estimate the mitigation costs;
- (vii) prepare an EMP to be implemented by the executing agency during project implementation, operation and abandonment;
- (viii) prepare the EIA and SEIA reports;
- (ix) conduct public consultation and ensure information disclosure; and develop plans for public consultation and information disclosure during project implementation;
- (x) assess the executing agency's capacity to undertake an environmental review of the environmental assessment report and EMP recommendations, and recommend measures for capacity building, if necessary; and
- (xi) ensure that the proposed project, with EIA and EMP implementation, conforms to the Government and ADB environmental assessment requirements, policies and regulations.

42. **Review of the Draft EIA and SEIA Reports.** The draft EIA, as well as SEIA, which highlights the main findings of the report, is to be reviewed by ADB (RD sector division and then

¹² The assessment of the significance should include consideration of whether the impacts are (i) acceptable, (ii) acceptable after mitigation measures are applied, or (iii) are unacceptable – because of significant adverse impacts to people and their livelihoods, or because there will be an irreversible impact on the ecosystem.

RSES) and the executing agency. The Borrower should provide the SEIA conclusions to the project-affected people and local NGOs to solicit their comments. The Borrower should also solicit the comments of the national environmental agency on the draft environmental assessment documents. Comments are to be incorporated in the final environmental assessment reports together with those of ADB, the project executing agency, the affected groups and local NGOs.

43. **Environmental Considerations in Loan Fact Finding.** During the early stages of loan processing, loan fact finding is undertaken to: evaluate the soundness of the proposed project; identify unresolved issues; identify loan covenants; revise the project design and implementation plan, as appropriate; prepare an appropriate financing plan and determine a suitable ADB loan amount; and reach initial agreement with the Borrower on various aspects of project implementation. At this stage, the EIA results and recommendations including mitigation costs and EMP costs should be available and incorporated into the proposed project design.

44. The loan fact-finding Mission is to assess the institutional capability of the executing agency and environmental agency and designs appropriate implementation and institutional arrangements for the environmental monitoring program. Consistent with the specific environmental requirements of the DMC, the national environmental agency clears the EIA and SEIA reports. Agreement is then reached with the executing agency on the implementation of the EMP.

45. The final environmental assessment documents prepared under the PPTA are further reviewed and processed. The environment specialist in the RD reviews the SEIA report. From the safeguard compliance point of view, RSES reviews the report to ensure that the environmental assessment recommendations comply with ADB's environmental assessment requirements. The project executing agency and the national environmental protection agency make a final review the EIA and EIA reports. The executing agency then officially submits the EIA and SEIA reports to ADB for submission to the Board of Directors or for incorporation in the RRP. The SEIA report is edited by the Economics Editor prior to circulation to the Board of Directors and the public. The cover memo, attached to the report, highlights that the report is a Borrower's document and that it has not been formally reviewed nor approved by ADB.

46. **Circulation to the Board.** SEIA is to be submitted to the Board at least 120 days before Board consideration. The SEIA and the EIA, if requested, may also be made available by ADB to locally affected groups and NGOs through the Board of Directors. The RD also provides RSES with copies of the SEIA. Similarly, a copy of the report is provided the CCO; Director, RSES; and General Counsel, OGC.

47. **Disclosure of the SEIA to the Public.** After Management approval to circulate the report to the Board has been sought, the report is forwarded to the Secretary's office for circulation and posting in the ADB website. The Office of External Relations circulates the report to the members of the ADB Library Depository Program and places this in the ADB website.

48. **Environmental Review of the RRP.** ADB's final evaluation of the environmental aspects of the project including loan covenants and assurances are documented in the environment section of the RRP. An economic evaluation of environmental impacts is also to be incorporated in the RRP. The RRP should document any prominent recommendations of the EMP, environmental loan covenants, and other special features. If any changes to the project that have been made after SEIA circulation to the Board, an assessment of any environmental impacts associated with these changes should be included.

49. RSES reviews the first draft of the RRP and provides advice to the Mission on safeguard compliance issues. The Mission includes its response in an Issues Matrix, which documents how any issues raised by RSES will be addressed in subsequent processing of the project.

50. **Issuance of the Safeguard Policy Compliance Memo before the MRM.** The MRM is a critical checkpoint for environmental safeguard compliance with ADB's safeguard policies. Compliance is assessed based on the review by RSES and the Issues Matrix prepared by the Mission leader. Immediately prior to the MRM the CCO issues the Safeguard Policy Compliance (SPC) Memorandum. The SPC memorandum advises Management either that (i) the project in compliance, or (ii) certain actions are necessary to ensure compliance prior to the second MRM.

51. During loan appraisal, if undertaken, the Mission makes a final evaluation of the proposed project, refines the project design, addresses issues raised at the MRM, resolves pending issues with the project executing agency and the government, and finalizes implementation arrangements. At this stage, environmental aspects are to be integrated with the technical, institutional, economic, and financial aspects of the project, and the foundation is laid for implementing and evaluating the project. The Environment Specialist in the RD is to confirm final agreement on the implementation of the EMP executing agency and the national environmental agency.

52. **Environmental Loan Covenants.** At this stage, loan covenants are to be finalized and included in the Loan Agreement to ensure efficient and effective EMP implementation by the agencies concerned, including the executing and environmental agencies. The environmental covenants should cover the following:

- key environmental mitigation measures and monitoring requirements;
- institutional arrangements and responsibilities for EMP implementation;
- requirements for evaluating the EMP's effectiveness, and reporting to ADB; and
- special requirements, as necessary, for public consultation and environmentally responsible procurement.

53. During the Loan Appraisal, the Mission should confirm clearance of the environmental assessment by the national environmental agency and the final agreement reached with the project executing agency and the national environmental agency on the implementation of the EMP. At this stage, the project team leader assisted by the RD environment specialist should translate the relevant provisions of the EMP into the Project Administration Memorandum.

54. Before the second MRM or Staff Review Committee (SRC) meeting, RSES reviews the revised RRP, and where warranted, issues a second SPC memo to advise Management of environmental safeguard risks posed by the project. For fully compliant projects, RSES reaffirms its satisfaction of the project's environmental safeguards in a memo to the Mission leader.

b. Category B

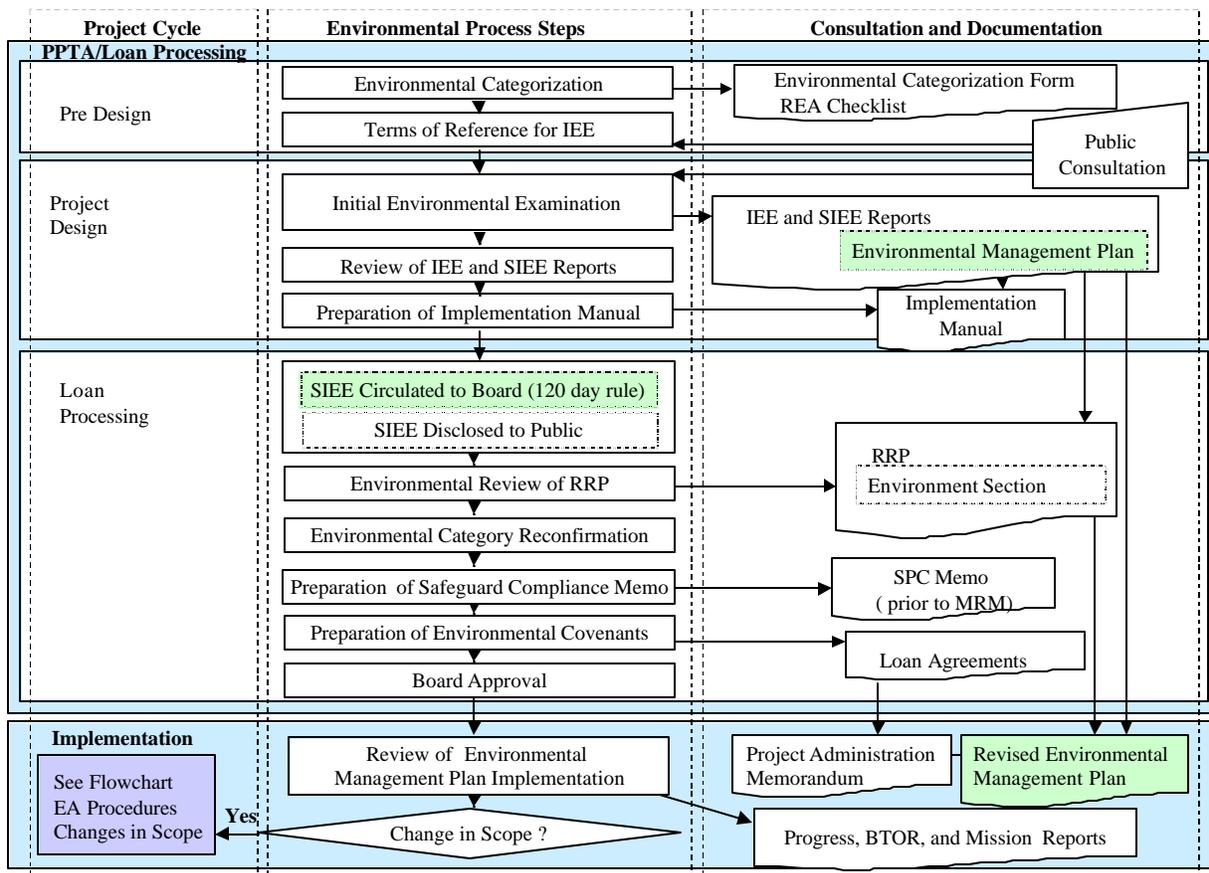
55. Category B projects must follow the same general set of steps as Category A projects (Figure 3). However, the environmental assessment requirements for Category B are less stringent than those for Category A. The main differences are:

- (i) the requirement is for an IEE, which has a more limited scope and content than an EIA;

- (ii) less public consultation is required; and
- (iii) with the exception of projects deemed to be environmentally sensitive, there is no specific requirement for an EMP; and circulation to the Board and public disclosure of the SIEE are not required to meet the “120 day rule”.

56. **Terms of Reference for the IEE.** In general, the scope of the IEE is more limited and the level of effort to prepare the IEE is significantly less than for an EIA. Specifically, there is limited consideration of alternatives and a description of “institutional arrangements and environmental monitoring plan” replaces the requirement for preparation of an EMP.

Figure 3: Environmental Assessment and Review of Category B Projects



Green shaded areas only apply to Category B projects deemed environmentally sensitive

57. **Initial Environmental Examination.** The IEE should be conducted as part of feasibility study. The environmental assessment team should work closely with the technical planning and design group to ensure that environmental considerations are integrated into the project design. While scope of the IEE TOR is the more limited and the level of effort needed smaller, the environmental assessment team conducts many of same tasks and analysis as required for an EIA (see Appendix 3). The IEE must come to a conclusion as to “whether or not significant

environmental impacts warranting an EIA are likely.” If the EIA is warranted, the IEE must provide a recommendation on scope and TOR for the EIA.

58. **Review of Draft IEE and SIEE.** The draft IEE, as well as SIEE, which highlights the main findings of the IEE, is reviewed by ADB (RD sector division and then RSES) and the executing agency. Depending the scope of public consultation activities, additional comments may be sought from the project affected people and other stakeholders. All comments are to be incorporated into the final documents. The project executing agency and the national environmental protection agency make a final review the IEE and SIEE reports. The executing agency then officially submits the reports to ADB for submission to the Board of Directors or for incorporation in the RRP, as required. The SIEE report is edited by the Economics Editor prior to circulation to the Board of Directors and the public. The cover memo, attached to the report, highlights that the report is a Borrower’s document and that it has not been formally reviewed nor approved by ADB.

59. **Circulation to the Board and Disclosure to the Public.** SIEE reports are required to be circulated world wide, through the depository library system and ADB web site. IEEs will also be made available on request. Only Category B projects deemed to be environmentally sensitive have the requirement that SIEEs must be circulated to the Board and disclosed to the public following the “120 day rule”.

60. **Environmental Review of the RRP.** As with category A projects, ADB’s final evaluation of the environmental aspects of the project, loan covenants and assurances are included, and special features of the project are documented in the RRP. Unless it is has been circulated, the SIEE is normally attached as a core appendix of the RRP.

61. From this stage onward, the environmental assessment steps (review by RSES, issuance of the SPC Memo, loan covenants) are the same as for Category A projects.

c. **Category C**

62. Category C projects do not require the preparation of EIAs or IEEs. However, environmental assessment is to be undertaken. The environmental implications of these projects need to be assessed. The assessment is to be reported in the RRP. In some instances, capacity building activities during implementation may be needed to ensure that environmental considerations are addressed. In other cases, environmental loan covenants may be needed to ensure to ensure compliance with environmental and social safeguards policies.

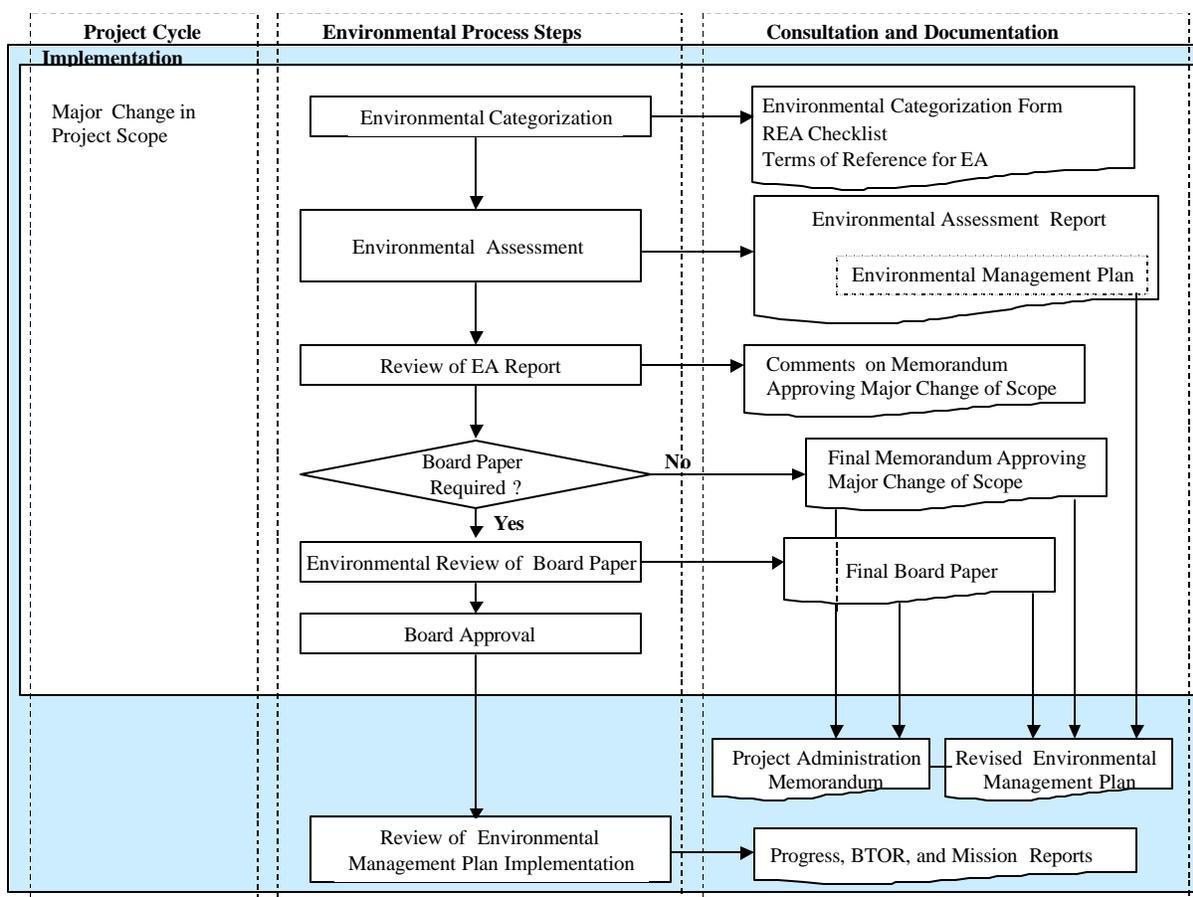
d. **Change in Scope During Implementation and Supervision**

63. Project implementation commences after the loan is declared effective, and includes the preparation of detailed engineering designs and tender documents, construction of project facilities or physical development of project sites, and testing and commissioning of project facilities. Mission leaders should provide copies of the back-to-office reports (BTORs) of review missions to RSES. The BTOR should provide details on major environmental issues discovered during field visits and on proposed remedial measures, with an indication of the nature of follow-up action needed.

64. Major changes in a project will trigger the environmental assessment process (Figure 4). A major change is one that materially alters or fundamentally affects the project’s purpose (immediate objectives), components, costs, benefits, procurement, or other implementation

arrangements as approved by the Board.¹³ All major changes in scope will be screened for environmental significance, and the environment category determined. All proposed changes classified as category A will require an EIA, and those classified as B, will require an IEE. In the case of environmentally sensitive changes, the SEIA or SIEE will be made available to the general public, as well as the Board of Directors, at least 120 days before the change in scope is approved.

Figure 4. Environmental Assessment and Review of a Major Change in Scope



6. Environmental Assessment and Review of Program Loans

65. Program loans must follow the same general environmental assessment and review process as projects loans. However, analysis of environmental impacts takes on different form. ADB requires that the environmental impacts of policy actions associated with program loans be evaluated, and that appropriate mitigation measures be identified and incorporated as loan covenants. The environmental assessment will focus on the policy actions to be supported by the program loan. While IEEs and SIEEs or EIAs and SEIAs do not have to be prepared for program loans, unless there is also an investment component in the loan, a matrix of potential environmental impacts of each policy action, together with appropriate mitigation measures, will

¹³ Project Administration Instructions 5.04 on Change on Project Scope or Implementation Arrangements.

be prepared for each program loan, with a qualitative indication of the likely order of magnitude of each impact and brief reasons for the judgment. The principles followed in preparing the matrix include screening of potential environmental impacts (including indirect impacts); mitigation of potential adverse impacts; and ensuring that the institutional basis for implementing mitigation measures, including environmental monitoring, is in place. The basic environmental assessment requirements for program loans are summarized in Table 3.

Table 3: Environmental Assessment Requirements for Program Loans

Category	Basic Environmental Assessment Requirements
A: Projects with potential for significant adverse environmental impacts. (OM 20)	<ul style="list-style-type: none"> • Environmental Assessment of Policy Matrix (see Appendix 4 for contents) • Environmental Assessment of Policy Matrix is normally attached as a core appendix to the RRP • For any project loans included, the Category A requirements for project loans apply
B: Projects judged to have some adverse environmental impacts – but of lesser degree and/or significance than category A (OM 20)	<ul style="list-style-type: none"> • Environmental Assessment of Policy Matrix (see Appendix 4 for contents) • Environmental Assessment of Policy Matrix is normally attached as a core appendix to the RRP • For any project loans included, the Category B requirements for project loans apply
C: Projects unlikely to have adverse environmental impacts (OM 20)	<ul style="list-style-type: none"> • Environmental implications to be summarized in the RRP

66. SEA, which facilitates systematic evaluation of the environmental impacts of a policy, plan or program and its alternatives, may be usefully applied as a best practice approach in the preparation of the environmental assessment (see Chapter VII). If an investment component is included in the program loan and specific projects are identified as a part of the program loan, these projects should follow normal project loan environmental assessment requirements for project loans.

7. Environmental Assessment and Review of Sector Loans

67. Under the sector lending modality, ADB finances the capital investment needs of a given sector (i) in a specified geographical area, (ii) over a specified period of time, or (iii) both. Policy and institutional changes introduced as conditions under a sector loan may have an impact on the environment, directly or indirectly. Accordingly, policy and institutional changes proposed in a sector loan should also be examined to determine their environmental implications, and appropriate environmental interventions should be introduced. Under the sector lending modality, subprojects are not necessarily identified prior to loan processing, and ADB financed sector loans normally include only small subprojects. The basic environmental assessment requirements for sector loans are summarized in Table 4.

Table 4: Environmental Assessment Requirements for Sector Loans

Category	Basic Environmental Assessment Requirements
A. Projects with potential for significant adverse environmental impacts. (OM 20)	<p><u>Prior to Loan Approval</u></p> <ul style="list-style-type: none"> • General Requirements for Category A Projects • EIAs of sample subprojects, as necessary • Environmental Assessment and Review Procedures for subprojects (including environmental criteria for subproject selection) • Environmental Assessment of Sector Impacts including analysis of cumulative and/or synergistic impacts (recommended) <p><u>After Loan Approval</u></p> <ul style="list-style-type: none"> • Category A subprojects and Category B subprojects deemed environmental sensitive are to be reviewed by ADB • SEIAs disclosed to public
B. Projects judged to have some adverse environmental impacts – but of lesser degree and/or significance than category A (OM 20)	<p><u>Prior to Loan Approval</u></p> <ul style="list-style-type: none"> • General Requirements for Category B Projects • IEEs of sample subprojects, as necessary • Environmental Assessment and Review Procedures for subprojects (including environmental criteria for subproject selection) • Environmental Assessment of Sector Impacts including analysis of cumulative and/or synergistic impacts (recommended) <p><u>After Loan Approval</u></p> <ul style="list-style-type: none"> • Category A subprojects and Category B subprojects deemed to be environmentally sensitive are to be reviewed by ADB • SIEE disclosed the Public
C. Projects unlikely to have adverse environmental impacts (OM 20)	<ul style="list-style-type: none"> • No IEE or EIA • Environmental implications to be summarized in the RRP • Feasibility studies of sample subprojects are to review of environmental implications

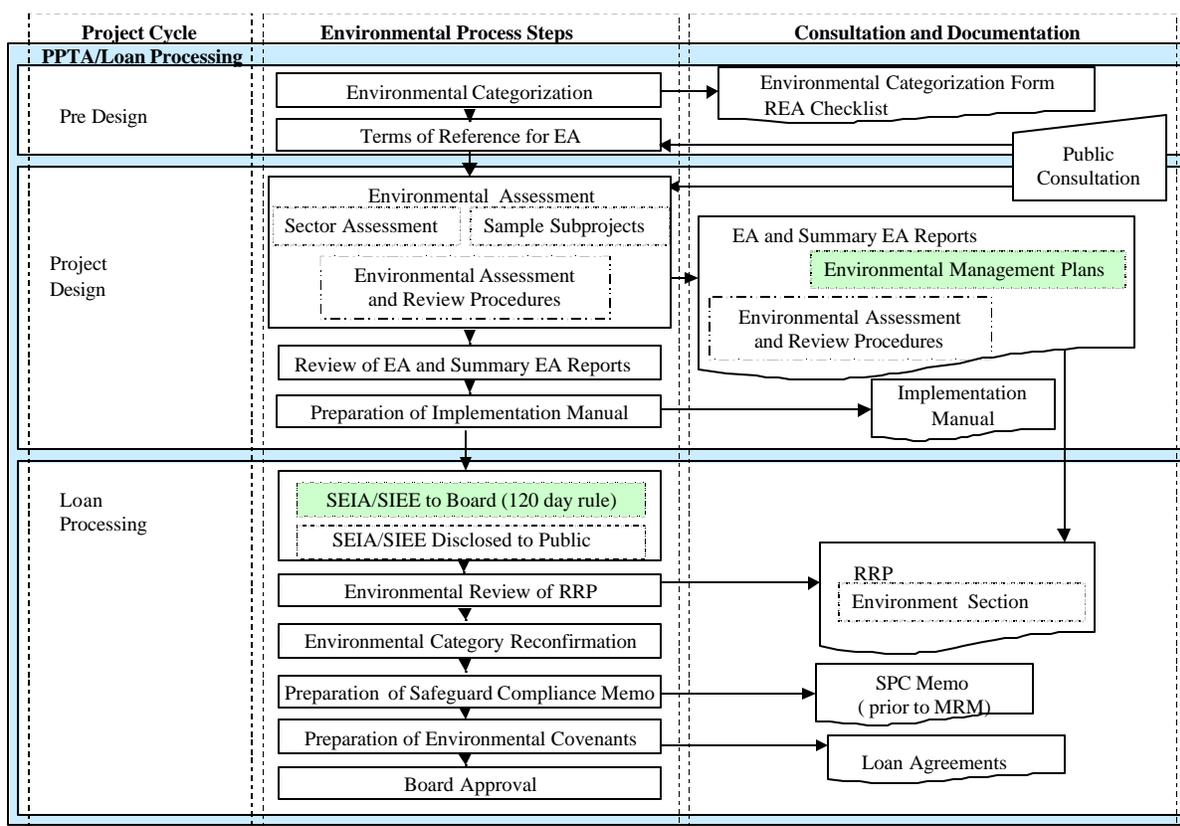
a. Prior to Sector Loan Approval

68. Sector loans must follow the same environmental assessment and review process as project loans (Figure 5). Sector loans must also fulfill the same public consultation, information disclosure, and reporting requirements as project loans. In addition, the Borrower is to:

- (i) conduct environmental assessments of sample subprojects;
- (ii) develop an environmental assessment and review procedures for subprojects; and
- (iii) undertake an environmental assessment of sector impacts (recommended).

69. These activities are to be completed during the project design phase and are to be incorporated in project reporting on the environmental assessment. The environmental assessment of sample subprojects is to follow project loan requirements of IEEs and EIAs.

Figure 5. Environmental Assessment of Sector Loans - Prior to Loan Approval



Note: Shaded boxes only apply for Category A projects and Category B projects deemed environmentally sensitive

70. To establish the broad parameters (including environmental parameters) for selecting subprojects to be financed under the loan, a few subprojects should be identified and appraised prior to loan approval. Feasibility studies are prepared for such subprojects during the formulation of the sector loan, and provide the executing agency with some indication of and experience with, how feasibility studies, including IEEs or EIAs, should be prepared and cost and benefit parameters established. These studies also help refine the eligibility criteria being developed for the sector loan, including specific environmental criteria and concerns that need to be carefully examined during subproject selection, design, appraisal, and implementation.

71. For category A or for category B sample subprojects deemed environmentally sensitive, the SEIA or SIEE shall be submitted to the Board at least 120 days before Board consideration of the sector loan to demonstrate the manner of treating environmental issues that may arise during and after subproject selection¹⁴. Environmental assessment and review procedures for subprojects are to be prepared (see Appendix 6) and be described in the SEIA or SIEE. Procedures are required for:

- determining the environment category (if necessary);
- using environmental criteria for subproject selection;

¹⁴ The IEE or EIA shall also be made available to the Board upon request.

- specification of free limits¹⁵ or other project size limits (e.g. capacity limits for energy facilities), as appropriate;
- preparation of IEEs/EIAs
- EMPs;
- public consultation and information disclosure;
- review of environmental assessment reports by environmental agencies;
- review of environmental assessment reports by ADB RDs and RSES (where necessary); and
- monitoring environmental performance – reporting on environmental assessment activities.

72. **Criteria for Exemption from the Requirement to Submit IEEs.** Sector loans, by the very nature, may contain a large number of small subprojects. It is important that the environmental assessment review procedures set free limits, project size limits, or other criteria for exemption of small projects from the requirements to submit IEEs to ADB for review and/or clearance. However, setting free limits does not exempt the executing agency from complying with the national and local legislation in terms of environmental assessment and permitting procedures.

73. During loan preparation, the capacity of the executing agency and environmental agencies to implement the environmental assessment and review procedures needs to be assessed. If the executing or environmental agency requires capacity building, a suitable mechanism to strengthen institutional capability should be established to ensure conformity with ADB's requirements. This may be done through special review arrangements, technical assistance (TA) provision, or staff consultant recruitment.

74. **Sector Impacts.** As a best practice approach, SEA (see Chapter XV) can be undertaken as part of the comprehensive sector study during program formulation to address social and environmental issues and the sector's development needs, and identify potential win-win policy interventions that can be included in the policy matrix. SEA can help identify better and more responsive environmental criteria for selecting subprojects and policies for implementing the sector loan. SEA is especially useful for assessing the cumulative and synergistic environmental impacts of a series of projects proposed for a sector.

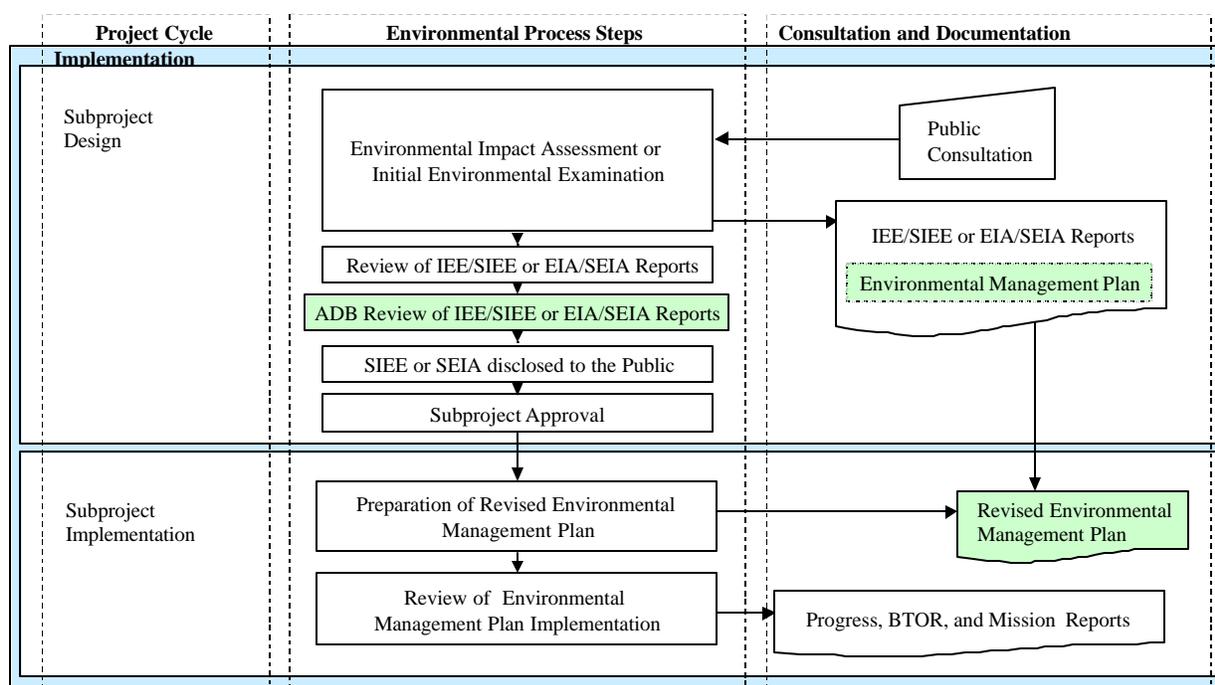
75. SEA may be used to help identify better criteria for selection of subprojects and necessary policies for implementing the sector loan. SEA is appropriate if there is a need to assess the cumulative environmental impacts of all projects proposed for a sector. In addition, SEA can be useful where sector investment alternatives need to be evaluated e.g., expansion of power generation capacity as opposed to improved demand-side management. Sectoral policies can also be subjected to a "sector" SEA (e.g., setting of air emission standards for new and existing sources of air pollution). SEAs are also cost-effective in reducing the need for environmental assessments of individual projects. For sector loans, they can address possible cumulative impacts arising within the sector, and provide guidance for sectoral environmental policies, standards, institutional capacities, and environmental review requirements. SEA can be used to streamline monitoring and supervision requirements across a large number of projects while facilitating interagency coordination.

¹⁵ Free limit: A monetary limit above which subloans require the Bank's prior approval

b. After Sector Loan Approval

76. Based on the environmental assessment and review framework agreed upon at the time of appraisal, the Borrower must undertake environmental assessment of all subprojects (Figure 6). As appropriate, the environmental agency or another mandated institution may assist the executing agency in subproject selection following the environmental and other eligibility criteria agreed upon. For any subprojects confirmed by ADB as a Category A project or a Category B project deemed as environmentally sensitive, the proposal and the IEE or EIA of the subproject should be forwarded to ADB for review and clearance. The SIEE or SEIA should be made available to the general public at least 120 days before the subproject is approved.

Figure 6: Environmental Assessment and Management of Subprojects after Sector Loan Approval



Note: Shaded boxes only apply for Category A projects and Category B projects deemed environmentally sensitive

8. Environmental Assessment of Sector Development Program Loans

77. The sector development component follows the procedures for sector loans, while the policy-based loan component follows the requirements of program loans.

9. Requirements for Emergency or Rehabilitation Assistance Loans

78. ADB has a special facility to assist DMCs in restoring vital economic infrastructure and social services following the damage caused by natural disasters. The emphasis is on financing urgent rehabilitation requirements to re-establish the status quo ante, particularly on (i) water, sewerage, and health facilities and education; (ii) power; (iii) transportation and communications; and (iv) irrigation and drainage. A rehabilitation project is categorized according to the significance of the environmental impacts of its components or subprojects.

79. The basic environmental assessment requirements for emergency or rehabilitation assistance loans are summarized in Table 5. If the subprojects to be financed are known, then environmental assessment requirements for project loans apply (see Table 2). If subprojects are not known, the requirements, except the requirement to conduct an environmental assessment of sector impacts, for sector loans apply (see Table 4).

80. In the case of emergency loans, all requirements for environmental assessment apply. However, in view of the need for fast track processing of such emergency loans, there is a need for procedural flexibility as provided for by relevant operational procedures. In all cases, the RRP is to justify the departure from standard procedures as described in the respective operations manual sections with reference to the specific circumstances of the individual project and the emergency processing schedule. In practice, the nature of the emergency may require loan approval before the environmental assessment is completed. In this case, the environmental assessment should be completed during the detailed engineering design stage of individual projects.

Table 5: Environmental Assessment Requirements for Emergency or Rehabilitation Assistance Loans

Category	Basic Environmental Assessment Requirements
A. Projects with potential for significant adverse environmental impacts. (OM 20)	<ul style="list-style-type: none"> • For any known projects included, the requirements for project loans apply (see Table 2) • If subprojects are not known, requirements of sector loans apply (see Table 4) – environmental assessment of sector impacts is not required
B. Projects judged to have some adverse environmental impacts – but of lesser degree and/or significance than category A (OM 20)	<ul style="list-style-type: none"> • For any known projects included, the requirements for project loans apply (see Table 2) • If subprojects are not known, requirements of sector loans apply (see Table 4) – environmental assessment of sector impacts is not required
C. Projects unlikely to have adverse environmental impacts (OM 20)	<ul style="list-style-type: none"> • Feasibility studies of known and sample subprojects are to include reviews of environmental implications

10. Environmental Assessment and Review of Financial Intermediation Loans and Equity Investments

81. ADB's involvement with financial intermediaries is normally in the form of credit lines or equity investments. Table 6 summarizes environmental assessment requirements for financial intermediaries. A detailed description is provided in Chapter IX.

