Environmental Documentation Manual

For P.L. 480 Title II Cooperating Sponsors Implementing Food-Aided Development Programs

Second Edition

February 1999

USAID

Environmental Working Group

FAM
Food Aid Management

PLEASE NOTE

This Environmental Documentation Manual (EDM) is considered an informational, practical guide to help PL 480 Title II cooperating sponsors (CS) complete the environmental documentation that is required under USAID's environmental regulations and procedures found in Title 22 of the Code of Federal Regulations (22 CFR part 216) and explained in the FY 2000 BHR/FFP DAP/PAA Guidance. The EDM is advisory only. It is not official USAID procedures, regulations, handbooks, guidelines, guidance, or revisions thereto, nor does it modify or replace any aspect of 22 CFR 216. Should there be any apparently conflicting guidance between 22 CFR 216 and the EDM, 22 CFR 216 will take precedence as the authoritative guidance.

The EDM has been developed by USAID's Africa Bureau (AFR), in cooperation with the Bureau for Humanitarian Response, Office of Food For Peace (BHR/FFP), and the Food Aid Management Environmental Working Group. While the EDM has been written with major support from AFR and uses African experiences, the lessons in it are universal and should prove useful for Title II CSs working in other parts of the world.

PVOs will find that there are other sources of information within USAID Missions and Regional Bureaus regarding compliance with 22 CFR 216. To the extent that the EDM or other similar unofficial Agency documents suggest processes or procedures for completing Initial Environmental Examinations (IEEs) and other environmental documentation, these are meant to be purely advisory and, it is hoped, helpful suggestions. For authoritative guidance, people should refer to 22 CFR 216 itself, and consult with USAID's Bureau Environmental Officers (BEOs) or other knowledgeable staff.

The only environmental documents that are required for submission to BHR/FFP are those laid out in 22 CFR 216, such as the IEE or Request for Categorical Exclusion, and if needed, the Scoping Statement and Environmental Assessment. Other tables, matrices and forms suggested in the EDM or elsewhere are helpful to preparers and reviewers but are purely optional, and each CS may decide whether they are useful in submission of its 22 CFR 216 requirements to BHR/FFP.

Comments on this document are encouraged and can be sent to the BEO, Bureau for Global
Programs and BEO, Bureau for Humanitarian Response, c/o G/ENV/ENG RRB 3.8-31, Washington D.C. 20523-3801; e-mail: jdesrosiers@usaid.gov. See also the Bureau for Humanitarian Response's webpage: http://www.info.usaid.gov/hum_response/titleii.htm

U.S. Agency for International Development
Bureau for Africa
Office of Sustainable Development
and the
Bureau for Humanitarian Response
Office of Food for Peace

Environmental Documentation Manual

For P.L. 480 Title II Cooperating Sponsors Implementing Food-Aided Development Programs

Compiled and Edited by:
Charlotte Bingham, USAID/AFR/REDSO/ESA, Nairobi
Walter Knausenberger, AFR/SD/PSGE, Washington, D.C.
Weston Fisher, EPIQ/Tellus Institute, Boston

with the assistance of the
Food Aid Management, Environmental Working Group
and the
USAID Bureau for Humanitarian Response, Office of Food for Peace (BHR/FFP)

Food Aid Management
Environmental Working Group
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Table of Contents

List of Tables

List of Boxes

List of Figures

Note: If this is an electronic version of this document, check page numbers as font changes or margin parameters may affect pagination.

FOREWORD

Food commodities are a major resource not only for humanitarian assistance, but also for development. Annually, the U.S. Government provides about $1 billion of food through P.L. 480 (the Agricultural Trade Development and Assistance Act of 1954) to developing and re-industrializing countries. A high proportion of this food has been provided through the Title II program managed by USAID. Title II is implemented both through Private Voluntary Organizations (PVOs), known as Cooperating Sponsors (CSs), as well as through the U.N.'s World Food Programme (WFP), both of whom carry out development and emergency food aid programs. Title II funding provided to CSs to carry out development food aid programs supports activities in maternal and child health, agricultural production, natural resource management and infrastructure development (e.g. roads, bridges, latrines, wells and small-scale irrigation systems). By and large, prior to FY 98, these PVO activities were not subjected to USAID's environmental review process. USAID's Bureau for Humanitarian Response, Office of Food for Peace (BHR/FFP) and Bureau for Africa, Office of Sustainable Development (AFR/SD) have been collaborating since 1997 in systematically introducing approaches to apply USAID's legally mandated Environmental Procedures ("Reg. 216") to programming of developmental food aid. USAID expects that the incorporation of environmental oversight, will ultimately enhance the design and appropriateness of Title II interventions, and thus improve the sustainability and impact of these programs.

The present *Environmental Documentation Manual* (EDM) was conceived in early 1997 as the "Environmental Information Package." Through collaboration among the Office of Food for Peace (BHR/FFP) and the Bureau for Africa, Office of Sustainable Development, as well as the Environmental Working Groups organized by Food Aid Management (FAM) and USAID/Ethiopia the document was first issued for review as the EDM in November 1997. The draft EDM was first revised after use in a regional training course in December 1997. A first draft was published in January 1998 and a final draft in April 1998. The current version reflects use of the EDM during the past year and further changes in the timelines and submittal process that became effective in FY 1999. We hope the latest revisions have made the Manual far easier to use and interpret by those working in the field who for the first time are encountering the intricacies of USAID environmental regulations as applied to food aided development.

Ms. Charlotte Bingham, primary author, is the Regional Environmental Officer for USAID's Regional Economic Development Services Office for East and Southern Africa (REDSO/ESA) based in Nairobi, Kenya. She has been a lead organizer and trainer in the Africa Bureau's Environmental Capacity Building (ENCAP) initiative jointly developed with co-author Dr. Walter Knausenberger, the Environmental Advisor and Analyst in the Bureau for Africa's Office of Sustainable Development (AFR/SD). Knausenberger took the initiative to provide continuing support to BHR/FFP in assisting Title II Cooperating Sponsors come to grips with the environmental compliance process. Mr. Wes Fisher, of Tellus Institute, is a natural resources specialist and trainer engaged under EPIQ in the Africa Bureau ENCAP Initiative, and has provided critical support in the Manual's preparation. The FAM Environmental Working Group continues to support Cooperating Sponsors through a combination of training, technical assistance and information transfer to increase the application of sounder environmental design and management to developmental food aid programs and activities.

David Atwood, Chief
Division of Productive Sector Growth
and Environment
AFR/SD/PSGE

David Nelson, Chief
Division of Development Programs
Office of Food for Peace
BHR/FFP/DP

ACKNOWLEDGMENTS

Without the support and engagement of many collaborators, this Manual would not have seen the light of day.

In 1997, the Food Aid Management (FAM) liaison center, in Washington, D.C., promptly established an Environmental Working Group (EWG) which became very actively engaged in formulating approaches to help Cooperating Sponsors address the Environmental Procedures. Paige Harrigan, Program Associate with FAM, has ensured close communication with the Environmental Working Group through the EDM drafting and review process with the support of T. J. Ryan, FAM Director.

Special thanks go to David Nelson, Chief of the Development Programs Division in the Office of Food for Peace in USAID's Bureau of Humanitarian Relief (USAID/BHR/FFP/DP), who embraced the challenge of helping Cooperating Sponsors (CSs) achieve compliance with USAID's Environmental Procedures in a period of declining USAID resources. Susan Morawetz, USAID/BHR/FFP/DP Project Officer, shepherded this process from its inception and not only educated the drafters of this document on the needs and constraints faced by Title II PVOs, but helped to define with the CSs the timetable and assistance needed to minimize the burden they faced in trying to achieve environmental compliance.

FAM EWG members active in reviewing the EDM and providing insightful comments include: Tom Remington of CRS Kenya who served as EWG Washington D.C. chair until his posting in Africa; Carlos Perez and Bob Bell of CARE; Sheryl Cowan of Africare; Amy Volz of ACDI/VOCA; David Ameyaw of ADRA International; Susan Bornstein of Technoserve; Ben Hoskins of WVRD; and Kevin Connors, Mendez-England. Gaye Burpee of CRS Baltimore and Tom Gardiner of ACDI-VOCA Cape Verde also provided insightful suggestions for the EDM. We have benefitted from the skills of Michael Matthews, editor and publication services manager with AMEX International. Likewise, the facilitation and technical and editorial support of Tellus Institute staff, especially Michael Lazarus and Michael Ruth, is sincerely appreciated.

As pioneers in tackling the early drafts of the guidance, the members of the Ethiopia Environmental Working Group organized by USAID/Ethiopia, deserve special thanks. We appreciate the initiative and support shown by USAID/Ethiopia's Food and Humanitarian Assistance Office, especially Herbie Smith, Carrel Laurent, Joy Shiferaw and Sarah Douglass. Among the CSs in the Ethiopia Environmental Working Group, we especially appreciate the contributions of Andrew Barnes of FHI Ethiopia and Kari Egge of CRS.

For their encouragement and guidance, we are indebted to the Agency Environmental Coordinator, James Hester, and Bureau Environmental Officers Paul des Rosiers (BHR and Global), Carl Gallegos (Africa), and Jeffrey Goodson (Asia/Near East). David Atwood, Chief of the Productive Sector Growth and Environment Division, USAID/AFR/SD, and Dennis McCarthy, Chief of the Agriculture and Environment Office of USAID/REDSO in Nairobi, supported the efforts of the authors in this collaboration with the Bureau for Humanitarian Response.

Finally, this 2nd edition of the EDM has been based on (i) field testing with CSs at regional environmental workshops in Ethiopia, Ghana, Cape Verde, Kenya, Honduras and Bolivia; (ii) FAM and BHR/FFP review of the quality of DAP/PAA environmental documentation submissions in 1998, and (iii) soliciting comments from Title II CSs' on their experience in the field with using the EDM and with preparing their environmental documentation.

Charlotte Bingham, Walter Knausenberger and Wes Fisher
February 1999

GLOSSARY OF ACRONYMS AND ABBREVIATIONS

AFR	Bureau for Africa (USAID)
BEO	Bureau Environmental Officer
BHR/FFP	Bureau for Humanitarian Response, Office of Food for Peace (USAID)
CE	Categorical Exclusion
CFR	Code of Federal Regulations
CFW	Cash for Work
CITES	Convention on the International Trade in Endangered Species
CSs	Cooperating Sponsors (PVOs & NGOs) programming food aid
DAP	Development Activity Proposal
EA	Environmental Assessment
EDG	Environmental Decision Guide
EDM	Environmental Documentation Manual
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EPIQ	Environmental Policy and Institutional Strengthening Indefinite Quantity Contract (USAID-funded consortium initiated Oct. 1996)
ESA	Eastern and Southern Africa
EWG	Environmental Working Group
FAA	Foreign Assistance Act
FAM	Food Aid Management (association of PVOs using food aid in international development and relief programs, funded by USAID/BHR/FFP)
FAO	Food and Agriculture Organization
FAQ	Frequently Asked Questions
FFP	Office of Food for Peace, USAID/BHR
FFW	Food-for-Work
FY	Fiscal Year
GIS	Geographic Information System
ha	hectares
IEE	Initial Environmental Examination
IPM	Integrated Pest Management
IR	Intermediate Result
IUCN	International Union for the Conservation of Nature
LOP	Life-of-Project funding
M&E	Monitoring and Evaluation
MEO	Mission Environmental Officer (USAID)
MOA	Ministry of Agriculture
ND	Negative Determination
NEAP	National Environmental Action Plan
NGO	Non-Governmental Organization (in USAID usage, applies mainly to host-country organizations)
NRM	Natural Resources Management
OFDA	Office of Foreign Disaster Assistance (USAID/BHR)
PAA	Previously Approved Activity (USAID Title II)
PEA	Programmatic Environmental Assessment
P.L. 480	Public Law 480—Agricultural Trade Development and Assistance Act of 1954 providing

	for assistance in the form of food commodities
PRC	Project Review Committee
PVO	Private Voluntary Organization (in USAID usage, applies mainly to U.S. international PVOs)
REA	Regional Environmental Advisor (USAID)
REDSO	Regional Economic Development Support Office (USAID)
Reg. 216	Informal short form of USAID's Environmental Procedures, 22 CFR Part 216. Also Regulation 216 or colloquially sometimes as "Reg. 16"
REO	Regional Environmental Officer (USAID)
SD/PSGE	Office of Sustainable Development/Division of Productive Sector Growth and the Environment, Bureau for Africa (USAID)
SO	Strategic Objective
SOW	Scope of Work
TA	Technical Assistance
(Title II)TII	One of the main provisions of P.L 480 applying to food aid programmed by PVOs
U.N.	United Nations
UNCED	United Nations Conference on Environment and Development
UNHCR	United Nations High Commission for Refugees
U.S.	United States
USAID	U.S. Agency for International Development
USEPA	U.S. Environmental Protection Agency
WFP	World Food Program(me)

Section 1

Introduction to the Environmental Documentation Manual

Environmental Documentation Manual

1 INTRODUCTION TO THE ENVIRONMENTAL DOCUMENTATION MANUAL

1.1 Overview

This Environmental Documentation Manual (EDM) has been developed specifically to assist Title II private and voluntary organizations (PVOs) in designing environmentally sound development activities and in bringing their activities into compliance with USAID Environmental Procedures. It may also be useful for PVOs carrying out development activities with other sources of support. This document contains five sections and eight annexes.

- Section 1 introduces the Manual and describes the rationale for compliance. It also summarizes USAID and PVO Title II responsibilities, briefly reviews some of the environmental terminology, and identifies potential resources to assist you with your environmental analysis process. The terms and concepts, some of which may be unfamiliar, are discussed in detail in the sections that follow.

- Section 2, the **Environmental Decision Guide,** is your first step in looking at how the Agency's environmental procedures apply to your activities and determining what you must submit with your Development Activity Proposal (DAP) or Previously Approved Activity (PAA). This guide will also assist you in revising or amending, as needed, environmental documentation on a yearly basis to ensure that it remains consistent with your activities.

- Section 3, **Preparing and Submitting Regulation 216 Environmental Documentation,** introduces you to the environmental documentation preparation process and provides specific information on the submission of the documentation to USAID to meet compliance requirements, including the annual Environmental Status Report.

- Section 4, **Writing the Initial Environmental Examination (IEE)**, describes preparation of the IEE narrative and associated analysis and covers principles and tools of environmental review.

- Section 5, **Frequently Asked Questions,** assembles questions that have arisen about DAP/PAA environmental compliance, especially those posed by members of the PVO Environmental Working Group of Food Aid Management (FAM) and a PVO/USAID working group in Ethiopia.

- The Annexes include forms and sample USAID compliance documents, other useful information on the compliance process, and some lists of useful references.

Please refer to Section 5 after reading the four main sections. It provides supplementary information on (a) the rationale for Title II environmental compliance; (b) responsibilities and timelines; (c) DAP and PAA environmental compliance documentation; (d) environmental analysis; (e) questions regarding preparation of environmental assessments (EAs) or Programmatic Environmental Assessments (PEAs); and (f) designing and managing more environmentally sound activities. These were compiled from questions which arouse during the first 18 months of experience by CSs in applying the EDM in earlier drafts. As questions arise, refer to this section for answers. Otherwise, contact your USAID Mission or the Bureau for Humanitarian Response (BHR) at USAID or the Bureau Environmental Officer (BEO), either the one for BHR or the one for your geographic region (Africa, Asia/Near East, Europe and Newly Independent States, and Latin America).

We hope that the step-by-step process outlined in this package will make adopting USAID environmental procedures easier. Experience has shown that complying with procedures strengthens development activities and makes them more sustainable. This manual may appear daunting, but it is intended to make environmental compliance less burdensome.

This section of the Manual is designed to help Cooperating Sponsors (CSs) understand:

- why Title II activities are subject to USAID Environmental Procedures;
- what the general procedures are;
- how Cooperating Sponsors can apply the procedures;
- who is responsible for what;
- the timeline for submission and approval of specific documents; and
- opportunities for obtaining assistance in achieving compliance.

As you prepare environmental compliance documentation, work closely with your USAID Food for Peace Officer (FFP), the Country Mission Environmental Officer (MEO), and, when needed, the BEO at the BHR. You may also consult with USAID's Regional Environmental Officer (REO) (where available) or your respective geographic BEO.

1.2 USAID's Environmental Procedures Applied to Food Aid Programs

Since 1977, USAID's Environmental Procedures[1] (known as Regulation 216 or Reg. 216) have applied to all new projects, programs, or activities authorized or approved by USAID and to substantive amendments or extensions of ongoing projects, programs, or activities. The purpose of the procedures is to:

- ensure that environmental consequences of USAID-funded activities are identified and considered in the design and implementation of activities prior to final decisions to proceed;
- assist countries in strengthening their environmental evaluation capabilities;
- define limiting environmental factors that constrain development; and
- identify activities that can assist in sustaining or restoring the natural resource base.

USAID has determined that many food-assisted development activities have not been in compliance with USAID's Environmental Procedures. Table 1.1 illustrates some P.L. 480 interventions that typically have environmental impacts.

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[1] The procedures, published in final form in the fall of 1980, are codified in 22 CFR 216 (Title 22, Code of Federal Regulations, Part 216), a copy of which is included as Annex D.

