

The Environmental Assessment Process

The Pollution Prevention and Abatement Handbook is intended to be used principally as input to the World Bank Group's environmental assessment (EA) processes. This chapter outlines the key features of the EA procedure for World Bank projects. The International Finance Corporation (IFC) and the Multilateral Investment Guarantee Agency (MIGA) follow the same overall policies but have somewhat different environmental analysis and review procedures. (For details, contact IFC's or MIGA's Environmental Unit.)

In recent years, environmentally sustainable development has become one of the most important challenges facing development institutions such as the World Bank. Accordingly, the Bank has introduced a variety of instruments into its lending and advisory activities. Environmental assessment (EA) is one of the most important of these tools.

The purpose of EA is to enhance projects by helping prevent, minimize, mitigate, or compensate for any adverse environmental and social impacts. Development institutions and many developing countries have introduced EA requirements and regulations into their development activities. Their experience to date shows that EAs often do provide these benefits.

EA at the World Bank

In 1989, the Bank adopted Operational Directive (OD) 4.00, "Annex A: Environmental Assessment." EA became standard procedure for Bank-financed investment projects. In 1991 the directive was amended as OD 4.01. It is in the process of conversion to an Operational Policy, OP 4.01. EA is designed to be a flexible process that makes environmental considerations an integral part of project preparation and allows environmental issues to be addressed in a timely and cost-effective way during project preparation and implementation.

The primary responsibility for the EA process lies with the borrower. The Bank's role is to advise the borrower throughout the process, to con-

firm that practice and quality are consistent with EA requirements, and to ensure that the process feeds effectively into project preparation and implementation.

Stage 1: Screening

To decide the nature and extent of the EA to be carried out, the process begins with screening at the time a project is identified. The project team determines the nature and magnitude of the proposed project's potential environmental and social impacts and assigns the project to one of three environmental categories.

Category A: a full EA is required. Category A projects are those expected to have "adverse impacts that may be sensitive, irreversible, and diverse" (OD 4.01), with attributes such as direct pollutant discharges large enough to cause degradation of air, water, or soil; large-scale physical disturbance of the site or surroundings; extraction, consumption, or conversion of substantial amounts of forest and other natural resources; measurable modification of hydrologic cycles; use of hazardous materials in more than incidental quantities; and involuntary displacement of people and other significant social disturbances.

Category B: although a full EA is not required, some environmental analysis is necessary. Category B projects have impacts that are "less significant . . . , not as sensitive, numerous, major or diverse. Few, if any of these impacts are irrevers-

ible, and remedial measures can be more easily designed” (OD 4.01). Typical Category B projects entail rehabilitation, maintenance, or upgrading rather than new construction.

Category C: no EA or other environmental analysis is required. Category C projects entail negligible or minimal direct disturbance to the physical setting. Typical Category C projects focus on education, family planning, health, and human resource development.

Projects with multiple components are classified according to the component with the most significant adverse impact; if there is a Category A component, the project as a whole is classified as A.

Between October 1989 and May 1995, more than 1,000 projects subject to the requirements of the OD on Environmental Assessment were presented to the World Bank’s Board of Directors. The breakdown of these projects by category is shown in the table below; the breakdown by sector is shown in Table 1.

<i>Project category</i>	<i>Number of projects</i>	<i>Percentage of total</i>
A	104	10
B	418	41
C	498	49

Stage 2: Scoping and Development of Terms of Reference

Once a project is categorized, a scoping process is undertaken to identify key issues and develop

the terms of reference (TOR) for the EA. At this stage, it is essential to identify more precisely the likely environmental impacts and to define the project’s area of influence. As part of this process, information about the project and its likely environmental effects is disseminated to local affected communities and nongovernmental organizations (NGOs), followed by consultations with representatives of these groups. The main purpose of these consultations is to focus the EA on issues of concern at the local level.

Stage 3: Preparing the Environmental Assessment Report

When a project is classified as Category A, a full-scale environmental assessment (EA) is normally undertaken, resulting in an EA report. Category B projects are subject to a more limited EA, the nature and scope of which are determined case by case (see Figure 1). The main components of a full EA report are the following:

Executive summary. A concise discussion of the significant findings of the EA and recommended actions in the project.

Policy, legal and administrative framework. Discussion of the policy, legal, and administrative framework within which the EA is prepared. The environmental requirements of any cofinanciers should be explained.