Table 6: Environmental Assessment Requirements for Financial Intermediation Loans and Equity Investments

Category	Basic Environmental Assessment Requirements
FI: Projects are categorized FI if they involve and credit line through a financial intermediary for an equity investment in a financial intermediary.	<p>General Requirements:</p> <ul style="list-style-type: none"> • The financial intermediary must adopt an appropriate environmental management system, comprising policy, procedures, and capacity, to comply with all relevant government environmental regulations and requirements in its operations. • Environmental assessment of financial intermediation loans and equity investments (see Chapter IX) • Reporting on Environmental assessment of financial intermediation loans and equity investments to included in the RRP (see Appendix 7) <p>For credit lines, additional requirements include:</p> <p><u>Prior to Loan Approval</u></p> <ul style="list-style-type: none"> • Environmental Assessment and Review Procedures for subprojects (including environmental criteria for subproject selection) <p><u>After Loan Approval</u></p> <ul style="list-style-type: none"> • Category A subprojects and Category B subprojects deemed environmentally sensitive: <ul style="list-style-type: none"> (i) SIEAs/SIEEs are to be cleared by ADB before subproject approval (ii) SEIAs/SIEEs disclosed to public <p>For Microfinance and subprojects projects below the free limit:</p> <ul style="list-style-type: none"> • No requirement for the adoption of an environmental management system or environmental assessment report. • Projects must comply with all DMC environmental regulations

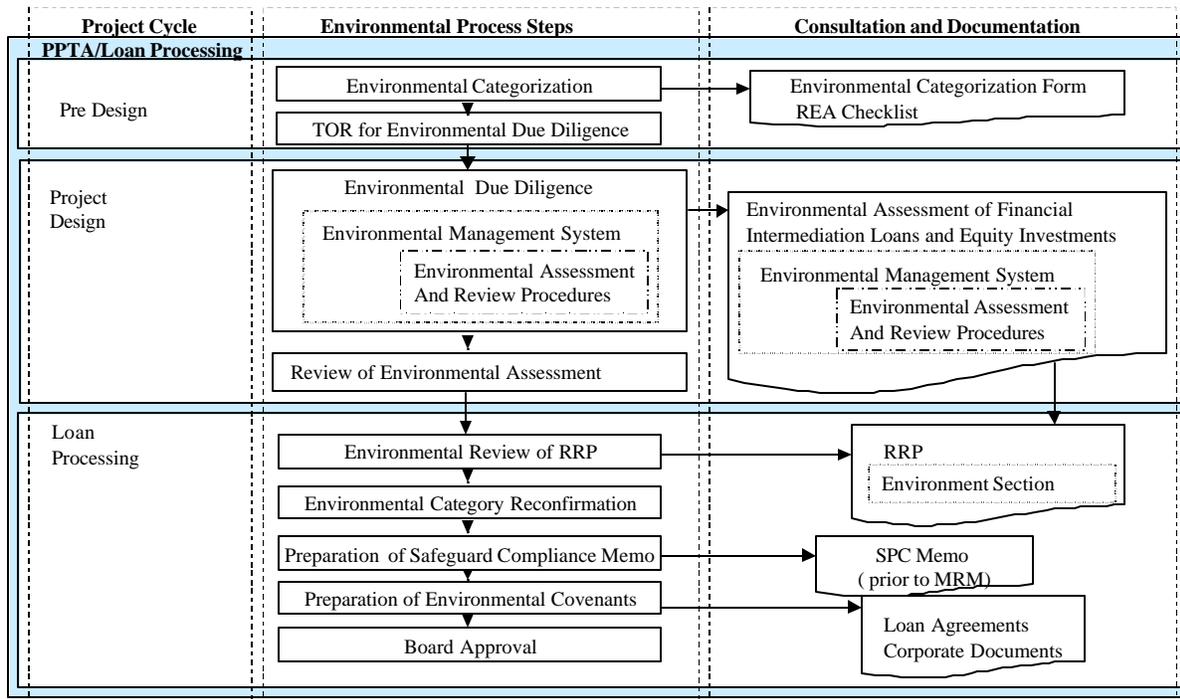
a. Prior to Approval - Environmental Due Diligence

82. Financial intermediation loans and equity investments must follow the same environmental assessment and review process as other projects (Figure 7). However, the focus of the environmental assessment is on due diligence of the financial intermediary and its EMS.¹⁶

¹⁶ Here the term "environmental management system" is defined as a system for planning, implementing, reviewing and improving the processes and actions that an organization undertakes to meet its environmental goals. The major components of an EMS are (i) policy, (ii) planning, (iii) implementation and operation, (iv) checking and corrective action, and (v) management review. Many EMSs are built on the "Plan, Do, Check, Act" model. This model leads to continual improvement based upon

- planning, including identifying environmental aspects and establishing goals [plan];
- implementing, including training and operational controls [do];
- checking, including monitoring and corrective action [check]; and
- reviewing, including progress reviews and acting to make needed changes to EMS [act].

Figure 7: Environmental Assessment and Review of Financial Intermediation Loans and Equity Investments – Prior to Approval



83. When ADB's investment is in the form of equity in a financial intermediary, no subprojects to be financed by the financial intermediary are directly involved. For ADB projects involving equity investment in a financial intermediary, where ADB funds will not finance specific subprojects but where the financial intermediary may have operations with adverse environmental impacts, the financial intermediary must adopt an appropriate environmental management system, comprising policy, procedures, and capacity, to comply with all relevant government environmental regulations and requirements in its operations. The financial intermediary will ensure that the sub-borrowers will comply with the environmental regulations and requirements of the DMC government and, if necessary, ADB. If required, ADB may also address any need for strengthening capacity building of the financial intermediary and the relevant environmental agency to deal with the environmental issues.

b. Credit Lines for Subprojects

84. Where ADB involvement is a credit line for subprojects,¹⁷ the assessment of the financial intermediary and its EMS must be undertaken. In addition, the financial intermediary must have appropriate environmental assessment and review procedures for all subprojects to be financed with ADB funds. This situation is analogous to that for sector loans. In this regard, the preparation of an environmental assessment and review procedures is required as part of the environmental assessment. Any need for strengthening the environment agency and/or the financial institution in the DMC should be addressed. For category A and category B projects deemed environmentally sensitive the IEE or EIA must be cleared by ADB before subproject approval. The SIEE or SIEA must be disclosed to the public at least 120 days before the subproject is approved. For these subprojects, ADB will review compliance with ADB environmental assessment requirements, including those related to consultation and information disclosure. For subprojects below the free limit, ADB reserves the right to review the subproject proposal and its IEE or EIA.

c. After Approval of Financial Intermediation Loans and Equity Investments

85. As with sector loans, all subprojects financed through the financial intermediary should follow the general environmental assessment requirement for projects loans (Figure 8). The environmental assessment and review procedures of the financial intermediary should be in place before the subproject approval.

d. Environmental Reporting Requirements

86. The environmental assessment reporting (Appendix 7) for a category FI project includes a description of the environmental management system to be applied by the financial intermediary. Reporting on the environmental assessment is to be included in the RRP.

87. Financial intermediation loans and equity investments, generally microfinance projects, where all subprojects will result in insignificant environmental impacts will be treated as category C, and are not required to adopt of an EMS or prepare an environmental assessment report. However, the financial intermediary should review these projects for compliance with all government environmental regulations and abide by requirements outlined in an exclusion list.¹⁸

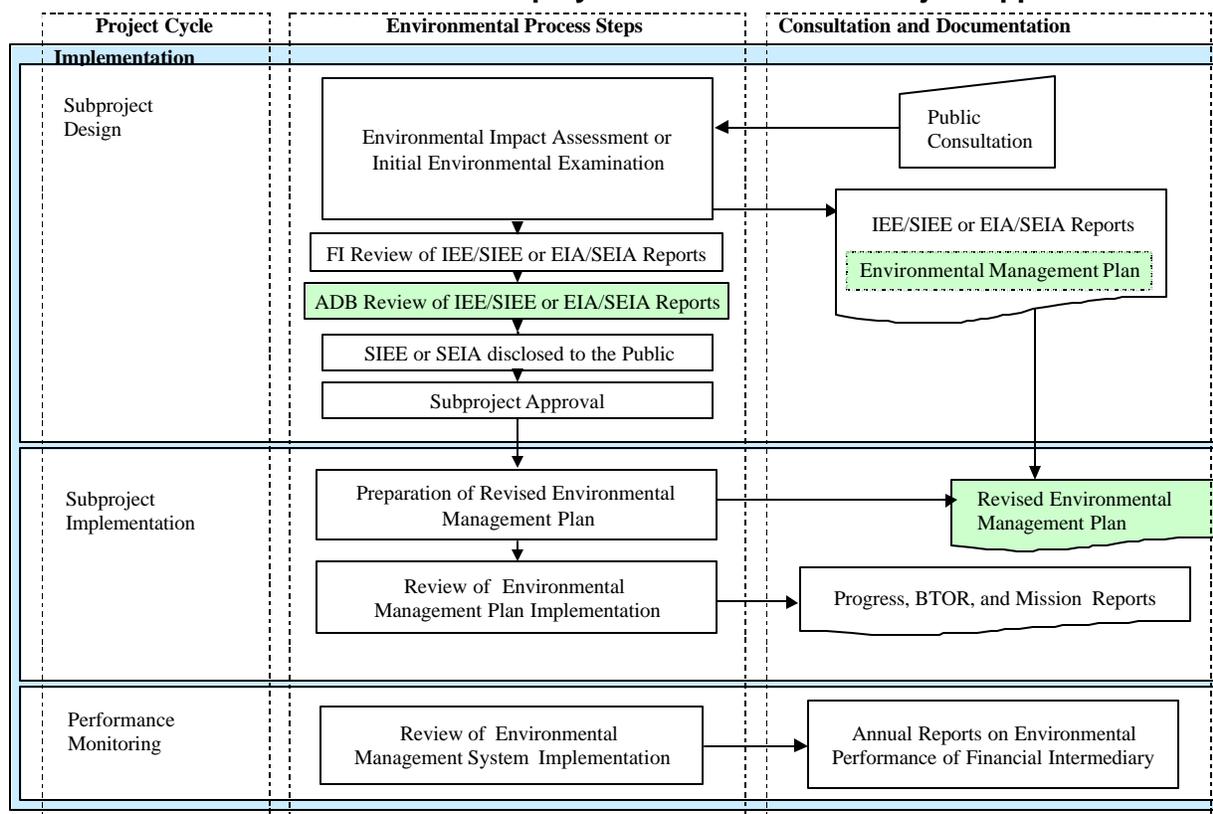
11. Private Sector Operations Department Investments

88. ADB's environmental assessment requirements for private sector investments are the same as those for the public sector (Table 7). However, it should be noted that PSOD operations are not supported by PPTAs, and various approaches are used to assess the technical, economic, social and environmental aspects of the project.

¹⁷ Here the term "subproject" includes expansion or rehabilitation of an existing project.

¹⁸ An exclusion list for screening negative activities should be established between the ADB and the financial intermediaries before the ADB's loan considerations.

Figure 8: Environmental Assessment and Management of Subprojects Financial Intermediation Loans and Equity Investments - After Project Approval



Note: Shaded boxes only apply for Category A projects and Category B projects deemed environmentally sensitive

Table 7: Environmental Assessment Requirements for Private Sector Operations

Basic Environmental Assessment Requirements	
Direct Loans	<ul style="list-style-type: none"> Direct loans and equity investments are required to follow the project loan requirements
Indirect Loans and Equity Investments	<ul style="list-style-type: none"> Category FI: Indirect loans and equity investments are required to follow the requirements for financial intermediation loans and equity investments
Partial credit and political (partial) risk guarantees	<ul style="list-style-type: none"> : Partial credit and political (partial) risk guarantees can only be provided to companies that have complied with Government environmental regulations and do not have any environmental liabilities (e.g. site contamination, pollution or encroachment on protected areas) Guarantees for specific projects are required to follow the project loan requirements Guarantees that enable a financial or other institution to establish a credit line or otherwise on lend are to follow the requirements for financial intermediation loans and equity investments

89. Private sector entities and implementing institutions are a diverse group with varying environmental awareness and capabilities, and ADB generally adopts a flexible procedure in dealing with private sector loans, to tailor environmental requirements to the project and expected subprojects. Nevertheless, the substance of ADB's environmental assessment requirements for private sector investments is the same as those for the public sector. For direct investments and equity investments with specific identified projects or subprojects, the general environmental assessment requirements for project lending (see Table 2) will be applied. For indirect investments in the form of a credit line and equity investment operations through a financial intermediary where only some subprojects will be known prior to project implementation, ADB's environmental requirements for financial intermediation loans and equity investments will apply (see Table 6).

12. Cofinancing

90. ADB's Environment Policy covers all components of projects, whether financed by ADB, governments, or cofinanciers. Cofinancing comprises financing from official sources (e.g., official loans and grant cofinancing) as well as commercial sources (e.g., commercial banks, insurance companies, institutional investors, and export credit agencies). Commercial cofinancing may be provided with or without an ADB credit enhancement instrument (i.e., a partial credit guarantee, a political risk guarantee, or the complementary financing scheme). Project components that use cofinancing in any form must have environmental assessments carried out in accordance with the requirements set forth in OM 20. Wherever possible, a single environmental assessment will be conducted to satisfy the requirements of ADB and the cofinanciers.

D. Implementation and Supervision

91. Project implementation commences after the loan is declared effective, and includes the: preparation of detailed engineering designs and tender documents, construction of project facilities or physical development of project sites, and testing and commissioning of project facilities and procurement materials. At the appraisal stage, it is necessary to ensure that the EMP and other environmental loan covenants are incorporated into the Project Administration Memorandum (PAM).¹⁹

92. For category A and category B projects deemed environmentally sensitive, the subject of compliance with environmental covenants should be adequately covered and checked during the Inception Mission. At the same time, a tripartite meeting involving ADB, and the executing and environmental agencies may be convened to clarify and confirm the EMP and related relevant implementation arrangements, particularly the funding, capacity of institutions and third party organizations, and need to include environmental mitigation measures in the tender documents to fully implement EMP compliance.

¹⁹ The project administration memorandum contains project data and information that allows the Borrower, executing agency implementing agency, and ADB to monitor project implementation and evaluate project impact. The loan appraisal mission should initiate detailed discussions with the Borrower and executing agency on the content of the PAM. The PAM is generally drafted prior to the inception mission in consultation with other offices (Consulting Services Division, Loan Administration Division, Operations Evaluation Department, and Project Coordination and Procurement Division) for discussion with the Borrower, executing agency and implementing agency during the mission. To minimize potential disagreement on project implementation arrangements, the PAM is attached as an appendix to the inception mission's memorandum of understanding, and signed by the Borrower or executing agency, and the mission.

93. In most cases, environmental problems arising during project implementation can be readily minimized through sound construction planning and implementation of effective environmental control measures during construction. It is therefore important that the project administration memorandum, detailed engineering designs, and tender documents incorporate the environmental assessment reports' findings and recommendations. Likewise, the cost implications and responsibilities for environmental management should be identified early in the project cycle. Environmental management during the detailed design phase can then focus on ensuring that

- (i) environmental assessment, and technical planning and design groups work closely to reconfirm the EMP in light of any project design changes, and revise the EMP, as necessary, for environmental compliance monitoring;
- (ii) contractor's covenants for good construction practices are clearly stipulated in the construction contracts to minimize environmental impacts, with appropriate penalties for non-compliance; and
- (iii) construction contracts include clauses on adequately qualified personnel, equipment, and organization to ensure that the contractors implement good engineering practices and use environment-friendly products.

94. During the physical development period, the thrust of environmental management by the executing agency is on strict control and monitoring of contractors' compliance with good environmental practices and measures stipulated in the contracts. The EMP's effectiveness is also monitored and evaluated, and deficiencies detected are corrected in a timely manner. Failure of contractors to comply with environmental clauses of the contract should be reported to ADB through project progress reports. These reports will include information on the contractors' environmental performance.

95. During project review missions, the executing agency's progress and performance in EMP implementation are reviewed, and an independent review panel is created to monitor environmental compliance, if necessary. The midterm review mission includes a major review of project environmental performance. Back-to-office reports of review missions should provide details on any major environmental issue discovered during field visits and on proposed remedial measures, with an action plan for follow-up measures in addition to assessment on the implementation of EMP and environmental loan covenants.

96. As project implementation is normally reviewed by ADB not more than twice a year, the effectiveness of environmental management will depend, to a large extent, on the DMC's executing agency and close monitoring by the environmental agency. Consequently, a strong partnership between ADB and the environmental agency in overseeing project environmental management is necessary to strengthen compliance. Third party monitoring may also be employed to ensure compliance. Cost implications, responsibilities and reporting mechanism must be identified early in the project cycle to support such monitoring mechanism. During project operation, environmental problems arise from (i) project operation (e.g., waste disposal), and (ii) utilization of resources (e.g., water, land, and energy) necessary to produce the project output or product. The focus of environmental management during project operation will be on (i) managing the process operation to avoid, abate, and minimize pollution and wastes; (ii) ensuring efficient operation of pollution control facilities and procedures; and (iii) implementing

environmental protection measures. The thrust of environmental management is on rational management of environmental resource utilization to ensure their sustainability.

E. Completion and Post-Evaluation

97. Environmental Reporting in Project Completion Reports. To ensure proper documentation of the actual environmental impacts of the project and the success of the EMP, a project/program completion report (PCR) is prepared by the responsible RD. The PCR is to include a concise history of the environmental aspects of the project to completion, (ii) an evaluation of the implementation of the EMP and environmental loan covenants, and (iii) an assessment of the performance of the executing agency. The environmental section of the PCR is to be based on the facts documented in Borrower's/executing agencies' semiannual reports and annual environmental review missions' back to office reports. The PCR should contain the necessary information to fulfill the benefits monitoring and evaluation²⁰ (BME) requirements of the Project Performance Management System (OM 22).

98. Environmental Evaluation in Project Performance Reports. To foster organizational learning and project improvement, project/program performance audit reports are prepared for selected projects. These independent evaluations by ADB's Operations Evaluation Department include an analysis of the effectiveness of the EMP in achieving intended objectives. These reports also assess the PCR's environmental reporting in terms of its adequacy and integrity and focus on specific issues relating to the environmental aspects as documented in the PCR. Thus it is important that executing agencies be required to continue to submit annual or semi-annual project operation performance reports to ADB from project completion to post-evaluation. The reports should include adequate details on the environmental performance and associated costs and human resources capacity.

F. Uncertainty and the Unexpected

99. Uncertainties in Locations and Alignments of Infrastructure. For most category A projects and category B projects deemed environmentally sensitive, major site selection issues will have been addressed by the time of Board approval. Where uncertainty exists about specific locations or alignments of major infrastructure or project facilities at the time of Board approval, the EIA or IEE will include an EMP that presents full details on the agreed process to be followed for environmental assessment, including any special studies of environmental issues and specification of environmental mitigation measures during project implementation. The pertinent details will be presented in the SEIA or SIEE, and summarized in the RRP. The details will also be fully reflected in the loan agreements.

²⁰ BME seeks to provide information about the benefits and impacts of projects and thereby to assist both the Bank and concerned organizations in Daces in improving the effectiveness of development and related investment policies. BME comprises three distinct activities: (i) preparation and analysis of benchmark (baseline) information; (ii) monitoring benefits during implementation and after completion of a project; and (iii) evaluation of the benefits of the completed project. BME is designed to address the concerns of those adversely affected, and to assess the impact of the project after it is completed. Benefit monitoring makes available information that will help in assessing whether the project services are delivered to the intended beneficiaries, how much they have actually benefited, and whether adverse effects of the Bank intervention have been adequately mitigated. BME is important in projects in the following sectors: agriculture, fisheries, forestry, livestock, irrigation, rural development, microcredit, education, health, population, water supply and sanitation, urban development, housing, and rural electrification. BME is required particularly in projects with components that address crosscutting issues such as poverty reduction and women in development, in those with environmental concerns and where intensive beneficiary participation is necessary for project success, and in program loans.

PART 2. TECHNICAL GUIDELINES

III. OVERVIEW

100. Part 1 of these guidelines provides procedural guidance on “what must be done” to comply with ADB’s environmental assessment requirements. Part 2 provides an overview of ADB’s technical guidance on “how to conduct” the environmental assessment associated with a given loan or investment.

A. The Nature of Environmental Impacts

101. **Environmental Impacts Defined.** An environmental impact is any change that activities associated with a project may cause in the environment, including the impact of any such change on health and socio-economic conditions, on physical or cultural heritage, on the current use of lands and resources for traditional purposes by Indigenous Peoples, or any structure, site, or thing that is of historical, archaeological, paleontological, or architectural significance.

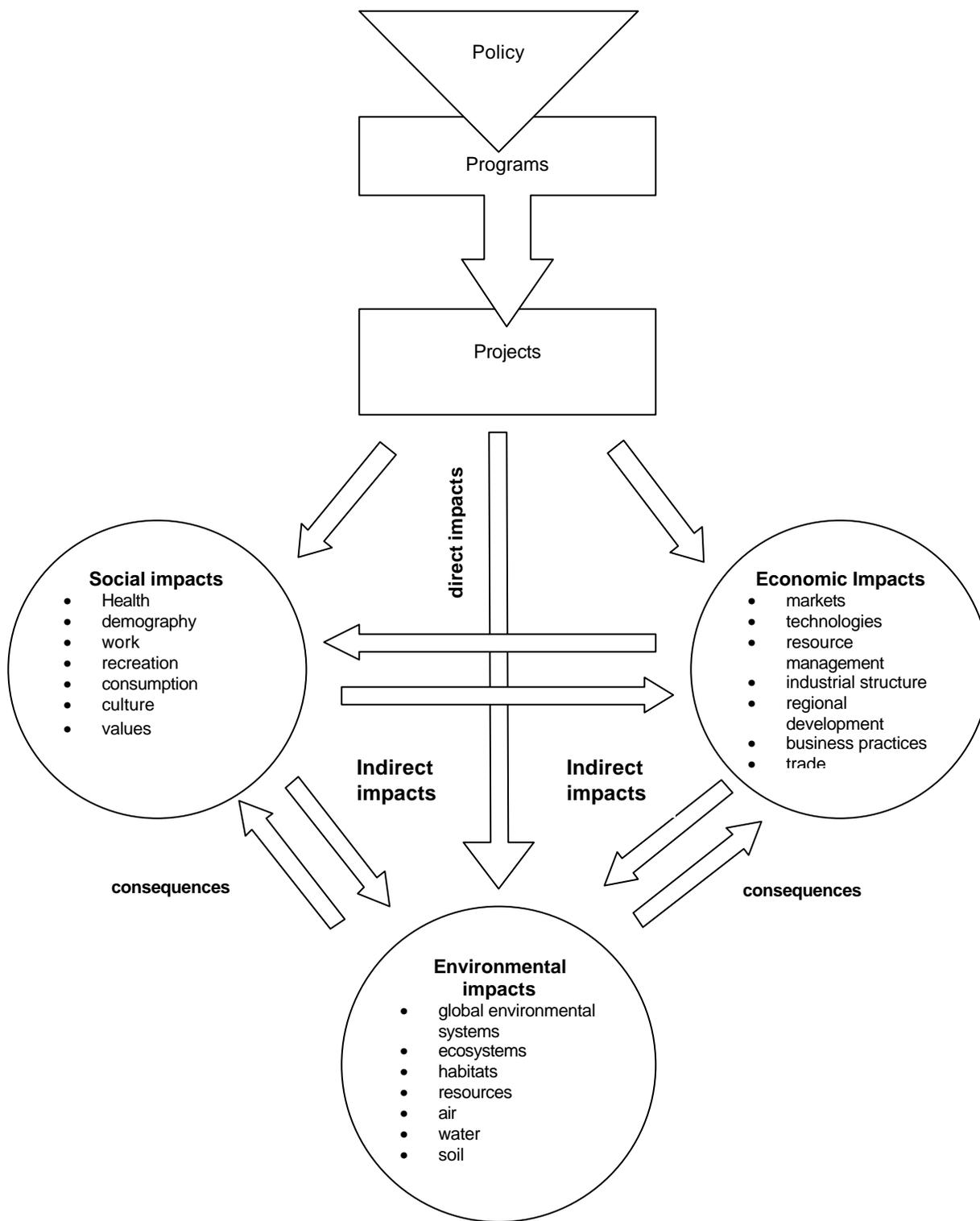
102. **Environmental Impacts include Socio-economic Impacts.** During the environmental assessment, the social and economic impacts of the project are to be considered. The definition of environmental impact (above) goes beyond impacts on the physical and biological environmental components. It includes impacts on various social and economic components.

103. **Direct and Indirect Impacts.** In conducting environmental assessment of its projects, the ADB is concerned with the both direct and indirect impacts. Direct impacts are those occur through direct interaction of an activity with an environmental, social, or economic component (Figure 9). For example, a discharge of industrial effluent into a river may lead to a decline in water quality. Direct impacts on one environmental component may lead to indirect impacts on other components. For example, the decline in water quality in the river may lead to a secondary indirect impact on fish in the river. In turn, the impact on the fish population may lead to reduced harvests of fish with corresponding reductions in fishing incomes.

104. In ADB project loans or sector loans, the project activities have potential to directly impact on the environment. In ADB’s program loans, the impacts on the environmental components are normally indirect. That is, the policy reform components of the program loan are designed to bring about changes in social and economic behavior. These social and economic changes may in turn lead to potential indirect impacts on the environment.

105. **Induced Development Impact.** Indirect impacts may include growth-inducing impacts and other effects related to induced changes to the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems including ecosystems. For example, one of the more contentious issues is the induced development impact of roads on forests, other ecological habitats, and cultural sites. New roads may be planned to open a new area to settlement, to provide access to natural resources or to connect two areas of economic activity by crossing a forest or biologically sensitive area. The environmental assessment must not only consider the direct impacts of road construction and use, but also the induced impacts that will come from more people and more economic activity. However, the actual impacts of induced development over a long time horizon are uncertain. Therefore the decision whether or not to build roads must take these risks into account. Before action is taken to open access to new areas satisfactory provisions must be in place to avoid or mitigate adverse ecological and cultural consequences, even if they appear to have a low probability of occurrence.

Figure 9: Conceptual Overview of the Environmental, Social, and Economic Impacts of Policies, Programs, and Projects.



B. Specialized Guidance

106. ADB's specialized guidance for environmental assessment includes methods and approaches that might be used in the conduct of a specific aspect of the environmental assessment, irrespective of the sector or project type. This is to be contrasted with sector guidance, which focuses on the environmental impacts and mitigation measures for given types of projects within a sector (see Section C). These guidelines provide specialized guidance on:

- (i) Country Environmental Analysis (Chapter IV),
- (ii) Determination of the Environment Category (Chapter V),
- (iii) Environmental Management Plan (Chapter VI),
- (iv) Environmental Assessment of Program Loans (Chapter VII),
- (v) Environmental Assessment of Sector Loans (Chapter VIII),
- (vi) Environmental Assessment of Financial Intermediation Loans and Equity Investments (Chapter IX),
- (vii) Public Consultation and Information Disclosure (Chapter X),
- (viii) Environmentally Standards and Emission Levels (Chapter XI),
- (ix) Social Dimensions (Chapter XII),
- (x) Environmental Responsible Procurement (Chapter XIII),
- (xi) Cultural Heritage (Chapter XIV), and
- (xii) Strategic Environmental Assessment (Chapter XV),
- (xviii) Cumulative Effects Assessment in Environmental Assessment (XVI),
- (xix) Managing and Administering an Environmental Assessment Study (XVII),
- (xx) Economic Analysis in Environmental Assessment (XVIII),
- (xxi) Multilateral Environmental Agreements (XIX), and
- (xiii) Environmental Auditing.

107. **Country Environmental Analysis.** CEA is a new requirement under ADB's environment policy. Methods and approaches are under development. Chapter IV provides information on and examples of CEA current practices.

108. **Determination of the Environment Category.** The environment category is to be determined early in the assessment of projects. Chapter V provides an overview of the classification process, examples forms and REA checklists, classification criteria, and example categorizations for different types of projects.

109. **Environment Management Plan.** The EMP is an important output on the environmental assessment process. The EMP is to guide implementation of mitigation measures and monitoring requirements. Chapter VI outlines the information and level of detail needed in environmental management plans.

110. **Environmental Assessment of Program Loans.** For program loans, environmental assessment involves the preparation of a matrix of environmental impacts of policy and institutional actions, mitigation measures, institutional basis for implementing mitigation measures and monitoring program. The environmental assessment should review environmental and sustainability objectives of the program or sector development program and propose a set of criteria, targets or indicators for evaluating the effect of the loan. Chapter VII provide more details on environmental assessment of program loans.

111. **Environmental Assessment of Sector Loans.** For sector loans, the environmental assessment of sector impacts should consider the cumulative effects assessment of all projects envisioned as a part of the loan. Assessment at the sector level can enhance the efficiency of subproject-level IEEs by avoiding redoing analyses for issues covered adequately in an assessment for the entire sector. The assessment can concentrate on the site-specific impacts of the subproject. Chapter VIII provides more detail on environmental assessment of sector loans.

112. **Environmental Assessment of Financial Intermediation Loans and Equity Investments.** ADB's environmental assessment activities focus on a due diligence assessment of the financial intermediary. Environmental due diligence should concentrate on two main aspects; (i) evaluation of the financial intermediary's EMS; and 2) if the project involves credit lines or other forms of on lending, an evaluation the financial intermediary's procedures for environmental assessment and review of loans. Chapter IX provides more detail on environmental assessment of financial intermediation loans and equity investments.

113. **Public Consultation.** ADB requires public consultation and access to information in the environment assessment process. For category A and B projects, the Borrower must carry out consultations with groups affected by the proposed project and local NGOs²¹. The consultation should be carried out as early as possible in the project cycle so that the views of the project affected groups are taken into account adequately in the design of the project and environment mitigation measures. Chapter X provides additional information on public consultation.

114. **Environmental Standards and Emission Levels.** In determining appropriate environmental standards for ADB projects, ADB will follow the standards and approaches detailed in the World Bank's *Pollution Prevention and Abatement Handbook*.²² This handbook describes generally acceptable pollution prevention and abatement measures and emission levels. However, as in the case of the World Bank environmental assessment procedures²³, the environment assessment for any individual project may recommend adoption of alternative emission levels and approaches to pollution prevention and abatement. This flexibility is required to best reflect national legislation and local conditions in determining the appropriate standards and emissions levels. In all such cases, the environment assessment report will provide justification for the levels and approaches chosen for the particular project or site. Chapter XI provides more information environmental standards and emission levels.

115. **Social Dimensions.** Considering the central role of people in development and recognizing that a development project could produce effects detrimental to the welfare of the same people it intends to benefit, it is essential that the environmental assessment of a proposed project include an analysis of the project's social dimensions. With the increasing emphasis placed by ADB on the environmental and social aspects of development, there has been heightened concern about issues such as beneficiary participation, poverty reduction, role of women in development and environmental management, involuntary resettlement, and vulnerable groups, including children and indigenous peoples. This concern for the social aspects of development is articulated in ADB policies, reflected in strategic frameworks, and incorporated in Bank operations through various guidelines, manuals, and handbooks as well as instructions to its staff. ADB's environmental review process, in fact, specifies the need for social analysis and public participation. Environmental assessment reports and summaries if possible

²¹ These consultation requirements are in harmony with those adopted by the World Bank.

²² World Bank 1999. *Pollution Prevention and Abatement Handbook: Toward Cleaner Production*. Washington, D.C.

²³ World Bank Operational Manual – OP 4.01 on Environmental Assessment. January 1999.

are required to include: (i) an social acceptability assessment of the proposed project; and (ii) recommended mitigation measures such as a Resettlement Plan and an Indigenous People's Development Plan, as necessary. It should be noted that Resettlement Plans and Indigenous People's Development Plan are to be prepared as separate documents as required by the relevant ADB policies. Chapter XII describes how to incorporate social dimensions into the environmental assessment.

116. Environmentally Responsible Procurement. Environmentally responsible procurement (ERP) is a systematic approach to purchase of goods and services that are thought to be less damaging to the environment than other goods and services that serve the same purpose. ERP requires that purchasing decisions and allocation of contracts be based in part on environmental criteria along with other factors such as price, quality, and availability. Consideration must be given to the total environmental costs throughout the product life cycle – from manufacture, use, and disposal. Borrowers and executing agencies, should wherever possible, ensure that the goods and services procured under ADB-financed projects have been produced in a responsible manner with a view to resource efficiency, waste minimization and environmental considerations. Suitable provisions will in due course be included in loan and project agreements as well as bidding documents to ensure environmentally responsible procurement. The form and content of such provisions will be developed in coordination with other multilateral financial institutions. More details are provided in Chapter XIII.

117. Cultural Heritage. ADB requires that the impacts on cultural heritage be assessed as part of the overall environmental assessment of a project. Cultural heritage is legally protected in almost every country. The Convention for the Protection of the World Cultural and Natural Heritage of 1972 has become the foundation for national and other legislation since it requires signatories to adopt general policies; establish appropriate organizations and services; and develop legal, scientific, and financial measures for the protection and conservation of cultural and natural heritage. Chapter XIV provides more details of the environmental assessment of impacts on cultural heritage.

118. Strategic Environmental Assessment. SEA is being introduced as an approach and method for conducting environmental assessments of program loans and sector loans. It may also be used in conducting country environmental analysis. Chapter XV provides an overview of SEA and provides some criteria for screening projects to see determine whether SEA is an appropriate tool.