Table 1.1. Typical P.L. 480 Food Aid Supported Activities and Their Potential Environmental Implications

Type	Activity	Potential Adverse Environmental Impacts
Irrigation	- rehabilitation of older schemes or new construction - river diversions - dam and pond construction - land leveling	- transmission of waterborne diseases - destruction and/or impairment of wetlands - salinization of soils - alteration in aquatic ecology, including fisheries - water pollution (non-point source farm runoff) - effects on downstream water flow - water use conflicts
Water Supply and Sanitation	- potable water supply - latrines & sewerage - water catchments - wells & ponds	- groundwater aquifer drawdown or depletion - waterborne disease transmission - contamination of groundwater
Health Services Programs	- immunizations - AIDS/HIV treatment	- medical and biohazardous wastes - disposal of used/spent needles
Rural Infrastructure	- construction and/or rehabilitation of secondary and tertiary (farm to market) roads - construction of public buildings (health posts, schools)	- opening of otherwise intact forest or protected areas to exploitation and/or destruction - erosion and uncontrolled runoff from improper construction practices or lack of adequate drainage - impacts on land use, e.g., wetlands or farmlands
Natural Resources Management	- soil and water conservation, e.g., bunds, terracing, etc. - reforestation - land clearing - exotic species introduction, e.g., non-indigenous seed	- improper/incomplete structures add to erosion potential - inadvertent shifts in land use patterns - destruction of natural or secondary forest for reforestation with exotic species - disruption of ecosystem balance through commercial production or harvesting of fauna or flora - displacement by exotic species of endemic (local) species; weediness
Crop Protection, Livestock Disease Control	- introduction and application of pesticides - use of dip vats	- water pollution (non-point source farm runoff) - environmental contamination - human contact with toxic substances - residues in food commodities, milk and meat - poisoning of livestock

In addition to compliance with Reg. 216, **many Cooperating Sponsors (CSs) are looking beyond compliance and, where relevant, incorporating sound environmental planning into activity designs** to ensure that TII-supported activities not only "do no harm," but actually improve the long-term sustainability of the natural resource base upon which food security depends (see Box 1.1). This approach is encouraged and is particularly relevant as Title II humanitarian resources are increasingly being programmed in concert with strategic development objectives, and often in conjunction with direct dollar grant resources.

Box 1.1. Environmentally Sound Design and Management of Food Aid Activities—The CARE/Bangladesh Example

In Bangladesh, CARE's Integrated Food for Development (IFFD) project has an extensive set of environmental analysis procedures that include a two-step environmental assessment process, provision for environmental management planning, and long-term environmental monitoring.

In 1991, during the design of IFFD, a programmatic environmental assessment revealed that CARE's extensive feeder road reconstruction under this Title II Food Aid Project could have potential impacts on drainage, farm productivity, and fish production, in addition to dividing floodplain areas. As a result, CARE, in association with its national implementing partner, established an environmental analysis program for its IFFD activities. CARE staff forms a team with the Local Government Engineering Department to conduct joint pre-work surveys and environmental reviews.

Initial reviews using detailed checklists, are conducted for each road alignment being considered for rehabilitation. These reviews require project staff to evaluate physical (e.g., erosion), biological (e.g., fish populations), and human interest (e.g., cultural resources) parameters. If the analyses show that a road will have a significant adverse environmental impact in any one or more of these broad categories, a more detailed environmental assessment is required. This process requires that project staff address the same parameters in greater detail with narrative descriptions of anticipated environmental impacts. The procedure also requires development of an environmental management plan (including mitigation measures) and monitoring of impacts after work is completed.

IFFD's environmental monitoring system includes the internal procedures mentioned above and a long-term monitoring program that is examining environmental impacts at 12 representative sites throughout the project area. This long-term monitoring system examines three key parameters: capture fisheries, agricultural land, and human settlements.

CARE/Bangladesh has a related training component and specific manuals and guidelines that are used in this environmental analysis process.

Contact: Chris Perine, Technical Advisor, IFFD.

1.3 General Procedures

Nearly all USAID-supported projects, programs, and activities are subject to USAID's Environmental Procedures and need some environmental documentation. One exception is an Exemption for international disaster assistance. The applicability of the Exemption needs to be documented in the DAP or PAA. Categorical Exclusions (stipulated in the Agency's regulations) are applicable to training, nutrition, family planning, small-scale research, etc., and require only limited documentation. Nevertheless, Categorical Exclusions (CEs) must be documented as such and approved by USAID. In all other cases, an Initial Environmental Examination (IEE) is required and sometimes, an Environmental Assessment (EA). These terms are discussed in Section 2.

1.4 Process, Roles, and Responsibilities

Cooperating Sponsors (CSs) will initiate the environmental documentation process.

- All DAPs and DAP amendments will be accompanied by a Categorical Exclusion document, an IEE, or an EA, but most typically an IEE.

- All PAAs will be accompanied by Environmental Status Reports.

- If a CS submits a DAP Amendment, if activities are modified in a way that would change how they are treated under Reg. 216 (which could happen even without a DAP amendment) or if environmental mitigation and monitoring plans or measures change, an IEE/Categorical Exclusion amendment should also be submitted.

DAP and PAA environmental documentation is prepared in connection with the official submission cycle and accompanies the DAP/PAA proposal. Steps on how to prepare Reg. 216 documentation, including annual Environmental Status Reports, are in Section 3. Advice on preparing an IEE is provided in Section 4. CSs should work with Mission Environmental and Food for Peace Officers to ensure that the documentation is adequate, and that appropriate mitigation and monitoring measures are incorporated into activities.

CSs are asked to do as much of the background work as possible to comply with Reg. 216. Ideally, the CS submits environmental documentation that the Sponsor itself has prepared. This is consistent with USAID's intent under re-engineering to promote flexibility and transfer more responsibility to its collaborators. The CSs know their activities and local environment better than anyone else and are best suited to determine appropriate mitigation and monitoring measures.

CSs and/or Missions are encouraged to submit a draft of their documentation for informal review to the Mission Environmental Officer, a Regional Environmental Officer (where available), the BHR BEO or the geographic BEO to obtain feedback prior to formal submission. To avoid possible confusion in the clearance process all drafts circulated for comment and/or information should be clearly dated and marked "DRAFT -- Not Yet Approved by Mission." This draft submission process will likely be facilitated if the draft is submitted by the MEO or Mission FFP Officer on behalf of the CS for review by one of the BEOs or the REO (where one exists). In all cases, the DAP IEE/Categorical Exclusion, PAA Environmental Status Report, or DAP/PAA IEE amendment must first be cleared by the Mission Director or his/her designee **prior** to final approval by USAID/Washington.

1.5 Resources to Support Environmental Analysis and Capacity Building

This document has been developed by BHR/FFP, through the assistance of the Africa Bureau. Also, a much shorter field version of the EDM, *A Field Guide to USAID Environmental Compliance Procedures* (March 1998) has been produced by CRS and FAM. Both have been distributed to PVO headquarters, field staff, and USAID Missions. In addition to these documents (which are referenced in the annual *P.L.480 Title II Guidelines for Program Proposals* disseminated by BHR/FFP), CSs should consult the Mission and Bureau Environmental Officers, and the Regional Environmental Officer (if one exists).

Considerable interest exists within USAID and the Title II PVO community to ensure environmentally sound design and management of development activities. Resources are available within host country universities, among host government environmental/natural resource planning and management units, and through in-country private consultants. It may also be possible to capitalize on available training courses in technically specific areas of value to NGOs/PVOs and others. USAID's Africa Bureau has prepared *Environmental Guidelines for Small-Scale Activities in Africa* which provides summary information and suggestions.

There are many other handbooks on environmentally sound design and management of small-scale projects, such as the CODEL series (available from VITA) covering small-scale activities in agriculture, forestry, livestock, integrated conservation and development projects, and water projects (see References in the Africa Bureau's *Environmental Guidelines* for a complete listing). *Project Food Aid, User's Guide for the Design of Food-Aided Development Projects* by Bryson, et al. (1991) provides guidance on the adoption of sound food aid management practices in all sectors (see especially Part III, Section 9 on natural resources management). See Annex G for a comprehensive listing of reference documents; most of the citations include information on how to obtain the documents. You may wish to contact FAM's Food Security Resource Center directly for more information on the environmental documents the Center has on file (See Annex G.2) and those which are available electronically (including sample Reg. 216 environmental documentation submitted by other CS's). Their website is **http://www.foodaid.org.** The International Association for Impact Assessment (IAIA) website is a valuable starting point for exploring environmental assessment resources on the Internet at **http://iaia.ext.nodak.edu/IAIA**.

You may also find USAID's Internet site index useful for tracking down resources available through USAID—the address is **http://www/info.usaid.gov/site_index.html**. Finally, there are pertinent resources and documents available through USAID's Bureau for Africa, Division for Productive Sector Growth and the Environment at **http://www.info.usaid.gov/regions/afr/sdpsge/psgehome.html**. Also see the BHR website **http://www.info.usaid.gov/hum_response/titleii.htm**.

USAID, PVOs and FAM have generated and received numerous ideas for how best to provide additional resources and capacity to support environmental analysis. Some of these ideas are discussed in Section 5. We welcome your additional suggestions and thoughts.

1.6 Resource Agencies

A separate insert to the EDM provides a detailed contact list (including names, addresses, phone, fax and e-mail). Contact updates are also available from The Food Aid Management Resource Center Internet address listed above.

Section 2

Environmental Decision Guide (EDG)

2 ENVIRONMENTAL DECISION GUIDE (EDG)

2.1 Introduction

2.1.1 Introduction to the Environmental Decision Guide

Purpose

This Guide helps you classify Title II activities when preparing environmental documentation for submission with your DAP or PAA. Each new DAP requires compliance with USAID regulations. In addition, CSs are required to re-examine each year the potential environmental impacts of their programs to make sure their Reg. 216 documentation is still applicable, still covers everything, and has no unresolved matters. Thus, the Guide is also used to determine what kind of revised Reg. 216 environmental documentation may be necessary. Always start with this Guide; then proceed to Section 3. In this manual, the term "Reg. 216 documentation" covers Categorical Exclusion, IEE and EAs as defined under Reg. 216, as well as the annual Environmental Status Report as required by the *P.L. Title II Guidelines for Program Proposals*.

The Reg. 216 documentation should cover the entire life-of-project (LOP) activities, even if some were begun long before submission of Reg. 216 documents.

To help ensure CSs re-examine the environmental impacts of their programs, and determine whether they need to revise or amend their environmental documentation, all Title II PAAs must include an Environmental Status Report (see Section 3.2 and Annexes A.5 and A.6 for specific instructions). The Environmental Status Report (ESR) provides a) information to guide you on the kinds of changes that might necessitate amended environmental documentation; and b) a means to demonstrate the status of compliance with environmental mitigative measures, monitoring or other conditions that may have been required to ensure environmentally sound activities. If amended documentation is needed, you will need to use this Environmental Decision Guide, and other instructions in this Manual. If a CS submits a DAP Amendment, it must also include an amendment to the DAP's Reg. 216 documentation.

Organization

The Guide has two principal parts: (1) this introduction, which explains the purpose of the Guide, what you will need to use it, where to go for help, how to begin, and important definitions; and (2) a Step-by-Step environmental decision process, which helps you determine the Reg. 216 classifications of your activities and the type of response you will need to make to meet Reg. 216 requirements.

Effective Use

The most important first step is to gather information about all activities you are planning or implementing, including location, specific nature, and all components of the activity, including any ancillary activities related to the primary activity. For example, if you are assisting with small-scale irrigation, is a road being built as part of the irrigation activity? What are the specific physical components of the activity, such as small-scale irrigation that requires a diversion or a dam, water distribution canals, leveling of land, possible relocation of farmers, etc.?

If you have activities for which detailed information is not available, gather whatever information you can about the generic nature and general location of such activities.

The information you gather should be organized in table(s) that facilitate decisions about the next steps. A Sample Summary table is provided as Table 2.2 and an example table is illustrated in Annex E.1. Definitions of terms and explanations of how to fill out these tables are provided in the Guide instructions that follow.

Beginning to Use this Guide

Read through the entire Environmental Decision Guide first. Look at the accompanying flow charts to gain an idea of the overall process. Note the additional resource information provided elsewhere in the Manual to which this guide will refer you from time to time. Remember that the purpose of this guide is to help you determine what form of environmental documentation you will need to comply with the Agency's environmental regulations and, in the process, to help you design and undertake environmentally sustainable activities.

2.1.2 Obtaining Help

You may need two principal types of assistance and information:

C Clarification or information regarding USAID environmental procedures and use of the Guide. For information relating to USAID procedures and this guide, contact the MEO, who will be able to help you or to refer your questions to a regional office or an appropriate BEO.

C Technical or topical information concerning the environment or the relationship of your activity to its setting. If you need information about the environment or setting in your particular location, contact appropriate in-country agencies and organizations. For example, if you need to know if there are protected areas, such as parks or reserves, in the vicinity of your activities, contact the responsible Ministry or Authority in the country. In certain instances, you might want to approach specialists at the university or environmental NGOs working in the country. The MEO may be able to help you identify these contacts.

2.1.3 Important Definitions: Types of Environmental Decisions

Reg. 216 defines several types of environmental decisions (also called classes of action in the regulation) and types of environmental effects:

Exemption: Exemptions are classes of action not subject to Reg. 216. Nevertheless, prudent and sound environmental practices should be applied. See Section 2.2.1 of this guide.

Categorical Exclusion: Categorical Exclusions are classes of actions that typically do not affect the environment, such as studies, seminars, or training. They require only brief documentation that supports the applicability of the exclusions as defined in Reg. 216. See Section 2.2.2 of this guide.

Threshold Decision: This is a formal USAID decision that determines, based on an Initial Environmental Examination (IEE), whether a proposed action is a major action that significantly affects the environment.

Significant (Adverse) Effect or No Significant (Adverse) Effect: Under Reg. 216, an effect is considered significant when an action does significant harm to the environment. An effect is not considered significant when activities are **not** expected to do significant harm to the biophysical environment—under normal conditions and with good practices. Many, if not most, of USAID's activities are not specifically listed in Reg. 216, i.e., they are not exempt, nor are they Categorical Exclusions, and yet these activities do not normally have a significant effect on the environment. **Development activities that do not have significant effects—and are neither exempt nor categorically excluded—still have an environmental documentation requirement.**

An IEE is the document normally needed to determine whether an activity has significant or no significant adverse effect. An IEE is required for obligation of funds/implementation of an activity. No irreversible commitments of resources can be made before the IEE is approved (see Section 2.2.3).

> **Negative determination:** A threshold decision within an IEE is referred to as a **negative determination**[2] if the activity has no significant (adverse) effects on the environment. If the determination is negative, but some specific conditions merit monitoring (one cannot predict everything) or if there are some specific mitigative measures (i.e., measures that can be taken to minimize, avoid, or compensate for adverse effects during construction or implementation), the **negative determination** can be made **with conditions**. For example, a condition might be that water quality be monitored or that measures be taken to prevent erosion and siltation.
>
> A specific instance of a negative determination with conditions can apply when there are multiple small-scale activities, the details of which are not known when the IEE is prepared, in which case the conditions specify subsidiary environmental reviews. Additional information is provided below in Section 3 and in Annex F.
>
> **Positive Determination:** The threshold decision is referred to as a **positive determination** if there could be significant adverse effects. The regulation has a specific list of actions normally having a significant effect. From a practical point of view and as a matter of Agency practice, this class of action should also include preparation of an IEE. In this instance, the IEE is normally the prelude to preparing an Environmental Assessment (EA), which, in the case of a significant (adverse) effect, is the document needed to permit obligation of funds/implementation of an activity. No irretrievable commitments of resources can be made before the EA is completed and approved. **The regulation permits one to prepare an EA without preparing an IEE first, but this guide does not recommend that approach.** (See Sections 2.2.3 and 2.2.4.)

Under Reg. 216, an EA is prepared for USAID actions outside the U.S., but this does not apply when these actions might affect the U.S., the global environment, or areas outside the jurisdiction of any nation, such as oceans. Where such effects might occur, as determined by the Agency Environmental Coordinator,[3] Reg. 216 calls for preparation of an Environmental Impact Statement (EIS). The EIS requirement is very rarely invoked—only one has been done in USAID's history (but see 2.2.4 below—relating to pesticides and endangered species).

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[2] By way of analogy think of negative and positive in medical terms. For example, a negative tuberculosis test indicates that you do not have the disease.

[3] The person who overseas application of Reg. 216 for USAID.

Deferral: A deferral requires documentation, within the context of an IEE, that explains why a threshold decision cannot be made, typically because of insufficient information. Deferring a threshold decision on an activity or a specific component thereof also means deferring implementation of the affected activity. Deferrals only postpone the inevitable—one must return to do an amended IEE to resolve the outstanding deferral of a decision. In some cases, particularly small-scale activities, the negative determination with conditions that require subsidiary environmental reviews is preferable.

See **Box 2.1** and **Figure 2.1 (Decision Tree for Reg. 216)**, which summarize these classes of actions.

Box 2.1. Main Types of Reg. 216 Environmental Decisions—at a Glance (Refer to Figure 2.1)

- **Exemption**
- **Categorical Exclusion**
- **Threshold decisions**
  - No Significant (Adverse) Effect (or Impact)—IEE needed
    - *Negative Determination*
      - Without Conditions
      - With Conditions
  - Significant (Adverse) Effect—IEE not necessarily needed (but recommended by this EDG)
    - *Positive Determination*
      - Environmental Assessment
      - Programmatic Environmental Assessment
- **Deferral**

2.2 The Step-by-Step Environmental Decision Process

This portion of the EDG has four parts (go through each in order).

C Section 2.2.1 helps you determine whether any of your activities are *exempt* from USAID environmental procedures.
C Section 2.2.2 helps you determine if any of your activities qualify for *Categorical Exclusions*.
C Section 2.2.3 helps you categorize your activities or activity components that will require an *IEE.*
C Section 2.2.4 can be used to identify whether any of your activities require an *EA.*

Very often the activities or their components under a DAP or PAA fall under more than one class of action. It is therefore possible to classify some activities in one way and some in another in a single IEE. This is typically the case.

Please note that the section (§) numbers from the Agency's environmental regulation are cited below as appropriate. Actual excerpts from Reg. 216 are italicized. These are provided as a convenience, since you may need to cite them in preparing the environmental documentation based on the outcome of using this guide. You may also use the section numbers to help find the full text in the regulation, which is provided in Annex D.

Organize the list and information about proposed and planned activities (see Section 2.1.1), including their various components, in a table similar to Table 2.2, found as a blank template at the end of this Section. Then

answer the questions below. [Please note that the BHR BEO typically requests that a summary table be part of the environmental documentation submitted by a CS.]

