

INTRODUCTION



Title 22, Part 216 of the Code of Federal Regulations (referred to hereafter as Regulation 216) establishes the environmental review process for USAID development assistance. The procedures, roles, and responsibilities for implementing these regulations are set in Chapter 200 of *USAID Directives* (ADS 204: Environmental Procedures). The objective of Regulation 216 is to ensure that all U.S. government funded projects financed by USAID undergo an environmental review to avoid or lessen any potential adverse impacts on the environment. Additionally, the environmental procedures defined in ADS 204 are intended to ensure that environmental factors and values are integrated into USAID's decision-making process. USAID's environmental procedures:

- Provide a structure in which to establish environmental review requirements safety checks for environmental soundness.
- Ensure the formal preparation of documentation that provides the basis for environmental evaluation of project design by funders, regulatory agencies, and the implementing organization itself.
- Employ a systematic process that reduces the errors and oversights common in ad hoc approaches to environmental design.

This manual has been designed to provide guidance to USAID personnel and their development partners in designing, implementing, and monitoring and evaluating environmental mitigation measures for specific development sector programs. The sectors included in this manual were selected based on the LAC missions' current and projected portfolios. Other sectors not currently included in this manual can be added as the need arises. It is expected that the environmental review process applied to the design and implementation of an activity will improve the long-term success of development activities by minimizing damage to the environment that affects future economic and social development.

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CLASSES OF ENVIRONMENTAL IMPACTS

Direct (Primary) vs. Indirect (Secondary)

Direct impacts are generally associated with the construction, operation, and maintenance of a facility or activity, and are generally obvious and quantifiable. *Indirect impacts* are induced changes in the environment, population, economic growth, and land use. Examples of indirect impacts include: strip settlement associated with new roads, waterborne disease associated with abandoned construction borrow pits, or siltation of rivers and streams caused by construction activity.

Short-Term vs. Long-Term

Impacts are short-term or long-term depending on their persistence and duration. The duration of impacts may have much to do with the project phase in which they occur: pre-operational (construction), operational, or post-operational (after project completion or decommissioning).

Positive vs. Negative

Although the term environmental impact has come to be interpreted in the negative sense, many actions have significant positive effects that should be clearly defined and discussed. This is particularly appropriate for redevelopment or remedial actions whose specific purpose and need is to remedy any undesirable condition.

Anticipated

The threat of an activity or project that is considered undesirable can lead to loss of land value even before the project occurs, making it difficult to transfer nearby properties. Likewise, the promise of an action that is considered desirable may induce people to move to the location in hopes that they will benefit from the project. Concerns about relocation can be more intense than the actual relocation. It is a common pitfall to ignore those impacts occurring during planning and assessment or those that occur after the project has served its useful life.

Cumulative

Cumulative impacts result from the incremental impact on a common resource when added to other past, present, and reasonably foreseeable future actions. Circumstances generating cumulative impacts could include: water quality impacts from an effluent discharge that is combined with other point source discharges or from non-point source runoff; and loss or fragmentation of environmentally sensitive habitats resulting from several separate development projects. The assessment of cumulative impacts is difficult in part due to speculation of future actions, and in part due to the complex interactions that need to be evaluated when considering collective effects. Water and air quality modeling provide a means to study effects of cumulative impacts.

Source: Tellus Institute. 2000. Topic Briefing: An Introduction to Environmental Assessment. USAID/Africa.

Purpose and Intended Audience

This manual is intended for use by USAID mission personnel and their development partners nongovernmental organizations (NGOs), contractors, and for-profit entities. It provides practical information and resources for practitioners in developing initial environmental examinations, incorporating mitigating action into projects with negative threshold determinations, and guiding next steps in projects with positive threshold determinations. *They should not be viewed, however, as a substitute for detailed technical guidance or design manuals.* Users should be aware of host-country laws, procedures, and guidelines that apply to environmental reviews, assessments, and strategies for mitigating adverse environmental impacts.

Annex C of this manual provides comprehensive checklists for organizing environmental reviews as required under Regulation 216.

What Types of Interventions Are Covered?

The manual contains information and guidance for the following eight sectors:

Chapter 2. Small-Scale Infrastructure: Guidance on construction of housing, school construction, sanitation, water supply, and healthcare facilities.

Chapter 3. Rural Roads: Considerations in planning and designing rural road projects, as well as considerations for operation and maintenance components of road rehabilitation projects.