119. Additional Guidance. Additional guidance on (i) cumulative effects assessment in environmental assessment (Chapter XVI), (ii) managing and administering an environmental assessment study (Chapter XVII), (iii) economic analysis in environmental assessment (Chapter XVIII), (iv) multilateral environmental agreements (Chapter XIX), and (v) environmental auditing (Chapter XX).

C. Sector Guidelines

120. The ADB has developed environmental guidelines for selected projects in the following sectors: agriculture and natural resources, energy, industry, social infrastructure, and transport. These sector guidelines are designed to assist ADB staff to incorporate environmental considerations during loan preparation. The guidelines may be used to help determine whether projects can be expected to cause significant adverse environmental impacts. The existing guidelines can be found in the following ADB Publications:

- Environmental Guidelines for Selected Agricultural and Natural Resource Projects, 1987.
- Environmental Guidelines for Selected Infrastructure Projects, 1993.
- Environmental Guidelines for Selected Industrial and Power Development Projects, 1993.

121. ADB is revising its sector environmental guidance and new versions are expected to be available by the end of 2003.

IV. COUNTRY ENVIRONMENTAL ANALYSIS

A. Introduction

122. A country environmental analysis (CEA) is to be prepared as an input to the country strategy and program (CSP) exercise. The CEA will provide the background information necessary for informed decision making on environmental constraints, needs, and opportunities in a developing member country (DMC), including those that impinge upon poverty partnership agreements, as appropriate. The CEA will outline environmental issues that are most important to a DMC's development strategy and describe ADB's role in helping remove the environmental constraints on the DMC's sustained development. The CEA is directed at the policy, program, and sector levels, although it may highlight important environment issues associated with projects in the pipeline. The CEA is envisaged as a participatory process that is initiated before the CSP, and continues through CSP preparation to assess potential environmental issues associated with the CSP.

123. The CEA is prepared by the regional department concerned, and will focus specifically on relevant sectors and institutional analysis of direct concern to ADB operations.²⁴ The analysis will be tailored to the requirements of each DMC, and will purposefully build on complementary work by other agencies. In addition to enhancing the consideration given to environmental factors in formulating policies, plans, and programs, the information and analysis contained in the CEAs will support and facilitate the downstream environmental assessment of individual ADB-financed projects. The CEA will also provide a basis for monitoring country environmental performance.

124. An ADB environmental specialist or qualified outside consultant should prepare the CEA—working as part of the team responsible for preparation of the CSP.

B. Recommended Content of the Country Environmental Analysis

125. At this stage of development there is still limited experience with CEA.²⁵ This section outlines the recommended contents for a CEA.

1. Background Information

a. Role of Environment and Natural Resources in Economy

- description of the role environment and natural resources in the economy and identification of the extent to which poor communities depend upon environment and the natural resources for their livelihood and well being
- estimates of the sector share of GDP from natural resources and agriculture

²⁴ The Pacific Department will instead prepare a regional environmental strategy as an input to the Regional Strategy for the Pacific.

²⁵ Country environmental analysis is a new requirement. Methods and approaches are under development and are being tested as part of the development of the CSP in various DMCs. Those wishing more information should consult with the RSES division of RSDD.

- identification of opportunities for sustainable development in the environment and natural resource sectors

b. Key Environmental Issues faced in the country

- review of the key environmental indicators, qualitative and quantitative information at the sub-national level distinguishing the problem in different geographic areas, sectors and ecosystems
- identification of policy failures, market and institutional failures, social, economic and cultural factors
- discussion of impacts on livelihoods, health and vulnerability of poor communities and issues of global and regional concerns
- identification of the opportunities and constraints the environment places on development. The review would identify the extent to which environment could contribute to economic growth and the gains to be made from environmental improvement in specific sectors

c. Regulatory and Institutional Framework

- identification of main stakeholders
- review of the environmental standards, regulations, enforcement mechanism and instruments
- assessment of appropriateness and effectiveness of regulatory environment
- capacity and capability assessment of environmental agencies and other organizations involved in environmental permitting, assessment, monitoring, and enforcement
- identification of and evaluation of the effectiveness of formal or informal mechanisms for cross-sectoral coordination of policies and actions
- examination of the extent and nature of public consultation in decision-making

2. Priorities for Action

a. Past Environmental Record

- review of the country's record in dealing with difficult environmental issues (e.g., energy, chemical, and other highly polluting industries)
- assess record in complying with environmental conditions in projects financed by international financial institutions

b. Environmental Information Needs

- identification of data gaps that need to be filled for a better understanding of the country's environmental problems, either through one-time studies or through improved on-going monitoring
- identifying key indicators to be monitored so that trends in the main environmental problems can be assessed. These indicators should be based on existing or easily collected data and be policy-relevant

c. Review of Country Strategy and Program

(i) Overview of CSP

- a brief overview ADB sectoral strategies and work programs, highlighting environmental lending projects, if any
- links between ADB strategies and work program with the Government, bilateral and multilateral funding agencies operating in the country

(ii) Assessment of environmental consequences of CSP

- assessment of the impact of the CSP on the key environmental issues facing the country
- links between environmental implications and the objectives in individual sectors need to be identified
- including possible win-win situations (e.g., reducing land degradation problems to help achieve agricultural growth targets, or reducing water pollution to help achieve health targets) as well as possible trade-offs (e.g., the impact on pollution or biodiversity of road development)

(iii) Conclusions and Recommendations

- an overall assessment of the potential environmental benefits and adverse implications
- general recommendations to ensure environmental sustainability of the planning and implementation of the country program

3. Appendixes

Appendix 1. Indicators for Monitoring Environmental Performance

- definitions of key environmental indicators
- presentation of trends (i.e. a time series) of key environmental indicators

Appendix 2. Key Environmental Institutions in the Country

- organizational listing of institutions responsible for environment and natural resource management in the country

Appendix 3. ADB Multi Year Lending Program

- tabular summary of ADB multi year lending program

Appendix 4. ADB Multi Year Technical Assistance Program

- tabular summary of ADB multi year lending program

V. DETERMINATION OF THE ENVIRONMENT CATEGORY

A. The Process

126. All loans and investments are subject to categorization to determine environmental assessment requirements. Categorization is to be undertaken using Rapid Environmental Assessment (REA). REA requires the completion of the environmental categorization form (Table 9). REA uses sector-specific checklists (Appendix 1), developed based on the ADB's past knowledge and experience. These checklists consist of questions relating to (i) the sensitivity and vulnerability of environmental resources in project area, and (ii) the potential for the project to cause significant adverse environmental impacts. For projects including a number of different components (e.g., coastal resource management and fisheries harbor development) it may be necessary to prepare more than one REA checklist

127. The process of determining a project's environment category is to be initiated by the RD sector division, which will prepare a REA screening checklist, taking into account the type, size, and location of the proposed project. A project is classified as one of the environmental categories (A, B, C, or FI). The RD sector division director will submit the proposed environment category and the checklist to the director, RSES for concurrence or further discussion as required. Final categorization will be the responsibility of the CCO. Loans are classified into one of:

- (i) Category A (*OM 20*): Projects with potential for significant adverse environmental impacts. An environmental impact assessment (EIA) is required to address significant impacts.
- (ii) Category B (*OM 20*): Projects judged to have some adverse environmental impacts, but of lesser degree and/or significance than those for category A projects. An initial environmental examination (IEE) is required to determine whether or not significant environmental impacts warranting an EIA are likely. If an EIA is not needed, the IEE is regarded as the final environmental assessment report.
- (iii) Category C (*OM 20*): Projects unlikely to have adverse environmental impacts. No EIA or IEE is required, although environmental implications are still reviewed.
- (iv) Category FI (*OM 20*): Projects are classified as category FI if they involve a credit line through a financial intermediary or an equity investment in a financial intermediary. The financial intermediary must apply an environmental management system, unless all subprojects will result in insignificant impacts.

128. **Categorization based on the Most Environmentally Sensitive Component.** Categorization is to be based on the most environmentally sensitive component. This means that if one part of the project is with potential for significant adverse environmental impacts, then project is to be classified as Category A regardless of the potential environmental impact of other aspects of the project. Of course only those aspects of the project with potential for significant adverse environmental impacts need to be assessed in detail. The scoping for the EIA and the TOR for the EIA report should focus on the significant environmental issues.

Table 9: Environmental Categorization Form**ENVIRONMENTAL CATEGORIZATION****A. Instructions:**

(i) This form is to be completed by the Sector Division in the Regional Department and submitted to the Environment and Social Safeguard Division (RSES) for endorsement by RSES Director, and for approval by the Chief Compliance Officer (CCO) of the Regional and Sustainable Development Department.

(ii) The environment categorization of a project is a continuing process. If there is a change in the components or/and site of a project that may result in category change, the Sector Division should submit a new environmental categorization form for endorsement by RSES Director and approval by the CCO. The old form should be attached for reference.

a. B. Project Data: Project No. _____

Country/Project Title: _____ Date: _____

Department/ Division: _____ Processing Stage: _____

Lending Modality: [] Project Loan [] Program Loan [] Financial Intermediation
[] Sector Loan [] SDP Loan Loan or Equity Investment

Coverage: [] Country [] Subregional [] Inter-regional

C. Environment Category: [] New [] Recategorization --- Previous Category _____

Category A

Category B

Category C

Category FI

Additional information is needed for categorization and is to be gathered by the Mission Leader. In the interim, the project is classified as:

Category A/B [] Environmental Specialist to participate in fact finding

Category B/C

Comments:

D. Documents attached: *The categorization will be considered incomplete if proper documentation is not attached.*

Basis for Categorization/ Recategorization:

[] REA Checklist

[] Project and/or Site Description (must be attached)

[] Other: _____

Terms of Reference for EIA/IEE:

[] Key issues identified and attached

[] Under preparation and will be submitted on _____ (date)

ENVIRONMENTAL CATEGORIZATION

b. E. Basic Environmental Assessment Requirements

Please check one of category A, B, C or FI

Category A:

- Environmental Impact Assessment (EIA)
- Environmental Management Plan including a Budget
- Public Consultation (at least twice)
- Disclosure 120 days in advance of Board Consideration

Category B:

- Initial Environmental Examination (IEE)
- Public Consultation

Check if the project is to be deemed environmentally sensitive (by CCO)

- Environmental Management Plan including a Budget
- Disclosure 120 days in advance of Board Consideration

Category C:

- Review of Environmental Implications

Category FI:

If Category FI, please check one of the following

- Equity Investment
 - Environmental Management System
- Credit Lines
 - Environmental Management System - including Environmental Assessment and Review Procedures for Subprojects
- Credit Lines where all subprojects will only have insignificant impacts
 - Review of Environmental Implications

For program, sector, or sector development program loans, please check the applicable requirements

Program and Sector Development Program Loans

- Environmental Assessment of Policy Matrix

Sector Loans

- IEEs of Sample Subprojects
- Environmental Assessment and Review Procedures
- Environmental Assessment of Sector Impacts (recommended)

F. Signatures

Category Assigned by:

RD Mission Leader

Date: _____

Endorsed by:

Director, Sector Division

Date: _____

Endorsed by:

Director, RSES

Date: _____

Approved by:

Chief Compliance Officer

Date: _____

Sample Rapid Environmental Assessment Checklist (for AGRO-INDUSTRIAL Project)

Rapid Environmental Assessment (REA) Checklist

**AGRO-INDUSTRIAL
PROJECTS**
Instructions:

- This checklist is to be prepared to support the environmental classification of a project. It is to be attached to the environmental categorization form that is to be prepared and submitted to the Chief Compliance Officer of the Regional and Sustainable Development Department.
- This checklist is to be completed with the assistance of an Environment Specialist in a Regional Department.
- This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB checklists and handbooks on (i) involuntary resettlement, (ii) indigenous peoples planning, (iii) poverty reduction, (iv) participation, and (v) gender and development.
- Answer the questions assuming the “without mitigation” case. The purpose is to identify potential impacts. Use the “remarks” section to discuss any anticipated mitigation measures.

Country/Project Title:
Sector Division:

SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting			
Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Wetland	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Mangrove	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Estuarine	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Buffer zone of protected area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Special area for protecting biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Bay	<input type="checkbox"/>	<input type="checkbox"/>	

SCREENING QUESTIONS	Yes	No	REMARKS
B. Potential Environmental Impacts			
Will the Project cause...			
▪ ecological disturbances arising from the establishment of a plant or facility complex in or near sensitive habitats?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ eventual degradation of water bodies due to discharge of wastes and other effluents from plant or facility complex?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ serious contamination of soil and groundwater?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ aggravation of solid waste problems in the area?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ public health risks from discharge of wastes and poor air quality; noise and foul odor from plant emissions?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ short-term construction impacts (e.g. soil erosion, deterioration of water and air quality, noise and vibration from construction equipment?)	<input type="checkbox"/>	<input type="checkbox"/>	
▪ dislocation or involuntary resettlement of people			
▪ social conflicts arising from the influx of construction laborers from other areas?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ environmental degradation (e.g. erosion, soil and water contamination, loss of soil fertility, disruption of wildlife habitat) from intensification of agricultural land use to supply raw materials for plant operation; and modification of natural species diversity as a result of the transformation to monoculture practices?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ water pollution from discharge of liquid effluents?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ air pollution from all plant operations?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ gaseous and odor emissions to the atmosphere from processing operations?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ accidental release of potentially hazardous solvents, acidic and alkaline materials?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ uncontrolled in-migration with opening of roads to forest area and overloading of social infrastructure?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ occupational health hazards due to fugitive dust, materials handling, noise, or other process operations?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ disruption of transit patterns, creation of noise and congestion, and pedestrian hazards aggravated by heavy trucks?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ disease transmission from inadequate waste disposal?	<input type="checkbox"/>	<input type="checkbox"/>	

129. **Confirmation of Categorization.** Projects are classified during an initial screening of potential environmental impacts. However, the classification is subject to change as more detailed information becomes available and preparation proceeds. The environment category must be reconfirmed by the CCO prior to the first MRM.

B. Basic Environmental Assessment Requirements

130. **Category A.** EIA is required to examine the project's potential impacts, and to recommend an environmentally sound project by comparing all possible alternatives. Public consultation must be undertaken at least twice during the EIA process, once during the early stage of the EIA field studies and after the draft EIA report has been prepared. The EIA should recommend mitigation measures for minimizing the adverse impacts and identify environmental monitoring requirements. The mitigation measures and proposed monitoring are to be incorporated into the EMP. An EIA report must be prepared following the recommended format in Appendix 2. The SEIA shall be circulated to the Board at least 120 days prior the Board consideration. The EIA and SEIA are to be made available for public (and published it on ADB's web-site). The Borrower should translate the SEIA into the local language.

131. **Category B.** An IEE is required for Category B projects to determine whether or not significant environmental impacts warranting an EIA are likely. If an EIA is not needed, the IEE is regarded as the final environmental assessment report. Public consultation must be undertaken during the IEE process. An IEE report is required to follow the recommended format in Appendix 3. For Category B projects deemed environmentally sensitive, the SIEE should be submitted to the Board at least 120 days prior to the Board consideration. In addition to the SIEE, IEE will be made available to Board members upon request. The Bank may make the SIEE available to locally affected groups and NGOs, upon request, through the Board Member of the DMC concerned, or through the Bank's Depository Library program, except where confidentiality rules would be violated.

132. **Category C.** No EIA or IEE is required but environmental implications of the project still need to be reviewed and mitigation measures if any should be directly integrated into the project design.

133. **Category FI.** Environmental Assessment of the financial intermediation and equity investments is required. A due diligence assessment of the financial intermediary and its environmental management system (EMS) is required, except in the where the subproject involves only small loans with insignificant impacts. In the cases where there will be on lending through credit lines, an environmental assessment and review procedures for subprojects are required. The environmental assessment and review procedures is similar to that for sector loans and the requirements for public involvement, information disclosure, and in some cases, clearances by ADB apply.

C. Classification Criteria

1. Category A

134. A proposed project is classified as Category A if it is likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented, and affect an area broader than the sites or facilities subject to physical works. For these projects, the environmental assessment examines the project's potential negative and positive environmental impacts, compares them with those of feasible alternatives (including the "without Project" situation), and

recommends measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance.

135. The following locations for prospective projects suggest a Category A classification:

- (i) in or near sensitive and valuable ecosystems (e.g., protected areas, wetlands, wild lands, coral reefs, and habitats of endangered species);
- (ii) in or near areas with cultural heritage sites (e.g. archaeological, historical sites or existing cultural sites);
- (iii) densely populated areas where resettlement may be required or pollution impacts and other disturbances may be significant;
- (iv) regions subject to heavy development activities or where there are conflicts in natural resource allocation;
- (v) watercourses, aquifer recharge areas, or reservoir catchments used for potable water supply; and
- (vi) lands or waters containing valuable resources (e.g. fisheries, minerals, medicinal plants, prime agricultural soils).

136. The following are examples of potential environmental impacts suggesting a Category A classification.

- (i) permanent conversion of potentially productive or valuable resources (e.g., fisheries, natural forests, wild lands);
- (ii) destruction of natural habitat and loss of biodiversity or environmental services provided by a natural system;
- (iii) risk to human health and safety (e.g. from generation, storage, or disposal of hazardous wastes, inappropriate occupational health and safety measures, violation of ambient water or air quality standards);
- (iv) displacement of large numbers of people or businesses; and
- (v) absence of effective mitigation or compensation measures.

137. Environmentally sensitive issues which require special attention during the environmental assessment process include the following: disturbance to tropical forests, conversion of wetlands, potential adverse effects on protected areas/sites, encroachment on lands or rights of indigenous peoples or other vulnerable minorities, involuntary resettlement, impacts on international waterways and other transboundary issues, and toxic waste disposal. The best way to ensure proper treatment of such issues is to classify the project as Category A, so that the level of effort will be adequate in terms of analytical expertise, decision making, interagency coordination, public involvement, and disclosure.²⁶

²⁶ World Bank. 1993. *Environmental Screening*. Environmental Assessment Sourcebook Update No. 2. World Bank: Washington, D.C., USA.

138. **Measuring the Magnitude of Impacts.** The following criteria may use to measure the magnitude of environmental impact:

- (i) absolute amount of resource or ecosystem affected,
- (ii) amount affected relative to existing stock of the resource or ecosystem,
- (iii) intensity of impact,
- (iv) timing and duration of impact, and
- (v) probability of occurrence for a specific impact

2. Category B

139. A project is classified as Category B if its potential adverse environmental impacts on human populations or environmentally important areas, (e.g., wetlands, forests, grasslands, and other natural habitats) are less adverse than those of Category A projects. These impacts are site-specific, and few are irreversible. In most cases, mitigation measures can be designed more readily than for Category A projects.

3. Category C

140. A project is classified as Category C if it is likely to have minimal or no adverse environmental impacts.

4. Category FI

141. A project is classified FI if involves and credit line or an equity investment in a financial intermediary. Projects that involve small loans, generally microfinance projects, where all subprojects will result in insignificant environmental impacts will be treated as category C, and do not have a requirement for the adoption of an EMS or environmental assessment report.

D. Sample Environmental Categorizations

142. The sample categorizations for project types are provided in the Table 10.

Table 10: Sample Categorizations for Project Types

Category A	Category B	Category C	Category FI
Dams and reservoirs	Agro-industries	Forestry research and extension	Credit Lines
Forestry and production projects (large-scale)	Rural electrification	Rural health services	Equity Investments
Industrial plants (large-scale)	Electrical Transmission	Marine research	
Irrigation, drainage, and flood control (large-scale)	Urban water supply and sanitation	Family planning program	
Mineral development (oil and gas)	Rural water supply and sanitation	Microfinance projects likely to have minimal or no adverse impacts	
Port and harbor development	Irrigation and drainage (small-scale)		
Thermal and hydropower development	Watershed projects		
	Renewable energy		

E. Reclassification of a Project

143. It is possible for a project to be reclassified as new information becomes available or as modifications are introduced in the project design. For example, a Category A project may be reclassified as Category B if all components with significant impacts are cancelled. Conversely, a Category B project may become Category A if new information reveals that it may have significant adverse environmental impacts that were originally thought to be limited to one environmental aspect. Upwards reclassification (e.g. B to A; or C to B) carries some costs. As a result, additional resources will be required for environmental studies, public consultations, and report preparation. Moreover, the schedule for project preparation may be delayed if a decision to conduct more environmental assessment activities is taken during the latter stages of the PPTA.

VI. ENVIRONMENTAL MANAGEMENT PLAN

A. Introduction

144. An important objective of environmental assessment is to develop procedures and plans to ensure that the mitigation measures and monitoring requirements approved during the environmental compliance review will actually be carried out in subsequent stages of the project. As a result, ADB places strong emphasis on the preparation of EMPs during project processing and on setting out conditions and targets to be met during project implementation. The terms of reference for an EIA thus require the Borrower or their consultants to prepare an EMP as a major output of the environmental assessment. Where appropriate, the key contents of EMPs are incorporated into the loan agreement, for implementation and monitoring by the Borrower.

145. ADB requires that an EMP be included as part of the EIAs and IEEs (for Category B projects deemed environmentally sensitive). The EMP is carefully reviewed to ensure environmental safeguard compliance prior to the first MRM. However, at this stage in the project cycle, the specific construction and operational activities may not be well defined. And often it is not possible or practical to provide the details required for an effective EMP. Thus the ADB requires that the Borrower ensure that a revised EMP be prepared at the beginning of the implementation stage

B. Institutional Arrangements

1. Environmental Management Office

146. Where relevant, a project environmental management office (EMO), or its equivalent within the Project Management Office/Unit at the executing agency, should be established. To ensure long-term institutional capacity building, it is recommended that the staff of the EMO be drawn from the permanent full-time staff of the executing agency. Major responsibilities of the EMO are to ensure the mitigation measure and monitoring programs are carried out as agreed, and reporting is completed in compliance with the ADB requirements.

147. Successful environmental supervision requires a mechanism to (i) determine whether the executing agency is carrying out the project in conformity with the EMP, (ii) identify problems, and (iii) to develop plans for corrective action.

148. In some cases, technical assistance may be required to build capacity, including technical support, equipment and financial resources, for strengthening of the EMO. In general, institutional strengthening should

- help the EMO to supervise the implementation of the EMP including supervision and evaluation of the work to be undertaken by or on behalf of the Borrower with respect to the mitigation measures and monitoring requirements;
- provide on-the-job training to officials of the EMO in order to build technical expertise in the environmental and social aspects of environmental management;
- instruct EMO personnel in the proper techniques of project inspection, monitoring, use of field monitoring equipment, and data collection; and

- assist the EMO to coordinate and consult with other government agencies, local communities, NGOs, and other stakeholders concerned with the environmental aspects of the project.

C. Contents of the EMP Prior to the MRM

149. The minimum contents of an EMP that should be included with EIAs or IEEs (for Category B Projects deemed environmentally sensitive), are described below:

1. Summary of Impacts

150. This section should summarize the predicted adverse environmental and social impacts that must be mitigated.

2. Description of Proposed Mitigation Measures

151. This section should set out clear and achievable targets, and quantitative indicators of the level of mitigation required. Each measure should be briefly described in relation to the impact and conditions under which it is required. These should be referred to designs, development activities, equipment descriptions, and operating procedures and implementation responsibilities.

3. Description of Monitoring Programs and Parameters

152. This section should outline the specific monitoring protocols, parameters, and expected frequencies. It should identify objectives and specify the type of monitoring required; it also describes environmental performance indicators which provide linkages between impacts and mitigation measures identified in the EIA/IEE report – parameters to be measured, methods to be used, sampling location and frequency of measurements detection limits and definition of thresholds to signal the need for corrective actions. Monitoring and supervision arrangements should be agreed by the ADB and the executing agencies to ensure timely detection of conditions requiring remedial measures; furnish information and the progress and results of mitigation and institutional strengthening measures; and assess compliance with national and ADB environmental safeguard policies.

4. Public Consultation Activities

153. The EMP should include a plan for public consultation activities during the finalization and implementation of the EMP. The degree of consultation will depend on the project and local situation, but will normally include (i) notification of local communities when project activities are going to take place; (ii) disclosure of the results of monitoring programs to local communities and other stakeholders; and (iii) provision for independent third party monitoring, where necessary (see Chapter X). Projects with potential for significant adverse impacts may require public consultation on the design of mitigation measures and provide for public participation in environmental monitoring. Stakeholder consultation is also recommended during the preparation of final monitoring reports.

5. Description of the Responsibilities for Mitigation and Monitoring Requirements

154. This section should specify the institutional arrangements for implementation - 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. EMP specifies the organizations and individuals that will be 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. The EMP may propose institutional strengthening activities including establishment of appropriate organization arrangements, appointment of key staff and consultants; and arrangements for counterpart funding and onlending when necessary.

6. Preliminary Cost Estimates

155. To ensure that mitigation measures and monitoring are adequately funded, the EMP should contain preliminary cost estimates.

D. Additional Contents of the EMP to include in Revised EMP during Implementation

156. During implementation, the EMP should be revised once construction and operational activities are well defined. Additional information should be provided on (i) the responsibilities for reporting, (ii) the work plan, (iii) the procurement plan, (iv) detailed cost estimates, and (v) mechanisms for taking corrective action.

7. Description of the Responsibilities for Reporting and Review

157. This section should specify institutional responsibilities for contractors, Borrower (DMC government), local authorities, and ADB, with the roles that prepare, submit, receive, review, and approve the reports. An implementation schedule detailing the timing, frequency and duration of mitigation measures, monitoring, and reporting of the progress should be prepared, showing phasing and coordination with procedures in the project operations manual and loan agreement. Recipients of such reports should include those with responsibility for ensuring timely implementation of mitigation measures and for undertaking remedial actions. In addition, the structure, content and timing of reporting should be specified to facilitate supervision, review and approval (if necessary) by ADB.

8. Work Plan

158. This section should specify staffing chart for the EMO, where necessary, and other related work, proposed schedules of participation by the project team members, and activities and inputs of related government agencies. The responsibilities and requirements of contractors should be clearly addressed to ensure integration into legal requirements and bidding/contract documents—EMP requirements should be integrated into such documents to ensure that contractors are clear with their obligations—where supervision identifies inadequacies in their implementation such documents provide a basis for enforcement and reporting. Implementation of major environmental covenants should be linked to disbursement conditions.

9. Procurement Plan

159. This section should include 2 sections: (i) the plan for procurement of the specific items and equipment required to implement of the mitigation and monitoring programs in the EMP, and (ii) a description of procedures to ensure consistency of all project procurement with the principles and practices of environmentally responsible procurement of goods and services (see Chapter XIII).

10. Cost Estimates

160. This should section provide the detailed costs of implementation. These should be specified for both the initial and recurring expenses for implementing all measures defined in the EMP, integrated into the total project costs and factored into loan negotiations. All costs—including administrative design and consultancy, and operational and maintenance costs—resulting from meeting required standards or modifying project design should be captured. A budgeting plan should be attached to resolve the issues of how those costs are to be met.

11. Project Feedback and Adjustment

161. The section should outline the procedures and mechanisms that will be used to modify and reshape the project in the light of monitoring results. A feedback mechanism, with proposed timing and procedures, should be included in the EMP to provide for modifications to the Project, and the executing agencies, the EMO, and the ADB.

Contents of a Complete EMP

1. Summary of Potential Impacts
2. Description of Planned Mitigation Measures
3. Description of Planned Environmental Monitoring
4. Description of Planned Public Consultation Process
5. Description of the Responsibilities and Authorities for Implementation of Mitigation Measures and Monitoring Requirements
6. Description of Responsibilities for Reporting and Review
7. Work Plan including staffing chart, proposed schedules of participation by various members of the project team, and activities and inputs of various government agencies
8. Environmental Responsible Procurement Plan
9. Detailed Cost Estimates
10. Mechanisms for feedback and adjustment

E. Sample Forms

162. The development of mitigation measures, the monitoring program, institutional arrangements and scheduling can be aided by the use of the matrices presented in Tables 11 – 14 attached. These matrices should be included in the EMP document.

Table 11: Template for summarizing Mitigation Measures

Project Stage	Project Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Institutional Responsibilities	Cost Estimates
Pre-Construction Phase					
Construction Phase					
Operation and Maintenance Phase					

Table 12: Template for summarizing Monitoring Requirements

	Mitigation Measure	Parameters To be Monitored	Location	Measurements	Frequency	Responsibilities	Cost
Pre-Construction Phase							
Construction Phase							
Operation and Maintenance Phase							

VII. ENVIRONMENTAL ASSESSMENT OF PROGRAM LOANS

A. Introduction

163. Program loans usually focus on specific economic sectors (energy, transport, agriculture, etc) or on broader economy-wide structural adjustment, which tends to be directed at reducing deficits, promoting market liberalization, privatization, strengthening government and market institutions, and pricing reforms instead of investment program.

164. ADB's internal document, "Environmental Considerations in Program Lending"²⁷ provides the conceptual basis to understand the types of policy interventions (structural adjustments) normally involved in a program loan. It links these policy interventions to potential economic and social outcomes (Figure 10). These economic and social outcomes are the direct impacts of the policy interventions. Based on these outcomes the environmental impacts of the proposed policy interventions need to be assessed.

165. **Environmental Conditionalities.** Program loans should include conditions to promote environmentally sound development. There are usually opportunities to promote efficient use of resources that will in turn lead to environmental benefits. Table 15 provides some examples of sector specific policy interventions designed to promote environmental sustainability. These interventions should be incorporated into program loans and sector development programs as appropriate to enhance to overall success and sustainability of the policy changes being introduced.

B. Recommended Approach

166. The basic environmental assessment requirement for a program loans is to assess the environmental consequences of specific policy and institutional reforms to be introduced with and include appropriate environmental covenants in loan documents. Appendix 4 provides the suggested contents for complete reporting on the environmental assessment of a program loan. While IEEs and SIEEs or EIAs and SEIAs do not have to be prepared for program loans, except where an investment component is also included, a matrix of potential environmental impacts of each policy action, together with appropriate mitigation measures, should be prepared for each program loan, with a qualitative indication of the likely order of magnitude of each impact and brief reasons for the judgment. The principles followed in preparing the matrix include screening of potential environmental impacts (including indirect impacts); mitigation of potential adverse impacts to the levels of "no significant harm to third parties"; polluter paying for mitigation measures; least-cost mitigation; and ensuring that the institutional basis for implementing mitigation measures, including environmental monitoring, is in place.

167. Strategic environmental assessment (chapter XV), which facilitates systematic evaluation of the environmental impacts of a policy, plan, or program and its alternatives, may be usefully applied in the preparation of program loans. If an investment component is included in the program loan and specific projects are identified as a part of the program loan, these projects should follow the general project environmental assessment requirements.

²⁷ ADB 1995. *Environmental Considerations in Program Lending; A Review of Bank's Experience*. Manila

Figure 10: Economic and Social Outcomes of Structural Adjustments

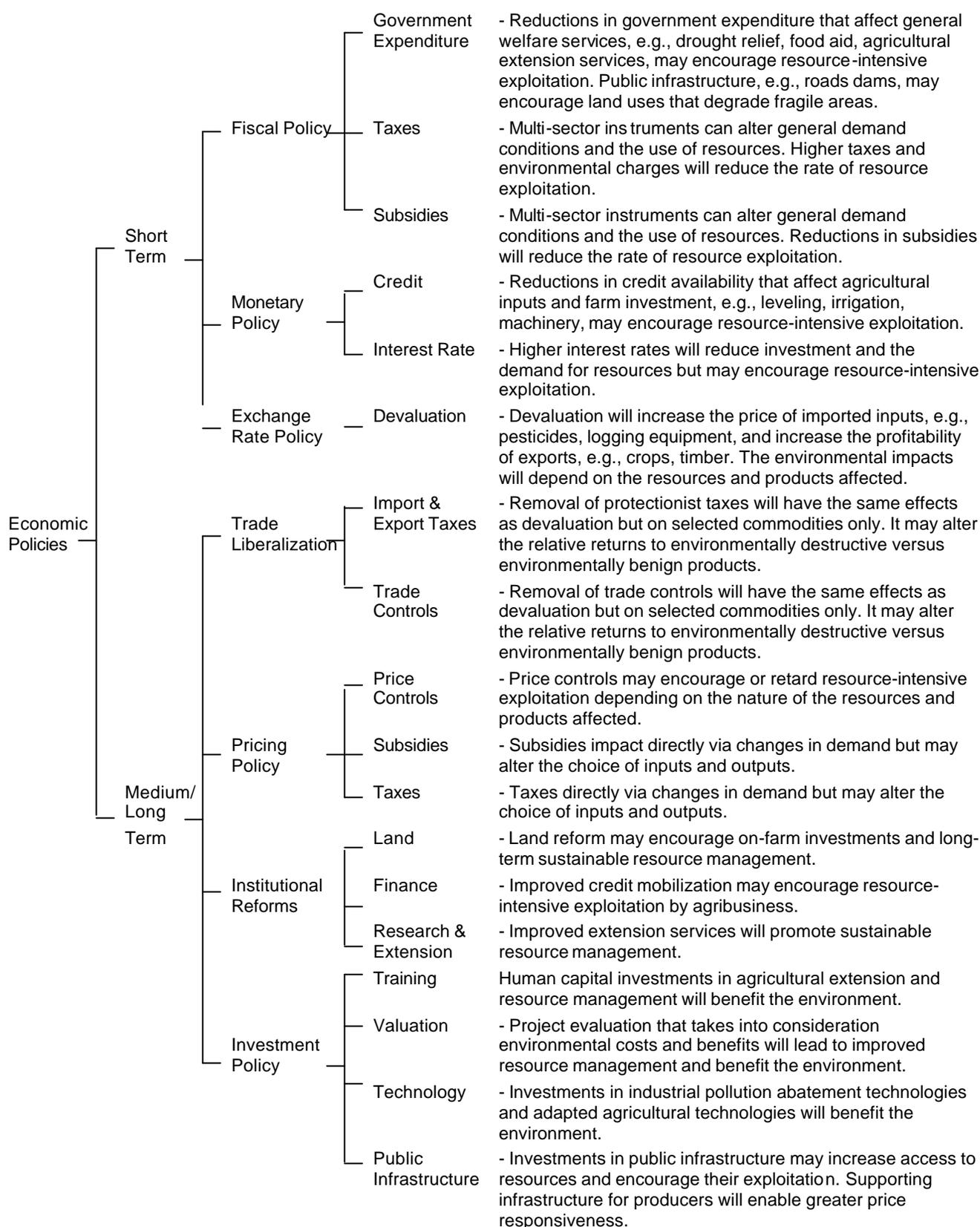


Table 15: Sector Specific Policy Interventions That May Promote Environmental Sustainability

Sector	Intervention	Example
Energy	Pricing	Full cost pricing Reduction in subsidies Increase in prices/tariffs
	Institutional Strengthening Environmental	Action energy programs Energy Conservation Measures
Water	Pricing	Increase in water tariffs
	Legal Enforcement	Water resource law
	Institutional Strengthening	Capacity building in water supply agency
	Incentives for Efficient Use Environmental	Water fee collection programs Compliance with efficiency targets
Forestry	Support Functions	Reforestation funding
	Legal Programs	Forest law enforcement
	Environmental	Eco-forestry policy Forest conservation master plans
Industry	Legislation	Industrial and Hazardous Waste Management
	Taxation	Mineral taxation
	Environmental	Environmental Auditing
Agricultural	Taxation	Taxes on agricultural produce
	Pricing	Agricultural inputs (e.g. water, pesticide, fertilizer)
	Environmental	Land and soil conservation Environmental criteria for agricultural project selection
Environmental	Institutional Strengthening	Environmental management institutions Environmental protection policies, strategies, and action plans Natural resource management plans Environmental impact assessment Market based instruments Environmental standards Environmental regulations

168. **Environmental Assessment of the Policy Matrix.** Whichever assessment technique is used, the results should be summarized in the “environmental assessment of policy matrix.” This matrix should contain each of the policy reforms and the likely social or economic outcomes. For the social and economic outcomes, the likely environmental impacts should be presented. Where necessary, mitigation measures should be provided to address environmental impacts. Any proposed monitoring requirements should be linked specific impacts and mitigation measures. Table 16 provides an example, based on an energy sector program, of the information that should be presented in the environmental assessment of the policy matrix.