2.2.1 Are Any of Your Activities Exempt from USAID Environmental Procedures?

Justifications that allow activities to be exempt from the Agency's environmental regulation are limited. This Environmental Documentation Manual is directed at food-aided **development** activities. Emergency activities are not addressed here. If you have reached the point of using this guide, your activities are **probably NOT exempt.**

**Exemptions** [§216.2(b)(1)]:[4]

(1) Projects, programs, or activities involving the following are exempt:

(i) International disaster assistance [International disasters are declared by the U.S. Ambassador in the country(ies) involved, including those that receive emergency food aid];

(ii) Other emergency circumstances; and

(iii) Circumstances involving exceptional foreign policy sensitivities.

Sometimes Title II activities are exempt because they are undertaken as part of international disaster assistance, which could involve emergencies (for example, civil strife, famine, major earthquake, or flood). Make certain you determine which activities are exempt for this reason and obtain the appropriate citation for each. There are instances in which "notwithstanding" authorities will be invoked for emergency actions that have the effect of waiving certain normally required provisions. These instances will need to be determined in consultation with USAID. For example, "notwithstanding" language exists for TII "emergency feeding" programs that exempts these activities from everything, including 22 CFR 216. The purpose for this is to avoid slowing down food drops to people who are on the verge of starving to death—it is not for sustainable development.

The exemptions of §216.2(b)(1) are not applicable to assistance for the procurement or use of pesticides.

Development activities almost never qualify for exemptions. Permission for an exemption under (ii) and (iii) is required from the highest levels of USAID and from the President's Council on Environmental Quality. In the extremely unlikely event that your activities might qualify for exemptions (ii) and (iii), a formal written determination, including a statement of justification, is required for each project, program, or activity. The determination is made by the Assistant Administrator with responsibility for the program, project, or activity, or by the Administrator, where authority to approve financing is reserved for the Administrator. The determination is made after consultation with the Council on Environmental Quality (a **rare** event) regarding the environmental consequences of the proposed program, project, or activity.

Table 2.1 lists several kinds of PVO activities that USAID may determine to be exempt.

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[4] All italicized text in this section is directly quoted from Reg. 216.

The Agency Environmental Coordinator has responded to several questions from the field concerning exemptions in order to clarify the underlying principles that justify an exemption.[5]

On the ground, practitioners not infrequently encounter situations which require distinguishing between emergency and development programming modalities, and decisions need to made as to whether emergency or development procedures and requirements apply, especially as related to environmental compliance. Typically questions arise as to how one handles:

1) actual (unpredictable) emergencies, such as major floods, cyclones or similar, that are declared disasters by the Ambassador and which, if they use TII funds, could be considered exemptions, in accordance with 216.2(b)(1)(i);

2) emergencies that are defined to be emergencies because the source of funding is the emergency side of FFP, in which case the justification for an exemption does not appear to lie within Reg 216 (but could lie elsewhere?); and

3) emergency programs that are justified with "notwithstanding" clauses and which may not be actual emergencies in the sense of number 1, but the source of the justification for not applying Reg. 216 is a “notwithstanding” clause(s).

Table 2.1. Illustrative Activities That May Qualify for Exemption

Type of Activity	Reason for Exemption
Emergency relocation of flood victims	Immediate response required; no alternatives available
Refugee camp establishment for rural populations caught in civil strife	Displaced populations without means or land to grow food; no immediate alternatives available
Emergency medical infrastructure, materials, and equipment for victims of war	Emergency medical requirements for injured populations

- When the current 22 CFR 216 was drafted in 1979-80, USAID created 216.2(b)(1)(i) for declared disaster assistance to avoid any possible delay in getting assistance to people who would die or suffer terribly if help didn't arrive in a matter of days. In the process, *(ii) Other emergency circumstances* and *(iii) Circumstances involving exceptional foreign policy sensitivities* were provided as contingencies to cover matters where people like the Administrator and the White House agreed that in extraordinary cases something was so urgent or so sensitive that environmental review was simply outweighed by the foreign policy need. The benchmark is extraordinarily high for these “emergency” or “foreign policy sensitivities” exemptions. They have been used rarely and even USAID’s first work in war-torn Bosnia did not qualify.

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5 Source: Jim Hester, USAID’s Agency Environmental Coordinator (AEC), May 14, 1998 e-mail to Charlotte Bingham, REDSO/ESA REO and Nov. 30, 1998 e-mail to Walter Knausenberger.

- Spending time and effort finding ways around an environmental review is time wasted that could have been used to make a project more effective. The purpose of the regulation is not to go through pointless bureaucratic gyrations, but to ensure a professional job of designing a project to be sustainable and not hurt the people and the society it is trying to help. Whether or not there were a 22 CFR 216, not considering environmental impacts will lead to underperformance or harmful activities.

- USAID has determined that declared disaster assistance emergencies with Office of Foreign Assistance (OFDA) funding are the only situations that qualify for *exemption (i)*. The purpose of this exemption is to give USAID the flexibility to address those disaster situations where even a day or two of delay would cause loss of lives and where getting relief to a location is critical. Even in cases of OFDA disaster assistance, the exemption clause should not be considered a license to ignore environmental consequences. OFDA does **advance planning** on how it will respond to different categories of disasters and **this is where efforts should be made to ensure that whatever is designed as a standard response package is as environmentally sound as possible**, in the same way that OFDA puts serious thought into advance planning to deliver medicines or temporary shelter. When a disaster response is extended in time, there should be a conscious effort to consider environmental impacts and to adjust assistance so as to minimize any long-term harm it might cause.

- USAID and other donors are now beginning to understand that giving exemptions to disaster assistance may not be as humane as once thought, since poorly designed disaster assistance can result in major problems being created after the disaster has passed. Refugee camps are one example. CSs, USAID, and other donors are learning that while very real needs may exist to get help to people as fast as possible in emergencies, there is also a need to "pre-design" emergency response packages with full consideration of environmental implications and mitigate them in advance of a response. They are also undertaking environmental review concurrently with providing disaster assistance, so that the assistance can be modified as it goes along to make it more environmentally sound.

  USAID's own OFDA has developed guidance for use by PVOs/NGOs in preparation and response to emergencies. **PVOs/NGOs are encouraged to develop environmentally sensitive programs based on this guidance and to coordinate their activities with the United Nations High Commission for Refugees (UNHCR) or other entities, which have environmental procedures for refugee operations.** Some of the UNHCR documents are referenced in Annex G.2.

In summary, **if you have activities that might fall under (i), consult the MEO (or appropriate parties) as soon as possible** to confirm that an exemption might be in order. Include appropriate information in your DAP or PAA indicating what activities are exempt and why. If some of your activities are considered exemptions under (i), include the justifying document (e.g., the disaster assistance cable) in your Reg. 216 environmental documentation.

"Notwithstanding" authorities are found throughout U.S. Government Foreign Appropriations and Assistance regulations, pertaining to exceptions permitting programming despite various prohibitions (i.e., these prohibitions "notwithstanding") for exigencies of various sorts: e.g.,

- for bonafide declared emergencies threatening human lives with imminent danger, political sensitivities; and

- for overriding geopolitical factors and programmatic needs (such as regional HIV/AIDS programs) deemed important and "without borders"—thus being able to operate in countries

in which USAID has no Mission ("non-presence" countries) or is prohibited by law from assisting (e.g., due to military coup—Section 508 of the FY98 Appropriations Act).

For pesticide use, even notwithstanding clauses do not override the need to have a proper risk-benefit assessment, following USAID's Pesticide Procedures in 22 CFR 216.3(b).

2.2.2 Do Any of Your Activities Qualify for Categorical Exclusions?

Reg. 216, 22 CFR 216.2(c)(1), provides three general criteria that define a more specific list of Categorical Exclusions provided in 216.2(c)(2). The three criteria are:

(i) *The action does not have an effect on the natural or physical environment*;

(ii) *[USAID] does not have knowledge or control over, and the objective of [USAID] in furnishing assistance does not require, either prior to approval of financing or prior to implementation of specific activities, knowledge or control over, the details of the specific activities that have an effect on the physical and natural environment for which financing is provided by [USAID]*; and

(iii) *Research activities which may have an effect on the physical and natural environment but will not have a significant effect as a result of limited scope, carefully controlled nature, and effective monitoring.*

These three criteria **are not normally used** in determining and citing Categorical Exclusions. Instead, you should use the specific list below which is taken from §216.2(c)(2). The list above is used **only** if the activity meets the criteria but is not specifically listed below. For example, you will notice that none of the items below covers monetization per se, so it would be appropriate to cite 22 CFR 216.2(c)(1)(i) *The action does not have an effect on the natural or physical environment*.

Categorical Exclusions [§216.2(c)(2)]:[6]

The classes of action defined as Categorical Exclusions are listed below. If Categorical Exclusions apply to your activities or components thereof, enter these activities in Table 2.2 with the relevant information:

(i) Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.);

(ii) Controlled experimentation exclusively for the purpose of research and field evaluation which are confined to small areas and carefully monitored [Note: a working definition of small would be fewer than four hectares (ha) or ten acres.];

(iii) Analyses, studies, academic or research workshops and meetings;

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[6] All italicized text in this section is directly quoted from Reg. 216.

(iv) Projects in which USAID is a minor donor to a multidonor project and there are no potential significant[7] effects upon the environment of the United States, areas outside any nation's jurisdiction or endangered or threatened species or their critical habitat [Note: USAID is a minor donor when its total contribution to the project is both less than $1,000,000 and less than 25 percent of the estimated project cost, or USAID's total contribution is more than $1,000,000 but less than 25 percent of the estimated project cost and the environmental procedures of the donor in control of the planning of design of the project are followed, but only if the USAID Environmental Coordinator determines that such procedures are adequate.];

(v) Document and information transfers;

(vi) Contributions to international, regional or national organizations by the United States which are not for the purpose of carrying out a specifically identifiable project or projects;

(vii) Institution building grants to research and educational institutions in the United States such as those provided for under section 122(d) and Title XII of Chapter 2 of Part I of the FAA [22 USCA §§2151 p. (b) 2220a. (1979)];

(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, waste water treatment, etc.) [Note: if biohazardous waste is handled, blood is tested, or syringes are used (as in an immunization program), mitigative measures to deal with waste disposal must be identified in an IEE.];

(ix) Assistance provided under a Commodity Import Program when, prior to approval, USAID does not have knowledge of the specific commodities to be financed and when the objective in furnishing such assistance requires neither knowledge, at the time the assistance is authorized, nor control, during implementation, of the commodities or their use in the host country;

(x) Support for intermediate credit institutions when the objective is to assist in the capitalization of the institution or part thereof and when such support does not involve reservation of the right to review and approve individual loans made by the institution [Note: if there could be some biophysical impact from the loans made by the credit institution, for most rural credit programs, procedures for environmental review should be incorporated in the program and this activity should be addressed as part of an IEE.];

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[7] In this particular instance the term "significant" is defined according to the U.S. Council on Environmental Quality regulations, because it applies to effects on the U.S. or outside a nation's jurisdiction. When effects are limited to countries outside the U.S. the word significant is defined as causing significant harm to the environment. Should you have an activity that might have significant effects on the U.S. or that is outside a nation's jurisdiction, consult the BEO.

(xi) Programs of maternal or child feeding conducted under Title II of [Public Law] *480* [Note: when there are no on-the-ground physical interventions.];

(xii) Food for development programs conducted by food recipient countries under Title III of [Public Law] *480, when achieving USAID's objectives in such programs does not require knowledge of or control over the details of the specific activities conducted by the foreign country under such program* [Note: PVOs do not receive Title III funds, so this categorical exclusion does not apply.];

(xiii) Matching, general support and institutional support grants provided to private voluntary organizations (PVOs) to assist in financing programs where USAID's objective in providing such financing does not require knowledge of or control over the details of the specific activities conducted by the PVO [Note: Title II is considered a commodity transfer, not a grant. Activities supported by 202(e) funds are subject to Reg. 216 compliance.];

(xiv) Studies, projects or programs intended to develop the capability of recipient countries to engage in development planning, except to the extent [they are] *designed to result in activities directly affecting the environment (such as construction of facilities, etc.);* and

(xv) Activities which involve the application of design criteria or standards developed and approved by USAID [Note: to date USAID has no such approved criteria or standards, so this categorical exclusion will not apply.]

A Few Reminders

C **The most common Categorical Exclusions that will apply to Title II programs are 216.2(c)(2)(i), (ii), (iii), (v), (viii) or (xi).**

C **The Categorical Exclusions of §216.2(c)(2) are not applicable to assistance for the procurement or use of pesticides.** No use of pesticides will be approved unless USAID pesticide procedures have been satisfied. Consult Annex D [22 CFR 216.3(b)].

C Certain activities, for example, monetization or supplying computer equipment, may not fall under the specific list provided in §216.2(c)(2). However, since they normally have no significant adverse effect on the environment, they can be categorically excluded by citing one or more of the three general criteria in 216.2(c)(1). **When an activity does not fit under §216.2(c)(2), but is still categorically excluded, this should be explained, together with citation of 216.2(c)(1)**.

C Categorical Exclusions are not a right; they are granted at the BEO's discretion.

Enter in Table 2.2 all those activities or components thereof to which the above items apply. **If all your activities qualify for Categorical Exclusions as defined above, you need only complete the Facesheet and the narrative attachment for a Categorical Exclusion** (as provided in **Annex A.1 and A.2**) in which

you describe the activities briefly and cite the relevant section number(s), e.g., 216.2(c)(iii) as the basis for the exclusion.

Enter Categorical Exclusion Activities in Sample Tables 2.2.

Box 2.2. Categorical Exclusions and "Except Clauses" Requiring Further Environmental Decision Making - The Example of Health Facilities

You should keep in mind that classifying activities under Categorical Exclusions (CEs) without adequately considering potential environmental effects can contribute to environmentally unsound design and implementation. For example, the CE for health related programs is based on Reg. 216.2(c)(2)(viii) for "[p]rograms involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, waste water treatment, etc.)"

The "except clause" covers circumstances when a CE will not do, such as construction, but there may be others, for example, generation and disposal of medical waste, including sharps from immunization programs, or laboratory wastes or ITNs (Insecticide-Treated Mosquito Nets), etc.

Thus, it is important to look beyond the initial CE classification you may give an activity to determine whether there are potential effects that may require mitigation or monitoring.

For more on health waste issues (common in many Title II health-related programs), CSs should consult *Healthcare Waste Management: A WHO handbook for the safe handling, treatment and disposal of wastes* (draft September 1997) and WHO's *Disposal and Destruction of Syringes and Needles in Viet Nam and the Philippines* (1998)." These and other related documents are on file with FAM's Food Security Resource Center and are referenced in Annex G.2. There is also more information available from the health impact assessment section of the International Association of Impact Assessment. Contact the following address on the Internet to join their listserver: **http://iaia.ext.nodak.edu/iaia/listserv.html**. You are also encouraged to seek advice, when appropriate, from your MEO, REO (where available), or your geographic or BHR BEO. Consult the BHR BEO or the Geographic BEO for updates on this information and any Programmatic Environmental Assessments on medical waste or insecticide-impregnated bednets.

2.2.3 Which of Your Activities Need an IEE?

Activities or activity components that are neither Exemptions nor Categorical Exclusions require an IEE and sometimes an EA.[8] Typically, these activities are in a "gray area," because they are neither clearly excluded from further environmental review, nor appear to have significant effects that trigger an EA. IEEs are a decision-making tool and are prepared to provide a first look at possible effects of activities on the environment. An important function of an IEE is to incorporate design modifications and appropriate ways to avoid or reduce potential impacts. It is also used to identify any needed monitoring.

Thus, unless all of your DAP activities qualify as Exemptions or Categorical Exclusions, you will prepare an IEE. These include all those activities that might trigger an EA and everything else (see Definitions in Section 2.1.3). See Section 2.2.4 of this guide to determine if your activities may or may not have a significant effect. The Facesheet for Environmental Compliance (Annex A.1) accommodates several determinations, according to the activities involved.

For all activities that are neither Categorical Exclusions nor Exemptions, an IEE will be prepared by the originator of an action. For projects including the procurement or use of pesticides, the procedures set forth in §216.3(b) will be followed, in addition to the IEE procedures.

Review your list of activities and their components:

- You should have already entered into Sample Table 2.2 those activities eligible for Categorical Exclusions.

- You should now list all additional activities that are not yet listed in Table 2.2. After you have prepared the IEE (see Sections 3 and 4), you will be able to determine if these are negative determinations with or without conditions, deferrals, or even, in some rare instances, positive determinations.

- If you have negative determination(s) the appropriate citation is also §216.3(a)(2)(iii).

- If you have deferrals the citation is §216.3(a)(1)(iii).

For these activities (Section 2.2.3) and any identified in Section 2.2.4, you normally will need to prepare an IEE.

2.2.4 Do Any of Your Activities Potentially Require an Environmental Assessment (EA)?

Activities that can trigger an EA are covered under four sets of regulatory provisions. These are: (1) actions normally having a significant effect on the environment [22 CFR 216.2(d)(1)]; (2) some pesticides [22 CFR 216.3(b)]; (3) endangered species and critical habitats [22 CFR 216.5]; and (4) special provisions of the

[8] Reg. 216 permits one to prepare an EA, if the activities are clearly to be given a positive determination, without preparing an IEE first, but this EDG recommends that you prepare the IEE as a precursor to an EA. Section 4.4 describes what to do if an IEE leads to a positive determination.

Foreign Assistance Act as described below. **All those activities or components thereof to which these four provisions apply should be entered in Table 2.2** as potential positive determinations.

The regulation defines an EA as "a detailed study of the reasonably foreseeable significant effects, both beneficial and adverse, of a proposed action on the environment of a foreign country or countries." See the Reg. 216 language [§216.6] in Annex D for more detail. The regulation provides information about the processing, format, and content of an EA, which is a relatively major document (with more detail, coverage, and depth than the IEE). EAs frequently take several months to a year to complete and are not normally applied to small-scale activities.

The four regulatory provisions that trigger an EA serve as a potential "red flag" that an EA **might be** required. You will note as you read the items covered by these four provisions that there is no reference to scale or magnitude of actions. The need for an EA as opposed to an IEE is a matter of judgment. Thus, you will prepare an IEE, even if you have activities included in this list, so that you can provide information about scale, scope, and magnitude of the activities. (For example, if your activities are small-scale or if pesticides have a specific kind of registration status, you will indicate in the IEE why mitigative measures and monitoring are sufficient and why an EA might not need to be prepared. Remember that EAs for small-scale activities are relatively rare. Box 2.3 examines the Title II activities that may or may not trigger an EA.