Chapter 4. Microfinance Institutions and Micro and Small Enterprises: Considerations for projects that provide business services to MSEs and for intermediary financial institutions and direct lenders that provide credit to MSEs.

Chapter 5. Solid Waste Management: Guidance on solid waste collection and disposal systems, and medical and hazardous wastes.

Chapter 6. Renewable Energy Systems: Information on solar, biomass, wind, and small-scale hydro energy systems.

Chapter 7. Ecotourism: Considerations for site identification, construction, and tourist facilities.

For the most part, activities at this scale can be undertaken with minimal impact on the environment. They typically receive a negative determination because they do not have significantly adverse environmental impacts. However, they often require identification of mitigation and monitoring measures or conditions to minimize potential impacts.

Activities that may trigger more in-depth environmental assessment processes include:

Chapter 8. Agriculture and Watershed Management: Discussion of soil and water conservation activities, streambank protection and restoration, small-scale drainage and irrigation systems, and pesticides and integrated pest management.

Chapter 9. Forestry: Guidance for plantation development, forest enhancement, natural forest management including fire control, and agro-forestry activities.

These activities often have the potential for significant adverse impacts on the environment, and when this proves to be the case they are given a positive determination and require a detailed environmental assessment.¹

How To Use These Guidelines

Each chapter of this manual includes a brief description of the sector, a discussion of the environmental impacts, specific guidance for program design, environmental mitigation measures, and references. There are also environmental checklists to help organize the environmental review process.

Environmental issues in each sector are the subject of many standalone manuals, handbooks, and reports. The sector briefings in these chapters provide only an introduction and summary. References have been carefully selected for relevance, with emphasis on those that can be accessed through the Internet.

For Chapters 8 and 9, additional guidance is provided for issues that should be considered in the scoping of an environmental assessment if the initial environmental examination results in a positive determination.

¹ Here, positive is used the same way the term is used medically. Testing positive may mean the problem will require further diagnosis and involve treatment.

These guidelines have no legal standing. Please refer to Annexes A and B for a full description of USAID environmental procedures and the text of Regulation 216.

Roles and Responsibilities in the Environmental Review and Assessment Processes

Environmental review and assessment are formal processes for identifying likely effects of particular activities or projects on the environment and human health and welfare. As such, environmental review is the responsibility of all those involved in the design and implementation of a program or activity. The environmental review process, which begins with the identification of potential effects of a proposed activity on the environment (initial environmental examination), continues throughout the life of an activity. Specific roles and responsibilities for each step in the process are established in ADS 204 and involve operational bureaus, missions, strategic objective teams, mission environmental officers, regional environmental advisors, bureau environmental officers, the agency environmental coordinator, and USAID partners.

The following abstract of the USAID's environmental regulations, prepared by the LAC Bureau environmental officer, applies to 99 percent of the cases that will be encountered:

1. All USAID-funded or -managed activities must be reviewed for environmental impacts.² This includes all new activities, as well as substantial amendments to ongoing activities such as large extensions in time, increases in funding, or modifications to activities.
2. The environmental review begins with either an *initial environmental examination* (IEE) or request for a *categorical exclusion*.
3. Regulations identify categories of activities that generally will not have an impact on the environment. Only activities within these established categories can, with the concurrence of the *bureau environment officer* (BEO), qualify for exclusion from further review.
4. All other activities require an IEE.

² Under extraordinary circumstances the administrator or responsible assistant administrator in consultation with the Council for Environmental Quality (CEQ) can in writing exempt activities from the review procedures. Certain appropriations, such as those for international disaster assistance funds managed by the Office of Foreign Disaster Assistance, may have congressional language to appropriate funds notwithstanding other provisions of the law. In the case of notwithstanding language consult your BEO and the agency environment coordinator for agency policy on the application of the regulations.

5. The IEE analyzes the reasonably foreseeable environmental impacts of a proposed activity. An IEE concludes with a recommended *environmental threshold decision* (ETD).
6. A *negative determination* is recommended for activities that will not have a significant negative impact, and a *positive determination* for those that could have a significant negative impact.
7. The USAID unit managing the activity is responsible for conducting the environmental review, not the *mission environment officer*. The recommended ETD or request for a categorical exclusion must be signed by the *mission director* or, if a Washington-managed activity, by the individual with the authority to commit funds for the activity, usually an *office director*.