Table 16: Example Policy Matrix for an Energy Sector Program

Policy Area	Stated Objectives	Proposed Actions	Other Actions Required	Economic and Social Outcomes	Environmental Impact
Energy conservation	Reduce energy use intensity to improve economic efficiency and promote sustainable economic development.	Implement energy audits and investments to improve energy efficiency.	Additional incentives to encourage the use of alternative fuels taking in consideration the border prices of competing energy carriers are required. The full cost of resources needs to serve as the basis for price determination and investment decisions and include the cost of environmental degradation.	Reduced need for, or postponement of, hydropower development and associated resettlement of population.	Conservation and protection benefits Avoidance of the potential disruptions to existing communities
Pollution, sulphur dioxide and particulate matter and water pollution	Reduce energy use through more efficient energy use and air and water pollution from energy use.	Strengthen the environment unit within the government institution concerned and pass environmental laws and regulations. Establish a fund for pollution abatement activities.	No other actions required.	Reduced emission of house gases proportionate with energy conservation achieved.	Improvements in Air Quality with potential health benefits
Resettlement of displaced persons from hydropower sites	Adopt adequate resettlement practices.	Under technical assistance: Establish a program for environmental monitoring, planning and institutional strengthening. Include a resettlement expert in hydropower project supervision missions.	No other actions required.	Siting and construction of resettlement areas Economic and social disruption of existing communities	Potential environmental impacts associated with siting and constructing infrastructure at resettlement areas
Energy pricing	Improve allocative efficiency, ensure operative efficiency and stimulate private sector investment in the energy sector.	Increase rates to economic cost through a series of regular increases. Eliminate all electricity tariff subsidies. Diesel and gasoline prices need not be changed.	Additional incentives to encourage substitution to cleaner energy sources, e.g., higher quality coal, oil, gas or hydropower, may be required.	The removal of subsidies on certain dirty fuels, e.g., lignite will encourage substitution to cleaner energy sources.	Potential for unintended adverse environmental and social impacts if other policy, market or institutional imperfections are not addressed

VIII. ENVIRONMENTAL ASSESSMENT OF SECTOR LOANS

A. Introduction

169. Sector lending is a form of ADB assistance to a DMC for project-related investments based on considerations relating to a sector or subsector as a whole in the DMC. The purpose of a sector loan is to assist in the development of a specific sector or subsector by financing a part of the investment in the sector, planned by the DMC. A sector loan is expected to improve sector policies and strengthen institutional capabilities. Such lending is appropriate particularly when a large number of subprojects in the sector or subsector are to be financed.

170. At the time of loan approval, the subprojects are usually not known. This makes it difficult to apply traditional environmental assessment techniques. The basic environmental assessment requirements for sector loans are designed to ensure better subproject design and but also include requirements for the ADB to review and confirm of the environmental assessment requirements of sub-loans, as necessary.

171. The first challenge in environmental assessment and review of sector loan is devising a method for undertaking an assessment of total impact of all subprojects to be financed. In many cases, the subprojects are small and the likelihood of significant adverse impacts from any one subproject is low. However, a large number of subprojects to be undertaken in relatively small geographic area in a relatively short period of time may cause significant cumulative impacts. The environmental assessment of sector impacts is directed towards ensuring the cumulative impacts of all the known or unknown subprojects is assessed prior to loan approval.

172. The second challenge for the environmental assessment and review of sectors loans is to provide an efficient mechanism for environmental assessment of each subproject. If an environmental assessment is undertaken at the sector level, it should be possible to streamline the environmental assessment of individual subprojects. ADB's requirements for IEE/EIA of sample subprojects are also important. The specific results of the sample IEE/EIAs are very useful in determining the appropriate level of environmental assessment requirements for all subprojects to be financed under the loan. Appendix 5 provides the suggested contents for complete reporting on the environmental assessment of a sector loan.

B. Recommended Approach to Sector Assessment

173. The procedures for environmental assessments of projects are discussed in part 1 and more information is provided on EIA (Appendix 2) and IEE (Appendix 3). This section presents guidance on how to prepare the environmental assessment at the sector level. The basic analytical steps are similar to all environmental assessments: (i) scoping, (ii) impact identification and assessment, (iii) identification of mitigation measures, (iv) identification of monitoring requirements, and (v) environmental assessment reporting.

174. **Scoping** involves 5 basic steps: (i) identifying the environmental indicators; (ii) preparing the development scenario—identifying the range of activities that will be involved in subprojects; (iii) defining the spatial or geographic extent for the purposes of the environmental assessment; (iv) defining the time period over which impacts are to be assessed; and (v) identifying the environmental issues.

175. **Stakeholders.** All “stakeholders” – i.e., parties potentially affected by (or otherwise interested in) the project – should be given an opportunity to participate in the scoping exercise. To the extent practical, this should be done as part of the public consultation activities for the project.

176. **Sustainability Indicators.** During scoping one must be sure to consider applicable social and ecological objectives and identify potential affected resources, ecosystems, and human communities of concern. Subprojects may occur over a large area and therefore it may be necessary to identify regional issues of concern and select appropriate regional environmental indicators. Research on sustainable development has identified most of the cumulative impacts issues associated with specific sectors (i.e., energy, agriculture, forestry, fisheries, community development, biodiversity, water resource management, wildlife management). Researchers on sustainability indicators have developed appropriate measurement indicators for addressing cumulative impacts. Table 17 provides an example of sustainability indicators that have proven useful for managing forests.

Table 17: Sustainability Indicators for Forestry

Conserving biological diversity
<ul style="list-style-type: none"> • percentage and amount of area forested • percentage and amount of interior forest space • protection of sites of biological significance • number of known species at risk • population levels and changes over time of selected species
Ecosystem Condition and Productivity
<ul style="list-style-type: none"> • natural disturbance and stress by type and severity • forest stand health
Conserving Soil and Water Resources
<ul style="list-style-type: none"> • percentage of riparian (shoreline) areas with natural vegetation cover • buffering capacity and soil acidification
Multiple Benefits of Forests to Society
<ul style="list-style-type: none"> • production of timber forest products • regional wood prices • employment in forest related sectors
Society’s Responsibility
<ul style="list-style-type: none"> • community involvement in sustainable forest management • implementation of integrated resource management plans • private land management and conservation programs • mutual learning mechanisms

177. **Development Scenario.** Most methods for environmental assessment work best when the actions or activities are clearly defined. This may be problematic for sector loans where the subprojects are in early stages of planning and the details of many activities are ill defined. In this case, it is often appropriate to use a scenario approach. While they may not accurately reflect what might ultimately occur, scenarios usually give a realistic picture of the scale, scope, and type of planned activities. The key is to describe project activities at the appropriate level of detail. In general, activities need to be described in terms of their location, timing, and magnitude. For example, discharges or emissions of pollutants should be detailed in terms of loadings, the temporal pattern of discharge, and point of entry into the environment. For

disturbances to land use or habitat, the areal extent, locations, and temporal pattern of disturbance should be given. For alteration of hydrologic regimes (e.g., flow in a river), the old and new regimes, should be given.

178. **Spatial Dimensions.** Definition of the spatial extent and resolution of the assessment area is one of the most critical decisions made in an impact assessment. Often it is not explicitly considered. If this is the case, the information brought forward for assessment may have been collected and analyzed at the wrong scale. It is also possible that critical spatial areas have been completely neglected, and areas where major impacts might occur could be considered to be outside the study area. Reviewing and assessing information is difficult enough without the confusion resulting from failure to define appropriate geographical boundaries and sub-areas within those boundaries.

179. Guidelines for determining geographic boundaries are difficult to state. Most practitioners accept that the minimum spatial extent should be the geographic extent of the project facilities and activities. It is widely accepted, however, that the impacts of the project may occur at a distance remote from the project site itself. Some ecologically-based considerations often used in determining spatial extent include (i) the home range of territorial species; (ii) the range of migratory species; (iii) the downstream transport in surface waters and movement in groundwater, when considering pollutants in aquatic systems; and (iv) the short, medium, and long range transport based on the atmospheric conditions, when considering atmospheric pollutants. These considerations can extend the geographic extent of the assessment far beyond the immediate vicinity of the project.

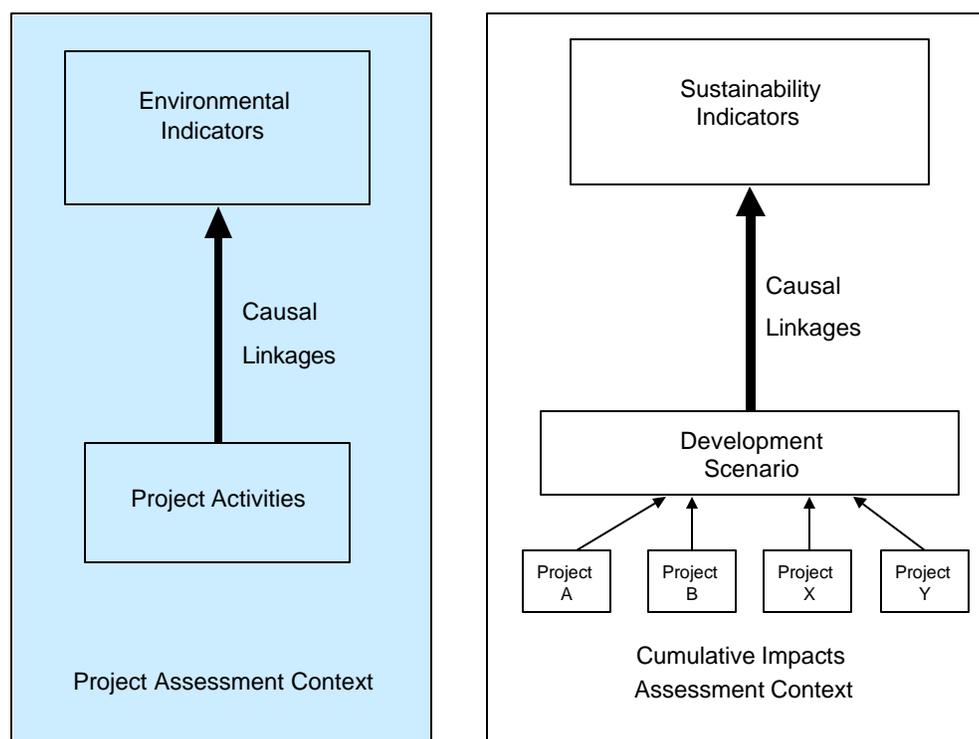
180. **Local Impacts.** In many environmental assessments local impacts are of extreme significance. If one chooses a large scale to assess effects, important local impacts may be overlooked. For example, the loss of harvested fish population from one locality may have little impact on the regional fish population, but it is likely to be very important to fishermen in the local communities who rely on the fish population. Because of this, and because not all parts of a large area receive the same intensity of impact, it is usually necessary to divide the larger spatial extent into smaller spatial units. Often there are natural units (e.g., reaches of a river, differing oceanic conditions, physiographic features, and habitat types). In other cases, division may be made on assumptions of intensity of impact.

181. **Temporal Dimensions.** Of equal importance to the spatial considerations are the definitions of the temporal horizon and resolution. As a general rule, there is a need to consider a time horizon long enough for the impacts to become manifest. There are a number of important considerations. At a minimum, there is a need to consider the planning horizon and the life of the proposed subproject activities to be able to understand the long-term impacts the project might have. There is also a need to evaluate the life cycle of the animals and plants that might be affected. For long-lived species, it may take two or three generations before the impacts on the population are manifest. Some impacts, such as those related to flooding, erosion, fire, and sedimentation, might only become evident as a result of episodic events. In addressing this, one must consider how the proposed activities alter the likelihood, magnitude, and temporal pattern of these impacts.

182. **Environmental Issues.** One convenient and effective way to represent cumulative impact issues is through the use of an impact hypothesis diagram. An *impact hypothesis* is an explicit statement that causally relates the effects of project activities to environmental indicators. In a project assessment context (Figure 11) one or more activities are causally

linked to a single environmental indicator. In the cumulative effects context all of the activities in a development scenario are linked to a single sustainability indicator.

Figure 11: Impact Hypothesis in Project Assessment and Cumulative Impact Assessment Context



2. Assessing Impacts

183. The use of a development scenario, the identification of sustainability indicators, and specification of impact hypotheses provides with the analytical framework to make the overall assessment of impacts. This provides a way of delineating the cause-effect relationships between multiple activities and environmental resources, ecosystems, and human communities of concern. The subsequent assessment depends on careful analysis using proven methods, procedures and tools of environmental assessment.

3. Identification of Mitigation Measures

184. In designing environmental protection measures reduce or prevent adverse environmental impacts, the assessment should focus on three key aspects relating to subproject selection: (i) recommendations related to the spatial planning for the location of subprojects, (ii) recommendations for criteria to exclude or prohibit activities that may have potential for significant adverse impacts, and (iii) recommendations for proven cost effective mitigation measures to designed into projects and included in the projects budget. These are not project specific mitigation, but rather environmental criteria for future subproject selection.

4. Monitoring Requirements

185. Environmental monitoring requirements should be based on the environmental sustainability indicators chosen for the assessment. Monitoring for cumulative impacts is not straightforward and can be very costly. To ensure meaningful results there is usually a need for a multi-year monitoring program at many monitoring stations within a large geographic area.

5. Integrating the Results

186. The sector assessment is a check to ensure that cumulative impacts of the project are acceptable. The results are also particularly useful in determining the environmental criteria to be used in the categorization of subprojects. In course of the environmental assessment of sector impacts most, if not all, of the potential environmental issues would have been identified, the impacts assessed, and mitigation measures and monitoring required discussed.

187. **Environmental Assessment and Review Procedures.** One of the most important results is the specification of the procedures for environmental assessment and review of subprojects (see Appendix 6 for the content of the environmental assessment and review procedures. Another important result is the set of summary examples of the potential impacts that might occur as a result of subprojects.

IX. ENVIRONMENTAL ASSESSMENT FOR FINANCIAL INTERMEDIATION LOANS AND EQUITY INVESTMENTS

A. Introduction

188. Financial intermediary projects involve the provision of capital by ADB to financial intermediaries, which in turn finances specific investments through loans or equity. Frequently, ADB funds will be channeled through a large financial institution such as a national development bank, which on-lends to smaller commercial banks and other financial intermediaries. Sometimes, a borrowing country's central bank acts as the intermediary between ADB and smaller financial intermediaries. Demand in the marketplace dictates the types of investments that are eventually made and the pace of borrowing, although the ADB and the borrowing government normally agree on a set of broad criteria. For example, some loans may be assigned to rural or industrial investments, whereas others may have a specialized focus, such as investments for rural agriculture, pollution prevention and abatement or urban development.

189. ADB's loans involving financial intermediaries are usually in the form of credit lines and equity investments. A financial intermediary could be a government, public corporation, or private institution. ADB's financing of subprojects through financial institutions may take on different forms. Private equity investments may finance companies with diverse operations or specific projects. Investment may flow directly through the financial institution to a specific subproject, as in credit lines. In other cases, such as an equity investment in a commercial bank, ADB's investments are not targeted to specific subprojects but support an institution whose investments may have environmental and/or social impacts.

190. Under ADB's environmental assessment requirements financial intermediary projects are subject to the same rigor of assessment by ADB and the same expectations of environmental performance in design and implementation as regular investment projects. However, the nature of financial intermediary projects requires differing roles and responsibilities of the party or parties involved. The ultimate project sponsor (the company or individual carrying out a project financed) is responsible for the project environment assessment. This is consistent with ADB policy for regular investment projects and with environmental assessment regulations in most countries: the entity that wants to undertake a project must also carry out any required environmental assessment. In most cases, project sponsors conduct any required environmental assessment and hire professional consultants to undertake the environmental assessment. The financial intermediaries must verify that subprojects in which they invest meet the environmental regulations or other requirements of the country (or, as appropriate, state, provincial or local authorities), and are consistent with ADB's environmental policies. This essentially means that financial intermediaries must screen projects and ensure that any legally required environmental report has been prepared and approved by the appropriate authorities, before approving any loan or investment. In the absence of such regulations, the financial intermediaries should verify that the environmental assessment meets the ADB's requirements as set out in OM 20.

191. Microfinance projects are usually executed through financial intermediaries. Loan amounts are small and projects normally have little potential for environmental impacts. To minimize loan transactions costs, environmental assessment procedures for microfinance projects may be streamlined.

B. Conducting Environmental Due Diligence

192. For financial intermediation loans and equity investments projects, ADB is seldom directly involved in environmental assessment of subloans. As a result, ADB's environmental assessment focuses on due diligence assessment of the financial intermediary (Table 18). Environmental due diligence should concentrate on; (i) evaluation of the financial intermediary's EMS,²⁸ and (ii) if the project involves credit lines or other forms of on-lending, an evaluation the financial intermediary's procedures for environmental assessment and review of loans.

1. Evaluation of the EMS

193. The evaluation begins overall description of the organization, its Board of Directors, its senior management, its business activities and its environmental and social track record. The adequacy of financial intermediary's EMS should be reviewed to determine whether it has the capability to ensure that ADB's environmental and social safeguards will be met. Key officers and staff responsible for environmental management should be identified and evaluated in terms of their training and experience. A key element of an EMS is an environmental policy as approved by a Board of Directors or senior management. The policy should be scrutinized to ensure that it provides for necessary mandate for integration on environmental and social considerations into the financial intermediary operations and provide development of procedures to ensure compliance with environmental laws and regulations. Procedures that are used for monitoring and review of environmental performance should be carefully assessed.

2. Evaluation of Environmental Assessment and Review Procedures

194. When the project involves credit lines or other on-lending arrangements, environmental due diligence also requires an evaluation of the environmental assessment and review procedures for subprojects (see Appendix 6). These procedures are equivalent to those that are required for sector loans. The evaluate should assess the adequacy of the environmental assessment and review procedures in the context of ADB's environmental assessment requirements

3. Recommended Improvements to meet ADB Safeguard Policies

195. The final aspect of environmental due diligence is the preparation of recommendations and action plan for any needed improvements to the financial intermediary's EMS. Recommendations should concentrate on those needed to meet ADB's Safeguard Policies.

²⁸ Here the term "environmental management system" is defined as a system for planning, implementing, reviewing and improving the processes and actions that an organization undertakes to meet its environmental goals. The major components of an EMS are:(i) environment policy, (ii) environmental management capability, (iii) environmental assessment and review procedures for subprojects (credit lines), and (iv) environmental monitoring and reporting. Many EMSs are built on the "Plan, Do, Check, Act" model. This model leads to continual improvement based upon:

- planning, including identifying environmental aspects and establishing goals [plan];
- implementing, including training and operational controls [do];
- checking, including monitoring and corrective action [check]; and
- reviewing, including progress reviews and acting to make needed changes to EMS [act].

4. Reporting

196. A report on environmental assessment of the financial intermediation loan or equity investment should be prepared following the recommended format in Appendix 7.

Table 18: Evaluating a Financial Intermediary - Environmental Due Diligence

This questionnaire is designed to guide the collection of information for evaluating the environmental procedures and performance of the financial intermediary. The questions may be discussed with financial intermediary staff having responsibility for environmental issues, a senior manager, or a credit officer.

1. *Current environmental procedures*

- Does the financial intermediary have any formal environmental policy or procedures? If yes, please describe them and provide appropriate documentation.
- Are there any types of projects in which the financial intermediary will not take part due to the environmental risks? (e.g., projects involving handling of hazardous wastes or endangered plants or animals).
- Who is responsible for environmental issues? (name/role and title).
- How are environmental considerations taken into account in the credit review and approval process for project loans or equity investments?
- How are environmental issues taken into account in deciding whether to offer or extend commercial credit, working capital finance, trade finance, payment services and other financial services to a company?
- In the view of the financial intermediary, to what extent is the nature of its investments in projects likely to be subject to environmental risks, and how are potential environmental risks taken into account?

2. *Staff environmental capabilities*

- Are there staff with environmental training in the financial intermediary? If so, describe.
- Are there technical staff with an engineering/industry background responsible for technical analysis of credit proposals?
- What experience, if any, does the financial intermediary have of hiring or dealing with environmental consultants?

3. *Environmental aspects of existing portfolio*

- To the financial intermediaries knowledge, are any of its investment/loans subject to environmental liabilities of any kind?
- To the financial intermediary's knowledge, have any of its commercial customers been the subject of environmental criticism? If so, describe.

4. *Environmental services*

- Does the financial intermediary, as part of its advisory services, have the capability to advise corporate clients on the environmental risks associated with project finance?
- Does the financial intermediary offer a service of investment in "environmental funds"?

5. *Other issues and plans for the future*

- Has the financial intermediary signed any national or international agreements or declarations concerning environmental issues?
- Has the financial intermediary ever received any criticism of its environmental record? If so, what was the criticism?
- Does the financial intermediary carry out environmental audits of its properties to analyze health and safety issues, waste disposal, etc.?
- Does the financial intermediary have plans to develop environmental procedures in the future? If so, what are these?

Source: As adapted from Conducting Environmental Due Diligence on FI Projects, EBRD in Financial Intermediary Lending and Environmental Assessment, World Bank Source Book Update Number 27: June 2002.

X. PUBLIC CONSULTATION AND INFORMATION DISCLOSURE

A. Introduction

197. The ADB's Environment Policy mandates the procedural requirements for effective public consultation and information disclosure in the EA process. The purpose of this chapter is to provide practical guidance on adequate public consultation and suggest approaches on how to achieve it.

B. Framework for Public Consultation

1. Rationale

198. Public consultation is an important element of the planning and implementation of economic development activities. It is embedded in the ADB's governance policy, sector policies such as forestry and fisheries, and safeguard policies on environment, involuntary resettlement, and indigenous peoples (Table 19). Public consultation is necessary to ascertain the public's views. Providing for people's participation in project design and development is a way to improve environmental governance by providing a mechanism to influence decisions about the use and management of natural resources.

Table 19: Policy Requirements for Public Consultation

Policies	OM/OP	Handbook/Guidelines
<ul style="list-style-type: none"> • Environment Policy • Policy on Indigenous Peoples • Resettlement Policy • Confidentiality and Disclosure Information • Sector Policies (Gender, Water, Forest, Fisheries, energy, etc.) • Governance Policy 	<ul style="list-style-type: none"> • OM/OP 20: Environmental Considerations in ADB's Operation • OM/OP 47: Incorporation of Social dimensions in Bank Operation • OM/OP 50: Involuntary Resettlement • OM/OP 53: Indigenous Peoples 	<ul style="list-style-type: none"> • Guidelines for Incorporation of Social Dimensions in Bank Operations • Handbook for Incorporation of Social Dimensions in Bank Operations • Handbook on Resettlement • A Guidebook for Policy on Confidentiality & Disclosure of Information

199. ADB's safeguard policies on Environment, Involuntary Resettlement, Indigenous Peoples recognize the importance of consulting with the project affected individuals and groups to provide opportunities to raise community's concerns and issues. ADB's operation manuals and guidelines for resettlement, indigenous peoples, and incorporation of social dimensions in ADB operations provide guidance on: i) identifying and assessing stakeholders, ii) assessing and evaluating the social impacts, and iii) developing and implementing appropriate resettlement and indigenous peoples plans. These plans are designed to minimize adverse impacts on the project-affected people, and provide for monitoring and evaluation the outcomes.

2. Principles of Public Consultation

200. Public consultation and information disclosure in the EA process is to be guided by the following general principles:

- **Information Dissemination.** Sufficient information should be provided in accessible and culturally appropriate ways. Providing information about benefits and disadvantages of the project at an early stage of the EA process allows people time to think about the issues, consider implications, and formulate their views. An informed public will understand the trade-offs; be able to contribute meaningfully to project design; and have greater trust with the project proponent.
- **Information solicitation.** Asking and listening to the local community, residents, and interested groups about their views and input into the EA yield new insights and site-specific information. Past broken promises or mismanagement may have left a legacy of mistrust. Information solicitation provides public's past experience with authorities and can initiate constructive dialogue.
- **Integration.** Predicting likely direct and indirect impacts, short-and long-term resource use implications, evaluating their significance and risks, and developing appropriate mitigation and monitoring programs require not only the scientific data collected by sampling and modeling, but must be based on stakeholder's input and views.
- **Coordination.** The ability to conduct effective public consultation depends on how individual team members appreciate benefits of consultation, understand their roles, and cooperate each other. A well-integrated Project Team with well-defined roles and responsibility can facilitate dialogue with the executive agency to inform the ADB's requirements and gain its commitment to remove any constraints to carry out public consultation throughout the project cycle.
- **Engaging People in Dialogue.** Public consultation involves engaging people in dialogue – a two-way flow of information and ideas between the project proponent and the stakeholders with the opportunity for the stakeholders to express their views and concerns. Ensuring the opportunity to participate in dialogue during the early preparation stage of the EA process enables to manage expectations and detect any potential serious conflict and help resolve issues before they lead to conflict, reducing financial losses due to delays.

3. Benefits

201. Effective public consultation can add substantial value to the EA process. The information gained through public consultation on the stakeholders' concerns, interests, and their ability to influence decision-making helps identify key cause of environmental problems. This can be used to evaluate direct and indirect environmental impacts, and assess short term and long-term resource use implications. The input from local communities and NGOs can help evaluate alternatives and strengthen the EMP by incorporating local input and know-how.

202. An informed public will better understand the tradeoffs between project benefits and disadvantages; be able to contribute meaningfully to the project design; and have greater trust with the project proponent and support for the proposed project. Effective public consultation

reduces the risk of conflicts and substantial delays in project implementation. Wider public support for the project is essential for the sustainability of the project.

4. Stakeholder Analysis

203. Stakeholder analysis is a tool to identify all parties that have direct and indirect interests in the project and its potential impacts on them. Failure to identify the stakeholders and consult with them could impair transparency in decision-making and which, in turn, could lead to conflicts, delaying the project process. Therefore, it is important to identify the stakeholders, the potential project impacts on them, and also to evaluate their concerns and needs, and their ability to understand and influence the decision-making at the project preparation stage.

204. There are 5 categories of stakeholders:

- Local communities
- Civil society;
- Government and local government bodies
- Private sector bodies
- Other institutions

205. The 'primary' stakeholders are those who are directly affected, whether positively or negatively. Social development specialists will have to generate and share socioeconomic and cultural information in doing the stakeholder analysis. Social analysis techniques and methods could be used in identifying stakeholders, their needs, aspirations, and concerns regarding the project. The type of data and information required to conduct a stakeholder analysis include household level socioeconomic data, information on ethnic mix and interactions, cultural traditions, gender profile in socioeconomic activities, mechanisms for decision-making regarding their environment and experience with similar projects. It is useful to rank the expectations, concerns and needs of different groups of project-affected persons. It is also important to determine how their diverse interests would impact on the project outcome. One basic issue that needs analysis is how different groups and individuals will interact with each other in influencing the project outcome.

206. The 'other' stakeholders are those who are indirectly affected. They can be organizations through which benefits are channeled to primary stakeholders. They include local, regional and national government, civil society organizations, individuals who live in the vicinity, private sector agencies, and multilateral and bilateral institutions. Although potential project impact on them may be secondary in nature, they also could become primary stakeholders depending on the type of activities, the sectors involved and the institutional capabilities to influence decision-making. Therefore, it is important that social and environmental specialists and project leaders be aware of the indirectly affected stakeholders.

207. **Choosing Stakeholders.** The choice of stakeholders for direct consultation must be made on a fair and equitable basis. Meaningful public consultation requires consultation with people who represent a range of legitimate interests including those:

- Who will be directly or indirectly and positively or negatively affected?
- Who are the most vulnerable groups?
- Who might have an interest or feel that they are affected?
- Who supports or opposes the changes that the project will deliver?

- Whose opposition could be detrimental to the success of the project?
- Whose cooperation, expertise, or influence would be helpful to the success of the project?

5. Conflict Management

208. Conflicts and disputes can arise over the assessment of environmental and social impacts, compensation, and decisions already made. Carrying out a careful stakeholder analysis, focusing on actual and potential conflicts, during the early stages of EA is a useful step to avoid and manage project related conflicts. However, if there is a potential for serious conflict or conflict has already occurred, voluntary resolution approaches such as problem-solving, consensus building should be used to mediate the situation and develop consensus among stakeholders to gain their support for the proposed project during the EA process.

209. To achieve consensus on environmental issues, stakeholder representatives must meet and negotiate mutually acceptable solutions during the conflict resolution process. The four key negotiation rules include

- **Assessment.** Identify various stakeholder groups, their concerns and interests, assess procedural ground rules, and selection of a neutral party. Issues related to fundamental values or constitutional and legal rights are not amenable to consensus building while issues of certain way of using the resource can be mediated. Technical and scientific issues need to be dealt with as part of environmental mediation;
- **Areas of agreement and disagreement.** Define all areas of agreement to establish common ground and eliminate those issues from discussion. Identifying areas of disagreement with underlying reasons of each point of conflict gives negotiators an idea of the magnitude of the problem. It also ranks points of conflict in an order of importance;
- **Specific steps.** Suggests specific steps for organizing productive meetings and decision-making processes among groups that have differences; and
- **Issue-by-issue negotiation.** Try to solve points of conflict one at a time, starting from minor issues toward major ones at the end. In this way, negotiators will address the more difficult problems after establishing a successful record of negotiation on less difficult issues.

6. Approaches for Public Consultation

210. Communication during environmental assessments involves seeking information, imparting information or reaching agreement through dialogue. There are a number of approaches that involve public consultation and information dissemination. A critical element of preparing for public consultation is associated with the selection of appropriate approaches (Table 20). Available approaches maybe categorized into 3 types: (i) disseminating information, (ii) soliciting input, and (iii) getting consensus on issues. The following approaches represent best practices for carrying out public consultation.

Table 20: Common Approaches for Public Consultation

	Disseminating Information	Soliciting Input	Getting Consensus
Approaches	Printed materials, displays and exhibits, advertising, open house	Community liaison officer, survey and questionnaires, interviews, small public meetings, public hearing	Advisory panel, problem solving technique, consensus-building technique, arbitration
Benefits	<ul style="list-style-type: none"> • Reach large audience • Minimum demand on the public • Can provide detailed information 	<ul style="list-style-type: none"> • Allow immediate response and feedback • Allows detailed and focused discussion • Show sociological data and quantify opinions, priority and concerns • Allows direct communication and exchange of information and debate 	<ul style="list-style-type: none"> • Can address highly technical problems • Helps prioritize and reach consensus • Impartiality from an uninvolved party
Challenge	<ul style="list-style-type: none"> • Ability to handle specific interest is low • Excludes illiterates • Costs of preparation and staffing 	<ul style="list-style-type: none"> • Potential conflicts between officer and employers • Requires specialists to deliver and analyze to avoid bias • Can be diverted by special interest groups 	<ul style="list-style-type: none"> • Difficult to include full range of views • May take a long time • Requires highly skilled mediators • Difficult to identify an acceptable neutral party

C. Requirements for Public Consultation and Information Disclosure

1. Public Consultation

211. Public consultation is mandatory as part of the EA process for category A and B projects supported by ADB. The ADB's safeguard policies for environment, resettlement, and indigenous people require public consultation at an early stage of the EA process. The adequacy of the public consultation and information disclosure is one of the criteria used to determine the project's compliance with the safeguard policies.

212. **Category A Projects.** Public consultation needs to be carried out during the early stage of EA preparation and throughout the project implementation to address any environmental issues that affect the local communities, NGOs, governments, and other interested parties. For all Category A projects, the Environment Policy requires public consultation at least twice: once during the early stages of EIA field work and once when the draft EIA report is available, and prior to loan appraisal by ADB.

213. **Category B Projects.** It is recommended that public consultation be carried out during the early stages of the EA process and throughout the project implementation to address any environmental issues that affect the local communities, NGOs, governments, and other interested parties.

214. **Category C Projects.** Public consultation is not required for environmental assessment of category C projects. However, consultation requirements may be set on a case-by-case basis, depending on the nature of the project and the relevant environmental and social issues, and interest level of the public.

215. **Category FI Projects.** Financial intermediation loans and equity investment require the financial intermediary have an EMS for its operation. Adequate public consultation procedures are to be incorporated into the EMS. Where the financial intermediary projects involve credit lines, ADB public consultation requirements for project loans apply. That is, the environmental assessment and review framework for sub loans must have procedures for public consultation.

2. Information Disclosure

216. Environmental assessment reports for ADB projects are intended to be accessible to interested parties and the general public. The *Environment Policy and Guidebook for Policy on Confidentiality and Disclosure of Information* outline requirements on the required types of environmental reports for disclosure.