If you have sets of similar activities, or you and other Title II sponsors working in the same area have similar activities, you might consider a Programmatic EA (PEA), which looks generically or programmatically at the entire class of actions, such as dams and irrigation interventions in Country X. Guidance on the use of PEAs is also provided in Reg. 216 [§216.6(d)]. The regulation states they "may be appropriate in order to assess the environmental effects of a number of individual actions and their cumulative environmental impact in a given country or geographic area, or the environmental impacts that are generic or common to a class of agency actions, or other activities which are not country specific." Classic PEAs are of benefit when a broad examination of a class of impacts is needed, typically in situations where previous EAs have not been performed and there is little past experience to use as a guide. See **Annex C: Programmatic Environmental Assessments—Special Application** for additional detail.

See Section 4.4 for pointers regarding next steps if your IEE leads to a positive determination.

"Actions normally having a significant effect on the environment" [§216.2(d)(1)]:

Reg. 216 identifies several generic "classes of action" that are considered *a priori* to have a high potential for causing harm to the environment and normally require an EA. These are:

(i) Programs of river basin development;

(ii) Irrigation or water management projects, including dams and impoundments;

(iii) Agricultural land leveling;

(iv) Drainage projects;

(v) Large scale agricultural mechanization;

(vi) New lands development;

(vii) Resettlement projects;

(viii) Penetration road building or road improvement projects;

(ix) Powerplants;

(x) Industrial plants; and

(xi) Potable water and sewerage projects other than those that are small-scale.

Box 2.3. Common Title II Development Activities that May Trigger an EA

Food-aided development activities could well invoke an EA if they involve the sorts of actions listed in Section 2.2.4. Specifically, categories of food-aided activities that will require an IEE and could trigger an EA include:

C road rehabilitation and construction
C dam construction, river diversion
C development of irrigation perimeters
C pesticide use: agricultural, medical, veterinary
C large-scale program of potable water and sewerage
C land leveling or extensive terracing and bunding
C exotic species introduction, especially if a protected area could be affected

Because PVO activities are typically small in scale, and do not involve new lands development, the examples cited above may not trigger an EA. Therefore, if you think you may have to do an EA, first complete an IEE on the proposed activity. You should prepare an IEE so you can provide information on the scale, scope, and magnitude of the activities. The rule to apply is that **when activities include classes of actions normally having an effect on the environment, the CS will first do an IEE**.

No definitive standards or written criteria exist to distinguish "small-scale" from "large-scale" and "non-significant" from "significant." It is the role of the IEE to make the case for a threshold decision. Communication with the MEO and BEO is advised to help the PVO use the IEE as a means of explaining whether an EA is needed or not. An EA may follow as an outcome of the threshold decision in the IEE, but is likely to be relatively rare for the majority of the CSs' activities.

Procurement or Use[9] ***of Pesticides [§216.3(b)]***

Any assistance involving procurement or use of pesticides is subject to USAID's Pesticide Procedures [22 CFR 216.3(b)]. The definition of a pesticide is broad and includes insecticides, fungicides, herbicides, many other "cides" as well as botanical pesticides and certain biological controls. In many instances, an IEE suffices to describe the conditions for safe use of pesticides. Some types of pesticides require an EA (or EIS);

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[10] "Use" is interpreted broadly by USAID, to include direct or indirect support to actual use such as transport, provision of fuel for transport, storage or disposal, etc. (i.e., cradle to grave.)

other pesticides may require an EA on the basis of a threshold decision made in an IEE. If pesticide procurement or use is part of your activity, you will need to review the specific provisions of 216.3(b), then determine the USEPA registration status and what restrictions apply with respect to user or environmental hazard, and find out whether USEPA intends to cancel or suspend registration, or has initiated other types of regulatory actions. Unless the exceptions (stringent) of 216.3(b)(2) apply, an IEE must be prepared that addresses the 12 specific types of information required by 216.3(b)(1)(i).

Users of the EDM may find it useful to obtain up-to-date information on pesticide registration at the following Internet website: <**http://www.epa.gov/pesticide**>.

In practice, USAID's pesticide procedures have had an unintended chilling effect on USAID's engagement in pesticide management, because of the perceived technical and informational hurdles. Paradoxically, Reg. 216 has also tended to minimize the inclination of USAID and its partners to become involved in integrated pest management (IPM). There is no reason why the prudent use of well-chosen, so-called general-use and least-toxic pesticides should not be readily justifiable to promote crop productivity. Ideally, these can be linked to IPM and sustainable agricultural practices.

In order to apply USAID regulations pertaining to pesticides, the name of the pesticide to be used and its USEPA registration status must be known. Contact your headquarters PVO support staff and USAID's BEOs for assistance. Also, for guidance on pest and pesticide management, you may wish to consult *Environmental Guidelines for Small-Scale Activities in Africa* (Knausenberger et al. 1996).

Endangered species and critical habitat [§216.5]

It is A.I.D. policy to conduct its assistance programs in a manner that is sensitive to the protection of endangered or threatened species and their critical habitats. The Initial Environmental Examination for each project, program or activity having an effect on the environment shall specifically determine whether the project, program or activity will have an effect on an endangered or threatened species, or critical habitat. If the proposed project, program or activity will have the effect of jeopardizing an endangered or threatened species or of adversely modifying its critical habitat, the Threshold Decision shall be a Positive Determination and an Environmental Assessment or Environmental Impact Statement completed as appropriate, which shall discuss alternatives or modifications to avoid or mitigate such impact on the species or its habitat.

For more on endangered and threatened species and the U.S. response to the Convention on International Trade in Endangered Species (CITES) see Box 2.4.

Provisions of the Foreign Assistance Act (FAA)

- ***Tropical Forests.*** Based on amendments to the **1992 FAA, Section 118(c)(14)** assistance must be denied for:

  (A) the procurement or use of logging equipment (unless an environmental assessment indicates that all timber harvesting operations involved will be conducted in an environmentally sound manner which minimizes forest destruction, and that the proposed activity will produce positive economic benefits and sustainable forest management systems); and

(B) actions which significantly degrade national parks or similar protected areas which contain tropical forests or introduce exotic plants or animals into such areas.

Assistance must also be denied under **Section 118(c)(15)** for the following activities, unless an environmental assessment indicates that the proposed activity will contribute significantly and directly to improving the livelihood of the rural poor and will be conducted in an environmentally sound manner which supports sustainable development:

(A) Activities which would result in the conversion of forest lands to the rearing of livestock.

(B) Construction, upgrading or maintenance of roads, including temporary haul roads for other logging or other extractive industries, that pass through relatively undegraded forest lands.

(C) Colonization of forest lands.

(D) Construction of dams or other water control structures that flood relatively undegraded forest lands.

C ***Biological Diversity and Endangered Species.***

Section 119 of the Foreign Assistance Act specifies that the preservation of animal and plant species through the regulation of hunting and trade in endangered species, through limitations on the pollution of natural ecosystems and through protection of habitats, is an important objective of U.S. development assistance. USAID must ensure that ongoing and proposed actions by the Agency do not inadvertently endanger wildlife or plant species or their critical habitats, harm protected areas, or have other adverse impacts on biological diversity.

Section 119(g)(10) provides for the denial of direct or indirect assistance "*for actions which significantly degrade national parks or similar protected areas or introduce exotic plants or animals into such areas.*"

In addition to the endangered species provisions of Reg. 216 and the Foreign Assistance Act, the Endangered Species Act of 1973 (as amended in 1978, 1982, 1988, and 1998) and the CITES convention affect USAID-funded actions overseas (see Box 2.4).

Box 2.4 Endangered and Threatened Species: What is CITES?

C CITES is the Convention on International Trade in Endangered Species of wild flora and fauna.
C CITES began in the mid-1970s with 139 member states as signatories.
C CITES is a global alliance whose focus is the protection of plants and animals that otherwise could be over-exploited by unregulated international trade.

What are the Appendices of CITES?

The UN sponsored a conference in Sweden in 1972 to recognize the need for focused international efforts to conserve wildlife. A treaty evolved from this conference which was designed to control the international trade in species that either were threatened with extinction or could become threatened with extinction. Three appendices were created:
Appendix I. Species in which commercial trade is prohibited and non-commercial use strictly controlled. *Examples: red panda, golden-capped fruit bat and Arowana freshwater fish.*
Appendix II. Species in which trade is strictly regulated to avoid jeopardizing species survival. *Examples: Nile crocodile, minke whale and leopard cat.*
Appendix III. Species identified by individual CITES parties as subject to domestic regulations to restrict or prevent exploitation. *Examples: golden jackal, walrus and little egret.*

What is the Red List?

The Red List is the most comprehensive inventory of threatened species and subspecies on a global scale. The "IUCN Red List of Threatened Animals" is compiled by the Species Survival Commission (SSC) of IUCN, which has more than 6,000 members.
List 1 - Threatened Species
Animals in this category are listed as Critically Endangered (CR), Endangered (EN), or Vulnerable (VU). *Examples: African wild dog (EN), black rhino (CR), and cheetah (VU).*
List 2 - Lower Risk: Conservation Dependent
Animals in this category are the subject of a targeted conservation program.
Examples: minke whale, spotted hyena and white rhinoceros.
List 3 - Lower Risk: "Near Threatened"
Examples: Colobus monkey, white rumped vulture, and shoebill.
List 4 - Extinct and Extinct in the Wild
Examples: dodo, Vietnam warty pig, and pig-footed bandicoot.

What is the U.S. response?

C The US is a signatory to the Convention.

C The Endangered Species Act of 1973 requires all Federal agencies to undertake programs for the conservation of endangered and threatened species, and prohibits the authorizing, funding, or carrying out of any action that would jeopardize a listed species or destroy or modify its "critical habitat." Enforcement authority rests with the U.S. Fish & Wildlife Service. For information by Worldwide Web check: **http://www.fws.gov/~r9endspp/endspp.html**.

C Broad prohibitions against taking of wildlife are applied to all domestic and international endangered animal species, which could apply to threatened animals by special regulation.

C Under the Act, authority was provided to acquire land for animals and plants listed under CITES.

C The 1998 Foreign Operations Appropriations Act (P.L. 105-118) prohibits the use of development assistance funds for any activity which is "in contravention to... CITES."

2.3 Environmental Decision Guide Summary

The main steps in starting the environmental documentation process using the EDM are:

1. Read the Introduction to the EDM to get an overview of your responsibilities and the resources available.

2. Assemble a comprehensive list of your planned activities.

3. Use the Environmental Decision Guide (EDG), contained in Section 2, first.

   The EDG will help you decide whether to prepare:

   - an Exemption, and/or
   - a Categorical Exclusion (CE), and/or
   - an Initial Environmental Examination (IEE), and/or
   - an Environmental Assessment (EA).

4. Go to Sections 3 and 4, which will guide you on how to prepare a Categorical Exclusion document, in the event all your activities are CEs, or an IEE (in the event you have no CEs or a mix of activities some with CEs and some without).

5. See Section 3.3 to review specific roles and responsibilities for environmental documentation submission.

6. Once you have become familiar with this Manual, use the Summary Decision Tree at the end of Section 3 to review your options.

7. Turn to the Frequently Asked Questions (Section 5) for answers to questions that others have encountered in starting the environmental documentation process.

Section 3

Preparing and Submitting Regulation 216 Environmental Documentation

Environmental Documentation Manual

3 Preparing and Submitting Regulation 216 Environmental Documentation

As you begin the process of preparing your environmental documentation, you should determine who has been designated as your USAID Mission Environmental Officer (MEO) contact.[12] This individual may or may not be specifically trained as an environmental specialist, and may, in some cases, not initially be familiar with USAID environmental review procedures as applied to Title II. Also, situations will arise, such as for non-presence countries, where no MEO will be available. In any event, please feel free to contact the geographic or BHR BEO, when needed.

This section has three parts:

C Preparing Regulation 216 Documentation

C Preparing the Annual Environmental Status Report

C Submitting Environmental Documentation: Roles and Responsibilities

If you already have an approved DAP or PAA and are already familiar with the environmental documentation preparation process, you can simply proceed to Section 3.2, Preparing the Annual Environmental Status Report.

3.1 Preparing Regulation 216 Documentation

3.1.1 Four Key Steps in Preparing Regulation 216 Documentation

Step One: Assemble Your Information

C Review the information you have inserted in Table 2.2.

Step Two: Determine Whether All Activities Qualify for Categorical Exclusion(s)

C If **everything** listed in your table(s) appears to qualify for Categorical Exclusion(s), and this list includes all activities contemplated during the Life of Activity, go to Annex A.1 and A.2 and prepare the documentation according to the format specified for the Categorical Exclusion, including use of the Title II Environmental Compliance Facesheet. Include in the documentation any monitoring for unforeseen effects, if needed.

C The CS should forward the completed Categorical Exclusion form with the USAID Mission's approval to the BHR FFP Office for clearance and the BHR Environmental Officer (BEO) for concurrence. If the BEO concurs, no additional environmental documentation is required with the DAP. Preferably, PVOs will submit to FFP via the FFP Country Backstop Officer, for the Office

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[12] As mentioned previously, in this manual the term "Reg. 216 documentation" covers Categorical Exclusions, IEEs, and EAs as defined under Reg. 216, as well as the annual Environmental Status Report as required by the *P.L. Title II Guidelines for Program Proposals*.

Director's signature. Where applicable, the USAID Mission may choose to have this documentation reviewed by the REO (where available), or the geographic BEO.

Note: If you have only Categorical Exclusions, prepare the Environmental Compliance Facesheet and the Request for Categorical Exclusion (Annex A.1 and A.2).

Step Three: Identify Whether You Have A Mix of Categorical Exclusions and Other Determinations

C If the list appears to includes a mix of Categorical Exclusions, activities requiring an IEE, and activities with a potential EA requirement, you will need to prepare an IEE. Review Figure 2.2. Beyond entering Categorical Exclusions in Table 2.2, ignore the "Expected Determination" column for the time being and **do not enter** other determinations until you have followed the instructions for IEE preparation in Section 4. CSs should **enter the determinations in Table 2.2 only AFTER following Section 4 instructions** because preparers frequently apply the wrong Reg. 216 citations, then change them in the document, but fail to maintain consistency by changing the earlier table entries.

C If some of your activities qualify for a Categorical Exclusion, but the others require an IEE or potentially an EA, you will be able to address all these possibilities on the Environmental Compliance Facesheet, Annex A.1.

C Discuss with the MEO the approach you intend to take and go to Step 4 and Section 4 to help in preparing the IEE according to the format in Annex A.3.

Note: If you have Categorical Exclusions *and* activities requiring an IEE, use the forms in Annex A.1 and A.3, after working through Sections 3 and 4 (See Figure 2.2).

Box 3.1. What Is an IEE?

An IEE is a review of the reasonably foreseeable effects on the environment of a proposed action. Its function is to provide a brief synopsis of the factual basis for a threshold decision: whether significant adverse impacts are to be expected and whether an Environmental Assessment will be required. It also identifies the monitoring and mitigation actions needed. Section 4, Writing the IEE, describes how to conduct the analysis required in the IEE narrative, applying fundamental principles and tools of environmental review. Also read the sample IEEs provided in Annex B.

Step Four Step: Organize the IEE

Getting Started on the IEE

If, as an IEE preparer you are *not especially familiar* with the implementation of activities and actual on-the-ground detail, you should *consider assembling a multi-disciplinary team of those who do have the knowledge* and can contribute different kinds of expertise.

Use the following as a guide and proceed in order:

1. Review the typical IEE situations, discussed below in Section 3.1.2, and the pointers about recommended Threshold Decisions, Section 3.1.3. You may also find it useful to review Figures 2.1 and 2.2.

2. Discuss your approach and any questions with the MEO and Food for Peace Officer.

3. Using the tables/list(s) assembled in the EDG (Table 2.2), gather the information suggested in **Section 4 (Writing the IEE)** and prepare a draft IEE. Consult with the MEOs and BEOs as appropriate. The summary table format is convenient and helpful because it can be readily updated and organized as more information is collected.

4. Submit the draft IEE to the MEO. Cooperating Sponsors are also encouraged to submit a draft of the IEE to the REO (where available), and/or BHR BEO prior to formal submission to the Mission. Review of drafts encourages a constructive dialogue and ensures that issues are addressed early. However, make sure drafts are **clearly marked** "DRAFT -- Not Yet Approved by Mission." See Section 3.3 for the formal submission and clearance process.

3.1.2 Typical Situations Encountered in Preparing an IEE

You will prepare a "classic" IEE in most cases. In your portfolio of activities, you could have more than one of the scenarios or situations described below, but in normal cases you will prepare one IEE that covers all the relevant possibilities.

- **Well-Defined Activities and No Significant Effects—Prepare IEE with a Negative Determination**

To prepare a **"classic" IEE**, which is the typical type of IEE, you will need specific information about the activities, including phasing, construction requirements, locations, and design. A "classic" IEE requires sufficiently detailed information about the discrete activity components **for the full life of the program**. For example, if agricultural interventions are planned, you should determine what type they are, how they work, and specifically where they occur (e.g., in villages a, b, and c). You should also have information about the site and setting. If, on the other hand, dams or river diversions are planned to irrigate an area, the information you should have would include the design of the dam or diversion, such as height, volume of water impounded or diverted; location of the water source; upstream and downstream characteristics; etc. An example of a relatively straight forward "classic IEE" is found in Annex B.3 (Africare/Mozambique IEE for FY 99 Manica Oil Seed Food Security Initiative PAA).

Multi-Site, Well-Defined Activities. Many TII-supported programs carry out specific, well-defined activities in numerous sites across a region or country. If there are multiple activities, are they well-defined, repetitive and/or predictable, and are impacts mitigatable by measures readily identifiable in advance? Do you know the sites well enough to determine that no untoward impacts would occur to sensitive areas (wetlands, protected areas, etc.)?