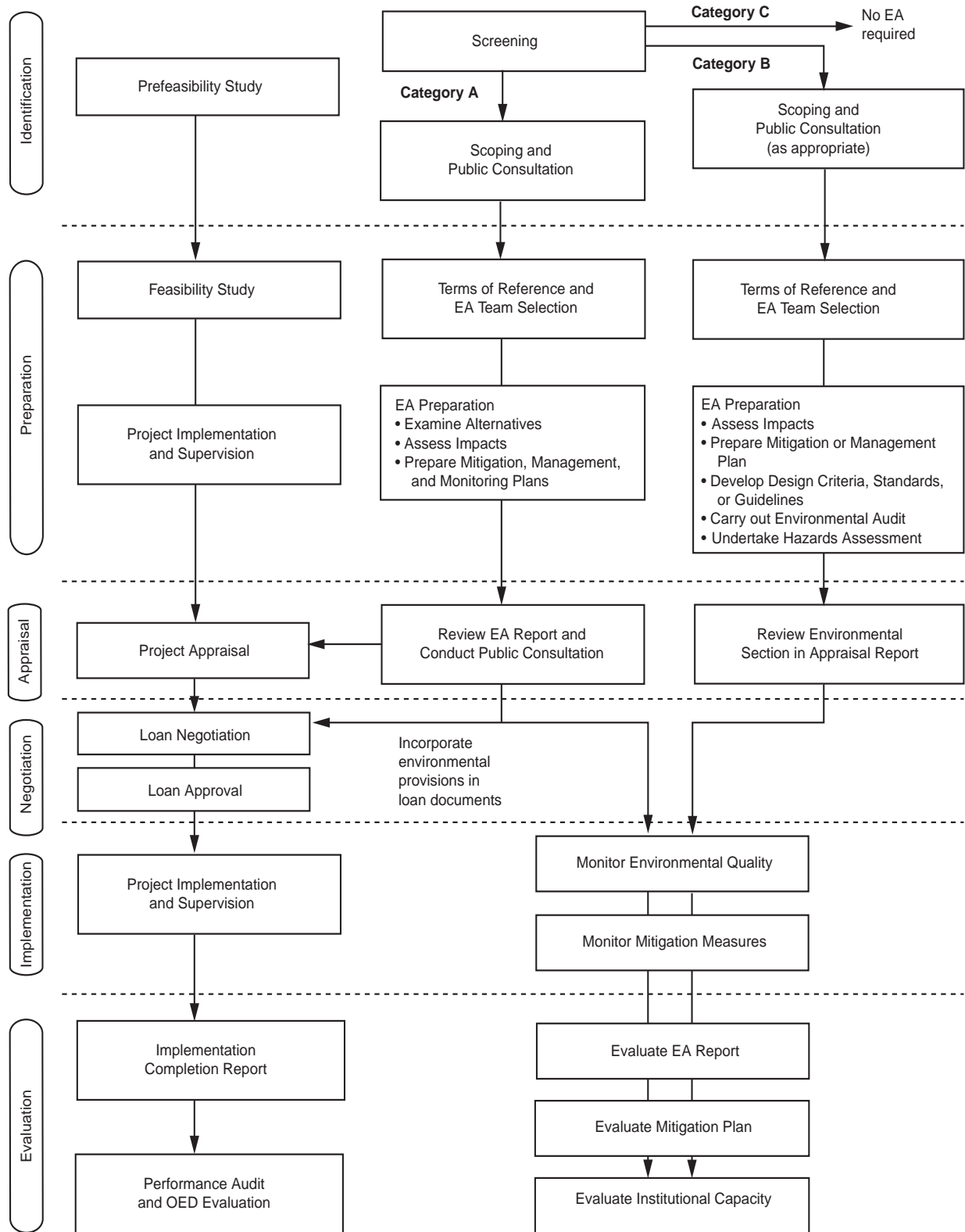
Project description. A concise description of the project’s geographic, ecological, social, and temporal context, including any offsite investments that may be required by the project, such as dedicated pipelines, access roads, power plants,

Table 1. IBRD Category A Projects by Sector, Fiscal 1991–95

<i>Sector</i>	<i>1991</i>	<i>1992</i>	<i>1993</i>	<i>1994</i>	<i>1995</i>	<i>Total</i>
Agriculture	2	1	3	7	5	18
Energy and power	6	14	10	9	8	47
Industry	2	1	0	0	1	4
Mining	0	0	0	1	0	1
Tourism	0	0	1	0	0	1
Transport	2	2	3	4	5	16
Urban	0	0	0	4	4	8
Water and sanitation	0	2	2	0	5	9
Total	12	20	19	25	28	104

Note: IBRD, International Bank for Reconstruction and Development. IBRD and the International Development Association (IDA) make up the World Bank.

Figure 1. The Environmental Assessment Process



Note: OED, World Bank Operations Evaluation Department.

water supply, housing, and raw material and product storage.