USING USAID ENVIRONMENTAL PROCEDURES STRATEGICALLY

Ensuring compliance with USAID's environmental procedures, while using the review process strategically to promote integration of environmental considerations throughout the project cycle is the topic of a document developed several years ago by two USAID environmental officers. In proposing ways to move beyond compliance to achieving results, the authors suggest the following:

- Each SO team must take ownership of the environmental review process with the mission environmental officer serving as a core member of each team.
- Reviewing progress on environmental compliance should be part of each mission's annual portfolio review.
- Be aware of technical and procedural options for incorporating environmental mitigation into project design and implementation.
- Promote linkages between environmental issues and other mission SOs and activities.
- Devolve responsibility for the environmental review process to partners and provide training in environmental review.
- Use Regulation 216 compliance to develop environmental assessment capacity development with host country agencies. Work with host country governments to carry out environmental assessments.
- Train and re-invent mission environmental officers, helping them better understand their roles and responsibilities and become more proactive.

In a companion document the same authors pose a series of issues regarding possible revisions to Regulation 216 and USAID's environmental procedures. Readers are encouraged to keep the issues posed in these two documents in mind as they use this manual. A complete version of these two pieces can be found in Attachment 1 of this chapter.

Source: Bingham, Charlotte (USAID Regional Environmental Officer REDSO/ESA), and Walter Knausenberger (Environmental Analyst/Advisor, USAID Africa Bureau AFR/SD/ANRE), July 16, 1999, Using USAID Environmental Procedures Strategically; and July 20, 1999, Is Reg. 216 Ripe for Revision?

8. The BEO's written concurrence to the recommended ETD or request for a categorical exclusion must be received prior to obligation of funds.
9. An *environmental assessment* (EA) is required for activities receiving a positive determination. In short, an EA designs mitigations for potential negative impacts and thus is an integral part of program design and implementation.
10. An EA's development involves: (i) a *scoping exercise*, which further identifies the issues, proposes a schedule, possible phasing of EA development to match with program development, and results in a *scope of work* (SOW), and (ii) the environmental assessment itself. BEO approvals of the SOW are required before the EA; BEO approvals of the EA are required before activity implementation.
11. Be aware that the regulations stipulate specific questions that must be addressed in an IEE for activities supporting the *procurement or use of pesticides*.
12. Section 118 of the Foreign Assistance Act requires special attention for activities supporting tropical timber harvesting. Consult Section 118 and the BEO or agency environmental coordinator.
13. The USAID unit managing the activity is responsible for assuring that adequate time, staff, and financial resources are available for full implementation of Regulation 216. This includes:
 - i. Getting BEO concurrence on threshold decisions or categorical exclusions prior to obligation
 - ii. Developing the EA
 - iii. Implementing and monitoring EA mitigations
 - iv. When necessary, placing conditions in agreements that avoid the irreversible commitment of funds before the completion of environmental review and implementation of conditions and mitigations that pending EAs may require
15. Changes in USAID program development procedures result in funds frequently being obligated earlier in the program design than when the regulations were prepared in the early 1980s. At the time of obligation, if adequate information for making a threshold decision is not available, a *deferral* with the concurrence of the general counsel can be issued by the relevant bureau's *assistant administrator*.
16. See ADS 204 for USAID policy in applying the regulations with the new program development procedures.

Recent Trends and Emerging Themes in Environmental Review and Assessment at USAID

The guidelines in this manual present through text and tables, checklists, lists of references, and the resource materials available on the CD-ROM a snapshot of accumulated experience, lessons learned, best practices, and case examples in key sectors.

Stepping back from the details of sector-level review and assessment, several important trends have emerged in environmental review and assessment at USAID over the past 10 years. These trends include:

- More systematic attention to environmental review covering a wider range of program areas (food aid, microfinance) and operating units (DCHA, EGAT, and Global Health programs).
- Clear incorporation of environmental review into USAID's reengineered, Strategic Objective Team-based operating paradigm (through ADS 204).
- Greatly increased training of program partners, particularly by the Africa Bureau (through ENCAP³) and the Food for Peace Office (through the Food Aid Management Group⁴).
- Substantially increased in-house training (especially the E&E Bureau⁵).
- Increased use of foreign service nationals (FSNs) as mission environment officers (MEOs).