This situation is common, for example, in well or latrine construction, or terracing, where, at the beginning of a five-year DAP, a PVO may not have identified every specific site, but overall characteristics are known. It is not realistic or necessary in such multi-site interventions for a PVO to submit and for USAID to approve environmental documentation for each site-specific activity. Rather, the PVO in the example cited should analyze all construction activities, identifying all the mitigation measures that will be taken to ensure that they will have no adverse environmental effects. Mitigating measures might include training for local staff, and guidelines to ensure the actions taken have no negative environmental implications (e.g., water sources will not be diverted, soil will not be eroded, and protected species will not be endangered, etc.). The example of CARE Bangladesh in Box 1.1 (Section 1) is worth reviewing. Note that while the Bangladesh example has model value, it is a more intensive process than will typically be required for Title II activities.

A **negative determination without conditions** indicates that the activity is routine and is expected to have no significant effect on the environment. A **negative determination with conditions** indicates what mitigation and monitoring measures are to be carried out.

! Well-Defined Activities and Potential Significant Effects—Prepare IEE with a Positive Determination or Demonstrate in IEE Why a Positive Determination is Not Appropriate

If sufficient information is available and activities identified in the EDG were found to potentially trigger an EA, but you believe the activities will not cause significant environmental harm, the IEE you prepare should present information that demonstrates to USAID why an EA (positive determination) is not recommended. For example, if an activity involves land leveling of one ha (or even up to 100 ha) for irrigation—and recalling that land leveling is a potential trigger for an EA—you will need to give evidence that this modest magnitude of change should not require an EA. The explanation might be that the area is not ecologically sensitive, has no special environmental features (a wetland or a site where wildlife migrates), etc.

If you believe an EA is appropriate, the IEE should demonstrate why. If the particular hectares were ecologically sensitive, an EA might be needed. *The decision to prepare an EA is a matter of judgment, made with the relevant USAID Environmental Officers, who need sufficient information from the PVO in making this decision.* If an EA is determined to be necessary, the affected activity cannot proceed until the EA is completed and approved, although normally the other activities in the DAP may proceed once the IEE is approved.

! **Some Activities are Not Yet Fully-Defined—Prepare IEE with a Deferral**

A *deferral* may be appropriate for a DAP or PAA activity or major component when it is not yet fully defined, sufficient information is unavailable, or a decision to pursue an activity is not yet definitive. This applies especially when you expect that at least some of the activities are not likely to be considered small-scale. The request for a deferral is made within the IEE (see 216.3(a)(7)). To do so means that the IEE must be amended as soon as information about that activity becomes available. Remember, the deferred activity **cannot proceed** until the deferral in the IEE has been resolved, but other activities with negative determinations may proceed

once the IEE is approved. For more on the process of amending deferrals see Section 3.2 (Environmental Status Report Preparation) and Section 3.3 (Specific Roles and Responsibilities for Environmental Documentation Submission).

- **Multiple Activities Not Yet Fully Defined but Mostly Small-Scale—Consider an "Umbrella" IEE Process (see Annex F).**

The **"umbrella" IEE process** covers DAPs with one or more sets of activities generally expected to be small in scale, and in which at least some of the activities are not yet fully defined or designed at the time of DAP and/or IEE preparation. Thus, not enough specific information is available to allow a "classic" IEE to be prepared. An "umbrella" IEE assumes a negative determination with conditions. The conditions lay out the environmental steps to be followed as the activities become more completely defined. The umbrella IEE process can be applied to all the sponsor's program activities or to a portion of the program. [Note that a "classic" IEE may also incorporate an umbrella process for part of the program.]

An "umbrella" IEE or one containing an umbrella component may be applicable if:

- the DAP consists of one or more sets of activities, most of which are small-scale **but not yet fully designed**, and which can be subjected to a subsequent review process defined by the CS; or

- the CS intends to carry out a subgranting program in which sub-recipients submit proposals for activities (although specific sub-recipients and activities may not yet have been identified). These proposals would normally be linked to a post-IEE environmental review process similar to that described in Annex F.

An alternative to the "umbrella" IEE is to **prepare an IEE with a deferral of those activities for which insufficient information is available**, which will then require amendment of the IEE before obligation of funds for, or implementation of, the affected activities.

In principle, the advantages of the "umbrella" IEE are that (a) it provides for a CS-specific post-IEE screening and review process for each activity as the information about the activities is developed; and (b) all or most activities can be approved in the field on the basis of local screening and review once the IEE, including a process of environmental screening and review, has been approved by the BHR BEO. More information about the "umbrella" IEE is contained in Annex F. The screening process varies with the nature of the activities, e.g. environmental review and screening for construction of many small dams differs from that for construction of wells. A useful example of an environmental review process and screening form, specifically prepared for rural roads is provided in Annex B.6.

Note: As stated above, CSs may wish to apply the "umbrella" to only a **portion** of the IEE and not all. Take for example a DAP that contains proposed community identified activities (which typically lend themselves to an umbrella process) as opposed to a discrete soil and water conservation activity within the same DAP. The latter would be treated as an activity outside the umbrella component of the IEE.

3.1.3 Pointers about Recommended Threshold Decisions

In the IEE, PVOs will analyze all the activities and come to **recommended** threshold decisions. The PVO

recommends these decisions to the BHR BEO for approval. Note that **a single IEE can contain multiple determinations**, in addition to Categorical Exclusions. The key determinations to consider are:

- A **negative determination without conditions**, which indicates that the activity is routine and is expected to have no significant effect on the environment;

- A **negative determination with conditions**, which indicates what conditions for mitigation or monitoring will be carried out. The conditions for an umbrella IEE are detailed in Annex F. To reach a negative determination, you must show that there is no significant harm to the environment. Significance is a matter of judgment, based on context and the magnitude of an action (see Section 4, IEE Section 3). The decision to place **conditions** on a Negative Determination depends upon how sensitive the situation is and the potential for harm, which could be avoided or diminished through the application of certain conditions. If there is any confusion or doubt about whether to include conditions, the prudent decision is to select a "negative determination with conditions," then specify good environmental practices and mitigation or monitoring of impacts (see Box 3.2).

- A **positive determination**, which indicates the need for an EA or PEA; the IEE will make the case for or against an EA (see Section 4.4 if an EA is called for). A positive determination means that the activity could have a significant (adverse = harm) effect on the environment.[13] Once a positive determination is reached, an EA is required. If the activity is one of a kind, then a project-specific EA is suitable. If there are many similar activities either within a particular Title II Cooperating Sponsor's program, or where several CSs have similar activities, a PEA might be more applicable. Additional information on PEA preparation is provided in Annex C.

- A **deferral**, which indicates that a threshold decision and a positive or negative determination cannot yet be reached, because of insufficient information.

Keep in mind that you will not recommend determinations, positive or negative, until you have actually assembled the background information and prepared environmental analyses (see Section 4). Box 3.2 provides short examples of types of decisions reached. In Annex B, you will find examples of approved Title II IEEs, which give you an idea of how determinations are made in practice.

Categorical Exclusions. Parts or components of your activities are likely to merit Categorical Exclusions, based on your use of the EDG and the allowable Categorical Exclusions cited therein (and in Reg. 216) and incorporated in Table 2.2. For example, providing health information or training farmers would qualify as a Categorical Exclusion, but for the farmer training, the IEE would indicate, if appropriate, that training will include principles and practices of environmentally sustainable agriculture. **Note that even a DAP or PAA**

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[13] If the activity directly affects the U.S., the global environment, or areas outside the jurisdiction of a country, significance is not equated with harm, and U.S. Council on Environmental Quality definitions of significance apply.

in which all activities are Categorical Exclusions may need to incorporate provisions for monitoring and application of sound environmental principles and practices.

Box 3.2. Examples of Environmental Determinations

Example 1. If as part of a health activity, you were building a small health post or some other facility where health care and information were provided, your analysis would need to show that building and operating this facility posed no special environmental problems (e.g., no wetlands filled, no habitat for endangered species affected, no unusual erosion or flooding conditions, etc.), and that the health post could be built using standard engineering and construction practices. Assuming this were the case, the health post would qualify for a **negative determination without conditions.**

If, however, the health post's construction had some unusual siting conditions and the site could not be changed to avoid these conditions (e.g., unusual need for slope or soil stabilization, specialized erosion control, or need to divert a drainage course), then a **negative determination with conditions** would apply. If this health post were to be testing blood, using syringes, creating biohazardous waste, etc., then a **negative determination with conditions** would also apply. The conditions would specify how the adverse effects would be minimized or otherwise mitigated (e.g., how biohazardous wastes would be safely disposed of), so as to avoid environmental harm or risks to human health.

Example 2. If wells were to be developed, and they were shallow wells in an area with a sufficient aquifer and standard "good practices" for digging wells were to be followed, a simple **negative determination** would suffice. The IEE would affirm that the good practices are expected to suffice as mitigation measures, and would identify any other apt measures.

If there were unusual conditions, such as the need to use major construction equipment to bore hundreds of feet into the ground, questions about the sufficiency of the aquifer or a potential for saline intrusion, then a **negative determination with conditions** related to construction methods or monitoring would likely apply.

Example 3. If the activity were on the list that might trigger an EA (e.g., application of general-use pesticides, or construction of dams of 50,000 cubic meters capacity), but the scale and magnitude of potential significant impacts could be avoided or minimized because of design, mitigative measures, or monitoring, then the IEE would likely request a **negative determination with conditions** for mitigation and monitoring to ensure that significant adverse impacts would be avoided, i.e., the conditions of mitigation and monitoring would ensure that no potential for significant adverse impacts existed and therefore a **positive determination** would not be necessary.

Example 4. If an "umbrella" IEE is used (Annex F), the determination is by definition a **negative determination with conditions,** the conditions being the subsequent environmental screening and review appropriate to the food-aided development programs involved. Also normally included would be some environmentally relevant training or demonstrated capacity, mitigation, and monitoring.

See Section 2 for examples of applicable **categorical exclusions** (Sect. 2.2.2) and **positive**

See the Summary Decision Tree (Figure 3.2) at the end of this Section for a synopsis of the determination options.

3.1.4 Environmental Mitigation and Monitoring Plans

Mitigation and monitoring are often not given sufficient attention by IEE preparers, perhaps because of pressures associated with meeting submission deadlines, insufficient technical understanding of mitigation and monitoring options, or the natural tendency to focus more on the urgency of initiating present activities than on thinking carefully about potentially adverse effects. Thus CSs are urged to devote proper time and care to this task.

On the other hand, some CSs have also gone overboard, creating unrealistic mitigation checklists and a host of superfluous factors to be monitored. It is best to start with a doable mitigation strategy, and then limit your monitoring to only that which realistically will help you determine if your mitigation is working. Mitigation and monitoring are singled out for attention here, because every CS must **revisit their environmental mitigation and monitoring strategy or management plan annually** as part of their PAA submission. Refer to Section 4 of the EDM which provides guidance on mitigation and monitoring for IEE Section 4: Recommended Mitigation Actions (Including Monitoring and Evaluation).

Since June 1998, USAID has required water quality testing of USAID-funded potable water sources. All CSs engaged in developing potable water sources must consult the Section 4 EDM instructions for IEE Section 4: Recommended Mitigation Actions (Including Monitoring and Evaluation)—*IEE 4.2 Mitigation, Monitoring and Evaluation—The special case of water quality monitoring* for additional, required information. Check with the BEO or the MEO to make certain this water quality monitoring guidance is still current.

3.2 Preparing the Environmental Status Report

Each year, Cooperating Sponsors must examine their environmental documentation to make sure it is still operative and applicable and that it still covers everything, and unresolved deferrals exist. All Title II PAAs must include an annual Environmental Status Report (ESR). If a CS submits a DAP Amendment, if activities are modified in a way that would change how they are treated under Reg. 216 (which could happen even without a DAP Amendment) or if environmental mitigation and monitoring plans or measures change, an IEE/Categorical Exclusion Amendment should also be submitted. For all PAAs (*as specified in P.L. 480 Title II Guidelines for Fiscal Program Proposals*), Cooperating Sponsors will provide an Environmental Status Report as an appendix to the PAA, detailing the actions they have undertaken or that need to be taken with regard to the previously approved IEE/Categorical Exclusion or an EA or PEA where they might exist. In 2-10 pages or less, the Environmental Status Report narrative should indicate whether steps need to be taken to amend previous environmental documentation and whether conditions are being met, e.g., mitigation plans are on schedule and the monitoring and evaluation measures being undertaken by the Cooperating Sponsor. In a Mission's PAA comments and/or approval cable to BHR/FFP, the Mission should state whether it concurs with the Environmental Status Report. See Section 3.3 below.

The 'Environmental Status Report Instructions and Format' and the 'Environmental Status Report Facesheet' are shown in Box 3.3 and Box 3.4 respectively, and repeated in Annex A, where the 'Facesheet' is provided

as Annex A.5 and the ‘Instructions and Format’ as Annex A.6.

If you did not read Section 3.1.4 on Environmental Mitigation and Monitoring Plans please do so as this Section provides some perspective on how to complete the Environmental Status Report. In particular, if you do not clearly understand the requirements of the mitigation and monitoring plan refer to Section 4 of the EDM which provides guidance on mitigation and monitoring for IEE Section 4: Recommended Mitigation Actions (Including Monitoring and Evaluation.)

Box 3.3. ENVIRONMENTAL STATUS REPORT (ESR) INSTRUCTIONS AND FORMAT

In 2-10 pages or less, the Environmental Status Report should indicate whether steps need to be taken to amend previous environmental documentation and whether conditions are being met, e.g., mitigation plans are on schedule and the monitoring and evaluation measures are being undertaken by the Cooperating Sponsor. In a Mission's PAA comments and/or approval cable to BHR/FFP, the Mission should state whether it concurs with the Environmental Status Report.

Section A. Status of the IEE/Categorical Exclusion/EA or PEA

Use the answers to the following questions to determine if the status of the IEE has changed.

Use the same instructions for a Categorical Exclusion submission in the event all CS activities were Categorical Exclusions.

If any activities are covered under an EA which is typically activity or site-specific— or a broader sectoral, thematic or geographic PEA— the questions below need to be interpreted in the context of the specific activity, sector, or area.

A1. Modified or New Activities:

Have new activities been added or activities substantially modified?

Note what these are and reference an amended IEE, if the DAP or PAA has an approved IEE.

Reference a Categorical Exclusion Document in the event the DAP or PAA required only a Categorical Exclusion Document **and** the new/modified activities are also categorically excluded. If they are not, a full IEE will need to be prepared.

Note: An amended DAP requires an IEE Amendment. Also remember that activities can be changed or added that do not require an amended DAP, but which do alter Reg. 216 threshold decisions and would require an IEE Amendment.

A2. Resolution of Deferrals:

Did the previous IEE have deferrals?

List these. State if they are being resolved through an amended IEE to be submitted with this year's PAA. If not, indicate when an amended IEE will be submitted in order to be able to go ahead with the activities.

If the deferred activities have been dropped from the sponsor's program, amend the current IEE to state that and recommend to the BEO that the deferral is no longer applicable.

Box 3.3. ENVIRONMENTAL STATUS REPORT (ESR) INSTRUCTIONS AND FORMAT (Continued)

A3. Conditions:

If experience has shown that conditions in the IEE cannot be complied with, note and reference an amended IEE, which discusses what substitute conditions are recommended in order to comply with the spirit of the original conditions (to avoid or reduce environmental effects).

Many conditions in IEEs relate to **Mitigation and Monitoring.** If based on Section B2 below, it proved not feasible to carry out all mitigation and monitoring and the sponsor desires to change the conditions for mitigation and monitoring spelled out in the IEE, discuss and reference an amended IEE.

A4. Amendments:

Based on the above, is an amended IEE needed?

___ Yes If yes, attach here. No___

If the previous documentation was a Categorical Exclusion Submission, is an amended Categorical Exclusion needed to deal with new Categorical Exclusions for new activities?

___ Yes If yes, attach here. No___ Not Applicable___

Is the Sponsor unable to meet recommendations and/or conditions that are part of an EA or PEA or does the Sponsor believe an EA or PEA needs to be amended to cover additional or modified activities?

___ Yes No____ Not Applicable___

If yes, immediately notify the MEO, REO (where available) or the BHR BEO.

A5. Remember it is necessary to obtain the Mission's concurrence on an Environmental Status Report prior to proposal approval. Be sure to complete the ESR Facesheet. Proceed to Section B.

Box 3.3. ENVIRONMENTAL STATUS REPORT (ESR) INSTRUCTIONS AND FORMAT (Continued)

Section B. Status of Fulfilling Conditions in the IEE, including Mitigative Measures and Monitoring

Take this opportunity to re-evaluate your mitigation and monitoring plan. Make sure the commitments made in the IEE are doable and realistic, in other words, not beyond the capabilities and resources of the CS to implement. Mitigation and monitoring can be part of normal visits to an area to check on activities, unless specific testing, surveys or the like have been required. Alternatively, experience to date may indicate that the IEE's mitigation and monitoring plan is not sufficiently specific or is lacking in some respect. If conditions or mitigation and monitoring are part of an activity-specific EA or sectoral PEA, the instructions below still apply.

B1. For each component of the program, list or reproduce (as an Annex to this report) the mitigative measures and monitoring or other conditions. [For activities placed under an umbrella process according to EDM Annex F, do not reproduce the standard Environmental Screening Form and Review conditions; follow instructions at B3 below.]

B2. Describe status of complying with the conditions. Examples of the types of questions a Sponsor should answer to describe "status" follow.

1) What mitigative measures have been put in place? How is the successfulness of mitigative measures being determined? If they are not working, why not? What adjustments need to be made?

2) What is being monitored, how frequently and where, and what action is being taken (as needed) based on the results of the monitoring? In some situations, a CS will need to note that the monitoring program is still being developed with intent to satisfy the conditions. Alternatively, it could happen that the conditions cannot be achieved because of various impediments.

Sponsors are encouraged to construct table(s) of relevant status indicators.

For any conditions that cannot be satisfied, propose a course of remedial action and amend the IEE. In the case of an EA or PEA, consult the MEO, REO (where available), and the BHR BEO, as amending an EA or PEA is a more elaborate process.