Baseline data. For EA purposes, include an assessment of the study area's dimensions and a description of relevant physical, biological, and socioeconomic conditions, including any changes anticipated before the project begins, and current and proposed development activities within the project area, even if not directly connected with the project.

Impact assessment. Includes identification and assessment of the positive and negative impacts likely to result from the proposed project. Mitigation measures and any residual negative impacts that cannot be mitigated should be identified. Opportunities for environmental enhancement should be explored. The extent and quality of available data, key gaps in data, and uncertainties associated with predictions should be identified or estimated. Topics that do not require further attention should be specified.

Analysis of alternatives. Assesses investment alternatives from an environmental perspective. This is a key purpose of EA work and the more proactive side of EA—enhancing the design of a project through consideration of alternatives, as opposed to the more defensive task of reducing the adverse impacts of a given design. The Bank's Operational Directive on Environmental Assessment calls for the systematic comparison of the proposed alternatives for investment design, site, technology, and operations 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.

Mitigation or management plan. The set of measures to be taken during implementation and operation to eliminate or offset adverse environmental impacts or reduce them to acceptable levels. The plan identifies feasible, cost-effective measures and estimates their potential environmental impacts, capital and recurrent costs, and institutional, training, and monitoring requirements. The plan should provide details on proposed work programs and schedules to help ensure that the proposed environmental actions

are in phase with construction and other project activities throughout implementation. It should consider compensatory measures if mitigation measures are not feasible or cost-effective.

Environmental monitoring plan. Specifies the type of monitoring, who will do it, how much it will cost, and what other inputs, such as training, are necessary.

Public consultation. Recognized as key to identifying environmental impacts and designing mitigation measures. The Bank's policy requires consultation with affected groups and local NGOs during at least two stages of the EA process: (a) at the scoping stage, shortly after the EA category has been assigned, and (b) once a draft EA report has been prepared. Consultation throughout EA preparation is also generally encouraged, particularly for projects that affect people's livelihood and for community-based projects. In projects with major social components, such as those requiring involuntary resettlement or affecting indigenous people, the consultation process should involve active public participation in the EA and project development process, and the social and environmental issues should be closely linked.

Stage 4: EA Review and Project Appraisal

Once the draft EA report is complete, the borrower submits it to the Bank for review by environmental specialists. If it is found satisfactory, the Bank project team is authorized to proceed to appraisal of the project. On the appraisal mission, Bank staff members review the Environmental Impact Assessment's (EIA's) procedural and substantive elements with the borrower, resolve any outstanding issues, assess the adequacy of the institutions responsible for environmental management in light of the EIA's findings, ensure that the mitigation plan is adequately budgeted, and determine whether the EIA's recommendations are properly addressed in project design and economic analysis.

Stage 5: Project Implementation

The borrower is responsible for implementing the project according to the agreements derived from the EA process. The Bank supervises the implementation of environmental aspects as part of

overall project supervision, using environmental specialists as necessary.

Guidance and Best Practice Development and Dissemination

The World Bank's three-volume *Environmental Assessment Sourcebook* (World Bank 1991) is an important source of EA information for Bank staff and borrowers. A digital version has recently become available on-line and on diskette. The printed version is available in Chinese, English, Russian, and Spanish and will soon be available in Arabic. In addition, the *Sourcebook* is being expanded incrementally in the form of EA Sourcebook Updates in a looseleaf format. Updates issued to date include:

- "The World Bank and Environmental Assessment: An Overview"
- "Environmental Screening"
- "Geographic Information Systems for Environmental Assessment and Review"
- "Sectoral Environmental Assessment"
- "Public Involvement in Environmental Assessment: Requirements, Opportunities, and Issues"
- "Privatization and Environmental Assessment: Issues and Approaches"
- "Coastal Zone Management and Environmental Assessment"
- "Cultural Heritage in Environmental Assessment"
- "Implementing Geographic Information Systems in Environmental Assessment"
- "International Agreements on Environment and Natural Resources: Reference and Appendix in EA"
- "Environmental Auditing."

Other Bank units, such as the regional environment divisions and the Transport, Water, and Urban Development Department and the Industry and Energy Department, are also active developers of guidance and "good practice" in the EA area. For example, an EA handbook for the roads sector was recently completed, and a digital environmental manual is being finalized for the power sector.

Reference

- World Bank. 1991. *Environmental Assessment Sourcebook*. Washington, D.C.
- Vol. 1: *Policies, Procedures, and Cross-Sectoral Issues*. World Bank Technical Paper 139.
 - Vol. 2: *Sectoral Guidelines*. World Bank Technical Paper 140.
 - Vol. 3: *Guidelines for Environmental Assessment of Energy and Industry Projects*. World Bank Technical Paper 154.