There are also a number of emerging themes in environmental review and assessment at USAID of which users of this manual need to be aware. Several of these themes are related to USAID process and procedures, others to new or re-emerging program areas

Process and Procedures

Revision of Regulation 216? USAID has been implementing Regulation 216 in its current form for over 20 years. While the overall purpose and policy remain as relevant today as they were when the regulations were formulated, some circumstances including USAID's organizational structure and mix of

³ See www.encapfrica.org.

⁴ See www.foodaidmanagement.org/envmt3.htm.

⁵ See <http://ee-environment.net/216/index.shtml>.

program areas have changed. In addition, the science behind some elements of environmental assessment has changed dramatically.⁶ Several years ago Regional Environmental Advisor Charlotte Bingham and AFR/SD Environmental Advisor Walter Knausenberger wrote the paper, *Is Reg. 216 Ripe for Revision?*⁷ The sixteen issues raised continue to be valid and deserve discussion among those involved in implementing Regulation 216.

Coordination of Environmental Review Procedures across the U.S. Government. Many U.S. government agencies now have international programs working in program areas similar to those of USAID, such as the Department of Agriculture, Forest Service, Department of Energy, and Department of Interior. In some cases, USAID co-funds programs with these agencies; in other cases, USAID implements programs with funding from them. The application of USAID environmental review and assessment procedures in these cases needs to be clarified. At the same time, U.S. government funding agencies such as the Overseas Private Investment Corporation (OPIC) have increasingly rigorous environmental review procedures. At the country program level, the mission performance plan (MPP) is one vehicle that could be used to track and coordinate these various processes.

Coordination of Environmental Review Guidelines within USAID

Several regional bureaus have developed environmental guidelines, Regulation 216 training courses, and related Web sites. An *Environment Officer's Handbook* has been drafted by several classes of new entry professionals. The coordination of these efforts across USAID now deserves some concerted attention.

⁶ For example, our understanding of the health impacts of various chemicals (see footnote 7). Many elements of conventional risk assessment have been discredited and the Precautionary Principle has emerged as a new guiding principle. See Poul Harremoes and David Gee (eds.), 2002, *The Precautionary Principle in the 20th Century: Late Lessons from Early Warnings*, Earthscan; Carolyn Raffensperger, Joel Tickner and Wes Jackson (eds.), 1999, *Protecting Public Health and the Environment: Implementing the Precautionary Principle*, Island Press; Mary O'Brien, 2000, *Making Better Environmental Decisions: An Alternative to Risk Assessment*, MIT Press; and Anne Platt McGinn, 2000, *Why Poison Ourselves? A Precautionary Approach to Synthetic Chemicals*, Worldwatch Paper No. 153. See also results of the International Summit on Science and the Precautionary Principle at <http://www.uml.edu/centers/lcsp/precaution> For a skeptic's view of the Precautionary Principle, see Julian Morris (ed.), 2000, *Rethinking Risk and the Precautionary Principle*, Butterworth-Heinemann.

⁷ Charlotte Bingham and Walter Knausenberger, 1999, *Is Reg. 216 Ripe for Revision?* Paper prepared for the USAID Environment Officers Workshop. See also Bingham and Knausenberger, 1999, *Using USAID Environmental Procedures Strategically*.

GUIDING PRINCIPLES FOR SUSTAINABLE USE OF THE NATURAL RESOURCE BASE

In 1993, the World Resources Institute (WRI) developed a ten-year regional environmental strategy for USAID's Latin American and Caribbean Bureau. The strategy, titled, *Green Guidance for Latin America and the Caribbean*, includes a comprehensive analysis of principal environmental problems in the region, clarifies the link between development and environment, and provides guidance for incorporating environmental considerations into USAID-financed projects and programs.

During the 1990s the LAC Bureau made significant strides in carrying out the guiding principles for sustainable resource management defined in this strategy. However, these principles are still as relevant and important today as they were when they were developed, nearly 10 years ago. Readers are

encouraged to use *Green Guidance* as a reference for planning and designing environmental and natural resources activities in the region.

Green Principles

- Attack root causes of environmental degradation, stressing prevention of problems.
- Integrate environmental considerations broadly into USAID-supported sectors and programs.
- Promote economic and environmental policies for sustainable development and eliminate conflicting policies that induce degradation.
- Strengthen institutions, including nongovernmental organizations and government agencies, for resource management.
- Strengthen education and

training (human resources) in all areas of environmental management.