B3. If the CS is using Environmental Screening Forms (ESFs) and environmental reviews, prepare: i) a table listing the ESFs prepared and submitted; (ii) the Category(ies) the activity(ies) was\were placed in; and (iii) whether the ESF has been approved by the MEO. For any Category 2 or above activities, the chart should include the status of the Environmental Reviews, e.g., in preparation; submitted to MEO; approved by MEO; MEO referred to REO and BEO; and the date of approval by MEO or by REO or BEO, if appropriate.

Box 3.4. TITLE II ENVIRONMENTAL STATUS REPORT FACESHEET

Title of Activity:

CS name/Country/Region:

Funding Period: FY_____- FY_____

Resource Levels: Commodities (dollar equivalent, incl. monetization):_____
Total metric tonnage request: _____

Status Report Prepared by: Name _____ Title _____
Date: _____

Date of Previous Status Report:_____

A. Status of the IEE/Categorical Exclusion/EA or PEA

IEE Reference: Date of most recent IEE or Categorical Exclusion (If all activities were CEs): _____

_____ No revisions or modifications needed. IEE/CE or CE and all activities still applicable

_____ Amended IEE submitted, based on attached report, summary, etc., (referencing the body).

_____ EA or PEA needs to be amended to cover additional or modified activities. [Note: If yes, immediately notify the MEO, REO where one exists or the BHR BEO.] Amended EA or PEA submitted, based on_____.

B. Status of Fulfilling Conditions in the IEE, including Mitigative Measures and Monitoring

_____ Environmental Status Report describing compliance measures taken is attached.

_____ For any condition that cannot be satisfied, a course of remedial action has been provided within an IEE Amendment. [**Note:** For conditions under an EA or PEA, consult the MEO, REO (where one exists) and/or BEO].

USAID APPROVAL OF ENVIRONMENTAL STATUS REPORT:

Clearance:

Mission Environmental Officer:* _____ Date: _____

Food For Peace Officer: _____ Date: _____

* or USAID Environmental Representative, if MEO does not exist.

3.3 Specific Roles and Responsibilities for Environmental Documentation Submission

DAP or DAP Amendments

CSs, working with Mission Officers, are expected to finalize draft environmental documentation and submit it to the USAID Mission, or Regional Office in the case of non-presence countries, for review and clearance (prior to formal DAP/PAA or DAP Amendment submission, if possible). It is possible, but not typical, that the Mission may prefer to prepare the document itself, based on input from the PVO. Thus, the PVO should discuss this matter with the Mission, typically the Mission Environmental Officer (MEO), prior to preparing the environmental documentation.

PAA Submission

PAA submissions need not include amended environmental documentation, if no significant changes have been made to the activity design, in how activities will be implemented, or in how mitigative measures and monitoring will be carried out, since the environmental documentation approval.

C Use Box 3.3 or Annex A.6 to determine if your IEE needs to be amended.

C An Environmental Status Report must be submitted as described above under Section 3.2.

C The Mission's PAA approval/comments cable to BHR/FFP must include a statement as to whether the Mission concurs/does not concur with the CS's Environmental Status Report.

For those Title II projects in their final year of implementation, and even for those that do not plan to submit a follow-on DAP, it still makes sense to prepare an ESR near the project's completion. As always, the PVO should consult with the Mission, BEO, and FFP for guidance.

Deferrals

For those Cooperating Sponsors who received a deferral from the BHR Bureau Environmental Officer (BEO) on one or more aspects of their program, an amended IEE should be included with their proposal, to resolve each deferral or indicate that the activity will not be conducted.

Clearance Process

Draft environmental documentation is submitted to the MEO. Cooperating Sponsors and/or Missions are also encouraged to submit their environmental documentation for informal review to one or both BEO's or a Regional Environmental Officer (where available) to obtain feedback prior to formal submission. Review of drafts encourages a constructive dialogue and ensures that issues are addressed early. All draft Reg. 216

documentation must be returned to the Mission for required clearance and the Mission may request revisions to ensure that Mission objectives, consideration of local conditions and consistency with environmental documentation of Sponsors in the same country is achieved.

To avoid possible confusion in the clearance process, all **drafts** circulated for comment and/or information should be **clearly marked** "DRAFT -- Not Yet Approved by Mission" and **dated**. Remember, all environmental documentation must be cleared by the Mission Director, or his or her designee, prior to proposal submission by the CS to FFP Washington, and that it is the ultimate responsibility of the Cooperating Sponsor to ensure the clearance process is followed.

If DAPs or PAA proposals are revised after submission to BHR/FFP Washington, the environmental documentation should be revisited.

In all cases, the **IEE/Categorical Exclusion or IEE Amendment must first be cleared by the Mission Director or his/her designee prior to final IEE/Categorical Exclusion and DAP/PAA approval by USAID/Washington**.

Once the Mission has cleared the IEE/Categorical Exclusion, a signed copy should be sent to BHR/FFP (as part of the DAP, PAA or DAP Amendment submission). Upon receipt, the IEE/Categorical Exclusion or IEE Amendment will be forwarded to the Director of FFP for clearance, as a request for BEO concurrence. Concurrence by the USAID BHR BEO is the **last step** in the approval process. Geographic Bureau clearances are not required, although CSs are free to send geographic BEOs informational copies of environmental documentation, and to seek these individuals' guidance and expertise during IEE preparation and project design. The BHR BEO will also provide informational copies of IEEs to the relevant geographic BEOs and seek their input, as appropriate. Figure 3.1 provides a summary of the IEE or IEE Amendment Preparation and Submittal Process.

For more on who does what, see the environmental compliance section of the annual *P.L. 480 Title II Guidelines for Fiscal Program Proposals* and Question 5.2.2 in Section 5 (Frequently Asked Questions).

Figure 3.1. Summary of IEE or IEE Amendment Preparation and Submittal Process

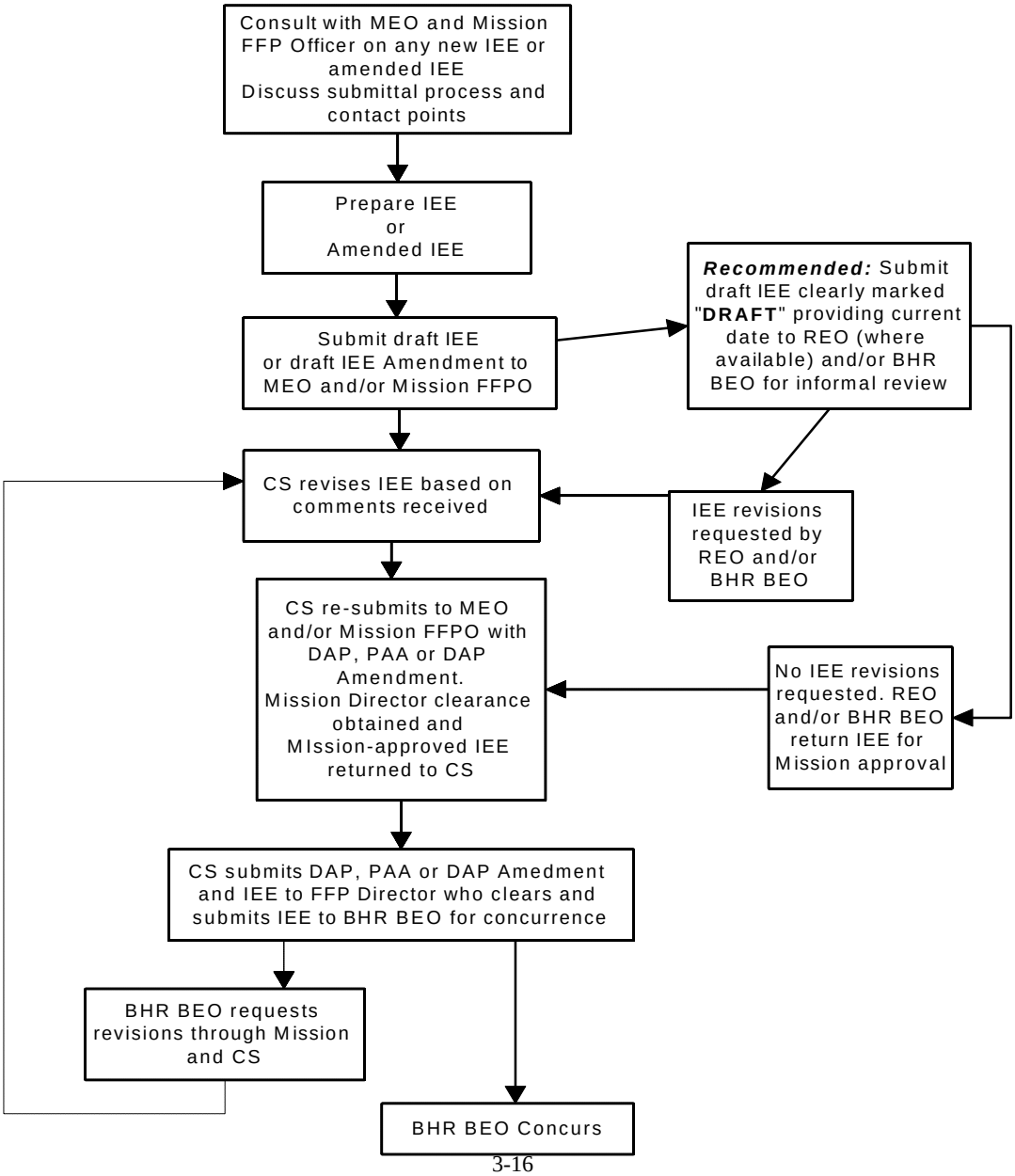


Figure 3.2 - Summary Decision Tree for Environmental Documentation: Panel 1

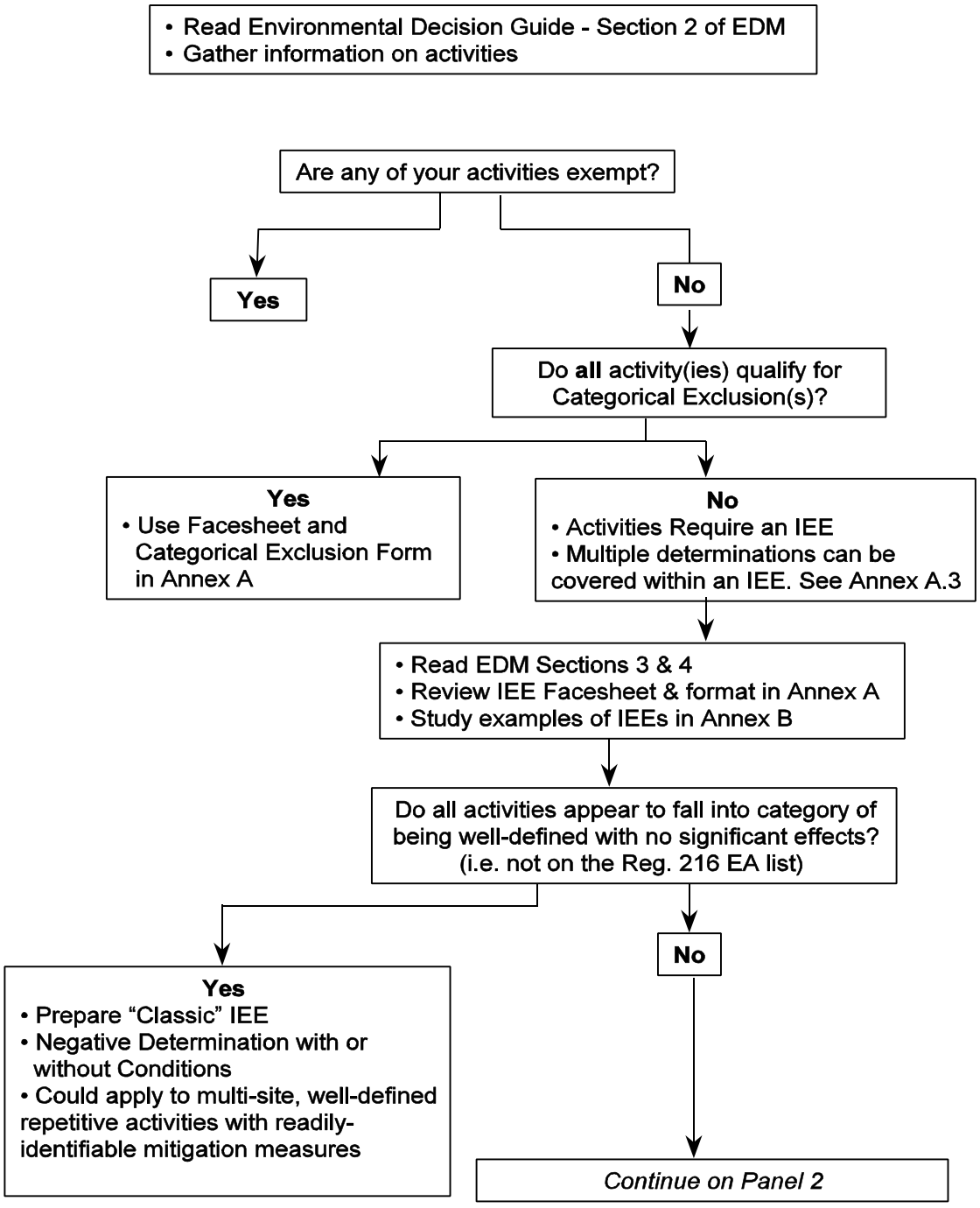
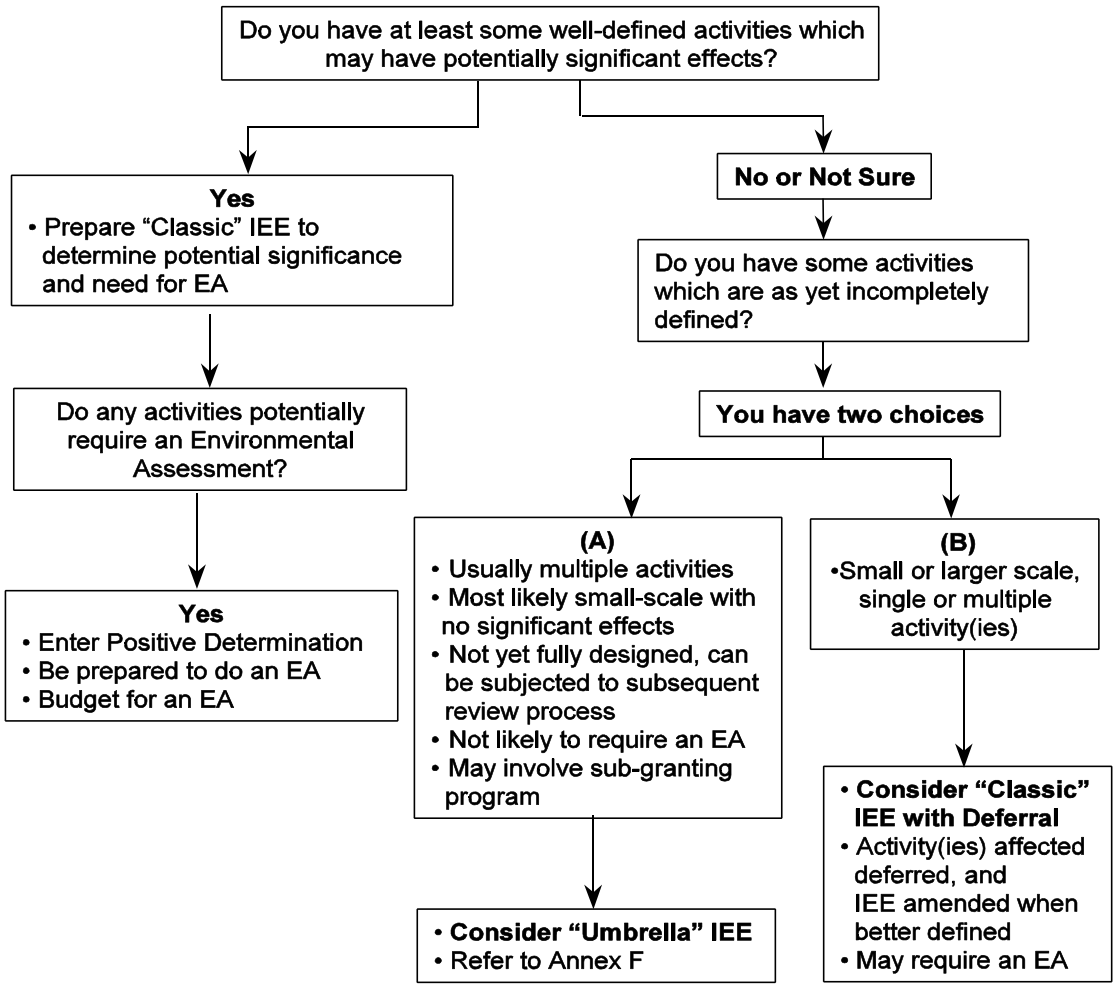


Figure 3.2 (continued). Summary Decision Tree for Environmental Documentation: Panel 2



Section 4

Writing the Initial Environmental Examination (IEE) Narrative

4 Writing the Initial Environmental Examination (IEE) Narrative

This Section helps you do the analysis required to prepare a good IEE narrative. The process described here is representative of that applied in environmental review anywhere in the world. Section 4.1 examines information needs; Section 4.2 outlines the steps to complete the IEE; Section 4.3 is organized under the number and title of each IEE Section. Section 4.4 offers suggestions on what to do if the IEE results in a positive determination and an EA or PEA needs to be prepared. Various tables and boxes provide informative detail and suggested approaches. Remember, the preparation of various IEE sections is iterative: you will progressively move through the analysis in preparing the IEE narrative, typically return to earlier sections, make additions and revisions, and then make determinations.

If you have several sets of dissimilar activities, it may be advantageous for you to consider using this section to prepare an environmental analysis that parallels the narrative outline for the IEE for each set of activities. If you choose this option you will assemble several narratives, one for each set of activities. Nevertheless, use only one Environmental Compliance Facesheet to summarize these separate narratives.