217. **Category A Projects.** To facilitate the required consultations with the affected groups and local NGOs, the information about the project's environmental issues as well as technical data needs to be transferred into a form and language(s) accessible to those being consulted. The SEIA is made available to the public through the depository library system, and are placed on the ADB website and also posted on the ADB's website no later than 120 days prior to the Board considerations. The full EIA is also made available to interested parties upon request.

218. **Category B Projects.** To facilitate the required consultations with affected groups and local NGOs, the information about the project's environmental issues as well as technical data needs to be transferred into a form and language(s) accessible to those being consulted. For projects deemed environmentally sensitive, SIEEs are made available to the public through the depository library system, and are placed on the ADB website no later than 120 days prior to the Board considerations. For other category B projects, the environmental analysis is posted on the ADB website as part of the RRP. The full IEE reports are also made available to the interested parties upon request.

219. Proposed project and exchange views with relevant government institutions and other interested parties to facilitate the dialogue. Information disclosure in the environmental assessment is not required for the category C projects. However, the public can access to the environmental information described in the RRP that is posted on the ADB website.

3. Reporting

220. Reporting the public consultation and information disclosure activities is required as part of the project review. The information regarding the past and future consultation and disclosure activities is reviewed during the mid-term review and annual review for Category A and B sensitive projects. A summary of the past consultation activities and recommendations and future plan needs to be described in the EIA and SEIA for a category A project and IEE and SIEE for a category B project. The key reporting aspects listed below are to be included in both EIA and IEE:

- (i) relevant laws and regulation;
- (ii) methodologies used to inform and involve the public in the EA process;

- (iii) analysis of the data and information gathered;
- (iv) discussion of the strategic issues related to various stakeholders, level of involvement,
- (v) documentation of public meetings and interviews, including dates, names, topics of discussion, and important outcomes;
- (vi) recommendations on how the project might address concerns raised during public consultation; and
- (vii) recommended measures for continuous public consultation during the environmental management program.

D. Best Practices for Public Consultation and Information Disclosure

221. Public consultation can be applied at various times throughout the EA process in order to build consultation into project planning and implementation, and to monitor consultation activities throughout the project cycle. While there is no formula for determining when public consultation should be applied, it generally should start early in an EA process. The strategic considerations for public consultation and information disclosure at each EA process of the project cycle are as follows:

1. Determining the Need and Extent of Public Consultation

222. **Project Identification.** During the project identification phase, it is important to determine the existence of: i) an EA regulatory framework where public involvement is specified in the Borrower's country, ii) the executing agency's political will and capacity to plan and conduct public consultation; and iii) adequate in-country financial resources to support consultation costs. Political support from the executing agency should be strongly encouraged so that any regulatory constraints can be removed to ensure that the consultation process succeeds. ADB and executing agency need to consult with other donor institutions, if necessary, to ensure that the proposed project has synergetic effect on their projects.

223. **PPTA Fact Finding (TOR for Environmental Assessment).** To carry out effective public consultation, it is crucial to develop sound TOR that defines clear roles for each project team members and executing agency. PPTA Fact-finding, identify any site-specific constraints that will make consultation difficult. Constraints may include cultural or political factors such as restrictions on women or ethnic minorities, geographic factors such as inaccessibility or diffuse settlement over a wide area, and public's past confrontational experience with authorities.

224. To carry out effective public consultation, it is also important to assess executive agency's capacity and skills to collect and analyze data, interact effectively with the public, and interpret findings for decision-makers. Developing systematic training programs or engaging local or international consultants is required in the TOR to ensure required level of expertise and local knowledge and experience in place to carry out public consultation.

2. Public Consultation During the Preparation of EIAs and IEEs

225. **PPTA Feasibility Study.** Selection of appropriate consultation approaches is crucial to the effective consultation. Before conducting public consultation, develop a strategy that identifies stakeholders, specifies appropriate consultation tools, schedules, roles of Project Team and the executing agency, conflict resolution methods, and prepare appropriate information materials to support consultation.

226. The environmental assessment report should integrate social analysis conducted by social development specialists or consultants in the assessment of the magnitude of impacts and develop appropriate mitigation measures and EMP. The EMP should explore roles for communities in environmental monitoring. A community-based monitoring requires good understanding of community's socioeconomic situation, its way of life, and resource use practices, and establishment of interactive mechanisms that allow continuing dialogue and feedback system between project implementers and local inhabitants during implementation.

227. Effective publication requires the provision sufficient information in a form that is readily understandable and meaningful to the project affected people. If needed, the technical information will need to be presented in a form to ensure that relevant project and environmental information is accessible to the local communities and other stakeholders. Once a draft EIA or IEE is prepared, disclose to the relevant stakeholders the information on the recommended mitigation measures and monitoring plan to gain their consensus and support. Ensure that public consultation activities are adequately documented in the draft EIA/SEIA and IEE/SIEE.

228. It is necessary to recognize any concerns that local communities or other stakeholders may have to detect any potential serious conflicts in the communities. Appropriate mechanisms that incorporate local decision-making traditions to facilitate dialogue and develop consensus on identified issues should be established. Careful attention to the selection of stakeholder representatives is necessary to make mediation manageable.

3. Monitoring Compliance with Public Consultation Requirements

229. **Safeguard Policy Compliance Memo.** Prior to the MRM, RSES reviews the RRP and the final EIA/SEIA or IEE/SIEE to determine the project's degree of compliance with ADB's safeguard policies. To facilitate this review, public consultation activities and future plans should be described in the SEIA or SIEE and include an assessment of compliance with the ADB's requirements and national laws and regulations.

230. **Environmental Loan Covenants.** To make all the agreed environmental and social safeguards binding and effective, the procedures, responsibilities, and resource allocations for public consultation and information disclosure activities that are documented in the EIA/SEIA, IEE/SIEE, and RRP are to be included in the environmental covenants of the loan documents.

231. **Loan Approval and Implementation (EMP Implementation).** During the implementation stage, the EMP needs to be implemented and monitored. It is important to maintain effective procedures: (i) for addressing complaints, (ii) to detect and document any changes in the project design and EMP, and (iii) for corrective action to mitigate any unforeseen adverse environmental and social impacts. The EMP will need to be modified, as necessary, to minimize unintended or unpredicted adverse environmental and social impacts.

232. Disclosure of monitoring results to the local communities is recommended if the proposed project proposes community environmental monitoring. Local communities, end-users and beneficiary of natural resources, can act as a watchdog to detect changes in their surroundings and provide site-specific information to the monitoring institutions. With good awareness programs, disclosure of monitoring results can provide incentives for local communities to conserve natural resources they depend on.

233. **Mid-term Review.** During the mid-term review mission, the executing agency's progress and performance in EMP implementation are reviewed. Interviews with local communities should be undertaken to detect any negative environmental and social impacts that were not predicted in the EA. The effectiveness of EMP should be assessed and any necessary corrective actions undertaken. The review of EMP and complaints feedback procedures should be described in the back-to-office report.

234. **Project Completion and Evaluation.** Annual review mission should cover issues and identified solutions if any concerning project affected people. The executive agency needs to send ADB the annual report to describe the progress made in the on-going public consultation. Evaluate consultation process and draw on the experiences for the future projects. As part of the project review, the effectiveness of consultation process should be assessed in the Project Completion Report. The Performance Audit Reports should draw lessons for future projects.

XI. ENVIRONMENTAL STANDARDS AND EMISSION LEVELS

235. In determining appropriate environmental standards for ADB projects, ADB will follow the standards and approaches laid out in the World Bank's *Pollution Prevention and Abatement Handbook*.²⁹ This handbook describes generally acceptable pollution prevention and abatement measures and emission levels. However, as in the case of the World Bank environmental assessment procedures,³⁰ the environment assessment for any individual project may recommend adoption of alternative emission levels and approaches to pollution prevention and abatement. This flexibility is required to best reflect national legislation and local conditions in determining the appropriate standards and emissions levels. In all such cases, the environment assessment report will provide justification for the levels and approaches chosen for the particular project or site.

236. Environmental standards are numerical concentrations of environmental parameters recommended to support or maintain a designated use of a resource in an ecosystem, area, or region. The significance of predicted changes - positive or negative - brought about by project impacts on the environment can be evaluated when the resulting environmental quality is compared to the relevant environmental standards. Environmental standards are established to protect human health and ensure the long-term sustainability of an environmental resource. Air quality standards are set to protect human health, while water quality standards are designed to support the intended use of water, and protect the aquatic ecosystem as well as human health. Soil quality standards are designed to protect agriculture, human health, and surface and groundwater resources. There are 2 kinds of standards: (i) ambient or sink, and (ii) emission or discharge.

A. Ambient Environmental Standards

237. Ambient standards (often referred to as environmental criteria) are concentrations of environmental parameters in an environmental medium (e.g. air, water, and soil quality) that must not be exceeded, or levels of environmental quality (e.g. dissolved oxygen level in waters) that must be maintained. They generally define the prescribed limits to which levels of environmental resources may be permitted to fall, or the upper limits to which pollutants may be allowed to reach in the environment. Ambient standards may define the degree of environmental quality that must be maintained in an environmental resource to support its continued beneficial human use. While often set to protect human health, they may also be set to ensure the long-term sustainability of an environmental resource. An example is the setting of minimum quality standards for ecologically sensitive areas.

B. Discharge Standards

238. Emission or discharge standards are the maximum concentration level of environmental parameters emitted or discharged to the environment. Emission standards are normally established on a desired level of abatement at the source that can be achieved through the application of best practicable abatement technologies. Emission or discharge standards are usually specific to an area or ecological zone, and may be set for specific industries. Discharge standards are set for emissions and effluents from projects and activities. They define the maximum acceptable quantity of pollutants that may be discharged into the ecosystem, area or region. They are set for specific pollutants and often stated as concentrations or discharge rates

²⁹ World Bank 1999. *Pollution Prevention and Abatement Handbook: Toward Cleaner Production*. Washington, D.C.

³⁰ World Bank Operational Manual – OP 4.01 on Environmental Assessment. January 1999.

to reflect the temporal dimension. They are usually specific to an area or ecological zone, and may be set for specific industries.

239. Project-specific discharge standards should be based on the quantity of a pollutant that may be discharged without violating ambient standards for environmental resources. For this to be done, the receiving environment for the pollutant must be characterized in terms of existing levels. Predicted changes in concentrations resulting from the additional discharge should be compared against ambient standards.

C. Setting Environmental Standards

240. All environmental standards should be considered tentative. Standards are based on current knowledge, environmental conditions, living standards, and technologies. As these conditions change, it may become necessary to revise the standards. It is often neither practical nor possible to introduce and enforce standards that would immediately rectify an environmental condition. Progressive environmental standards may be introduced with a specified timetable for implementation to give those concerned enough time to make adjustments that would reduce pollution emission levels without severe economic difficulties (e.g. operating issues, plant closures).

241. Where neither ambient nor discharge standards exist, there is a risk of uncontrolled ecological disruption and environmental degradation which may, in turn, reduce the quality of life for all inhabitants of the affected areas. At the very least, interim or initial minimum standards should be set by the EIA team and then subsequently modified as appropriate. One alternative is to begin with a minimum standard of environmental protection measures for all projects regardless of their type, size or location. As they are developed, subsequent ambient and discharge standards may supersede the standard environmental protection measures.

242. ADB normally recognizes national environmental standards in evaluating the EMP for projects. If national environmental standards do not exist or are considered inappropriate, ADB takes World Bank or World Health Organization guidelines into account. If the standards are deemed inappropriate, the executing agency could include a review of existing standards and recommend needed changes.

243. There are now interim quantitative water ecological quality criteria that, for example, would support a balanced and healthy aquatic ecosystem. This gap makes the evaluation of the significance of ecological impacts inconclusive.

D. Performance Standards

244. Performance standards provide a results-based or goals-oriented approach to resolve inter-jurisdictional differences in methods, guidelines and practices. Specifically, performance standards identify what objectives are to be achieved environmental assessment, and environmental monitoring and compliance. However, flexibility is provided in the methodology used to demonstrate acceptable findings, which allows for different methods of measurement to be compared e.g. Method 'A' may be more complex, and provide a higher level of resolution than Method 'B', but both methods are proven to achieve a level of sensitivity that meets the regulatory environmental objective or standard. This approach is particularly applicable when multiple donor interests may be involved in a project. ADB encourages and supports DMCs to adopt it to develop a "one-window" approach to minimize duplication of efforts in situations

where multiple environmental processes or standards are represented by the donors and DMC itself.

E. Meeting Environmental Standards by Integrating Cleaner Production (CP) into the EMP

245. Discharge standards define the conditions under which a project may or may not discharge effluent into the environment and, thus, the type and amount of treatment required for the effluent. An EIA includes the preparation of an EMP to ensure that a project meets the appropriate discharge standards. The EIA itself should include EMP to provide detailed design criteria for specific mitigation measures to meet the discharge standards.

246. The cost of installing and operating treatment facilities can be a very significant item in the total project budget and must not be overlooked in the project's financial feasibility study. The choice of a project location can also be influenced heavily by environmental standards. At present, choosing a site to minimize the investment requirements for effluent treatment can reduce overall project costs. Industrial projects are often grouped together to take advantage of cost reducing centralized effluent treatment and disposal facilities. Where there has been considerable development prior to the introduction of environmental standards, retrofitting projects to meet the standards can be even more costly than incorporating treatment facilities into new projects.

247. The CP/pollution prevention approach offers an opportunity to reduce waste generation from the source. Generally, it involves 4 approaches:

- (i) input substitution by employing less harmful and more degradable substances, thereby rendering wastes non-toxic, non-hazardous and enabling the application of recognized effective treatment processes for effluent polishing at lower cost;
- (ii) improvement of housekeeping through establishment of preventive maintenance measures, particularly by avoiding leakage and spillage of valuable raw materials with specified materials handling procedures;
- (iii) process modifications to apply more modern and efficient technologies, optimize use of raw materials, and enhance materials recovery, reuse, and recycle; and
- (iv) changes to end products by producing less harmful, recyclable outputs (e.g., water-based cosmetics, unbleached paper, pellet products rather than powder) by considering the lifecycle of the end products themselves.

248. Separately or in combination, all these approaches can reduce the cost of handling wastes to meet environmental standards, while at the same time improve productivity. The environmental assessment should include a review of the potential adoption of these approaches in reducing costs and environmental impacts of treated and untreated wastes.

XII. SOCIAL DIMENSIONS AND ENVIRONMENTAL ASSESSMENT

A. Introduction

249. Considering the central role of people in development and recognizing that a development project could produce effects detrimental to the welfare of the same people it intends to benefit, it is essential that the environmental assessment of a proposed project include an analysis of the project's social dimensions. ADB and other development partners has been increasingly aware of the critical role environmental and social aspects of the design and implementation interventions for sustainable development. This awareness has increased the importance of: beneficiary participation, poverty reduction, role of women in development and environmental management, involuntary resettlement, and vulnerable groups, including children and indigenous peoples. This concern for the social aspects of development is articulated in ADB policies, reflected in strategic frameworks, and incorporated in Bank operations through various guidelines, manuals, and handbooks as well as instructions to its staff. ADB's environmental review process, in fact, specifies the need for social analysis and public participation. Environmental assessment reports and summaries if possible are required to include (i) an social acceptability assessment of the proposed project; and (ii) recommended mitigation measures such as a Resettlement Plan and an Indigenous People's Development Plan (IPDP), as necessary.

B. Social Dimensions and Associated Processes

250. The concept of social dimensions captures the key elements of human perspectives in development and aims at avoiding or mitigating the adverse effects of development interventions on groups that do not have the capacity to absorb such effects. The concept begins with the explicit recognition that people are the center of development, and that development is for all people. It recognizes that economic growth is a prerequisite for development, in general, and social development, in particular. Furthermore, it recognizes that (i) the poor, women, and vulnerable groups contribute to economic growth; (ii) their empowerment enhances social harmony, which is essential to economic growth; and (iii) returns from investments in women and the poor are often comparable to, and may exceed, returns from investments in infrastructure, energy, industry, and agriculture.³¹

251. The key social dimensions considered in ADB operations are:

- (i) Poverty Reduction, which involves helping the poor through: (a) assistance directly targeted to support productive activities that generate employment and income; (b) identification of development policies and investments that expand the employment opportunities for the poor; and (c) improvement of the access of the poor to health, family planning, education and related services, and expansion of these services;
- (ii) Gender and Development, consisting of promoting policies and activities that help all people develop their full potential, improve their productivity, increase their contribution to the economy, and share in the rewards of development as equal partners;

³¹ ADB. 1993. *Guidelines for Incorporation of Social Dimensions in Bank Operations*. Social Dimensions Unit. ADB: Manila, Philippines. October 1993.

- (iii) Human Resources Development, including Population Planning, which involves investments to help improve the skills, living standards, and quality of life of present and future generations of people, and increase their contribution towards sustained and accelerated economic growth; and
- (iv) Vulnerable Groups, including children, indigenous and tribal people, ethnic minorities, illegal settlers and squatters, disabled people, new and old immigrants, whose condition may be made worse by a policy reform, a new program, or some form of project intervention, and for whom social safety nets and compensation mechanisms have to be provided so that they are not adversely affected by such changes.

252. The need to analyze social factors that influence a project continues throughout the entire life of a project, although the most crucial stage occurs during project design or the conduct of the project feasibility study when all relevant social dimensions of the proposed project are examined thoroughly and incorporated into project design. The analysis conducted as part of the feasibility study is called social analysis, and may cover an assessment of: (i) the groups expected to benefit from, and use the services to be provided by, the project; (ii) the needs of the groups; (iii) their demands; (iv) their absorptive capacity; (v) gender issues; and (vi) possible adverse effects on vulnerable groups and the need for measures to mitigate or compensate those adversely affected.

253. As the scope and content of social analysis differ among and within sectors, and among countries and regions within countries, it is necessary to conduct an Initial Social Analysis (ISA) during the project identification stage. The ISA would identify the major population groups that may be affected, beneficially and otherwise; by the proposed project and which should be the focus of the social analysis. It would also identify the specific social dimension issues that would be examined during the social analysis to be carried out as part of project preparation. A general description of the objectives, scope, and methodology for ISA is in the *ADB Guidelines for Social Analysis of Development Projects* (1991) and *Handbook for Incorporating Social Dimensions into Bank Operations* (1994). The latter document includes subsector checklists to guide the conduct of the ISA, and suggests several data collection techniques and guidelines for the conduct of interviews with local groups. To supplement the information contained in these publications, the Offices of the Regional Vice Presidents issued an Inter-office Memorandum on a *Guideline for Conducting Initial Social Assessments* on 3 June 1997, which will be incorporated in the next revision of the Handbook. In addition, ADB has policies and norms of good practice that relate to the following major issues: gender, involuntary resettlement, indigenous peoples, participatory processes, and involvement of NGOs.

C. Poverty Reduction

1. ADB's Poverty Reduction Strategy

254. In ADB's view, "poverty is a deprivation of essential assets and opportunities to which every human is entitled."³² Therefore, as poverty, in its most basic form, is the lack of essential physical, social, and psychological needs, poverty reduction would involve the creation of a situation in which the poor are either given, or enabled to acquire, those assets necessary to achieve a minimally acceptable level of existence. These critical assets are

³² ADB. 1999. *Fighting Poverty in Asia and the Pacific: The Poverty Reduction Strategy of the Asian Development Bank*. ADB: Manila, Philippines. October 1999.

- (i) **land**, including natural resources of river, forest, and marine environments which have provided the basis for development of many communities, which has historically been the most common asset through which people have met their basic needs but which have been progressively exhausted in many DMCs;
- (ii) **human capital**, in the form of education and skills, which has now become the major avenue for increasing the asset base of the poor; and
- (iii) **social capital**, or the strength and diversity of associations that exist between members of a community and foster trust and cooperation.

255. Poverty reduction program centers on mitigating poverty and helping the poor through development assistance targeted directly towards the creation of productive activities. It includes initiatives to improve access of the poor to services such as health care, education, family planning support and other services, and social infrastructure to improve quality of life and create new opportunities for them to expand their economic activity. Initiatives focusing on concerns such as gender and development and environmental protection and management are also elements of an overall poverty reduction strategy.³³ General approaches to poverty reduction include the following:

- (i) adoption of appropriate macro policies, including promotion of investment activities that favor labor-intensive technologies, with emphasis on expanding employment opportunities for the poor;
- (ii) greater attention to poverty reduction aspects in traditional projects, with growth as the primary objective;
- (iii) projects targeted exclusively to assist the poor in employment and income generation; and
- (iv) projects targeted to assist the poor by enhancing human resources development (e.g., education, health) and to improve the income-earning skills and capacity of the poor.

256. With its recent declaration of poverty reduction as the overarching goal of its development efforts, ADB has initiated its transformation into a poverty-focused institution at the operational level.³⁴ Consequently, there will be stronger support for social infrastructure development aimed at promoting or enhancing the delivery of social services to the underprivileged segments of society, both in the rural and urban settings.

257. Future investments in agriculture and rural development will be made in order to increase efficiency in all areas of agricultural production, supported by a strengthened local governance, group formation, and greater social capital. The increased poverty emphasis will also focus on innovative investments to meet basic infrastructure needs of the poor.

³³ ADB. 1999. *Reducing Poverty: Major Findings and Implications*. A Report Based on Consultations in Selected DMCs of ADB. ADB: Manila, Philippines. September 1999.

³⁴ ADB. 1999. *Poverty Reduction Strategy*. Working Paper 5-99. ADB: Manila, Philippines. 25 August 1999.

258. Multidisciplinary natural resource management projects of the type that employs the integrated, community-based approach (such as coastal resource management and watershed development projects), will also be given more attention, considering that communities in ecologically vulnerable ecosystems, are usually among the poorest of the poor. Natural resource management projects, if properly designed and implemented, should enable resource rehabilitation and yield long-term environmental and social benefits.

259. There will also be increased provision of social investment funds³⁵ to stimulate economic growth, reduce poverty in priority areas, and strengthen local initiative and social capital. Private sector led small- and medium-scale enterprises (SMEs) would also be encouraged to generate livelihood for low-income groups. In these areas, ADB will have to ensure that both environmental management and poverty reduction components are incorporated, and applicable environmental assessment procedures are applied in their planning, design, and implementation. Moreover, ADB will consider projects intended to expand access of the poor to SMEs to increase employment, and fund studies on how industrial pollution in SMEs can be lowered to lead to increased production, increased profit, and more employment. Cleaner production will also be endorsed to benefit the poor.

D. Poverty Reduction and Environmental Assessment

260. The poverty reduction strategy of ADB is defined by a framework consisting of 3 key elements: (i) pro-poor, sustainable economic growth, (ii) social development, and (iii) good governance—which, together, should result in socially inclusive development. However, for socially inclusive development to be achieved, a better understanding is needed of the environmental implications of policies to reduce poverty and of the impacts of environmental policies on the poor.

261. Environmental considerations, including natural resource management, are key elements in sustainable economic growth because growth will be threatened if the natural environment and resources are not well managed. Although much of the past damage has been caused by powerful vested interests, the pressures of poverty and population compound the threat through deforestation, overgrazing, and over fishing. The rural poor are often forced to live on marginal and fragile lands and waters that require sensitive resource management in the face of increasing degradation. The urban poor are exposed to disease and illness resulting from overcrowding and polluted living conditions.

262. Given the close interrelationships between poverty and the state of the environment, it is essential that projects proposed to rehabilitate fragile habitats and degraded resources should give equal importance to the upliftment of the socioeconomic status of the communities residing within, or deriving their subsistence from, such ecologically sensitive areas. The environmental assessment of a proposed project should therefore include an ISA, which will identify these communities, determine their needs and wants, invite their full participation in the design and subsequent implementation of the project, and secure their commitment to environmental protection and management for long-term project sustainability. The ISA's results should be incorporated in the project environmental assessment and summary environmental assessment reports, specifically in the sections on (i) Description of the Environment; (ii) Social Acceptability; and (iii) Impact Assessment and Mitigation Measures.

³⁵ Social investment funds are facilities to provide grant support to small-scale projects based on local initiative and co-financing, which are generally implemented by NGOs, community-based organizations, or small contractors using labor-intensive techniques.

1. Involuntary Resettlement

263. Any development project that introduces significant changes in the patterns of use of land, water, or other natural resources may entail some adverse impacts on people who are currently using such resources and associated economic, social, cultural, and religious facilities. Examples of projects that involve acquisition or redirection of use of lands that are owned or utilized by individuals and communities include

- (i) construction of highways, railways, and irrigation canal networks;
- (ii) construction of dams for irrigation and hydropower generation;
- (iii) construction of transmission lines and other facilities requiring rights-of-way;
- (iv) construction of airports;
- (v) construction, rehabilitation, or expansion of ports and towns;
- (vi) construction or improvement of urban infrastructure such as sewerage, subways, intracity roads, and more general urban systematization;
- (vii) establishment of coal-fired thermal power generation plants and other polluting industrial plants;
- (viii) inception of mining operations, particularly strip mining;
- (ix) establishment of protected nature parks, biodiversity and conservation areas, and grazing areas; and
- (x) forestry development, including reforestation, industrial tree plantations, clearing/harvesting of forests, and closure of forest areas.

264. While many of these projects may be of crucial importance to local, regional, and national development, they may also give rise to conflicts between long-term national development goals and the interests of local communities and individuals who may be immediately and adversely affected. Projects that require involuntary displacement of people generally have adverse economic, social, and environmental impacts on the displaced people. Homes are abandoned, production systems are dismantled, and productive assets and income sources are lost. Displaced people may be relocated to environments where their skills may be less applicable, competition for resources greater, and host populations hostile or culturally incompatible. Well-established community structures, social networks, and kinship ties are broken or weakened, and cultural identity, traditional authority, and potential for mutual help diminished. For survival, displaced people may be forced to overexploit ecologically fragile areas, thereby exacerbating environmental degradation.

2. Involuntary Resettlement Planning

265. Considering these potentially adverse impacts of displacement on individuals and communities, involuntary resettlement, if unavoidable, should be well planned and executed so that the quality of life and livelihoods of those affected will be restored, economic growth is

enhanced, and poverty reduced, especially for such vulnerable people. Any project that will require the relocation of people should include resettlement as an integral part of project design, and should deal with it from the earliest stages of the project cycle, taking into account the basic principles enunciated in the ADB policy on involuntary resettlement.³⁶ An ISA should be conducted as part of project preparation to determine the need for a Resettlement Plan and assess the amount of effort that may be required to prepare such a Plan.

266. If the results of the ISA indicate that the project is likely to have significant resettlement effects,³⁷ a Resettlement Plan should be prepared, preferably as part of the project preparatory technical assistance or, at the latest, before appraisal. A Summary Resettlement Plan should also be included in the draft RRP for the MRM and in the RRP for Board circulation whenever there are resettlement effects. The Summary Resettlement Plan can be included in the draft SEIA for public disclosure.

3. Involuntary Resettlement and Environmental Assessment

267. Category A and B projects may involve land acquisition, which may result in adverse social impacts, including displacement of individuals and communities. Therefore, a Resettlement Plan should be prepared and briefly incorporated in the environmental assessment report, particularly in the environmental mitigation and monitoring plans to be implemented during project implementation and operation. The Resettlement Plan's implementation should also be monitored as part of regular project implementation.

268. The ADB *Handbook on Resettlement: A Guide to Good Practice* (1998) describes resettlement planning in the context of ADB's project cycle; elaborates on key resettlement planning concepts; explains data collection and participatory methods, and their application to resettlement planning; and reviews income restoration.

³⁶ ADB. 1995. *Involuntary Resettlement*. ADB: Manila, Philippines. August 1995.

³⁷ Significant resettlement requires a full Resettlement Plan, and means one or more of the following: (i) 200 people or more will experience resettlement effects; (ii) 100 people or more who will experience resettlement effects are indigenous or vulnerable people, including women-headed households, the poorest, isolated communities, those without legal title to assets, and pastoralists; or (iii) more than 50 people experiencing resettlement are particularly vulnerable, e.g., a group of hunter-gatherers.

E. Indigenous Peoples

1. ADB Policy on Indigenous Peoples

269. The working definition employed in ADB operations as they affect indigenous peoples regards them as having a "social or cultural identity distinct from the dominant or mainstream society, which makes them vulnerable to being disadvantaged in the processes of development."³⁸ In many cases, indigenous peoples live in separated communities or cultural or ethnic groupings geographically distant from urban centers, and often function at the periphery of the political, social, cultural, and economic systems of the dominant or mainstream society. As socioeconomic development takes place, many development initiatives are extending into geographically remote areas, often considered the traditional homelands of indigenous peoples, which offer resources such as forests, minerals, and hydropower potential. Physical intrusions of development interventions into the traditional domains of indigenous peoples, and social intrusions into indigenous cultures, can be viewed by indigenous peoples and others as a violation of human rights, rights to land, and rights associated with the maintenance of culture.

270. ADB's policy on indigenous peoples ensures that ADB interventions are:

- (i) consistent with the needs and aspirations of affected indigenous peoples;
- (ii) compatible in substance and structure with affected indigenous peoples' culture and social and economic institutions;
- (iii) conceived, planned, and implemented with the informed participation of affected communities;
- (iv) equitable in terms of development efforts and impacts; and
- (v) not imposing the negative effects of development on indigenous peoples without appropriate and acceptable compensation.

2. Implications for Environmental Assessment

271. In line with the ADB policy on indigenous peoples, the ISA conducted as part of project design should include specific consideration of indigenous peoples as a potentially affected population. If the ISA identifies indigenous peoples specifically as a significantly and adversely affected population, or vulnerable to being so affected, an IPDP acceptable to ADB must be prepared by the government or other project sponsors. The IPDP should include key elements such as specific measures to mitigate negative effects and provide necessary and appropriate assistance and compensation so that the circumstances of the affected peoples would be as favorable as would have existed before the intervention.

272. The IPDP should be prepared and submitted to ADB by the Government or private sector project sponsor along with the feasibility study for the project. The Plan should include an Executive Summary, with salient issues of the Summary to be included in the RRP to be considered in the MRM, and, in every case, in the final RRP for Board consideration.

³⁸ ADB. 1998. *The Bank's Policy on Indigenous Peoples*. ADB: Manila.

273. If necessary, pertinent sections of the IPDP should be included in the environmental assessment report to complete the description of the physical environment, the potential impacts of the project, and the measures to mitigate, offset, or compensate for, adverse impacts. The IPDP will also confirm the social acceptability of the proposed project, as the Plan could not have been prepared without prior consultations with, and involvement of, the affected indigenous peoples.

F. Gender and the Environment

1. ADB Policy on Gender and Development

274. In 1985, ADB first adopted a *Policy on the Role of Women in Development*, which provided the framework for the implementation of a range of activities within its regular operational program that emphasized women as a special target group. However, in view of significant changes in the Asia-Pacific region since 1985, ADB revised its policy to reflect the changing environment, codify the transition from women in development to gender and development, incorporate current thinking on gender and development issues, generate an increase in ADB activities directly benefiting women, provide the appropriate policy framework for the new approaches and practices, and introduce the institutional mechanisms to operationalize ADB's strategic development objective of improving the status of women.

275. The revised *Policy on Gender and Development*³⁹ adopts mainstreaming as a key strategy in promoting gender equity (i.e., gender considerations will be mainstreamed into all ADB activities) and includes gender sensitivity, gender analysis, gender planning, mainstreaming, and agenda-setting as key elements.

276. Women's participation in the design and implementation of development projects, including those in natural resource management, in particular, is essential in achieving development objectives at the community level. It is therefore important that women's needs and concerns are determined and assessed as part of project design. In all ADB projects, including program and sector loans, gender considerations have to be addressed as part of the social analysis process. If the ISA identifies significant gender issues, these will be examined further through detailed *gender analysis*. The results of the ISA and subsequent social analysis will form part of the project feasibility study, and relevant sections of the social analysis report will be incorporated in the environmental assessment report for the project.

277. Gender analysis is a framework for considering the impact of a development intervention on both women and men. Gender analysis explores who does what, where, when, and for what time period. It assesses the differences in social roles between females and males and the constraints faced by females in gaining access to, and participating in, development activities. It evaluates the implications of such constraints in the design of development strategies, policies, interventions, and projects so that unequal access and opportunities between females and males will be avoided. A gender analysis framework is a flexible instrument with the ultimate purpose of assisting in the design and implementation of programs and projects that maximize the productivity and participation of both men and women, and includes appropriate implementation arrangements for strategies, policies, interventions, and projects.

278. Suggestions about gender issues that may be relevant in specific subsectors are given in the checklists provided in the ADB Handbook on Poverty and Social Analysis. Further

³⁹ ADB. 1998. *Policy on Gender and Development*. ADB, Manila, Philippines, May 1998.

information on the analysis of gender issues in water supply and sanitation, education, health, urban development and housing, and agriculture, are contained in the ADB *Handbook on Gender Analysis and Women in Development*.

G. Environmental Governance

279. ADB's environmental assessment requirements are compatible with and reinforce the four elements of ADB's *Policy on Good Governance: Sound Development Management*⁴⁰, and as set out in ADB's *Medium-Term Agenda and Action Plan for Governance*⁴¹. These elements are: (i) Accountability – by supporting the need for public officials to be responsible for government behavior, and responsive to the entity from which their authority is derived and reinforcing the need for citizens to be provided with an acceptable level of public services and encouraging that environmental impact standards are met; (ii) Participation – by supporting the involvement of citizens in the development process. Beneficiaries and groups affected by the environmental impacts of projects need to participate so that the government can make informed choices with respect to their needs and protect their rights, by encouraging the participation of project beneficiaries and affected groups and encouraging NGOs as vehicles for mobilizing and reaching project beneficiaries; (iii) Predictability – by supporting reforms and amendments to DMC environmental legislation, impartial settlement of disputes which arise from environmental impacts and by supporting the fair and consistent application of these laws and their implementation, and (iv) Transparency – by supporting improved availability of information to the general public and clarity about rules, regulations, and decisions on environmental impacts.