- Build participation and empowerment of the public on environmental initiatives.
- Strengthen the role of the private sector in environmental management and prevention of resource degradation.
- Promote research, information exchange, and technology transfer for sustainable development and environmental management.
- Strengthen implementation of USAID environmental procedures.
- Promote donor coordination for sustainable development and environmental management.

Source: Green Guidance.

Technical Program Areas

USAID programs have expanded significantly over the past 10–15 years in a variety of areas, such as non-project assistance (NPA), policy reform, sectoral or structural adjustment, trade promotion, microfinance and microenterprise programs, and disaster management and emergency response, to name a few. Investments in agriculture are slated to increase substantially under the current administration. This will include programs in new areas such as biotechnology, bio-safety, and genetically modified organisms. It may also include investments in pesticides, the regulations for which need to be reviewed and revised with careful attention to recent advances in integrated pest management (See Chapter 8: Section D Pesticides and IPM in this manual). Guidelines for environmental review and assessment are needed in many of these areas.⁸

USAID environmental guidelines need to stay abreast of advances in our understanding of environmental impacts. In the health arena, for example, much more is now known about the potential harm of endocrine disrupters, and the use of mercury and PVC in hospitals and health clinics.⁹ In the biodiversity arena, much more is now known about invasive species.¹⁰ Ways need to be found to keep USAID mission environmental officers abreast of these emerging issues.

⁸ For disaster management and emergency response, see Charles Kelly, 2001, *Rapid Environmental Impact Assessment: A Framework for Best Practice in Emergency Response*, London: Banfield Grieg Hazard Research Centre, University College Working Paper No. 3, online: <http://www.bghrc.com>. Mr. Kelly has many years of experience working on USAID disaster and emergency programs in the Sahel.

⁹ On mercury, PVC, incineration, pesticides, and pollution prevention, see the Web site of Health Care Without Harm at www.noharm.org. On endocrine disrupters, see Theo Colborn, Dianne Dumanoski, and J.P. Myers, 1997, *Our Stolen Future: Are We Threatening Our Fertility, Intelligence, and Survival? A Scientific Detective Story*, New York: Plume/Penguin, online: www.ourstolenfuture.org. See also Ted Schettler, Gina Solomon, Maria Valenti, and Annette Huddle, 2000, *Generations at Risk: Reproductive Health and the Environment*, MIT Press; Joe Thornton, 2000, *Pandora's Poison: Chlorine, Health and a New Environmental Strategy*, MIT Press and the Physicians for Social Responsibility Human Health and the Environment project, online: www.igc.org/psr. *Rachel's Newsletter*, available in both English and Spanish at www.rachel.org covers environmental health issues on a regular basis.

¹⁰ See Christopher Bright, 1998, *Out of Bounds: Bioinvasion in a Borderless World*, Worldwatch Institute; John Tuxill, 1999, *Nature's Cornucopia: Our Stake in Plant Diversity*, Worldwatch Paper No. 148; and Randy Westbrooks and Mark Schaefer, 2000, *Invasive Plants: Changing the Landscape of America*, Diane Publishing Co.

Environmentally Sound Design

Long-term sustainability is the overall objective of any economic or social development. Meaningful movement in this direction requires that the development interventions are well-conceived and that a set of enabling conditions be fulfilled. Environmentally sound design addresses the first of these requirements: it is an essential component of designing and implementing successful activities. And it is concerned with environmental justice efforts to ensure that the poor do not bear a disproportionate burden of economic and health consequences of environmental degradation. Environmentally sound design has an important effect on social sustainability.

Enabling conditions for achieving more environmentally sustainable development include:

- A legal and policy framework enabling sustainable private and public initiatives.
- Clearly defined national objectives on environmental design and management.
- Good information on national and regional environmental resources and conditions.
- Host country capacity to implement and apply environmental laws and policy including financial resources, trained professionals, and effective institutions and responsibility and accountability for this implementation.

Sound design requires that environmental impacts associated with projects, programs, and policies be identified, predicted, and mitigated. This is not enough, however. It must also adhere to principles that apply to sound design, management and implementation in general principles that have grown out of the development experience of organizations in the field.

Next Steps

This manual should be considered a working draft. Following the June 2002 Mission Environmental Officers Conference in Panama, comments will be solicited from the mission environmental officers, the bureau environmental office, and regional environmental advisors. The new material will be incorporated into a final English version, which will then be translated into Spanish. It is expected that a training seminar on Regulation 216 and the use of this manual will be held in the fall of 2002, at which time updates to the English version and a complete translated version will be distributed.