Suggested steps involved in preparing an IEE are:

C assembling the relevant information resources;
C carrying out the environmental analysis;
C writing the IEE narrative;
C settling on recommended threshold decisions; and
C finalizing the Environmental Compliance Facesheet to attach to the IEE Narrative, together constituting the full IEE.

4.1 Assembling the Information Resources

Review the table you prepared in Section 2. The table can be organized and updated as information is assembled, and it will help you to organize the IEE narrative.

To screen a program or activity for potential environmental impacts, certain information about the community and physical environment at the site(s) will be needed. Some of this information will already have been collected to develop the activity objectives, but additional data will be necessary to identify alternative methods of accomplishing the objectives and to assess their impacts on the environment. It is also recommended that you obtain a copy of the National Environmental Action Plan (NEAP) or equivalent as a valuable source of environmental data.

Locate key sources of background data. Potential sources of existing information about the environment and natural resources include:

- Host country counterpart agencies, such as the Ministry of Agriculture or Forestry, or local agricultural extension workers, universities, or training centers;
- Direct observation during a site visit and contact with counterparts, villagers, farmers, and residents;
- NGOs, consultants, and technical experts;
- National-level documents, such as the Conservation Strategy for Sustainable Development (IUCN

sponsored), National Environmental Action Plan (NEAP), National Report on Environment and Development prepared for the United Nations Conference on Environment and Development (UNCED) held in Rio in 1992, or the Tropical Forestry Action Plan;
- USAID Environmental Sector Assessment (sometimes referred to as an Environmental Threats Assessment) or Biodiversity Assessment (in place or likely in process);
- Geographic Information System (GIS)[14] databases (consult Ministry of Environment or Natural Resources or equivalent); and
- FAO (which has supported international soils and water resource inventories in many areas).

Note: You will not be able to acquire all possible sources of information for the IEE. Be selective and judge what you think is most useful, e.g., the NEAP and related documents if there are protected areas that could be affected directly or indirectly by your proposed activities.

< ***Useful socio-economic and cultural information***

To understand the context of your interventions, you need information on local culture, socio-economic conditions, and gender relations in the areas of your proposed activities. Without this understanding and the participation of the local population, your activities' sustainability will be questionable. Sources of such information include direct observation, local counterparts, local farmers and villagers, and local NGOs. Box 4.1 highlights the need for taking participation into account in the information gathering process. The participation of affected groups needs to be encouraged so that potential adverse impacts can be identified and mitigation strategies developed by those most knowledgeable about the local setting and existing environmental conditions.

Box 4.1. Quick Tips on How to Promote a Participatory Process

- ! Work with organizations established in the local community.
- ! Participation must be facilitated. It won't just happen by calling a meeting.
  - Be attentive to meeting times and suitability of places for women to attend.
  - Provide gender training to the PVOs and NGOs who will be working at the local level.
- ! Work with entire families.
- ! Ensure that communication skills, discussion and methods of inclusion are appropriate for the community in which you are working.

By **incorporating gender and other social variables in design and environmental analysis**, development programs will be more effective and sustainable. Gender-disaggregated data should routinely be collected where appropriate. This information can be useful as baseline for monitoring and evaluation purposes.

For example:

C In the case of increased agricultural crop production, be sensitive to the fact that women and men have different relationships to specific resources, and these relationships affect resource access and use. Which farmers are responsible for what? Is it appropriate to ensure that all farmers receive training

[14] Geographic Information Systems provide digitized computerized map data, often on subjects such as land use, drainage, climate, vegetation, or soils. Overlaps of several themes can be made.

in the new technology? How will you choose the farmers? During training is a good time to consider the different social variables that might have an impact on the environment.

C For agricultural extension and demonstration of improved practices, determine through a participatory process whether those involved agree that the technology can be expected to work. What would be the anticipated draw-backs? Will they use the new techniques, if not, why not? Again, who selects the farmers and how?

C In providing agricultural credit, will all farmers benefit, or mainly those who own (or farm) the land? If it is in a region where credit is tied to ownership and women farmers cannot own land, can provisions be made to benefit them?

One should also aim to promote enforcement of environmental and health statutes or application of such statutes in areas with disadvantaged populations. **Environmental justice** concerns to be addressed include:

C inequities or disproportional adverse environmental impacts affecting low income populations or various disadvantaged groups (depending on the context: ethnic groups, indigenous populations, minorities and women);
C adverse effects on populations that depend on subsistence consumption of natural resources or those who have traditional livelihoods, e.g., pastoralists who depend upon rangeland proposed for irrigation;
C population groups that face higher health risks because of exposure to environmental hazards created by nearby project activities; and
C segments of the population whose health is differentially affected by exposure to environmental hazards or changes in environmental baseline conditions.[15]

< ***Importance of maps***

Maps can be especially valuable in activity design and implementation, as well as in preparing the IEE. They also make it much easier for reviewers to understand the IEE context. They should be of sufficient scale to show roads and villages, targeted rivers and streams, and topographic features (e.g., 1:50,000 or 1:25,000 or better). Compare information about the setting with maps or plans of your activity to assess how the geographic area may be affected by your proposed action. Be careful when comparing maps of different scales.

Maps will help you visualize whether or how various resources or areas overlap with your area of intervention. Often you will not have a precise indication of areas of overlap, but you will be able to see potential areas of conflict that need to be investigated further. Development and presentation of environmental information in map form can be done manually with transparent overlays. Computer-generated maps or Geographic Information Systems (GISs) can be used to present multiple features from a variety of sources. You may even wish to consider providing maps as attachments to your environmental documentation.

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[15] Adapted from: US Executive Order 12898, February 1994.

4.2 Steps to Prepare the IEE

While the IEE outlines and templates (Annex A) are intended to be self-explanatory, experience has shown that the process is iterative and proceeds as follows:

< Examine the sample Environmental Compliance Facesheet and Narrative Outline format

Box 4.2, which follows, illustrates a sample of the Title II Environmental Compliance Facesheet and an outline for the narrative of a "classic" IEE that will comprise the body of the IEE. Another set to use as a template is contained in Annex A. You will note on the Facesheet, under Summary of Findings, that text should be inserted. This summary text will ideally fit on the second page along with the approval lines. The narrative for the IEE will follow the two Facesheet pages and will thus begin on page 3 of the full IEE.

< Begin the Environmental Compliance Facesheet

Complete part of the Facesheet by entering the names of the Program or Activity Title (or DAP/PAA title, if any) and the name of the Cooperating Sponsor and country (or region). Enter information about resource levels and IEE Preparer(s). If the IEE being prepared is an **amendment to any previous IEE**, note this information on the Facesheet. Enter the date, being careful not to use an automatic date function because the date will change as the document is opened, and it will seem to be more recent than it actually is. Each time there is a significant revision, change the date to reflect the date of the revision so you can keep track of various versions.

Do not enter information under Environmental Action Recommended or mark the Conditions—or prepare the Summary—at this time. You need to complete the full IEE narrative first, where the conclusions reached form the basis for the above Facesheet.

< Write the IEE Narrative

Write Sections 1 through 5 of the IEE narrative, following the outline shown in Box 4.2 and the recommendations in Section 4.4, organized according to the outline. Section 4.4 provides guidance on the typical process used to assess environmental impacts.

As mentioned previously, writing the IEE is typically an **iterative process**. You prepare each section, following the outline to the extent that you have information. You may need additional information and have to go back to various sections and add detail or, in some cases, revise your conclusions. It is best to jump in and do what you can, then fill in and revise later. **Sample environmental documentation is provided in Annex B for Title II programs.**

Box 4.2. Title II Environmental Compliance Facesheet (Part 1 of 2)

Title of DAP/PAA Program/Activity:

CS Name, Country/Region:

Funding Period: FY_____- FY_____

Resource Levels : Commodities (dollar equivalent, incl. monetization): _____
Total metric tonnage request:_____
202 (e) grant: $_____

Prepared by: Name _____ Date: _____
Title _____

IEE Amendment (Y/N): _____ **Date of original IEE:** _____

Environmental Media and/or Human Health Potentially Impacted (check all that apply):
air___ water___ land___ biodiversity(specify) _____ human health____ other___ none____

Environmental Action(s) Recommended (check all that apply)**:**

_ 1. *Categorical Exclusion(s)*:

_ 2. Initial Environmental Examination:

_ *Negative Determination*: no significant adverse effects expected regarding the proposed activities, which are well-defined over life of DAP/PAA. IEE prepared:

_ without conditions (no special mitigation measures needed; normal good practices and engineering will be used)

_ with conditions (special mitigation measures specified to prevent unintended adverse impact).

_ *Negative Determination*: no significant adverse effects expected, but multiple sites and sub-activities are involved which are not yet fully defined or designed. "Umbrella" IEE prepared.

_ conditions agreed to regarding an appropriate process of environmental capacity building and screening, mitigation and monitoring.

_ *Positive Determination:* IEE confirms potential for significant adverse effect of one or more activities. Appropriate environmental review needed/conducted.

_ EA to be / being / has been (*circle one*) conducted. Note that the activities affected cannot go forward until an EA is approved.

_ Deferral: one or more elements not yet sufficiently defined to perform environmental analysis; activity will not be implemented until amended IEE is approved. Briefly describe the nature of the deferred activities:_____

Summary of Findings:
Briefly describe (in 1 or 2 paragraphs) the activities being implemented or proposed and those deferred. Justify the reason for the recommended action(s) and cite appropriate sections of Reg. 216 as needed. For IEEs, reproduce here the Summary from Section 5 of the IEE narrative, and/or Section 2 of the Request for Categorical Exclusion.

Box 4.2 (continued). Sample IEE Narrative Outline to Accompany Title II Environmental Compliance Facesheet (See Annex A for blank template).

Initial Environmental Examination

Program/Project Data:
DAP/PAA Program/Activity:
CS Name, Country/Region:

1 Background and Activity Description

- **1.1 Background**
- **1.2 Description of Activities**
- **1.3 Purpose and Scope of IEE**

2 Country and Environmental Information (Baseline Information)

- **2.1 Locations Affected**
- **2.2 National Environmental Policies and Procedures (of host country both for environmental assessment and pertaining to the sector).**

3 Evaluation of Activity/Program Issues with Respect to Environmental Impact Potential

4 Recommended Mitigation Actions (Including Monitoring and Evaluation)

- **4.1 Recommended IEE Determinations**
- **4.2 Mitigation, Monitoring and Evaluation**

5 Summary of Findings

- **5.1 Environmental Determinations**
- **5.2 Conditions**

Box 4.3. How to Organize the IEE for Large and Complex DAPs or PAAs

For large multisectoral programs it might be easier to retain the Environmental Compliance Facesheet and Summary as is, but as a means of trying to simplify the documentation process, it is suggested that the CS consider preparing a series of documents that follow the IEE format but with each sector standing alone, e.g., roads, agriculture, health, soil conservation, etc. When there are four or five sectors involved, it is hard to keep track as one moves through the document. It is therefore recommended that the writeup for the first sector contain relevant background to the sector and program (without describing the whole program). If there are portions of IEE Section 1 that are applicable to other sectors, they do not need to be repeated in the next sector's documentation, but can be cross-referenced.

The same approach involving cross-referencing could be applied in the next section (Section 2 of the IEE *Country and Environmental Information*). If the language would be the same, just cross-reference, but if there are additional or different locations for the second sector, then add them. Actually there could be different EA policies or procedures too, for example, an irrigation activity might have certain requirements not applicable to wells.

If the DAP includes several sets of dissimilar activities (e.g., natural resources management, road construction, and water resources works), it may make sense to prepare separate sets of environmental analyses—each organized according to the IEE outline Sections 1 to 5—that will contribute to the IEE. Then you can use these sections directly as the IEE narrative, summarizing them in the Environmental Compliance Facesheet.

The summary in IEE Section 5 needs to state what environmental determinations are appropriate to which activities or groups of activities.

< Finish the Environmental Compliance Facesheet

Now you can complete the Environmental Compliance Facesheet by preparing the Facesheet Summary section, based on Section 5, which may need to be shortened to keep the Facesheet compact. The Summary should indicate what threshold decisions have been reached for specific activities or groups of activities. Include here your Summary Table of decisions, making certain to reference your listing of activities in Section 1 as well. Check the environmental media affected. Record the environmental determinations in the appropriate part of the Facesheet and mark the conditions line, if any activities have conditions for implementation, e.g., a Negative Determination with conditions.

4.3 Assembling the IEE Narrative

Following are suggested approaches to the IEE narrative preparation. Treatment is by section of the IEE.

IEE Section 1

- Background
- Description of activity(ies)
- Purpose and scope of IEE

U IEE Section 1: Background and Activity/Program Description

In Section 1 of the IEE, you should provide the background rationale for and description of current and/or proposed activities and the purpose and scope of the IEE.

Use the background subsection 1.1 to discuss briefly how your activities fit into the Mission and/or the host country strategy or program or to highlight other contextual information that should be brought to the attention of an IEE reviewer.

Under IEE subsection 1.2 on activities consider the following: What does it mean to describe an activity for an IEE? The organizational framework is up to you. Determine how you wish to organize and group activities in a logical or coherent fashion. If your DAP or PAA is organized as a Results Framework, you may find that method of organization most convenient. You may prefer some other logical grouping of activities, geographically or by sector.

Use the subsection 1.3 on "purpose and scope of the IEE" to note if this is the first IEE being prepared for the DAP or PAA, an amendment, or if certain activities are not being covered, e.g., they are expected to end in the near future, or are deferred.

What is the definition of an activity? In this manual, "activity" refers to the desired accomplishment or output such as a road, seedling production, forestry planting, or river diversion to irrigate land. An activity is independent, although it may be linked to other activities. Accomplishing the activity will require certain actions, such as planning and design, construction (clearing, digging, filling, transporting materials or even establishing a construction workers' camp). Other actions occur during operation or implementation (vehicular traffic patterns once a road is constructed, water management once irrigation infrastructure is in place). Most activities also need maintenance. Analysis of impacts requires that you know what all these actions are. These discrete actions, the inputs to accomplish the activity, do not, however, require separate Reg. 216 determinations. The activity as a whole is typically the subject of the Reg. 216 determination.

For each grouping (e.g., by type of intervention or Intermediate Result), try to provide information about the activities, including background and description of major components. You do not need to justify activities (this is covered in other parts of the DAP or PAA). You do, however, need to provide some physical detail and be as quantitative as possible. For example, "about 500 farmers will be trained in irrigated agriculture for one week each, four farm-to-market roads will be built in such-and-such locations with respective lengths of a, b, c, and d kilometers with a construction period of approximately four months during the dry season, and estimated vehicular traffic of about 20 small trucks or vans and 10 autos per day...."

Key Questions to Consider. You are not expected to answer the following questions as such in the IEE. Instead, they are provided to stimulate your initial thinking on potential impacts, which you will report in Section 3 of the IEE. Based on your answers to the questions below, develop a description of each activity and the components or specific actions needed to achieve desired results. Keep in mind the various phases of an activity, e.g., planning and design, construction, and operation.

C *Why is the (proposed or current) activity needed, and are there alternatives?* Have the alternatives been evaluated? If so, the IEE should indicate why the particular activity was chosen. If no alternatives have been considered, are there any, what are they, and should they be considered?

C *Why is the activity the best or most feasible?* Why is activity "x" the best or the most feasible way to accomplish the goal? For example, if increased income is the ultimate goal, why is small-scale irrigation (or aquaculture or micro-enterprise) the chosen activity? What other planned or potentially necessary activities are linked to the activity under consideration? The planned intervention may be

necessary to accomplish the goal, but is it sufficient? For example, if vegetable production were to increase, is the road adequate to transport it to market?

C *Does the activity have a history?* Is there some important history to the activity? For example, fish farming may have been tried before, but failed. Perhaps the community being assisted was relocated because of another project, etc. What was its previous experience? Does the activity involve rehabilitation of a previous investment (e.g., terraces)? It may be important to know why rehabilitation is proposed. Was rehabilitation expected and planned for in the original design? Was the prior design incorrect or inappropriate? Was maintenance neglected or improperly carried out? If faulty design or lack of maintenance is provoking the rehabilitation, how will these problems be avoided in the proposed new activity?

C *What are the results?* Distinguish between the physical reality (a school or a well constructed) and the ultimate result (potable water or education).

C *What would happen if the **no action alternative** were chosen?* The answer is **not** that things would remain the same. For example, without the proposed activity, adverse environmental effects might occur, because the proposed activity enhances environmental quality or halts environmental destruction. A rehabilitated road with proper drainage may pose fewer long-run environmental impacts than a deteriorating road that is eroding away.

C *What actions over time need to be considered, and where?* Consider the various components of your activity and what actions will be taken during (i) planning/design, (ii) construction, (iii) operation, and (iv) potential phase out or abandonment (end of useful life) of these components. **Are various locations involved?** For example, if you are building or rehabilitating a road, material from a distant quarry may be needed during the construction phase. Consider constructing a table that organizes the components of your activities by the four phases along the vertical axis, and by location (village, ward, district, nation, etc.) along the horizontal axis. Review the additional questions listed below to help you understand the activity and its components from the IEE point of view.

C *What actions will be taken during the **planning and design** phase?* For example, do samples need to be taken to do siting, should an engineering survey be undertaken? Would the proposed activity prompt people to move to or away from the site in anticipation of the activity happening? While planning and design work does not usually affect the environment or human behavior, sometimes it does. Or sometimes a decision made in this phase is not reversible. If your activity has such characteristics, note how and why.

C *What actions will be taken during **construction or clearing**?* Is a construction camp needed? Where will the labor come from? Does an access or haul road need to be constructed? Is quarrying needed to obtain construction materials or is a borrow pit for earth fill needed? What other construction materials are needed (wood, bricks, etc.) and where will they come from? If earth or vegetation is removed, what will be done with it? How will erosion be controlled? If new plantings are proposed will these be indigenous? Do utility pipes need to be laid? What social impacts may result during this phase?

C *What actions occur during **operation**?* What inputs are needed, including raw materials, water, or energy sources? Where will they come from? What products are created and where do they go (export, autoconsumption)? Are waste products created and how are they disposed of? Is traffic generated? What routine maintenance and repair activities are needed, and what inputs, (e.g., material, labor, transport) will this require? What social impacts may result during this phase?