280. In the context of developing new and strengthening the capacity of a DMC's environmental impact assessment institutions there much that can be done to foster good governance. This includes such initiatives as: i) legal reforms which improve environmental legislation and guidelines, (ii) improving the consultative process on EIA, draft laws and regulations to increase transparency to representatives of civil society, ii) strengthening of judiciary to make process of environmental disputes more accessible and fairer, iv) assisting DMC'S to improve regulatory frameworks, v) strengthening DMC oversight and enforcement capabilities in environment, vi) involvement of civil society groups in dispute mediation related to environmental complaints, vii) capacity building of environment ministries or sub-national departments, or other state entities which have governance responsibilities, viii) improvement to intergovernmental fiscal arrangements which will provide financial resources to improve environmental security, ix sound corporate governance in safeguarding employees and affected communities from negative environmental effects, and x) improvements to macro financial reform which will improve state allocations for environmental protection.

⁴⁰ ADB. 1997. *Governance: Sound Development Management* (R151-95); OM 54, Governance, issued 13 January 1997. Manila.

⁴¹ ADB. 2000. *Promoting Good Governance—ADB's Medium-Term Agenda and Action Plan*. Manila

XIII. ENVIRONMENTALLY RESPONSIBLE PROCUREMENT

A. Introduction

281. Environmentally responsible procurement⁴² is a systematic approach to purchase of goods and services that are thought to be less damaging to the environment than other goods and services that serve the same purpose. ERP requires that purchasing decisions and allocation of contracts be based in part on environmental criteria along with other factors such as price, quality, and availability. Consideration must be given to the total environmental costs throughout the product life cycle – from manufacture, use, and disposal.

B. ERP in Environmental Assessment

1. Using the Environmental Assessment Process to Strengthen ERP

282. ERP and environmental assessment are two aspects of an environmental management system. Integration of ERP into environmental assessment processes is a practical way to move ERP analysis to an earlier stage of the project cycle. By incorporating requirements to conduct ERP analyses into the terms of reference (e.g., see Table 21) for the environmental assessment team, opportunities for ERP can be identified and integrated into project design and implementation. The environmental assessment team should work with project design engineers, implementing agencies, and ADB project staff to develop recommendation on ERP specifications. These ERP considerations should be incorporated in the EMPs for specific projects. To ensure that ERP recommendations are carried forward into loan documents, they should be included in environmental assessment reporting requirements.

2. Using ERP to Strengthen the Implementation of EMPs

283. ERP can be used to strengthen the implementation of EMPs. The principles of environmentally responsible procurement can be extended to include management of and payment for contracts. Procurement documents can be structured to ensure that contractors carry out the environmental mitigation and monitoring programs outlined in the EMP. In particular, payments to contractors should be directly linked to the successful implementation of the EMP. Contractor performance guarantees should be subject to collection for failure to implement the EMP.

3. List of Ineligible Items

284. ADB uses a list of ineligible items to prohibit the purchase of specific goods and services under program loans. This list includes such goods as alcohol beverages, tobacco, jewellery, nuclear reactors and radioactive materials, military supplies, and hazardous substances. While these lists are essentially “negative lists”, in that they prescribe “what not to buy”, in expanded and enhanced form they would, provide guidance on environmentally inappropriate products”. In any case a list of ineligible items should be included as standard requirements for all ADB loans.

⁴² Environmentally Responsible Procurement is still in formative stages at ADB. However, ADB is playing a key role in an MDB working group development approaches, standards, and practices for ERP.

Table 21: Example Terms of Reference for ERP Analysis during Environmental Assessment

- In consultation with project design engineers, implementing agencies and MDB project staff, the consultant shall identify and collect together, in one section of EA report, recommendations for EA specifications during project design and implementation.
 - The consultant shall present all recommended ERP specifications in the greatest detail that is consistent with the project description, and in a form that is suitable for insertion into project bidding documents.
 - Where postponement of the development of ERP specifications is unavoidable due to absence of detail of the project description, the consultant shall specify missing engineering information that precludes the development of ERP specifications, and recommend terms of reference for the next stage of the project that allows appropriate ERP specifications to be identified.
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XIV. CULTURAL HERITAGE

A. Introduction

285. ADB requires that the impacts on cultural heritage be assessed as part of the overall environmental assessment of a project. Culture heritage is a record of humanity's relationship to the world, past achievements, and discoveries. Cultural heritage, also termed cultural property, cultural patrimony or cultural resources, can be defined as the present manifestation of the human past. It refers to sites, structures, and remains of archaeological, historical, religious, cultural, or aesthetic value. In conserving this heritage we are conserving those elements of our past that have the potential to contribute to our understanding of human history.⁴³ (See Table 22 for examples of cultural heritage).

Table 22: Selected Types of Cultural Heritage Sites

Main Categories	Sub-types	Examples	Comments
Sacred sites	Burial sites	Xian, China; Tomb Fields, Bahrain.	They are often discovered during the construction phase of projects. The Liaoning Environment Project in China will help conserve ancient burial sites.
	Sites of religious or spiritual significance	Mecca, Saudi Arabia; Buddhist pilgrimage sites in Nepal.	Important cultural sites were often inspired by religious beliefs and are still considered sacred places.
Archaeological sites	Pre-historic sites	Mounds, middens, caves.	These sites are often undetected or overlooked. They frequently shed light on use or overuse of natural resources, changing survival strategies and social organization.
	Historical sites	Historic roads, bridges, dams and other water works, fortifications, and walls.	Many of these structures are still in use, such as Roman roadways in Tunisia or hydrological features in Indonesia. They may also point to changes in sea level, vegetation, and hunting and agricultural practices.
	Engineering and industrial sites	Marib Dam, Yemen; The Great Wall, China; nineteenth century industrial sites (train stations, early woolen mills).	The introduction of new technologies—metallurgy, mortars, arches and vaulting, industrial architecture—can be documented and understood by studying artifacts and earlier structures. This in turn may suggest methods for conservation and may shed light on future avenues of technological advance.
	Submerged or marine sites	Ancient coastal settlements in the Mediterranean and Central America; sunken ships.	New techniques of marine exploration have revealed many sunken ships and submerged sites of ancient human settlement.
Monumental sculpture	Sites within biologically diverse areas or protected reserves	Tikal, Guatemala; sacred groves in Ghana.	Management policies that protect both cultural and natural resources should be developed.
	Cave sculpture	Chinese and Indian Buddhist cave sites.	The protection of these sites depends on an understanding of the processes of deterioration
Monumental painting	Architectural sculpture	Thebes, Egypt; Petra, Jordan.	Exterior sculpture is often damaged by polluted air and rising water tables.
	Cave or wall painting	Tombs in Luxor, Egypt; Tassili, Algeria	Conserving wall painting, in the face of large tourist flows, requires careful planning.

⁴³ Culture Heritage and Environmental Assessment. Environmental Sourcebook Update 8, World Bank. September 1994.

Main Categories	Sub-types	Examples	Comments
Architecture and town planning	Monumental architecture	Monte Alban, Mexico; Copan, Honduras; Wat Phu, Laos.	Great works of architecture and urban planning demonstrate the introduction of new design principles and construction techniques.
	Indigenous or vernacular architecture	M'zab Valley, Algeria.	Local materials, such as wood, mud brick and stone, were used to build extraordinary architectural compositions.
	Historic settlements and town centers	Fez, Morocco; Quito, Ecuador.	The protection of the historic core of cities depends on a comprehensive policy to address infrastructure and social needs.
Historic landscapes	Cultural landscapes	Cres, Croatia; Land of the Dogon, Mali.	Landscapes, whether designed, organically evolved or relict, demonstrate mankind's responses to changing environmental conditions.
	Historic parks and gardens	Sigiriya, Sri Lanka; Shalimar Gardens, Pakistan.	Returning gardens to their original appearance may require research into plant materials.
	Trade routes monuments and remains	The Silk Route from China to Europe; Pan-African trade routes; Mediterranean-wide commerce.	Remains of ancient trade routes document early trade relations and cultural connections. Trading patterns, often long distance, are revealed in archaeological finds such as ceramics, metalwork, coins, or paleobotanical evidence.

Source: Culture Heritage and Environmental Assessment. Environmental Sourcebook Update 8, World Bank. September 1994.

286. Cultural heritage is legally protected in almost every country. The Convention for the Protection of the World Cultural and Natural Heritage of 1972 has become the foundation for national and other legislation since it requires signatories to adopt general policies; establish appropriate organizations and services; and develop legal, scientific, and financial measures for the protection and conservation of cultural and natural heritage. The World Heritage List, sponsored by UNESCO, also encourages protection and includes cultural sites of exceptional interest and universal value. At the national or state level, there are generally four kinds of legislation relevant to cultural sites: (i) heritage place protection acts that specifically protect particular places (or places as a class) and specify procedures for their protection; (ii) land management, zoning, or planning acts that provide general protection for sites; (iii) notification or listing acts that allow for the recording of important data on cultural sites; and (iv) acts to conserve natural areas in which cultural features are located. In many countries, religious laws also address cultural heritage and in some cases, assign ownership or oversight responsibilities to various religious authorities.

B. Cultural Heritage and Environmental Assessment

287. ADB uses environmental assessment as one of its main instruments to ensure that projects do not result in unacceptable damage to cultural heritage. The potential significant adverse impacts on cultural heritage are considered along with other types of environmental impacts at all stages of the environmental assessment process from country strategy and program development through environmental classification, environmental assessment, and environmental review, to implementation and supervision.

1. Environmentally Sensitive Areas

288. Impacts on cultural heritage tend to be site specific. Sites with important cultural resources may be considered to be as environmentally sensitive areas. This will require that the project be classified as Category A or environmentally sensitive B. In this case, the

assessment may include inventories of cultural heritage resources, analyses of alternate sites or routes to avoid or reduce impacts, and plans to mitigate damages through protection of specific resources.

XV. STRATEGIC ENVIRONMENTAL ASSESSMENT

A. Introduction

289. Strategic Environmental Assessment is being introduced as a method and approach for conducting environmental assessment of program loans, sector development program loans, and sector loans. SEA can also be used as tool in country environmental analysis (see Chapter IV).

B. The Practice of Strategic Environmental Assessment

1. Policies, Plans, Programs and Projects

290. In general, all countries having experience with SEA distinguish between policies, plans, programs and projects:

- Policy – “A general course of action or proposed overall direction that a government is, or will be, pursuing and which guides ongoing decision-making.”⁴⁴
- Plan – “A purposeful, forward looking strategy or design, often with coordinated priorities, options and measures, that elaborates and implements policy.”
- Program – “A coherent, organized agenda or schedule of commitments, proposals instruments and/or activities that elaborates and implements policy.”

291. A hierarchy exists between policies, plans and programs with policies are at the top level of conceptualization and generality; plans are one level down from policies, and programs. Programs make plans more specific by including a time schedule for specific activities. Implementation of a program involves carrying out specific projects, which can be subjected to traditional EIA.

2. SEA vs. EIA

292. SEA is distinguished from EIA and there are different categories of SEA. Using the definitions above, SEA can be defined as “a systematic process for evaluating and anticipating the consequences of decisions taken prior to the project stage.... Its purpose is to ensure that environmental considerations and alternatives are addressed as early as possible and on a par with economic and social factors in policy, plan or program development.”⁴⁵

293. The term “strategic environmental assessment” is used exclusively for assessments of policies, plans and programs; the term “environmental assessment” is used for assessments of specific projects. **Different categories of SEA** are distinguished:

- (i) “Policy impact assessment” or “policy EIA” – the assessment of policies being planned, proposed or already in place.

⁴⁴ Sadler, B. and R. Verheem, 1996, *Strategic Environmental Assessment: Status, Challenges and Future Directions*, Ministry of Housing, Spatial Planning and the Environment, The Netherlands.

⁴⁵ Sadler, B. and R. Verheem, 1996, *Strategic Environmental Assessment: Status, Challenges and Future Directions*, Ministry of Housing, Spatial Planning and the Environment, The Netherlands.

- (ii) “Sectoral environmental assessment” – “the process of examining potential environmental and social implications of all or most of the potential projects proposed for the same sector.”⁴⁶
- (iii) “Area-wide or regional assessment” – assessments for policies, plans, and programs related to particular jurisdictions (e.g., land use plans for cities) or natural areas (e.g., river basin development plans).
- (iv) “Programmatic” environmental impact statements – a term used primarily in the United States to refer to assessments prepared for federal and state plans and programs, such as land use plans and herbicide spraying programs.

294. **Different types of impacts.** The scope of SEA cannot be restricted to consideration of environmental effects alone. The implementation measures associated with policies and programs cause direct economic and social effects. , These economic and social effects often cause indirect environmental effects. In addition to direct and indirect effects, SEAs should also consider “cumulative impacts;” i.e., impacts on the environment that result when the effects of implementing the proposal are added to analogous effects of other past, present and reasonably foreseeable future actions. Cumulative impacts are important because impacts of individual projects may be minor when considered in isolation, but significant when the projects are viewed collectively.

295. **Advantages of SEA.** SEA responds to the following often-mentioned criticism: project-level EIA occurs *after* questions related to whether, where and what type of development should take place have either been decided or largely pre-empted based on prior analyses that did not account for environmental concerns. SEA introduces environmental considerations into decision making early, before project location and scale decisions have been made. Also, SEA allows decision makers to focus on the environmental effects of strategic choices, before specific projects are considered. Thus, compared to a project-level EIA, an SEA can consider a broader range of alternative proposals and mitigation measures.

296. SEA allows for the systematic consideration of cumulative and broad scale (i.e., regional and global) environmental effects. There is often a lack of correspondence between the temporal and spatial scale of cumulative effects and the narrow scope of project-level EIA.

297. SEA provides a mechanism for incorporating into decision-making considerations related to sustainable development; i.e., development that meets the needs of the present without compromising the ability of future generations to meet their own needs. SEA can draw attention to potential environmental problems early so that decision makers can filter out environmentally damaging projects that might otherwise be the source of costly and protracted delays and controversy.

298. **Tiering.** SEA can enhance the efficiency of project-level EIAs when the proposal covered by an SEA is intended to lead to specific projects. Efficiencies can result because of the hierarchy that includes policies, plans, programs and projects. “Tiering” allows for “different

⁴⁶ Goodland, R. and R. Tillman, 1996, “*Strategic Environmental Assessment: Strengthening the EA Process*,” in Goodland, R., J. R. Mercier and S. Muntemba (eds.), *Environmental Assessment (EA) in South Africa – A World Bank Commitment*, Proceedings of the Durban World Bank Workshop, June 25, 1995, The World Bank, Washington, D.C.

levels of detail or specificity of environmental assessment as a proposal moves from a broad or early stage to a narrower or subsequent stage"⁴⁷ Tiering can promote efficiency because projects (which are at a lower tier) can make reference to analyses within the SEA at the next higher tier. In this way, those who prepare EIAs for specific projects can avoid redoing analyses for issues covered adequately in an SEA conducted for the plan or program at the next higher tier. In addition to promoting efficiency, tiering can help sharpen the focus of project-level EIAs. This can occur when an SEA for an policy, plan or program includes recommendations about issues to be addressed in conducting project-level EIAs (or, more generally, in conducting environmental assessments for proposals at a lower tier in the hierarchy).

3. Generic Steps in Conducting an SEA

299. SEA processes, currently in use, have a number of features in common:

- (i) **Screening.** A screening exercise is undertaken to answer the following threshold question: Should an SEA be conducted for the subject proposal (i.e., a particular policy, plan or program)?
- (ii) **Scoping.** A scoping exercise is conducted to ensure that all high priority issues relevant to the decision being made are addressed in the SEA. There is wide agreement that both direct and indirect (or "secondary") effects of a proposal should be examined and that cumulative impacts should be included in an SEA.
- (iii) **Indicators.** Sometimes the description and evaluation of effects is given in terms of "sustainability indicators" (i.e., measures used to gauge whether the proposal will contribute to sustainable development).
- (iv) **Stakeholders.** All "stakeholders" – i.e., parties potentially affected by (or otherwise interested in) the proposal – should be given an opportunity to participate in the scoping exercise. While consultation with stakeholders takes place at various points in proposal development, it is particularly important during scoping.
- (v) **Identification, Prediction and Evaluation of Effects.** SEA is concerned with the both direct and indirect impacts. The impacts of policies, programs, and plans on the environmental components are normally indirect. That is, the policy, programs, or plans are designed to bring about changes in social and economic behavior. These social and economic changes may in turn lead to potential direct and indirect impacts on the environment. The process of forecasting and evaluating environmental effects in an SEA can employ some of the same methods and procedures used in project-level EIA.
- (vi) **Integration.** Integration of environmental, social and economic effects must be part of the impact prediction and evaluation process. This joint consideration of environmental social and economic effects is essential because some proposals will yield direct economic (or social) impacts that will then lead to indirect (or "higher order") environmental effects. While most countries emphasize

⁴⁷ Weiner, K. S, 1997, "Basic Purposes and Policies of the NEPA Regulations," in Clark, R. and L. Canter, *Environmental Policy and NEPA*, St. Lucie Press, Boca Raton, FL.

environmental effects in SEAs, some are beginning to experiment with appraisals that integrate environmental, social and economic effects in a balanced way.

- (vii) **Mitigation.** An SEA should include measures that eliminate, reduce or offset adverse environmental effects. The term “mitigation” refers to the “elimination, reduction or control of the adverse effects of the policy, plan or program, and includes restitution for any damage to the environment caused by such effects through replacement, restoration, compensation or any other means”
- (viii) **Monitoring.** An SEA should include a plan for monitoring environmental effects so that mitigation measures can be implemented if unforeseen effects occur. In addition an SEA should include a plan for ensuring that agreed upon mitigation measures are actually carried out.
- (ix) **Independent Review.** An independent review of an SEA provides a check on the quality of the assessment. Results from the review should be considered in preparing the final SEA and in making final decisions. Researchers have developed criteria for reviewing and evaluating SEAs, and examples are given in Table 20.
- (x) **Influence on Decisions.** The SEA (including results of the independent review) should be made available to decision makers at a time when those results can inform debate on the proposal and alternatives to the proposal.

Table 20: Summary of Good Quality SEA Criteria⁴⁸.

The SEA report should

- contain a description of the project and the affected environment extending beyond the physical boundaries of the project, focusing on key assets, sensitive areas and threats;
- review environmental and sustainability objectives of the plan and propose a set of criteria, targets or indicators for evaluating the effects of the plan’s policies and their alternatives;
- contain a systematic identification, prediction and evaluation of potential impacts, including indirect and cumulative ones, with a level of detail appropriate for appraising the plan and the information needs of decision-makers;
- include recommendations on preferred alternatives and a description of suggested monitoring and mitigation measures;
- include recommendations for tiering its results to environmental assessments at lower levels of the planning hierarchy;
- clearly delineate and explain the methodology by which its findings have been obtained and report on findings from public consultation;
- facilitate sustainability appraisal by (a) evaluating environmental sustainability; (b) presenting its findings in a way which will facilitate an integrated sustainability analysis (including proposing sustainability criteria).

⁴⁸ Bonde, J. and A. Cherp, 2000, “Quality Review Package for Strategic Environmental Assessments of Land-Use Plans,” *Impact Assessment and Project Appraisal*, 18(2): 99-110.

4. Use of SEA in Environmental Assessment of ADB Operations

300. SEA is a tool for use in the environmental assessment of program loans and sector loans. For program loans, SEA can be used to help prepare the matrix of environmental impacts of policy and institutional actions, mitigation measures, and the institutional basis for implementing mitigation measures and monitoring program. It can also be used to review environmental sustainability objectives of the program and propose a set of criteria, targets or indicators for evaluating the effects of the loan.

301. For sector loans, SEA can help with the cumulative impact assessment of all projects envisioned as a part of the loan. Also, it can enhance the efficiency of subproject-level IEEs by avoiding the need to redo analyses for issues covered adequately in a SEA for the entire sector. The assessment of subprojects can concentrate on the site-specific impacts of the subproject.

a. Determining whether or not SEA is appropriate

302. Screening questions for determining whether SEA is the appropriate tool for environmental assessment of a program loan or sector loan⁴⁹ are presented below:

1. Which policy area or sector is targeted in the proposal?
 - Is it known to have or likely to cause environmental effects?
 - Are there components that are likely to generate cumulative or long-term environmental consequences?
2. What environmental considerations are raised by the proposal?
 - Does the proposal appear to initiate actions that will have direct or evident environmental impact?
 - Are there any policy, regulatory, or institutional weaknesses relative to environmental management in the sector?
3. What is the state of the country's institutional context?
 - Do property rights on resources such as land tenure security not being recognized by the existing law?
 - Does the institutional framework for managing resources severely limit the role of civil society/communities?
4. What is the state of the country's socio-economic context?
 - Is there high dependency on local resources?
 - What level of pressure on natural resources?
 - What is the rate of urbanization?
5. What is the state of the country's ecological context?
 - are ecosystems fragile or robust?
 - what is the overall level of ecosystem degradation?

⁴⁹ Source: Adapted from Sadler and Verhemmm 1996, the World Bank 1993, and Kessler and Van Drop 1998.

XVI. CUMULATIVE EFFECTS ASSESSMENT IN ENVIRONMENTAL ASSESSMENT

A. Introduction

303. A conventional project and site-specific approach to environmental assessment has its limitations when it comes to assessing potential cumulative effects on environmental resources. This is because the impact of a particular project on an environmental resource may be considered insignificant when assessed in isolation, but may be significant when evaluated in the context of the combined effect of all past, present, and reasonably foreseeable future activities that may have or have had an impact on the resources in question. Cumulative impact assessment also provides valuable and important inputs as an element of SEA, particularly in monitoring of environmental sustainability impacts during CSP preparation and annual monitoring reviews. For these reasons, the explicit assessment of cumulative effects is now considered desirable in environmental assessment practice.

304. Cumulative effects generally refer to impacts that are additive or interactive (synergistic) in nature and result from multiple activities over time, including the project being assessed. The US Council on Environmental Quality defines cumulative effects as "the impacts on the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions." Cumulative effects

- (i) are caused by the aggregate of past, present, and future actions;
- (ii) are the total effect, including both direct and indirect effects, on a given resource, ecosystem, and human community of all actions taken, no matter who has taken the actions;
- (iii) need to be analyzed in terms of the specific resource, ecosystem, and human community being affected;
- (iv) cannot be practically analyzed beyond a reasonable boundary; the list of environmental effects must focus on those that are meaningful;
- (v) rarely correspond to political or administrative boundaries;
- (vi) may result from the accumulation of similar effects or the synergistic interaction of different effects;
- (vii) may last for many years beyond the life of the project that caused the effects; and
- (viii) should be assessed in terms of the capacity of the affected resource, ecosystem, and/or human community to accommodate additional effects.

B. Cumulative Effects and the Environmental Assessment Process

305. The process of analyzing cumulative effects is an enhancement of the traditional environmental assessment components: (i) scoping, (ii) describing the affected environment, and (iii) determining the environmental consequences. Generally, it is also critical to incorporate cumulative effects analysis into the development of alternatives for an environmental assessment, since it is only by reevaluating and modifying alternatives in the light of the projected cumulative effects that adverse consequences can be effectively avoided or minimized.

306. In many ways, scoping is the key to analyzing cumulative effects as it provides the best opportunity for identifying important cumulative impact assessment issues, setting appropriate boundaries for analysis, and identifying relevant past, present, and future actions. By evaluating resource impact zones and the life cycle of effects, rather than projects, the boundaries of cumulative impact assessment can be properly defined. Scoping can also facilitate the interagency cooperation needed to identify agency plans and other actions whose effects may overlap with those of the proposed action.

307. Determining the cumulative environmental consequences of an action requires delineating the cause-effect relationships between the multiple actions and the resources, ecosystems, and human communities of concern. The successful analysis of cumulative effects ultimately depends on the careful application of individual methods, techniques, and tools to the environmental assessment. The unique requirements of cumulative impact assessment (i.e., focus on resource sustainability, expanded geographic and time boundaries) must be addressed by developing an appropriate conceptual model using a suite of primary methods: questionnaires, interviews, and panels; checklists; matrices; networks and systems diagrams; modeling; trends analysis; and overlay mapping and geographic information systems.

308. In most cases, it will be beyond the scope of an environmental assessment to include a full-fledged cumulative impact assessment. However, it is important that environmental assessment, where appropriate, includes a preliminary assessment of the potential for cumulative effects and specific recommendations on the need for, and the conduct of, a cumulative impact assessment. The key issues in considering a cumulative impact assessment relate to defining appropriate analytical boundaries in time and space, identifying and predicting future resource use and impacts, and evaluating the significance of cumulative effects that are predicted to take place. The spatial boundaries are best defined flexibly to allow adjustments during the assessment process as the nature of linkages becomes better defined. The setting of temporal boundaries will be largely a function of data availability as well as the levels of uncertainty and confidence in prediction. A concern is to determine the minimum data requirements that will allow defensible and robust impact predictions. The criteria for judging significance of cumulative effects are not different from those for other types of environmental assessment, but threshold effects and irreversible changes in the use of critical resources will generally be key concerns.

XVII. MANAGING AND ADMINISTERING AN ENVIRONMENTAL ASSESSMENT STUDY

A. Key Players in Environmental Assessment

309. In general, the key players in the environmental assessment process involve the project proponent, environmental agency, consultant, financing or approving agency, and public. The key players in ADB's environmental assessment operations are described in more detail as follows:

- (i) The Borrower. The project proponent is usually the executing agency of a Borrower. It may be a private organization in the case of private sector operations. The project proponent is responsible for environmental assessment process and preparing and submitting the environmental assessment report. They are also responsible to ensure that the requirements of public consultation and disclosure associated with the environmental assessment are fulfilled. The project proponent is also responsible for implementation of the EMP and other environmental loan covenants.
- (ii) RD Sector Divisions. The sector divisions of RDs prepare the environmental categorization form and supporting documentation in consultation with RSES. They also: (i) discuss and agree with the borrower and environmental agencies on a TOR for the environmental assessment; (ii) ensure the environmental assessment reporting in the RRP, (iii) supervise the incorporation of the environmental assessment's results in loan documents; and (iv) supervise of the implementation of the EMP.
- (iii) RSES also reviews the environmental assessment documents and other project activities for compliance with ADB's Environment and Social Safeguard Policies.
- (iv) A Consultant is usually hired by either by the project proponent/sponsor or ADB to prepare the environmental assessment report. In many cases, particularly for projects for the public sector, the Consultant is hired as part of the PPTA.
- (v) The DMC's environmental agency works on behalf of the DMC. The agency issues an environmental clearance based on the environmental assessment documents,.
- (vi) Other Stakeholders include beneficiaries or affected groups, the public and other interested parties such as NGOs. They are usually involved in reviewing documents, and provide valuable inputs through the environmental assessment process..
- (vii) Other financing agencies play a significant role when a project involves cofinancing. In case a project involves financing agencies having its own environmental assessment guidelines, it is necessary to obtain a commitment from both the agency and DMC on which environmental assessment guidelines will be applied – the agency's or ADB's.

B. Work Plan and Budget

310. Efficient, cost-effective, and smooth conduct of environmental assessment activities is the basic principle in preparing an environmental assessment work plan. The environmental assessment work plan which defines the environmental issues and breaks them into tasks, assigns the tasks to environmental assessment team members, describes the qualifications required of each team member, schedules the completion of tasks, and prepares the budgets required by each task according to its schedule. Environmental assessment tasks must be scheduled so that the subject items can be completed within the overall time frame of the environmental assessment and feasibility study. The key principles in managing an environmental assessment are

- (i) focus on the main issues,
- (ii) explore other available information,
- (iii) involve appropriate persons and groups,
- (iv) link information to decisions about the project,
- (v) present clear options for mitigation of impacts and for sound environmental management, and
- (vi) provide information in a form useful to decision makers.

311. As environmental assessment studies vary in scope, quality, and levels of expertise required in their preparation, the cost of the studies will depend on the quality of the advice provided to the decision makers through individual assessments and their intended use in project design, implementation, and management. While the costs of preparing an environmental assessment report sometimes appear high, it is actually low compared with the overall project cost, and considering its benefit to the project. Generally, environmental assessment costs range from 0.1 to 1 percent of the overall project costs for Category A projects.

C. Environmental Assessment Personnel

312. Environmental assessments may be prepared by an individual or team of environment specialists drawn from various disciplines depending on the size and complexity of the project. Selection of the environment specialists is based on the nature of the project. For example, a dam and flood control project may require the skills of a water resources engineer or hydrologist; an aquatic ecologist; or fisheries, agriculture, and resettlement specialists. In most cases with ADB, the environmental assessment is usually carried out as part of the PPTA. Therefore, all of the PPTA team members are obliged to contribute to the conduct of environmental assessment. On this basis, the PPTA team takes the role of the environmental assessment team, and the environment specialist assists the borrower in preparing environmental assessment documents. It is also advisable to provide for the services of a social development specialist to work with the environment specialist in the conduct of the environmental assessment to ensure that social issues are adequately addressed.

XVIII. ECONOMIC ANALYSIS IN ENVIRONMENTAL ASSESSMENT

313. ADB encourages the inclusion of economic analysis in the environmental assessment process. All EIAs require an “Economic Assessment” section that includes (i) costs and benefits of environmental impacts; (ii) costs, benefits, and cost effectiveness of mitigation measures; and (iii) for environmental impacts that have not been expressed in monetary values, a discussion of such impacts, if possible in quantitative terms. Economic analysis can assist in evaluating the significance of potential environmental changes, in assessing the incidence of environmental costs and benefits, and in identifying the least cost environmental mitigation measures.

314. Economic analysis in environmental assessments should be consistent with ADB's *Guidelines for the Economic Analysis of Projects*. When environmental impacts are a main feature of the project, these guidelines require that the environmental costs and benefits be measured and included in the benefit-cost analysis. Otherwise, the Guidelines encourage the inclusion of environmental costs and benefits in project analysis whenever feasible.

315. Conceptually robust approaches and methodologically rigorous techniques for identifying, physically quantifying, and then valuing environmental changes in monetary terms have been developed over the last forty years. Practical experience in their application is now making economic evaluation of environmental impacts increasingly possible in the context of project level analysis in DMCs.

316. Economic analysis of environmental impacts can be based on either primary data (for example, data collected at the site), or secondary data (for example, data from published studies). Economic analysis should be based on primary data whenever feasible, and whenever the environmental impacts are a main feature of the project. The best source of primary data is the environmental assessment itself, which should seek to generate data on environmental impacts that will allow economic valuation to be undertaken. In terms of air pollution for instance, environmental assessments should not be limited to estimating incremental emissions from a project but should instead quantify the impacts resulting from such emissions.

317. Economic analysis can be based on secondary data whenever the environmental impacts are not a main feature of the project, or as a preliminary analysis to gauge the value of collecting primary data. Secondary data on environmental values cannot usually be used directly, but must first be adapted to better fit the time and place of the new analysis, using the Benefits Transfer Method (BTM). BTM should be applied only to primary data from another location, and should not use secondary data itself. BTM can also involve the transfer of physical dose-response functions from one locality to another, but only when appropriate modifications are made to account for different site and receptor characteristics.

318. The economic analysis in an environmental assessment should be derived from the same analysis that goes into the RRP. It is possible, though, that the economic analysis of the project could change following circulation of the environmental assessment report either through a change in the project or a change in the analysis. The economic analysis in the RRP is the definitive one, and so the RRP should note if the economic analysis of the project has changed since the circulation of the environmental assessment report.

XIX. MULTILATERAL ENVIRONMENTAL AGREEMENTS

319. In the last few years, ADB has played a facilitating role in the context of multilateral environmental agreements (MEAs), including treaties, conventions, and protocols, particularly to support its regional cooperative efforts. The following criteria help determine where ADB assistance can be particularly helpful to DMCs: (i) ADB will concentrate on thematic areas in which it has already acquired expertise, instead of trying to build capacities in new areas; (ii) ADB will focus its participation on MEAs that have clearly identified roles for multilateral development banks; (iii) ADB participation will make a significant contribution to implementing the MEA within specific DMCs or at the subregional or regional level; and (iv) ADB participation will respond to DMC priorities for the relevant MEA. The precise nature of ADB operations in any DMC will be determined through the CSP process, and special attention will be paid to interventions that (i) deliver significant local level benefits as well as global environmental outcomes, (ii) assist vulnerable groups and countries to adapt to global environmental changes, and (iii) facilitate the mobilization of additional resources financial mechanisms of the respective MEA.

320. The MEAs that are consistent with these criteria are Agenda 21, the Convention on Biological Diversity, the Ramsar Convention on Wetlands, the Convention to Combat Desertification, the Framework Convention on Climate Change and its protocols, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, and the Stockholm Convention on Persistent Organic Pollutants (POPs). In addition, regional agreements, such as the South Pacific Regional Environment Programme (SPREP) Convention, have been appropriately supported through standard ADB operations programs. Each of these MEAs may furnish specific themes for environmental activities (i.e., loans and TA), including those that help conserve environmental resources for the livelihoods and health of the poor. ADB will assist DMCs to incorporate relevant commitments and opportunities under these international environmental treaties. The opportunities may also be pursued in collaboration with agencies that have special responsibilities for implementing particular agreements.

321. The special funding mechanisms under the multilateral environmental agreements offer a number of opportunities for DMCs. However, most DMCs lack the financial, economic, and environment policies; human resources; and technological capacity to take full advantage of these mechanisms. ADB is committed to helping its DMCs access financial and other resources under the designated financial mechanisms of international conventions and protocols, such as the GEF. In light of commitments in MEAs on transfer of technology, the international community at large has an obligation to facilitate developing countries' access to environmentally sound technologies, although this obligation does not supercede existing intellectual property rights. ADB is committed to supporting its DMCs to develop the capacity to effectively manage the process of technology transfer.

XX. ENVIRONMENTAL AUDITING

322. Environmental audit is a process to review the effectiveness of environmental management. Its objectives are to (i) determine whether a company complies with all regulatory and environmental performance standards, or other management requirements for their operations; and (ii) ensure conformity with environmental assessment requirements, and test the accuracy of the assessment. It entails a systematic, documented and periodic review of either a company's operation or project implementation. Therefore, its results could be very useful to improve company or project management performance.

A. Environmental Management System Audit

323. Environmental management system audits evaluate the effectiveness of environmental management and performance systems based on stated objectives. It also determines whether the systems have been designed and implemented to meet management objectives. Environmental management system audits have been formalized under ISO 14000 procedures.

B. Compliance Audit

324. There are two types of Compliance Audit. Regulatory Compliance Audit evaluates current operations and controls to determine applicable regulatory requirements, resulting in a statement of the compliance status. Performance Audit determines whether actual environmental management conforms to stated objectives.

C. Site Property Audit

325. Site Property Audit determines the environmental risks associated with financing, purchasing and sale, and for insurance purposes.

D. Environmental Assessment Audit

326. Environmental assessment audit determines whether the contents of an environmental statement are correct and comprehensive.

327. In the case of ADB and its environmental assessment process, environmental management audits are necessary to establish factual information to evaluate project environmental performance and management. They have the following objectives:

- (i) organize and interpret the environmental monitoring data to establish a record of change associated with project implementation or operation.
- (ii) verify that all or selected parameters and methods to measure environmental parameters as part of the environmental monitoring program comply with regulatory requirements, internal policies and standards, and established environmental quality performance limits.
- (iii) compare predicted and actual impacts to assess the accuracy of predictions.
- (iv) assess the effectiveness of environmental management systems, practices, and procedures.

- (v) determine the degree and scope of necessary improvement or remedial works in case of non-compliance, or in the event that the company's environmental objectives are not achieved.

REA Checklists

1. Checklists have been developed for many sectors. Checklists are subject to revision and new checklists are under development. Please contact the Director of RSES for information on the current set of checklists. The checklists developed to date are provided herein. The current checklists are:

- (i) Irrigation
- (ii) Fisheries
- (iii) Forestry
- (iv) Hydropower
- (v) Thermal Power Plants
- (vi) Power Transmission
- (vii) Agro Industrial Projects
- (viii) Chemical-based Industrial Projects
- (ix) Petrochemical Industrial Projects
- (x) Urban Development
- (xi) Water Supply
- (xii) Solid Waste Management
- (xiii) Sewage Treatment
- (xiv) Airports
- (xv) Ports and Harbors
- (xvi) Roads and Highways
- (xvii) Governance and Finance

Rapid Environmental Assessment (REA) Checklist

IRRIGATION

Instructions:

- ❑ This checklist is to be prepared to support the environmental classification of a project. It is to be attached to the environmental categorization form that is to be prepared and submitted to the Chief Compliance Officer of the Regional and Sustainable Development Department.
- ❑ This checklist is to be completed with the assistance of an Environment Specialist in a Regional Department.
- ❑ This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB checklists and handbooks on (i) involuntary resettlement, (ii) indigenous peoples planning, (iii) poverty reduction, (iv) participation, and (v) gender and development.
- ❑ Answer the questions assuming the “without mitigation” case. The purpose is to identify potential impacts. Use the “remarks” section to discuss any anticipated mitigation measures.

Country/Project Title:

Sector Division:

SCREENING QUESTIONS	Yes	No	REMARKS
<p>A. Project Siting</p> <p>Is the Project area adjacent to or within any of the following environmentally sensitive areas ?</p>			
<ul style="list-style-type: none"> ▪ Protected Area 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ Wetland 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ Mangrove 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ Estuarine 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ Buffer zone of protected area 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ Special area for protecting biodiversity 	<input type="checkbox"/>	<input type="checkbox"/>	
<p>B. Potential Environmental Impacts</p> <p>Will the Project cause...</p>			
<ul style="list-style-type: none"> ▪ loss of precious ecological values (e.g. result of encroachment into forests/swamplands or historical/cultural buildings/areas, disruption of hydrology of natural waterways, regional flooding, and drainage hazards)? 	<input type="checkbox"/>	<input type="checkbox"/>	

SCREENING QUESTIONS	Yes	No	REMARKS
▪ conflicts in water supply rights and related social conflicts?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ impediments to movements of people and animals?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ potential ecological problems due to increased soil erosion and siltation, leading to decreased stream capacity?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Insufficient drainage leading to salinity intrusion?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ over pumping of groundwater, leading to salinization and ground subsidence?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ impairment of downstream water quality and therefore, impairment of downstream beneficial uses of water?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ dislocation or involuntary resettlement of people?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ potential social conflicts arising from land tenure and land use issues?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ soil erosion before compaction and lining of canals?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ noise from construction equipment?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ dust?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ labor-related social problems especially if workers from different areas are hired?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ waterlogging and soil salinization due to inadequate drainage and farm management?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ leaching of soil nutrients and changes in soil characteristics due to excessive application of irrigation water?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ reduction of downstream water supply during peak seasons?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ soil pollution, polluted farm runoff and groundwater, and public health risks due to excessive application of fertilizers and pesticides?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ soil erosion (furrow, surface)?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ scouring of canals?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ logging of canals by sediments?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ clogging of canals by weeds?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ seawater intrusion into downstream freshwater systems?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ introduction of increase in incidence of waterborne or water related diseases?	<input type="checkbox"/>	<input type="checkbox"/>	

Rapid Environmental Assessment (REA) Checklist

FISHERIES

Instructions:

- ❑ This checklist is to be prepared to support the environmental classification of a project. It is to be attached to the environmental categorization form that is to be prepared and submitted to the Chief Compliance Officer of the Regional and Sustainable Development Department.
- ❑ This checklist is to be completed with the assistance of an Environment Specialist in a Regional Department.
- ❑ This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB checklists and handbooks on (i) involuntary resettlement, (ii) indigenous peoples planning, (iii) poverty reduction, (iv) participation, and (v) gender and development.
- ❑ Answer the questions assuming the “without mitigation” case. The purpose is to identify potential impacts. Use the “remarks” section to discuss any anticipated mitigation measures.

Country/Project Title:

Sector Division:

SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting			
Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Wetland	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Mangrove	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Estuarine	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Buffer zone of protected area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Special area for protecting biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	
B. Potential Environmental Impacts			
Will the Project cause...			
▪ overexploitation of fish stocks and long-term degradation of resource base?	<input type="checkbox"/>	<input type="checkbox"/>	

SCREENING QUESTIONS	Yes	No	REMARKS
▪ capture of non-target species and habitat damage through use of destructive fishing methods and gears?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ accidental damage to coral reefs by divers and fishing vessel anchors?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ pollution from oil and fuel spills and bilge flushing?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ ecological protection resulting from clearing for conversion of coastal wetlands to fishponds?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ social problems arising from conflicts with other site uses?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ downstream water pollution from discharge of pond effluents with drain water?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ reduction of water supplies for competing uses (e.g., irrigation or domestic)?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ restriction of water circulation, obstruction to navigation by fish pens/cages, and reduction of stream capacity from siltation?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ dislocation or involuntary resettlement of people	<input type="checkbox"/>	<input type="checkbox"/>	
▪ social problems due to land tenure and use conflicts?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ soil erosion and siltation during construction?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ noise and dust from construction?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ social problems especially when workers from other areas are hired?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ reduction of water available to downstream users during peak seasons?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ pollution of nearby aquatic environments by pond drainage water and inadequate farm management?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ depletion of local fish populations by stocking of wild fry/fingerlings in ponds?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ spread of diseases and parasites from exotic cultured species or escape of pond fish to the wild?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ increased public health risks due to the increased incidence or introduction of waterborne or water-related diseases?	<input type="checkbox"/>	<input type="checkbox"/>	

Rapid Environmental Assessment (REA) Checklist**FORESTRY****Instructions:**

- This checklist is to be prepared to support the environmental classification of a project. It is to be attached to the environmental categorization form that is to be prepared and submitted to the Chief Compliance Officer of the Regional and Sustainable Development Department.
- This checklist is to be completed with the assistance of an Environment Specialist in a Regional Department.
- This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB checklists and handbooks on (i) involuntary resettlement, (ii) indigenous peoples planning, (iii) poverty reduction, (iv) participation, and (v) gender and development.
- Answer the questions assuming the “without mitigation” case. The purpose is to identify potential impacts. Use the “remarks” section to discuss any anticipated mitigation measures.

Country/Project Title:**Sector Division:**

SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting			
Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Wetland	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Mangrove	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Estuarine	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Buffer zone of protected area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Special area for protecting biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	
B. Potential Environmental Impacts			
Will the Project cause...			
▪ increase in soil erosion and siltation?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ increase in peak and flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	

SCREENING QUESTIONS	Yes	No	REMARKS
▪ loss of downstream beneficial uses (water supply or fisheries)?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ impairment of ecological and recreational opportunities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ impairment of beneficial uses of traditional forests?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ any loss of precious ecology?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ possible conflicts with established management policies?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ dislocation or involuntary resettlement of people?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ loss of downstream ecological and economic functions due to any construction of social infrastructure (e.g., road, training or information center, office or housing)?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ displacement of people or reduce their access to forest resources?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ uncontrolled in-migration with opening of roads to forest area and overloading of social infrastructure?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ unnecessary loss of ecological value and decreased biodiversity by replacement of natural forest with plantation with limited number of species?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ technology or land use modification that may change present social and economic activities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ ecological problems due to land clearance prior to reforestation (e.g., soil erosion, disruption of hydrological cycle, loss of nutrients, decline in soil fertility)?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ other ecological problems (e.g., pollution of water bodies from fertilizers, pesticides, and herbicides used in the plantation)?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ social problems and conflicts related to land tenure and resource use rights?	<input type="checkbox"/>	<input type="checkbox"/>	

Rapid Environmental Assessment (REA) Checklist**HYDROPOWER****Instructions:**

- This checklist is to be prepared to support the environmental classification of a project. It is to be attached to the environmental categorization form that is to be prepared and submitted to the Chief Compliance Officer of the Regional and Sustainable Development Department
- This checklist is to be completed with the assistance of an Environment Specialist in a Regional Department.
- This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB checklists and handbooks on (i) involuntary resettlement, (ii) indigenous peoples planning, (iii) poverty reduction, (iv) participation, and (v) gender and development.
- Answer the questions assuming the “without mitigation” case. The purpose is to identify potential impacts. Use the “remarks” section to discuss any anticipated mitigation measures.

Country/Project Title:**Sector Division:**

SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting			
Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Wetland	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Mangrove	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Estuarine	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Buffer zone of protected area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Special area for protecting biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	
B. Potential Environmental Impacts			
Will the Project cause...			
▪ loss of precious ecological values due to flooding of agricultural/forest areas, and wild lands and wildlife habitat; destruction of fish spawning/breeding and nursery grounds, and disruption of fish migration routes?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ loss of archaeological, historical or cultural monuments?	<input type="checkbox"/>	<input type="checkbox"/>	

SCREENING QUESTIONS	Yes	No	REMARKS
▪ dislocation or involuntary resettlement of people?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ disruption/destruction of tribal groups/indigenous peoples?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ environmental degradation from increased pressure on land?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ conflicts on water supply rights, and related social conflicts?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ decreased production from capture fisheries due to submersion of river stretches and associated flood channels, and resultant destruction of fish breeding and nursery grounds?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ proliferation of aquatic weeds in reservoir and downstream impairing dam discharge, irrigation systems, navigation and fisheries, and increasing water loss through transpiration?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ scouring of riverbed below dam?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ increased incidence of waterborne or water-related diseases?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ depletion of dissolved oxygen by large quantities of decaying plant material, fish mortality due to reduced dissolved oxygen content in water, algal blooms causing successive and temporary eutrophication, growth and proliferation of aquatic weeds?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ deterioration of water quality in reservoir?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ decline or change in the fisheries below dams due to reduced peak flows and floods and water quality changes?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ loss of migratory fish species due to the impediment posed by the dam?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ formation of sediment deposits at reservoir entrance, creating backwater effect and flooding and waterlogging upstream?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ sedimentation of reservoir and loss of storage capacity?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ alteration of water quality due to evaporation in reservoir, lowered temperatures during low flow periods, silt concentration in density currents, low dissolved oxygen, and high levels of iron and manganese?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ salinization of floodplain lands and saltwater intrusion in estuary and upstream?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ decrease in floodplain agriculture?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ introduction or increase in incidence of waterborne or water-related diseases?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ environmental problems arising from uncontrolled human migration into the area, made possible by access roads and transmission lines?	<input type="checkbox"/>	<input type="checkbox"/>	

Rapid Environmental Assessment (REA) Checklist**THERMAL POWER
PLANTS****Instructions:**

- This checklist is to be prepared to support the environmental classification of a project. It is to be attached to the environmental categorization form that is to be prepared and submitted to the Chief Compliance Officer of the Regional and Sustainable Development Department.
- This checklist is to be completed with the assistance of an Environment Specialist in a Regional Department.
- This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB checklists and handbooks on (i) involuntary resettlement, (ii) indigenous peoples planning, (iii) poverty reduction, (iv) participation, and (v) gender and development.
- Answer the questions assuming the “without mitigation” case. The purpose is to identify potential impacts. Use the “remarks” section to discuss any anticipated mitigation measures.

Country/Project Title:**Sector Division:**

SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting			
Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Wetland	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Mangrove	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Estuarine	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Buffer zone of protected area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Special area for protecting biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	
B. Potential Environmental Impacts			
Will the Project cause...			
▪ impairment of historical/cultural monuments and other areas, and loss/damage to these sites?	<input type="checkbox"/>	<input type="checkbox"/>	

SCREENING QUESTIONS	Yes	No	REMARKS
▪ encroachment into precious ecosystem (e.g. sensitive habitats like protected forest areas or terrestrial wildlife habitats?)	<input type="checkbox"/>	<input type="checkbox"/>	
▪ dislocation or involuntary resettlement of people?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ aesthetic degradation and property value loss due to establishment of plant and ancillary facilities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ social conflicts between construction workers from other areas and community workers?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ noise and dust from construction activities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ short-term soil erosion and silt runoff due to construction?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ fugitive dust during transportation, unloading, storage, and processing of coal, and polluted runoff from coal storage?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ risk of oil spills, which could pollute surface and groundwater and soil?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ hazards in gas pipeline operation and gas storage at power plant sites?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ changes in flow regimes downstream of the water intake due to abstraction for cooling purposes?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ pollution of water bodies and aquatic ecosystem from wastewater treatment plant for boiler feed, bleed-off from cooling towers, boiler blowdown and wash-water, and effluent from ash pond?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ air pollution from fuel gas discharged into the atmosphere?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ public health and safety hazards due to solid waste disposal in sanitary landfills (see Matrix of Impacts and Measures for Solid Waste Disposal)?	<input type="checkbox"/>	<input type="checkbox"/>	

Rapid Environmental Assessment (REA) Checklist**POWER
TRANSMISSION****Instructions:**

- This checklist is to be prepared to support the environmental classification of a project. It is to be attached to the environmental categorization form that is to be prepared and submitted to the Chief Compliance Officer of the Regional and Sustainable Development Department.
- This checklist is to be completed with the assistance of an Environment Specialist in a Regional Department.
- This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB checklists and handbooks on (i) involuntary resettlement, (ii) indigenous peoples planning, (iii) poverty reduction, (iv) participation, and (v) gender and development.
- Answer the questions assuming the “without mitigation” case. The purpose is to identify potential impacts. Use the “remarks” section to discuss any anticipated mitigation measures.

Country/Project Title:**Sector Division:**

SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting			
Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Wetland	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Mangrove	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Estuarine	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Buffer zone of protected area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Special area for protecting biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	
B. Potential Environmental Impacts			
Will the Project cause...			
▪ encroachment on historical/cultural areas, disfiguration of landscape and increased waste generation?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ encroachment on precious ecosystem (e.g. sensitive or protected areas)?	<input type="checkbox"/>	<input type="checkbox"/>	

SCREENING QUESTIONS	Yes	No	REMARKS
<ul style="list-style-type: none"> ▪ alteration of surface water hydrology of waterways crossed by roads and resulting in increased sediment in streams affected by increased soil erosion at the construction site? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ damage to sensitive coastal/marine habitats by construction of submarine cables? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ deterioration of surface water quality due to silt runoff, sanitary wastes from worker-based camps and chemicals used in construction? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ increased local air pollution due to rock crushing, cutting and filling? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ chemical pollution resulting from chemical clearing of vegetation for construction site? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ noise and vibration due to blasting and other civil works? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ dislocation or involuntary resettlement of people 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ social conflicts relating to inconveniences in living conditions where construction interferes with pre-existing roads? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ hazardous driving conditions where construction interferes with pre-existing roads? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ poor sanitation and solid waste disposal in construction camps and work sites, and possible transmission of communicable diseases from workers to local populations? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ creation of temporary breeding habitats for mosquito vectors of disease? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ dislocation and compulsory resettlement of people living in right-of-way of the power transmission lines? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ environmental disturbances associated with the maintenance of lines (e.g. routine control of vegetative height under the lines)? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ facilitation of access to protected areas in case corridors traverse protected areas? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ accident risks associated with maintenance of lines and related facilities? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ health hazards due to electromagnetic fields, land subsidence, lowered groundwater table, and salinization? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ disturbances (e.g. noise and chemical pollutants) if herbicides are used to control vegetative height? 	<input type="checkbox"/>	<input type="checkbox"/>	

Rapid Environmental Assessment (REA) Checklist**AGRO-INDUSTRIAL****Instructions:**

- This checklist is to be prepared to support the environmental classification of a project. It is to be attached to the environmental categorization form that is to be prepared and submitted to the Chief Compliance Officer of the Regional and Sustainable Development Department.
- This checklist is to be completed with the assistance of an Environment Specialist in a Regional Department.
- This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB checklists and handbooks on (i) involuntary resettlement, (ii) indigenous peoples planning, (iii) poverty reduction, (iv) participation, and (v) gender and development.
- Answer the questions assuming the “without mitigation” case. The purpose is to identify potential impacts. Use the “remarks” section to discuss any anticipated mitigation measures.

Country/Project Title:**Sector Division:**

SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting			
Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Wetland	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Mangrove	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Estuarine	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Buffer zone of protected area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Special area for protecting biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Bay	<input type="checkbox"/>	<input type="checkbox"/>	
B. Potential Environmental Impacts			
Will the Project cause...			
▪ ecological disturbances arising from the establishment of a plant or facility complex in or near sensitive habitats?	<input type="checkbox"/>	<input type="checkbox"/>	

SCREENING QUESTIONS	Yes	No	REMARKS
▪ eventual degradation of water bodies due to discharge of wastes and other effluents from plant or facility complex?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ serious contamination of soil and groundwater?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ aggravation of solid waste problems in the area?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ public health risks from discharge of wastes and poor air quality; noise and foul odor from plant emissions?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ short-term construction impacts (e.g. soil erosion, deterioration of water and air quality, noise and vibration from construction equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ dislocation or involuntary resettlement of people	<input type="checkbox"/>	<input type="checkbox"/>	
▪ social conflicts arising from the influx of construction laborers from other areas?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ environmental degradation (e.g. erosion, soil and water contamination, loss of soil fertility, disruption of wildlife habitat) from intensification of agricultural land use to supply raw materials for plant operation; and modification of natural species diversity as a result of the transformation to monoculture practices?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ water pollution from discharge of liquid effluents?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ air pollution from all plant operations?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ gaseous and odor emissions to the atmosphere from processing operations?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ accidental release of potentially hazardous solvents, acidic and alkaline materials?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ uncontrolled in-migration with opening of roads to forest area and overloading of social infrastructure?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ occupational health hazards due to fugitive dust, materials handling, noise, or other process operations?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ disruption of transit patterns, creation of noise and congestion, and pedestrian hazards aggravated by heavy trucks?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ disease transmission from inadequate waste disposal?	<input type="checkbox"/>	<input type="checkbox"/>	

Rapid Environmental Assessment (REA) Checklist**CHEMICAL-BASED
INDUSTRIAL****Instructions:**

- This checklist is to be prepared to support the environmental classification of a project. It is to be attached to the environmental categorization form that is to be prepared and submitted to the Chief Compliance Officer of the Regional and Sustainable Development Department.
- This checklist is to be completed with the assistance of an Environment Specialist in a Regional Department.
- This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB checklists and handbooks on (i) involuntary resettlement, (ii) indigenous peoples planning, (iii) poverty reduction, (iv) participation, and (v) gender and development.
- Answer the questions assuming the “without mitigation” case. The purpose is to identify potential impacts. Use the “remarks” section to discuss any anticipated mitigation measures.

Country/Project Title:**Sector Division:**

SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting			
Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Wetland	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Mangrove	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Estuarine	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Buffer zone of protected area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Special area for protecting biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	
B. Potential Environmental Impacts			
Will the Project cause...			
▪ impairment of historical/cultural monuments/areas, and loss/damage to these sites?	<input type="checkbox"/>	<input type="checkbox"/>	

SCREENING QUESTIONS	Yes	No	REMARKS
▪ interference with other utilities and blocking access to buildings; nuisance areas due to noise and odor?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ dislocation or involuntary resettlement of people	<input type="checkbox"/>	<input type="checkbox"/>	
▪ air pollution resulting from emissions of hydrocarbons from process equipment, accidents, inadequate equipment maintenance, and poor planning?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ social conflicts between construction workers and local community workers?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ noise and dust from construction activities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ air pollution resulting from emissions from production process, accidents, and poor equipment maintenance?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ pollution of water bodies and aquatic ecosystem resulting from production wastes, utility operations, sanitary sewage, and miscellaneous discharges?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ contamination of soil and groundwater from solid wastes from water treatment sludges, cafeteria or lunchroom wastes, ashes and incineration residues, etc.?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ public health and safety hazards due to air pollution and possible groundwater contamination?	<input type="checkbox"/>	<input type="checkbox"/>	

Rapid Environmental Assessment (REA) Checklist**PETROCHEMICAL****Instructions:**

- This checklist is to be prepared to support the environmental classification of a project. It is to be attached to the environmental categorization form that is to be prepared and submitted to the Chief Compliance Officer of the Regional and Sustainable Development Department.
- This checklist is to be completed with the assistance of an Environment Specialist in a Regional Department.
- This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB checklists and handbooks on (i) involuntary resettlement, (ii) indigenous peoples planning, (iii) poverty reduction, (iv) participation, and (v) gender and development.
- Answer the questions assuming the “without mitigation” case. The purpose is to identify potential impacts. Use the “remarks” section to discuss any anticipated mitigation measures.

Country/Project Title:**Sector Division:**

SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting			
Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Wetland	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Mangrove	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Estuarine	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Buffer zone of protected area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Special area for protecting biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	
B. Potential Environmental Impacts			
Will the Project cause...			
▪ impairment of historical/cultural monuments/areas, and loss/damage to these sites?	<input type="checkbox"/>	<input type="checkbox"/>	

SCREENING QUESTIONS	Yes	No	REMARKS
▪ interference with other utilities and blocking access to buildings; nuisance areas due to noise and odor?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ dislocation or involuntary resettlement of people	<input type="checkbox"/>	<input type="checkbox"/>	
▪ air pollution resulting from emissions of hydrocarbons from process equipment, accidents, inadequate equipment maintenance, and poor planning?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ social conflicts between construction workers and local community workers?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ noise and dust from construction activities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ air pollution resulting from emissions from production process, accidents, and poor equipment maintenance?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ pollution of water bodies and aquatic ecosystem resulting from production wastes, utility operations, sanitary sewage, and miscellaneous discharges?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ contamination of soil and groundwater from solid wastes from water treatment sludges, cafeteria or lunchroom wastes, ashes and incineration residues, etc.?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ public health and safety hazards due to air pollution and possible groundwater contamination?	<input type="checkbox"/>	<input type="checkbox"/>	

Rapid Environmental Assessment (REA) Checklist**URBAN DEVELOPMENT****Instructions:**

- This checklist is to be prepared to support the environmental classification of a project. It is to be attached to the environmental categorization form that is to be prepared and submitted to the Chief Compliance Officer of the Regional and Sustainable Development Department.
- This checklist is to be completed with the assistance of an Environment Specialist in a Regional Department.
- This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB checklists and handbooks on (i) involuntary resettlement, (ii) indigenous peoples planning, (iii) poverty reduction, (iv) participation, and (v) gender and development.
- Answer the questions assuming the “without mitigation” case. The purpose is to identify potential impacts. Use the “remarks” section to discuss any anticipated mitigation measures.

Country/Project Title:**Sector Division:**

SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting			
Is the project area...			
▪ Densely populated?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Heavy with development activities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Adjacent to or within any environmentally sensitive areas?			
• Cultural heritage site	<input type="checkbox"/>	<input type="checkbox"/>	
• Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	
• Wetland	<input type="checkbox"/>	<input type="checkbox"/>	
• Mangrove	<input type="checkbox"/>	<input type="checkbox"/>	
• Estuarine	<input type="checkbox"/>	<input type="checkbox"/>	
• Buffer zone of protected area	<input type="checkbox"/>	<input type="checkbox"/>	
• Special area for protecting biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	
• Bay	<input type="checkbox"/>	<input type="checkbox"/>	
B. Potential Environmental Impacts			
Will the Project cause...			

SCREENING QUESTIONS	Yes	No	REMARKS
▪ impacts on the sustainability of associated sanitation and solid waste disposal systems and their interactions with other urban services.	<input type="checkbox"/>	<input type="checkbox"/>	
▪ deterioration of surrounding environmental conditions due to rapid urban population growth, commercial and industrial activity, and increased waste generation to the point that both manmade and natural systems are overloaded and the capacities to manage these systems are overwhelmed?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ degradation of land and ecosystems (e.g. loss of wetlands and wild lands, coastal zones, watersheds and forests)?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ dislocation or involuntary resettlement of people	<input type="checkbox"/>	<input type="checkbox"/>	
▪ degradation of cultural property, and loss of cultural heritage and tourism revenues?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ occupation of low-lying lands, floodplains and steep hillsides by squatters and low-income groups, and their exposure to increased health hazards and risks due to pollutive industries?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ water resource problems (e.g. depletion/degradation of available water supply, deterioration for surface and ground water quality , and pollution of receiving waters?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ air pollution due to urban emissions?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ social conflicts between construction workers from other areas and local workers?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ road blocking and temporary flooding due to land excavation during rainy season?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ noise and dust from construction activities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ traffic disturbances due to construction material transport and wastes?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ temporary silt runoff due to construction?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ hazards to public health due to ambient, household and occupational pollution, thermal inversion, and smog formation?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ water depletion and/or degradation?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ overpaying of ground water, leading to land subsidence, lowered ground water table, and salinization?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ contamination of surface and ground waters due to improper waste disposal?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ pollution of receiving waters resulting in amenity losses, fisheries and marine resource depletion, and health problems?	<input type="checkbox"/>	<input type="checkbox"/>	

Rapid Environmental Assessment (REA) Checklist**WATER SUPPLY****Instructions:**

- This checklist is to be prepared to support the environmental classification of a project. It is to be attached to the environmental categorization form that is to be prepared and submitted to the Chief Compliance Officer of the Regional and Sustainable Development Department.
- This checklist is to be completed with the assistance of an Environment Specialist in a Regional Department.
- This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB checklists and handbooks on (i) involuntary resettlement, (ii) indigenous peoples planning, (iii) poverty reduction, (iv) participation, and (v) gender and development.
- Answer the questions assuming the “without mitigation” case. The purpose is to identify potential impacts. Use the “remarks” section to discuss any anticipated mitigation measures.

Country/Project Title:**Sector Division:**

SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting			
Is the project area...	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Densely populated?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Heavy with development activities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Adjacent to or within any environmentally sensitive areas?			
• Cultural heritage site	<input type="checkbox"/>	<input type="checkbox"/>	
• Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	
• Wetland	<input type="checkbox"/>	<input type="checkbox"/>	
• Mangrove	<input type="checkbox"/>	<input type="checkbox"/>	
• Estuarine	<input type="checkbox"/>	<input type="checkbox"/>	
• Buffer zone of protected area	<input type="checkbox"/>	<input type="checkbox"/>	
• Special area for protecting biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	
• Bay	<input type="checkbox"/>	<input type="checkbox"/>	
B. Potential Environmental Impacts			
Will the Project cause...			
▪ pollution of raw water supply from upstream wastewater discharge from communities, industries, agriculture, and soil erosion runoff?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ impairment of historical/cultural monuments/areas and loss/damage to these sites?	<input type="checkbox"/>	<input type="checkbox"/>	

SCREENING QUESTIONS	Yes	No	REMARKS
▪ hazard of land subsidence caused by excessive ground water pumping?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ social conflicts arising from displacement of communities ?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ conflicts in abstraction of raw water for water supply with other beneficial water uses for surface and ground waters?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ unsatisfactory raw water supply (e.g. excessive pathogens or mineral constituents)?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ delivery of unsafe water to distribution system?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ inadequate protection of intake works or wells, leading to pollution of water supply?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ over pumping of ground water, leading to salinization and ground subsidence?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ excessive algal growth in storage reservoir?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ increase in production of sewage beyond capabilities of community facilities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ inadequate disposal of sludge from water treatment plants?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ inadequate buffer zone around pumping and treatment plants to alleviate noise and other possible nuisances and protect facilities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ impairments associated with transmission lines and access roads?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ health hazards arising from inadequate design of facilities for receiving, storing, and handling of chlorine and other hazardous chemicals.	<input type="checkbox"/>	<input type="checkbox"/>	
▪ health and safety hazards to workers from the management of chlorine used for disinfection and other contaminants?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ dislocation or involuntary resettlement of people	<input type="checkbox"/>	<input type="checkbox"/>	
▪ social conflicts between construction workers from other areas and community workers?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ noise and dust from construction activities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ increased road traffic due to interference of construction activities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ continuing soil erosion/silt runoff from construction operations?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ delivery of unsafe water due to poor O&M treatment processes (especially mud accumulations in filters) and inadequate chlorination due to lack of adequate monitoring of chlorine residuals in distribution systems?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ delivery of water to distribution system, which is corrosive due to inadequate attention to feeding of corrective chemicals?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ accidental leakage of chlorine gas?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ excessive abstraction of water affecting downstream water users?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ competing uses of water?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ increased sewage flow due to increased water supply	<input type="checkbox"/>	<input type="checkbox"/>	
▪ increased volume of sullage (wastewater from cooking and washing) and sludge from wastewater treatment plant	<input type="checkbox"/>	<input type="checkbox"/>	

Rapid Environmental Assessment (REA) Checklist**SOLID WASTE
MANAGEMENT****Instructions:**

- This checklist is to be prepared to support the environmental classification of a project. It is to be attached to the environmental categorization form that is to be prepared and submitted to the Chief Compliance Officer of the Regional and Sustainable Development Department.
- This checklist is to be completed with the assistance of an Environment Specialist in a Regional Department.
- This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB checklists and handbooks on (i) involuntary resettlement, (ii) indigenous peoples planning, (iii) poverty reduction, (iv) participation, and (v) gender and development.
- Answer the questions assuming the “without mitigation” case. The purpose is to identify potential impacts. Use the “remarks” section to discuss any anticipated mitigation measures.

Country/Project Title:**Sector Division:**

SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting			
Is the project area...			
▪ Densely populated?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Heavy with development activities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Adjacent to or within any environmentally sensitive areas?			
• Cultural heritage site	<input type="checkbox"/>	<input type="checkbox"/>	
• Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	
• Wetland	<input type="checkbox"/>	<input type="checkbox"/>	
• Mangrove	<input type="checkbox"/>	<input type="checkbox"/>	
• Estuarine	<input type="checkbox"/>	<input type="checkbox"/>	
• Buffer zone of protected area	<input type="checkbox"/>	<input type="checkbox"/>	
• Special area for protecting biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	
• Bay	<input type="checkbox"/>	<input type="checkbox"/>	
B. Potential Environmental Impacts			
Will the Project cause...			

SCREENING QUESTIONS	Yes	No	REMARKS
▪ impacts associated with transport of wastes to the disposal site or treatment facility	<input type="checkbox"/>	<input type="checkbox"/>	
▪ impairment of historical/cultural monuments/areas and loss/damage to these sites?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ degradation of aesthetic and property value loss?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ nuisance to neighboring areas due to foul odor and influx of insects, rodents, etc.?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ dislocation or involuntary resettlement of people	<input type="checkbox"/>	<input type="checkbox"/>	
▪ public health hazards from odor, smoke from fire, and diseases transmitted by flies, insects, birds and rats?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ deterioration of water quality as a result of contamination of receiving waters by leachate from land disposal system?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ contamination of ground and/or surface water by leachate from land disposal system?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ land use conflicts?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ pollution of surface and ground water from leachate coming from sanitary landfill sites or methane gas produced from decomposition of solid wastes in the absence of air, which could enter the aquifer or escape through soil fissures at places far from the landfill site?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ inadequate buffer zone around landfill site to alleviate nuisances?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ social conflicts between construction workers from other areas and community workers?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ road blocking and/or increased traffic during construction of facilities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ noise and dust from construction activities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ temporary silt runoff due to construction?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ hazards to public health due to inadequate management of landfill site caused by inadequate institutional and financial capabilities for the management of the landfill operation?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ emission of potentially toxic volatile organics from land disposal site?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ surface and ground water pollution from leachate and methane gas migration?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ loss of deep-rooted vegetation (e.g. trees) from landfill gas?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ explosion of toxic response from accumulated landfill gas in buildings?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ contamination of air quality from incineration?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ public health hazards from odor, smoke from fire, and diseases transmitted by flies, rodents, insects and birds, etc.?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ health and safety hazards to workers from toxic gases and hazardous materials in the site?	<input type="checkbox"/>	<input type="checkbox"/>	

Rapid Environmental Assessment (REA) Checklist**SEWAGE TREATMENT****Instructions:**

- This checklist is to be prepared to support the environmental classification of a project. It is to be attached to the environmental categorization form that is to be prepared and submitted to the Chief Compliance Officer of the Regional and Sustainable Development Department.
- This checklist is to be completed with the assistance of an Environment Specialist in a Regional Department.
- This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB checklists and handbooks on (i) involuntary resettlement, (ii) indigenous peoples planning, (iii) poverty reduction, (iv) participation, and (v) gender and development.
- Answer the questions assuming the “without mitigation” case. The purpose is to identify potential impacts. Use the “remarks” section to discuss any anticipated mitigation measures.

Country/Project Title:**Sector Division:**

SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting			
Is the project area...			
▪ Densely populated?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Heavy with development activities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Adjacent to or within any environmentally sensitive areas?	<input type="checkbox"/>	<input type="checkbox"/>	
• Cultural heritage site	<input type="checkbox"/>	<input type="checkbox"/>	
• Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	
• Wetland	<input type="checkbox"/>	<input type="checkbox"/>	
• Mangrove	<input type="checkbox"/>	<input type="checkbox"/>	
• Estuarine	<input type="checkbox"/>	<input type="checkbox"/>	
• Buffer zone of protected area	<input type="checkbox"/>	<input type="checkbox"/>	
• Special area for protecting biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	
• Bay	<input type="checkbox"/>	<input type="checkbox"/>	

SCREENING QUESTIONS	Yes	No	REMARKS
B. Potential Environmental Impacts			
Will the Project cause...			
▪ impairment of historical/cultural monuments/areas and loss/damage to these sites?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ interference with other utilities and blocking of access to buildings; nuisance to neighboring areas due to noise, smell, and influx of insects, rodents, etc.?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ dislocation or involuntary resettlement of people	<input type="checkbox"/>	<input type="checkbox"/>	
▪ impairment of downstream water quality due to inadequate sewage treatment or release of untreated sewage?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ overflows and flooding of neighboring properties with raw sewage?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ environmental pollution due to inadequate sludge disposal or industrial waste discharges illegally disposed in sewers?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ noise and vibration due to blasting and other civil works?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ discharge of hazardous materials into sewers, resulting in damage to sewer system and danger to workers?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ inadequate buffer zone around pumping and treatment plants to alleviate noise and other possible nuisances, and protect facilities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ social conflicts between construction workers from other areas and community workers?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ road blocking and temporary flooding due to land excavation during the rainy season?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ noise and dust from construction activities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ traffic disturbances due to construction material transport and wastes?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ temporary silt runoff due to construction?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ hazards to public health due to overflow flooding, and groundwater pollution due to failure of sewerage system?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ deterioration of water quality due to inadequate sludge disposal or direct discharge of untreated sewage water?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ contamination of surface and ground waters due to sludge disposal on land?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ health and safety hazards to workers from toxic gases and hazardous materials which maybe contained in sewage flow and exposure to pathogens in sewage and sludge?	<input type="checkbox"/>	<input type="checkbox"/>	

Rapid Environmental Assessment (REA) Checklist**AIRPORTS****Instructions:**

- This checklist is to be prepared to support the environmental classification of a project. It is to be attached to the environmental categorization form that is to be prepared and submitted to the Chief Compliance Officer of the Regional and Sustainable Development Department.
- This checklist is to be completed with the assistance of an Environment Specialist in a Regional Department.
- This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB checklists and handbooks on (i) involuntary resettlement, (ii) indigenous peoples planning, (iii) poverty reduction, (iv) participation, and (v) gender and development.
- Answer the questions assuming the “without mitigation” case. The purpose is to identify potential impacts. Use the “remarks” section to discuss any anticipated mitigation measures.

Country/Project Title:**Sector Division:**

SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting			
Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Wetland	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Mangrove	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Estuarine	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Buffer zone of protected area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Special area for protecting biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	
B. Potential Environmental Impacts			
Will the Project cause...			

SCREENING QUESTIONS	Yes	No	REMARKS
▪ encroachment on precious ecology resulting in loss or damage to terrestrial or aquatic habitats (e.g., wetlands or sensitive or protected areas)?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ encroachment on historical/cultural monuments or areas?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ decrease in value of land in the area due to noise and other nuisances such as traffic congestion and degradation of environmental aesthetics?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ dislocation or involuntary resettlement of people	<input type="checkbox"/>	<input type="checkbox"/>	
▪ noise and vibration disturbances?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ short-term ecological disturbances such as soil erosion, water quality deterioration (surface and groundwater), air pollution, noise and vibrations from construction equipment?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ social conflicts between local laborers and those from outside the area?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ creation of community slums following airport construction?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ communicable disease hazards?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ accidental disruption of utilities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ noise and vibration disturbances?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ traffic congestion at airport access and exit?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ short-term air quality degradation due to dredging-related operations?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ noise and vibration due to aircraft take-off and landing?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ hazards to traffic on highways near airport due to proximity of planes taking off and landing?	<input type="checkbox"/>	<input type="checkbox"/>	

Rapid Environmental Assessment (REA) Checklist**PORTS AND
HARBORS****Instructions:**

- This checklist is to be prepared to support the environmental classification of a project. It is to be attached to the environmental categorization form that is to be prepared and submitted to the Chief Compliance Officer of the Regional and Sustainable Development Department.
- This checklist is to be completed with the assistance of an Environment Specialist in a Regional Department.
- This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB checklists and handbooks on (i) involuntary resettlement, (ii) indigenous peoples planning, (iii) poverty reduction, (iv) participation, and (v) gender and development.
- Answer the questions assuming the “without mitigation” case. The purpose is to identify potential impacts. Use the “remarks” section to discuss any anticipated mitigation measures.

Country/Project Title:**Sector Division:**

SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting			
Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Wetland	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Mangrove	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Estuarine	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Buffer zone of protected area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Special area for protecting biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	
A. Potential Environmental Impacts			
Will the Project cause...			
▪ encroachment on precious ecology resulting in loss or damage to fisheries and fragile coastal habitats such as coral reefs, mangroves, and seagrass beds?	<input type="checkbox"/>	<input type="checkbox"/>	

SCREENING QUESTIONS	Yes	No	REMARKS
▪ short-term increase in turbidity and sunlight penetration as well as changes in sediment pattern and flows at dredging site?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ removal and disturbance of aquatic flora and fauna at dredging site?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ deterioration of water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ alteration of bottom surface and modifications to bathymetry, causing changes in tidal bore, river circulation, species diversity, and salinity?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ changes in sediment pattern and littoral drift that may cause beach erosion of neighboring areas?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ modification of terrestrial habitat by upland disposal of dredged material or covering of potential archaeological sites with dredge spoil?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ short-term air quality degradation due to dredging-related operations?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ noise and vibration due to blasting and other civil works?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ dislocation or involuntary resettlement of people?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ other social concerns relating to inconveniences in living conditions in the project areas?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ social conflicts if construction depletes local fishery resources on which communities depend for subsistence?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ poor sanitation and solid waste disposal in construction camps and work sites, and possible transmission of communicable diseases from workers to local populations?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ social concerns relating to local inconveniences associated with port operation (e.g. increased volume of port traffic, greater risk of accidents, communicable disease transmission)?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ deterioration of water quality due to ship (e.g. ballast water, oil waste, lubricant and fuel spills, sewage) and waterfront industry discharges?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ increased noise and air pollution resulting from airborne emissions (e.g. gas, smoke, fumes) from maneuvering and berthing ships and the waterfront industry?	<input type="checkbox"/>	<input type="checkbox"/>	

Rapid Environmental Assessment (REA) Checklist**ROADS AND
HIGHWAYS****Instructions:**

- This checklist is to be prepared to support the environmental classification of a project. It is to be attached to the environmental categorization form that is to be prepared and submitted to the Chief Compliance Officer of the Regional and Sustainable Development Department.
- This checklist is to be completed with the assistance of an Environment Specialist in a Regional Department.
- This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB checklists and handbooks on (i) involuntary resettlement, (ii) indigenous peoples planning, (iii) poverty reduction, (iv) participation, and (v) gender and development.
- Answer the questions assuming the “without mitigation” case. The purpose is to identify potential impacts. Use the “remarks” section to discuss any anticipated mitigation measures.

Country/Project Title:**Sector Division:**

SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting			
Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Wetland	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Mangrove	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Estuarine	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Buffer zone of protected area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Special area for protecting biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	
B. Potential Environmental Impacts			
Will the Project cause...			
▪ encroachment on historical/cultural areas; disfiguration of landscape by road embankments, cuts, fills, and quarries?	<input type="checkbox"/>	<input type="checkbox"/>	

SCREENING QUESTIONS	Yes	No	REMARKS
<ul style="list-style-type: none"> ▪ encroachment on precious ecology (e.g. sensitive or protected areas)? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ alteration of surface water hydrology of waterways crossed by roads, resulting in increased sediment in streams affected by increased soil erosion at construction site? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ increased local air pollution due to rock crushing, cutting and filling works, and chemicals from asphalt processing? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ noise and vibration due to blasting and other civil works? ▪ dislocation or involuntary resettlement of people 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ other social concerns relating to inconveniences in living conditions in the project areas that may trigger cases of upper respiratory problems and stress? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ hazardous driving conditions where construction interferes with pre-existing roads? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ poor sanitation and solid waste disposal in construction camps and work sites, and possible transmission of communicable diseases from workers to local populations? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ creation of temporary breeding habitats for mosquito vectors of disease? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ dislocation and compulsory resettlement of people living in right-of-way? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ accident risks associated with increased vehicular traffic, leading to accidental spills of toxic materials and loss of life? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ increased noise and air pollution resulting from traffic volume? 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ increased risk of water pollution from oil, grease and fuel spills, and other materials from vehicles using the road? 	<input type="checkbox"/>	<input type="checkbox"/>	

Rapid Environmental Assessment (REA) Checklist**GOVERNANCE AND
FINANCE****Instructions:**

- This checklist is to be prepared to support the environmental classification of a project. It is to be attached to the environmental categorization form that is to be prepared and submitted to the Chief Compliance Officer of the Regional and Sustainable Development Department.
- This checklist is to be completed with the assistance of an Environment Specialist in a Regional Department.
- This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB checklists and handbooks on (i) involuntary resettlement, (ii) indigenous peoples planning, (iii) poverty reduction, (iv) participation, and (v) gender and development.
- Answer the questions assuming the “without mitigation” case. The purpose is to identify potential impacts. Use the “remarks” section to discuss any anticipated mitigation measures.

Country/Project Title:**Sector Division:**

SCREENING QUESTIONS	Yes	No	REMARKS
A. Does the Project involve a Program Loan or Sector Development Program Loan with Policy Conditions Will the policy reforms lead to:			
▪ reductions in government expenditure that will adversely affect the delivery of public services for environmental protection, social programs, drought relief, food aid, or agricultural extension services	<input type="checkbox"/>	<input type="checkbox"/>	
▪ alterations in the pattern of land use or land use conflicts	<input type="checkbox"/>	<input type="checkbox"/>	
▪ impacts on the environment through increased exploitation of natural resources (e.g. forests, fisheries, minerals)	<input type="checkbox"/>	<input type="checkbox"/>	
▪ impacts on the environment through changes in agricultural inputs (e.g. land, water, energy, fertilizer, pesticides, biotechnology, mechanization)	<input type="checkbox"/>	<input type="checkbox"/>	
▪ reduced incentive, capability, or resources for small and medium size enterprises (SMEs) to comply with environmental protection laws and regulations	<input type="checkbox"/>	<input type="checkbox"/>	
▪ dismantling of environmental regulations or changes in the regulatory framework for environmental management	<input type="checkbox"/>	<input type="checkbox"/>	

SCREENING QUESTIONS	Yes	No	REMARKS
<ul style="list-style-type: none"> ▪ any other policy outcomes that might have major environmental implications 	<input type="checkbox"/>	<input type="checkbox"/>	
<p>B. Does the Project Involve a Financial Intermediation Component?</p> <p>Will the project involve:</p>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ credit lines through a financial intermediary, including micro-finance, that will finance sub-projects that include major infrastructure development, be located at or near an environmentally sensitive area, alter the pattern of land use or cause land use conflicts, lead to the generation of hazardous waste, or generate significant air or water pollution 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ equity investments 	<input type="checkbox"/>	<input type="checkbox"/>	
<p>C. Does the Project include an investment component</p>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ Project loan 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ Sector loan 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ Guarantee 	<input type="checkbox"/>	<input type="checkbox"/>	
<p>Will the project:</p>			
<ul style="list-style-type: none"> ▪ include major infrastructure development 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ be located at or near an environmentally sensitive area 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ alter the pattern of land use or cause land use conflicts 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ lead to the generation of hazardous waste 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> ▪ generate significant air or water pollution 	<input type="checkbox"/>	<input type="checkbox"/>	

CONTENT AND FORMAT ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

A. Introduction

1. EIA is an important tool for incorporating environmental concerns at the project level. EIA 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 the EIA study are to provide;

- (i) baseline information about the environmental, social, and economic conditions in the project area;
- (ii) 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) 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. In addition to alternative location of the project, project design or project management may also be considered; and
- (v) basic information for formulating environmental management plan.

2. EIA requires an in-depth analysis because of the potential significance of environmental impacts from the project. EIAs demand: (i) comprehensive analysis of the potential impacts; (ii) works to be carried out to formulate practical mitigation measures; (iii) in-depth economic valuation of impact to screen and evaluate the best alternative; and (vi) in-depth analysis to prepare an adequate environmental management plan.

B. The Process in Preparing EIA

3. Scoping should be conducted to develop the terms of reference (TOR) for an EIA. 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 EIA study,
- (ii) identify environmental components that need detailed further study,
- (iii) determine the general approach and methodology required to carry out the EIA study,
- (iv) identify in general all affected interest to be consulted in carrying out EIA study, and
- (v) identify the need to fit the outputs of EIA into the project context especially on environmental management plan.

4. The next step is undertaking EIA study, and the following are key important activities:

1. Describing Environmental Condition of the Project Area

5. Collection of baseline information on biophysical, social and economic aspects of the project area is the most important reference for conducting EIA 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 general nature of environmental and social resources condition of the affected areas.

2. Assessing Potential Impacts

6. The "technical heart" of the EIA 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 EIA 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

7. 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 Environmental Management Plan

8. The major output of environmental assessment for proposed project is an EIA report, which includes environmental management plan. In view of the increasing importance in improving the quality of project implementation and to ensure compliance with required mitigation and monitoring measures identified, EIA report will include, as part of EMP, concerned government or related agency undertaking the activities included in environmental management and monitoring plan which will be reflected in the relevant loan covenants.

9. Environmental management involves the implementation of environmental protection and mitigation measures and monitoring of 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 an EMP, 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 (see Table A2.1). The EMP will also cover a proposal for recommending the proposed project to use goods and products that are environmentally friendly as well as proposal for environmental loan covenants.

Table A2.1: Contents of an EMP

Contents of an EMP	
1.	Summary of Potential Impacts
2.	Description of Planned Mitigation Measures
3.	Description of Planned Environmental Monitoring
4.	Description of Planned Public Consultation Process
5.	Description of the Responsibilities and Authorities for Implementation of Mitigation Measures and Monitoring Requirements
6.	Description of Responsibilities for Reporting and Review
7.	Work Plan including staffing chart, proposed schedules of participation by various members of the project team, and activities and inputs of various government agencies
8.	Environmental Responsible Procurement Plan
9.	Detailed Cost Estimates
10.	Mechanisms for feedback and adjustment

10. 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 EMP.

11. 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 A2.2). 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 A2.2: Features of an Effective Environmental Monitoring Plan

- 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)

12. 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, the EMP should identify environmental mitigation measures that 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.

C. Documenting EIA Studies

13. EIA reports and their summaries (SEIA) 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 EIA. 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 EIA reporting requirement. In this context, it is necessary to ensure that the content of the EIA reports cover all issues required by ADB. Although the presentation of the EIA report may not follow ADB's standard, it is necessary to ensure that the SEIA should be formulated and presented in accordance to ADB's guideline.

1. Environmental Impact Assessment Report

14. The standard EIA report format address such issues as exploration of various alternatives, evidence of public consultation and social acceptability, economic analysis of impacts, and direct and indirect impacts. The suggested outline of the EIA report is in Table A2.3, and the main sections are annotated in the following sections.

Table A2.3: Outline of an EIA Report

A.	Introduction
B.	Description of the Project
C.	Description of the Environment
D.	Alternatives
E.	Anticipated Environmental Impacts and Mitigation Measures
F.	Economic Assessment
G.	Environmental Management Plan
H.	Public Involvement and Disclosure
I.	Conclusions

a. Introduction

15. This section usually includes the following:
- (i) purpose of the report, including (a) identification of the project and its proponent, (b) brief description of the nature, size, and location of the project and its importance to the country, and (c) any other pertinent background information;
 - (ii) stage of project preparation (i.e., pre-feasibility study, feasibility study, detailed engineering design preparation);
 - (i) extent of the EIA study, including the scope of the study, magnitude of effort, and persons/expertise or agency performing the study and corresponding person-months; and
 - (ii) brief outline of the contents of the report, including any special techniques or methods used for identifying issues, assessing impacts, and designing environmental protection measures.

b. Description of the Project

16. The project should be described in terms of its basic activities, location, layout, and schedule (in terms of the project cycle). This section of the EIA report should provide sufficient details on the following:

- (i) Type of project
- (ii) Need for project
- (iii) Location (use maps showing general location, specific location, project boundary and project site layout)
- (iv) Size or magnitude of operation including any associated activities required by or for the project
- (v) Proposed schedule for approval and implementation
- (vi) Description of the project including drawings showing project layout, components of project, etc. This information should be of the same type and extent as is included in feasibility reports for proposed projects, in order to give a clear picture of the project and its operations.

c. Description of the Environment

17. This section contains a description of the study area to provide a clear picture of the existing environmental resources and values within which the impacts must be considered. Detailed methodology to gather information, including data sources, should also be briefly described. As much as possible, the baseline information should be presented in maps, figures, and tables. The baseline environmental information area should include:

- (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. Alternatives

18. The consideration of alternatives is one of the more proactive sides of environmental assessment - enhancing the project design through examining options instead of only focussing

on the more defensive task of reducing adverse impacts of a single design. This calls for the systematic comparison of feasible alternatives for the proposed project site, technology, and operational alternatives. Alternatives should be compared in terms of their potential environmental impacts, capital and recurrent costs, suitability under local conditions, and institutional, training and monitoring requirements. For each alternative, the environmental costs and benefits should be quantified to the extent possible, economic values should be attached where feasible, and the basis for the selected alternative should be stated.

19. Examining alternative means of carrying out a project involves answering the following three questions: (i) what are the alternatives? , (ii) what are the environmental impacts associated with each alternative? , and (iii) what is the rationale for selecting the preferred alternative? For example, a road connecting two points can follow a number of different routes. In this case, the EIA report must describe the process taken to select the most appropriate route based on a set of pre-determined criteria. The consideration of alternatives and the selection criteria used to identify the preferred alternatives must include environmental factors. The information going into the decision and the decision-making process must be documented in the EIA report. For example, if "alternative means" refers to site selection for a large hydroelectric dam, the location of each alternative would have to be described, the environmental impacts of each alternative defined and the criteria and analysis of site selection presented.

20. Since the selection of alternatives can involve detailed technical analysis that includes more than just environmental factors, it may be preferable to present the details of this analysis as an appendix and include only the results and summary of this selection process in the body of the report. For example, a table listing the alternatives on one axis, and the criteria, such as reliability, cost, performance, inherent environmental effects and necessary mitigation measures, on the other axis may provide an effective summary.

21. **Alternatives to the project.** In some instances it will be necessary to consider "alternatives to" the project. This situation should not arise if the project is consistent with DMC's development strategy, ADB's Country and Strategy Program, and has been developed based on a sector strategy and roadmap. The EIA report should describe how the project fits into this larger strategic planning context. This context helps justify the project and demonstrates the requirements that may constrain the alternatives that are feasible or permitted.

22. However, in the case of potentially controversial projects, there may public concern that the project does not represent the best way to achieve stated development objectives. In addition, segments of the public may react negatively if they perceive that the EIA report has not considered alternatives to the project, or the preferred alternative is proceeding based on flawed assumptions. Therefore, if controversy is expected surrounding the fundamental reasons for the project, the EIA report should include a discussion of alternatives to the project.

23. One alternative that should receive special attention is the "no go" alternative. In some cases, this may be the only alternative to the project that can be realistically considered.

e. Anticipated Environmental Impacts and Mitigation Measures

24. **Review Characteristics of Each Environmental Impact.** This section will evaluate the project's expected impacts (in as quantified terms as possible) on each resource or value, and applicable sectoral environmental guidelines wherever any significant impact is expected (including environmental risk assessment, where appropriate. Environmental impacts to be

investigated will include those due to (i) project location; (ii) caused by possible accidents; (iii) related to design; and (iv) during construction, regular operations, and final decommissioning or rehabilitation of a completed project. Where adverse effects are indicated, discuss measures for minimizing and/or offsetting these, and opportunities for enhancing natural environmental values will be explored. Both direct and indirect effects will be considered, and the region of influence indicated. This analysis is the key presentation in the report and if not sufficiently completed it may be necessary to delay the project until the analysis can be completed. It is necessary to present a reasonably complete picture of both the human use and quality of life gains to result from the project due to the utilization, alteration, and impairment of the natural resources affected by the project, so that fair evaluation of the net worth of the project could be made.

25. **Mitigating Adverse Effects.** For each significant adverse environmental impact, the report will carefully explain how the project plan/design minimizes the adverse effects and in addition how the project plan/design, to the extent feasible, includes provision for offsetting or compensating of adverse effects and for positive enhancement of benefits or environmental quality. Where substantial cost of mitigation measures is involved, alternative measures and costs will be explored.

26. **Irreversible and Irretrievable Impacts.** The EIA report will identify the extent to which the proposed project would irreversibly curtail the potential uses of the environment. For example, highways that cut through stream corridors, wetlands, or a natural estuary can result in irretrievable damage to those sensitive ecosystems. Other impacts that may be irreversible include alteration of historic sites, and expenditure of construction materials and fuels. Also, projects through estuaries, marshes, etc., may permanently impair the area's natural ecology; or elimination of recreation areas and parklands can precipitate drastic changes in the project area's social and economic character.

27. **Temporary Effects During Project Construction.** In the event the construction phase of the project involves special environmental impacts (to be terminated on completion of construction), these will be separately discussed including proposed remedial measures.

f. Economic Assessment

28. This section may be drawn from the economic analysis conducted as part of the project feasibility study. It should include the following elements which should be integrated into the overall economic analysis of the project: (i) costs and benefits of environmental impacts; (ii) costs, benefits, and cost-effectiveness of mitigation measures; and (iii) discussion of impacts that have not been expressed in monetary values, in quantitative terms where possible (e.g. weight of volume estimates of pollutants).

g. Environmental Management Plan

29. The EMP describes how the mitigation and other measures to enhance the benefits of environmental protection will be implemented. It explains how the measures will be managed, who will implement them, and when and where they will be implemented. The following elements should be described in the EMP (see Table A2.1 for contents of EMP): (i) implementation of mitigation measures during project design; (ii) implementation of mitigation measures by contractors, and how impacts prevention will be incorporated in the materials procurement; (iii) social development program (e.g., resettlement plan, community training); (iv) contingency response plan for natural or other disasters, and project contingencies; and (v) environmental management and monitoring costs including mitigation costs.

30. The environmental monitoring plan describes the monitoring activities to ensure that adverse environmental impacts will be minimized, and the EMP implemented. The environmental monitoring plan will cover selected parameters to indicate the level of environmental impacts. It also describes how, when, and where the monitoring activities will be undertaken; who will carry them out; and who should receive the monitoring report. More importantly, it includes a proposal to carry out environmental compliance monitoring activities.

31. The present capacity of the executing agency to implement EMP should be described and implementation costs clearly identified.

h. Public Consultation and Information Disclosure

29. This section will (i) describe the process undertaken to involve the public in project design and recommended measures for continuing public participation; (ii) summarize major comments received from beneficiaries, local officials, community leaders, NGOs, and others, and describe how these comments were addressed; (iii) list milestones in public involvement (e.g., dates, attendance, topics of public meetings), and recipients of the report and other project-related documents; (iv) describe compliance with relevant regulatory requirements for public participation; (v) if possible summarize public acceptance or opinion on the proposed project; and (vi) describe other related materials or activities (e.g., press releases, notifications) as part of the effort to gain public participation. This section will provide of summary of information disclosed to date and procedures for future disclosure.

i. Conclusions

30. The EIA report will present the conclusions of the study including: (i) gains which justify project implementation; (ii) explanation of how adverse effects could be minimized or offset, and compensated to make these impacts acceptable; (iii) explanation of use of any irreplaceable resources; and (iv) provisions for follow-up surveillance and monitoring. Simple visual presentations of the type and magnitude of the impacts may aid the decision-maker.

2. Summary Environmental Impact Assessment Report

31. The summary EIA (SEIA) report is the executive summary of the EIA report. It describes the critical facts and significant findings of the EIA report, and their resolutions in sufficient detail. The reader should be able to understand the issues' importance and scope, and the appropriateness of the approach taken to resolve them. The SEIA report should be presented clearly and concisely as a stand-alone document (see Table A2.4) for submission to the Board and disclosure to the public.

Table A2.4: Outline of SEIA Report**A. Introduction (1/2 page)**

This section will include the purpose of the report, extent of the EIA 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 project, location, size or magnitude of operation and proposed schedule for implementation.

C. Description of the Environment (2-3 pages)

This section will include the physical and ecological resources, human and economic development and quality of life values in the area affected by the project. Where available, environmental standards will be used as the baseline for comparative purposes.

D. Alternatives (1-2 pages)

For each alternative, a summary of the probable adverse impacts and its relation to the project, and other alternatives will be discussed determine whether the project minimizes the environmental impact over all other alternatives and is within acceptable environmental impact limits. In most cases, environmental impacts "with" and "without" project alternatives should be examined.

E. Anticipated Environmental Impacts and Mitigation Measures (4-6 pages)

Environmental impacts, both direct and indirect, on different environmental resources or values due to project location, as related to design, during construction and regular operation will be discussed and mitigation, offsetting or enhancement measures will be recommended.

F. Economic Assessment (1-2 pages)

This section will include: (a) costs and benefits of environmental impacts; (b) costs, benefits and cost effectiveness of mitigation measures; and (c) for environmental impacts that have not been expressed in monetary values, a discussion of such impacts, if possible, in quantitative terms (e.g. weight or volume estimates of pollutants). This information should be integrated into the overall economic analysis of the project.

G. Environmental Management Plan (1-2 pages)

The EMP 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.

H. Public Consultation and Disclosure (1-3 pages)

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 .

I. Conclusions (1 page)

This section will describe the gains which justify implementation of the project; explain how significant adverse environmental impacts will be mitigated or offset and compensated for; explain/justify use of any irreplaceable resources and; describe follow-up surveillance and monitoring.

CONTENT AND FORMAT INITIAL ENVIRONMENTAL EXAMINATION (IEE)

A. Introduction

1. 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

2. 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.

B. The Process in Preparing IEE

3. 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

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

1. Describing Environmental Condition of the Project Area

5. 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

6. 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

7. 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

8. 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.

9. 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.

10. 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 A3.1). 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 A3.1: Features of an Effective Environmental Monitoring Plan

- | |
|---|
| <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) |
|---|

11. 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.

C. Documenting IEE Studies

12. 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

13. The content and format of the IEE report is in Table A3.3. 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 A3.2: 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

14. 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

15. 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

16. 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

17. 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

18. 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

19. 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 A3.3) for submission to the Board and disclosure to the public.

Table A3.3: 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.

ENVIRONMENTAL ASSESSMENT OF POLICY MATRIX

Recommended Contents¹ (to be used for the Policy Component of Program Loan)

A. Introduction

1. This section will include the purpose of the report and discuss the methodology used to assess the environmental impacts of the policy component of the program loan.

B. Description of Policy Interventions

2. This section should provide a description of the policy interventions. The policy matrix prepared for the program loan should be referenced.

C. Environmental Assessment of Policy Interventions

3. This section is to assess the environmental implications of the policy interventions. It should first link the policy interventions to potential economic and social outcomes. These economic and social outcomes are the direct impacts. Based on these economic and social outcomes, the environmental impacts of the proposed policy interventions need to be assessed. The assessment should be summarized in matrix format (below).

Policy Intervention	Economic and Social Outcomes	Environmental Impact	Mitigation Measures

D. Environmental Management Plan

4. This section should describe the conditions or safeguards required to ensure that the policy interventions will promote environmentally sound development. In addition, there are usually opportunities to promote efficient use of resources that will in turn lead to environmental benefits. Such interventions should be identified and incorporated into program loans and sector development programs as appropriate to enhance to overall success and sustainability of the policy changes being introduced.

E. Conclusion

5. This section should provide an overall summary conclusion. The potential for environmental impacts should be summarized and any proposed environmental conditions or safeguards stated.

¹ These recommended contents are to serve as a guide for reporting. The level of effort, amount of analysis, comprehensiveness, and level of detail are to be guided by nature of the project and the significance of the potential impacts.

ENVIRONMENTAL ASSESSMENT OF SECTOR LOANS

Recommended Contents¹

A. Introduction

1. This section should state the purpose of report (i.e. summarize results and incorporate by reference: (i) sector assessment, (ii) environmental management plans, if required; (iii) environmental criteria for subproject selection; and (iv) the environmental assessment and review procedures.

B. Overview of the Sector Loan

2. This section should provide a brief overview of sector loan, its objectives, of the nature of the subprojects. It should provide detail of the specific activities that may have potential for environmental impacts.

C. Environmental Assessment of Sector Impacts

3. This section should summarize the sector assessment.

D. Summary of IEEs and EIAs prepared for Subprojects

4. This section should summarize the results of the IEEs and EIAs prepared for known and sample subprojects. Particular emphasis is to be placed on the environmental management plans.

E. Environmental Criteria for Subproject Selection

5. This section should outline specific environmental criteria (e.g. exclusion from environmentally sensitive areas, negative lists for procurement) that are to be used in subproject selection.

F. Environmental Assessment and Review Procedures (see Appendix 6)

6. This section should summarize the environmental assessment and review procedures that will be used for subprojects. Particular emphasis should be placed on the responsibilities and authorities, cost estimate, and conformance of the framework to ADB's environmental and social safeguard policies.

¹ These recommended contents are to serve as a guide for reporting. The level of effort, amount of analysis, comprehensiveness, and level of detail are to be guided by nature of the project and the significance of the potential impacts.

ENVIRONMENTAL ASSESSMENT AND REVIEW PROCEDURES

Recommended Contents¹

(to be incorporated into reporting on environmental assessment of sector loans and environmental assessments of financial intermediation loans and equity investments)

A. Introduction

1. This section should outline the purpose, that is, to provide the procedures for environmental assessment and review of subprojects.

B. Overview of Type of Subprojects to be Assessed

2. This section should provide a brief overview of the nature of the subprojects. It should provide detail of the specific activities that may have potential for environmental impacts.

C. Country's Environmental Assessment and Review Procedures

3. This section should describe the country's environmental assessment and review process. It should show how the environmental assessment and review procedures for subprojects are designed to comply country's environmental assessment and review process and other environmental laws and regulations.

D. Specific Procedures to be used for Subprojects under the Sector Loan

1. Responsibilities and Authorities

4. The section should describe the responsibilities and authorities of (i) executing agency; (ii) other government departments; (iii) project proponents; (iv) the responsible Regional Department of ADB; and (v) RSDD of ADB, if any.

2. Environmental Criteria of Subproject Selection

5. This section should outline specific environmental criteria (e.g., exclusion from environmentally sensitive areas, negative lists for procurement) that are to be used in subproject selection.

3. Procedures for Environmental Assessment of Subprojects

6. This section should include procedures for

- environmental classification (if necessary),
- specific of free limits² as appropriate,
- preparation of initial environmental examinations (IEEs),
- preparation of environmental impact assessments (EIAs),
- requirements for environmental management plans,

¹ These recommended contents are to serve as a guide for reporting. The level of effort, amount of analysis, comprehensiveness, and level of detail are to be guided by nature of the project and the significance of the potential impacts.

² Free limit: A monetary limit above which subloans require the Bank's prior approval

- requirements for public consultation and information disclosure,
- review of environmental assessment reports by government environmental agencies,
- review of environmental assessment by ADB regional departments and RSDD as necessary, and
- monitoring environmental performance – reporting on environmental assessment activities

E. Confirmation that Environmental Assessment and Review Procedures conforms to ADB’s Environmental and Social Safeguard Policies

7. This section should evaluate the adequacy of the environmental assessment and review procedures in the context of ADB’s environmental assessment requirements.

F. Staffing Requirements and Budget

8. This section should estimate the staffing requirements and cost estimates for operation of the environmental assessment and review procedures. It should also provide estimates of costs required for preparation of IEEs and EIAs for subprojects.

ENVIRONMENTAL ASSESSMENT OF FINANCIAL INTERMEDIATION LOANS AND EQUITY INVESTMENTS

Recommended Contents¹

A. Description of the Financial Intermediary

1. This section should include an overall description of the organization, its owners, its Board of Directors, its senior management, its business activities and its track record.

B. Description of the Proposed Project

2. This section should outline the main elements of the financial intermediation loan or equity investment including a description of the nature of the projects or activities (if known) that may be funded.

C. Overview of the Environmental Management System (EMS)

2. This section should provide an overview description of the EMS.²

1. Assessment of Capability of Environmental Management Officers and Staff

3. The section should identify of key officers and staff responsible for environmental management. It should provide a summary of their training and experience.

2. Overview of Financial Intermediary's Environmental Policy

4. This section should provide the main elements of the environmental policy.

3. Description of Environmental Performance Monitoring and Reporting System

5. This section should describe procedures used to monitoring and review of the implementation of the EMS.

D. Proposed Environmental Assessment and Review Procedures for Subprojects

6. This section is required whenever the financial intermediary will onlend ADB funds for subprojects. See "Environmental Assessment and Review Procedures" (appendix 6).

¹ These recommended contents are to serve as a guide for reporting. The level of effort, analysis, comprehensiveness, and detail are to be guided by nature of the project and the significance of potential impacts.

² Here the term "environmental management system" is defined as a system for planning, implementing, reviewing and improving the processes and actions that an organization undertakes to meet its business and environmental goals. The major components of an EMS are (i) policy, (ii) planning, (iii) implementation and operation, (iv) checking and corrective action, and (v) management review. Many EMSs are built on the "Plan, Do, Check, Act" model. This model leads to continual improvement based upon

- planning, including identifying environmental aspects and establishing goals [plan];
- implementing, including training and operational controls [do];
- checking, including monitoring and corrective action [check]; and
- reviewing, including progress reviews and acting to make needed changes to EMS [act].

E. Environmental Management System - Recommendations on needed improvements to meet ADB Safeguard Policies

7. This section should evaluate the adequacy of the environmental assessment and review procedures in the context of ADB's environmental assessment requirements. It is to recommend needed improvements to the EMS to ensure that the requirements of ADB's Safeguard Policies are met.