C *Is planning for **end of useful life** pertinent?* If the activity were to cease (no longer needed or no longer funded) or its useful life were over (reservoirs silt up, mines become exhausted, nuclear plants are decommissioned, etc.), does it just disappear? What is left behind and what characteristics do the "leftovers" have?

IEE Section 2

- Locations Affected. Describe environment (including physical, biological, health, socio-economic, and cultural aspects) of the proposed activities' locations.
- Environmental Policies and Procedures

Note: Organize this section by location or activity, whichever is most convenient.

U IEE Section 2: Country and Environmental Information

In this section, you are describing the environment (physical, biological, socio-economic and cultural) in which activities, and the specific actions needed to accomplish these occur. It is standard practice in most countries and in most documents that assess environmental impacts to consider people and the socio-economic and cultural characteristics of the affected environment. *Although USAID regulations define environment as the natural and physical environment, experience demonstrates that an IEE needs to consider the human factor*. Some impacts may be beneficial for one segment of the population but adverse for others (e.g., women versus men or rich versus poor). Indigenous populations, different ethnic groups, and the economically inactive portion of the population (the elderly and those not yet of working age) may either benefit from an activity or be adversely affected in different ways from other groups.

You will need to determine first how you want to organize this section. It may be appropriate to adopt the same organizational framework you used in IEE Section 1, presumably by sector, type of activity or Intermediate Result, and to describe the environmental situation appropriate to each. For example, suppose rural health activities occur in the same general area as road rehabilitation activities. In this case, you may want to describe the baseline situations for rural health and then refer back to this description for roads. In some cases, it may be easiest to use geography as the organizing framework. [See also suggestion in Box 4.3, as to how to organize complex IEEs.]

Environmental baseline information could, in some cases, be similar to or the same as information in the sponsor's monitoring and evaluation framework. Similarities or differences between the environmental baseline and the baseline for measuring activity results will depend on the nature of the results expected and being tracked. All such baseline information, whatever the source or reason for collecting it, will be useful in determining long-term sustainability and in developing environmental mitigation and monitoring strategies. As noted earlier, people are part of the environment, and their interactions are the key issue under consideration, which is the case for most Title II development activities.

Locations Affected and Trends. Try to gain a picture of overall development issues and prospects for the area of concern. In so doing, you are trying to determine the future no-action alternative (the baseline situation in the future, as it will be shaped by trends, growth, further degradation, improvement in water or air quality

as regulations are developed and enforced, normal environmental change, etc.) The impacts of your actions are measured not against the existing situation but by using the yardstick of the future—the future context in which the actions will occur. If no clear trends exist, you may have to consider the existing situation to be the best approximation you have of the future. For example, if you are building a road through a forested area that has already been targeted for cutting and for development in the next four years, how much does it matter that the road will result in loss of vegetation? Can you estimate the population of the area 25 years from now? Fifty years? What would be the potential impact of the projected changes on the natural resource base?

Look at Box 4.4, which describes Major Categories in a Baseline Study, to determine what features you should describe or about which you should acquire data. Determine key characteristics and key data needs. You construct the description of the environment pertinent to your activities as you see fit.

You are not necessarily expected to answer the questions posed below. Once again, these questions are provided to stimulate your thinking and to encourage you to consider potential impacts, which you describe in Section 3 of the IEE.

What else is happening in the activity locations?

- Are roads being built or rehabilitated by others?
- Are there other projects operating or about to start-up?
- Has this area been identified as a growth area?
- Are there plans for power development or extension of electricity?
- Are there resources (e.g., mineral or biological) that will likely be exploited (mined, extracted) in the foreseeable future?

Environmental Policies and Procedures. Describe briefly the host country's environmental impact assessment policy, legislation, or procedures and whether the host country will require environmental documentation. Note any applicable policies or regulations for wildlife protected areas, wetlands, historic or archaeological sites, siting or construction of facilities, wells, dams, or water diversions.

Remember to **reference** your sources of information. For example, Kenya has procedures and standards for siting wells. Thus, for a Title II program for well development in Kenya, the CS may need to elaborate in of Section 2.2 of the IEE on the nature of the procedures specific to the siting of wells. Policies and procedures are likely to vary by sector, i.e., irrigation, roads, wells, or the like, and each is affected by the sector-specific policies, procedures or regulations from lead government unit, e.g., a Ministry of Agriculture or Ministry of Water Resources, etc.

Box 4.4. Major Potential Impact Categories in a Baseline Study (select and focus as appropriate to your activities)

- **Location**—characteristics of locations: political/administrative unit (taxing or lack thereof or other social and political characteristics may be relevant); physical and ecological setting (mountains, floodplain, coastal zone, desert; arid, humid, seasonal variations, drought cycles, or the like); features of a specific site (steep, flat, vegetated how, and so on)
- **Land Use**—existing patterns of land use in region, regional planning for future use, zoning
- **Geology**—geological provinces, bedrock formations, history of geological stability or instability
- **Topography**—general topography of region, specific topography of project area
- **Soils**—soils mapping, soil series properties, constraints to development
- **Climate**—temperature, cyclical precipitation patterns, cloud cover (identifying, where feasible historical trends and seasonal and long-term variability)
- **Groundwater Resources**—nature of water-bearing formations, recharge rates, sustainable safe yields, locations and depths of existing wells, quality
- **Surface Water Resources**—drainage basins and sub-basins, named and unnamed water bodies and watercourses, regulatory classification of water bodies, flow regimes, water quality data and evaluation, identification of existing permitted discharges to surface waters
- **Terrestrial Communities**—spatial arrangement of vegetative community types, vegetative species-abundance listings, wildlife species-abundance listings, records of threatened and endangered plant and animal species
- **Aquatic Communities**—nature of aquatic habitats, species-abundance listings for aquatic macro-invertebrate and fish communities, ecological indexing of community data
- **Environmentally Sensitive Areas**—identification of protected areas and biodiversity issues, wetlands, flood plains, steep slopes, stands of mature vegetation, aquifer recharge areas, areas of high water table, areas of rock outcrop, prime agricultural lands, and mines
- **Agriculture**—cropping patterns, irrigation, soil fertility and water conservation practices, pest management practices, pesticide use
- **Infrastructural Services**—nature and status of human services such as police and fire protection, hospitals, schools, utilities, sewage, water supply, solid waste disposal
- **Transportation**—layout and function of existing roadways, railways, airports; existing and projected capacities and demands
- **Air Quality**—regional quality and trends, data from local monitoring stations, reports of standards exceeded
- **Sound Levels**—existing sound levels, sources of sound
- **Demography**—census or population estimates, recent trends and projections for future population
- **Socio-economics**—economic and social structure of communities, land tenure, tax rates, characteristic types of development
- **Human and Livestock Health Hazards**—potential for enhanced risk of injury, malnutrition, non-communicable disease and occupational hazards; communicable diseases such as diarrhea, and transmission of vector-borne diseases such as malaria, schistosomiasis, sleeping sickness, onchocerciasis; and on livestock, Nagana, tick fever, heartwater, Rinderpest
- **Cultural Resources**—location and characterization of identified cultural resources (archaeological, historical, cultural, landmark), potential for unidentified resources in project area

Remember:

- You are not writing an environmental encyclopedia! Provide only baseline information needed to assess the potential environmental effects of your proposed activities.

- Be guided by national environmental policy or Environmental Action Plan(s) and by the special or unusual characteristics of the locations affected. For example, in one country, genetic diversity and maintenance of indigenous crop varieties may be important; in another, preventing land degradation or soil erosion may have special value.

- Consider what is ecologically or culturally unique, unusual, or sensitive. Consider what regulations or laws might apply. For example, are there special prohibitions on building in or filling wetlands?

- Obtain some information about all the locations associated with each activity and its related actions, as noted in IEE Section 1 above. For example, if a project or activity requires an access road or a utility line to a site or a borrow pit, relocation of families to another place, off-site disposal of waste, etc., it may be appropriate to describe all locations that will be affected by the proposed activities.

IEE Section 3

- **!** Describe impacts for each activity, using the same organizational framework you adopted for IEE Section 1
- **!** If an activity has no potential impact, or a component may be a categorical exclusion, briefly note this.

U IEE Section 3: Evaluation of Activity/Program Issues with Respect to Environmental Impact Potential

Identifying potential impacts requires application of **science** and **art**. Although scientific methods should be used whenever possible, there are often limitations due to inadequate data, complex relationships, and limited time and resources. Therefore, seeking the input of knowledgeable local experts and applying informed judgment are essential; where these are lacking, simple analysis and logical reasoning are useful.

You are advised to adopt the same organizational framework for IEE Section 3 as you adopted for IEE Section 1, so that reviewers can easily refer back to the activity descriptions.

! *Construct List of Potential Impacts*

You may wish to use one or more simple *checklists* to help you identify potential environmental impacts. Sample checklists are found in Annex E. In addition, Section 3 of the Africa Bureau *Environmental Guidelines for Small-Scale Activities* provides a sectoral list of questions and pointers to help identify possible impacts of specific activities. No checklist is perfect. Each is meant to help stimulate good thinking and planning about your activities. Checklists offer the advantage of simplicity for gathering and classifying information necessary for assessing environmental impacts. The technique is a structured way to help you begin to organize information, identify potential environmental impacts, think about possible mitigation options, and make tentative conclusions on the extent of environmental impacts.

Also consider using a "Project Impact Matrix" or "potential impact network" (see Annex E for examples) as a means of organizing your thoughts. Typically such a matrix has the various environmental components affected by the activity listed across the top. For each of these environmental components, you indicate if some input action during planning and design, construction, operation, and cessation of useful life could affect one of the environmental components.

Look again at the *Environmental Guidelines for Small-Scale Activities* or other references. Many of the concepts considered here are treated in more detail there, either by sector or in a procedural manner in Section 5.1 of the *Guidelines.*

Once you have organized activities by phase (planning, construction, operation, end of useful life) and bearing in mind the characteristics of the environment you noted in IEE Section 2, determine how each activity might affect some environmental component, e.g., aquatic ecology, soils, topography, water quality, flora and fauna, etc. You will need to focus on issues of importance. It is not always easy, even given the right data, to appreciate the various and often subtle ways in which certain project activities can affect the environment.

! ***Identify and Consider the Implications of Classes of Impacts***

- Using the information you developed and the description of the affected environment (from items in Box 4.5 and the list of questions), determine what types or classes of impacts may apply, as defined below.

- Determine direct impacts first, e.g., clearing land means loss of vegetation. A new or improved road means new or additional traffic.

- Consider the *implications of each direct impact to arrive at indirect or induced development impacts*. Indirect impacts are caused by the action, but two, three or four steps down the line from direct impacts, occurring later, or in different locations.

  As an example of indirect effects (a chain of impacts successively farther removed from the project area itself), consider the hypothetical case of a dam, which could result in reduced water flow downstream contributing to increased vegetation growth, which then tends to support denser populations of aquatic snails (some of which are vectors of schistosomiasis) leading to potential for increased incidence of schistosomiasis in the affected population. The health aspects of environmental assessment clearly need to be taken into account (see References in Annex G, e.g., World Bank Environmental Assessment Sourcebook supplements).

- Use the literature available to see how you might link direct impacts to secondary, tertiary impacts, etc. For example, does development of a site mean that more people are attracted to an area, resulting in population growth, or will the clearing be so extensive or in such a sensitive zone that an important habitat will be destroyed.

- Distinguish between short-term, or temporary, and long-term impacts. Although construction-related impacts are often short-lived, some impacts may occur during construction that are long-term with permanent implications, e.g., construction activities that alter the hydrology of a wetland.

- Distinguish beneficial impacts from adverse impacts, recognizing that where human groupings are concerned, impacts beneficial to one group may be adverse to another.

- Consider the ***potential for cumulative impacts***—those impacts that result when the impacts of your actions are added to the existing situation and other reasonably foreseeable actions regardless of what organization or agent is undertaking them. Cumulative impacts can result from individually minor but collectively significant actions over a period of time. This is particularly the case in countries with severe population pressures on land, water and energy resources. Area-wide environmental management plans and environmental analyses are therefore becoming increasingly important in mitigating adverse cumulative effects. You probably will not be able to mitigate the effects of activities for which you are not responsible. Nevertheless, where feasible, you should try to **coordinate your activities** with others, help others to recognize potential impacts of their activities, or play a role in fostering an environmentally sound overall development plan.

- Consider what you said about the future context of the activities, i.e., the future no action alternative. **Compare** the expected impacts to that, not just the current baseline situation.

! ***Predict and Characterize Potential Impacts***

Identify the nature of the changes in environmental conditions that are caused by the proposed action. Doing so requires an understanding of *cause-and-effect relationships*. Environmental impacts will have a number of distinct, but linked, characteristics, which should be considered to give an overall picture of the anticipated changes due to the project. Use the list in Box 4.5 to help predict potential impacts. In using the list of impact descriptors, consider especially effects on human groups. Also consider gender equity. Who is affected by the magnitude, direction, extent, duration, or frequency of impacts? Try to make your impact indicators as quantitative as possible. Define your terms for the reviewer and try to avoid words like minor, moderate, major, etc.

It is a good idea at this point to compare the impacts of the proposed action with the no-action alternative[16] and any other alternatives to the proposed action. If the proposed action seems to have the biggest set of adverse impacts, *consider these additional alternatives*. Consider reducing the size of the activity, changing its site or substituting another type of activity that could achieve a similar objective. Note: One can also identify alternatives that have less impact, e.g., mitigate certain impacts as well as identify a set of mitigative measures for each alternative. (See IEE Section 4 for more ideas.)

! ***Judge the Significance of Impacts***

Significance of a predicted impact depends on its *context* and *intensity*. **Context** varies with the setting. For example, the loss of one hectare of park in an urban setting may be more significant than the same quantitative loss in a more rural setting, unless that hectare is habitat for an endangered species (or belongs to you!). A new or rehabilitated road in an urban area could be far less significant than the same road in a remote or wilderness setting. **Intensity** depends on the degree to which an action:

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[16] It is important to stress the role of the no-action alternative because it serves as a baseline against which other alternatives can be measured. When the environmental consequences of the action alternatives are weighed against their projected benefits, the no-action alternative can sometimes be the best one.

- affects public health or safety;
- affects unique characteristics of an area (culturally, archeologically or historically important resources, parklands, prime farmlands, wetlands, wild and scenic rivers, ecologically critical areas, etc.);
- is likely to be highly controversial;
- is highly uncertain or involves unique or unknown risks;
- establishes a precedent;
- adversely affects nationally defined historic places;
- adversely affects endangered or threatened species or habitat and the like; or

Box 4.5. Typical Descriptors of Environmental Impact

Typical descriptors used in identifying potential impacts include:

! **Magnitude**: the absolute or relative change in the size or value of an environmental feature. Uncertainty is likely in forecasting the magnitude of change, and some upper and lower estimates may need to be given.

! **Direction:** the impact can represent a beneficial or adverse change in general. Therefore, it is important to know the direction of the impact as the beneficial impacts are welcome. Adverse impacts are of most concern in environmental analysis. Nevertheless, impacts beneficial to some groups may be adverse for others.

! **Extent:** the area affected by the impact—e.g., in hectares of productive agricultural land or kilometers of river. Distinction here between on-site and off-site impact is useful.

! **Duration:** the time period over which the impact will be felt. Some impacts may be very short-term (i.e., during construction), some may occur over a number of years, and some may be permanent. It is often desirable to specify duration in terms of short-term (i.e., one year or less), medium-term (i.e., one to ten years), and long-term (i.e., more than ten years).

! **Frequency:** refers to the return period for impacts that tend to recur over and over again—e.g., erosion associated with floods; loss of vegetation and soil cover associated with drought or fire; seasonal air quality problems, etc. Categories of return period can often be used to advantage in specifying frequency (e.g., annually or less, one to ten years, ten to 100 years).

! **Reversibility:** refers to the permanence of the impact. Several distinctions are possible here. Impacts may be reversible by natural means at natural rates, or be reversible by various forms of human intervention at reasonable costs. Others may be, for all practical purposes, irreversible. Irreversible impacts are likely to be more severe, because they assume permanent damage to the environment.

! **Likelihood of Occurrence:** the possibility of a particular impact occurring as forecast. Here, an estimate is made about how certain the impact prediction is, given the limitations of environmental science. Again, establishing categories of analysis such as definite, probable, and possible may be useful if they are well-defined. Sometimes this is referred to as the **risk** of an impact occurring.

- is irreversible.

Thus, determining "significance" involves a judgment, tempered not only by applicable national or international laws protecting the environment, but also by societal perceptions of importance. One way to judge significance is by considering the specific USAID or host country regulations, international conventions, or policies that say "x" is significant, or where standards exist that are not to be contravened.

IEE Section 4

- **!** Decide on threshold recommendations
- **!** Describe mitigation, monitoring and evaluation measures

U IEE Section 4: Recommended Mitigation Actions (Including Monitoring and Evaluation)

IEE 4.1 Recommended IEE Determinations

Organize this section to correspond with the organizational format chosen for IEE Sections 1 and 3. In this Section, you should conclude, on the basis of the information presented in the other Sections, what determinations you recommend for each activity or major component, e.g., what qualifies for a Categorical Exclusion, a Negative Determination (with or without conditions), a Positive Determination, or a Deferral. Review the options for determinations in Section 3.

- Categorical Exclusions must be consistent with one of those listed in Reg. 216 (see Section 2, the EDG).

- Negative Determinations with or without Conditions must be supported by information that allows reviewers of the IEE to conclude that no significant (adverse) impacts of the actions associated with an activity will occur. This conclusion is based on the reviewers' concurrence that either: there are no impacts; if there are, they will be mitigated; or effective monitoring will be incorporated in the activity or program so that adverse impacts will be identified and mitigated before they become significant. Note briefly what mitigative measures and monitoring are considered "conditions." You will be able to expand on these in IEE Section 4.2

- Positive Determinations will lead to an EA or PEA, in which more detail about the activities, actions and range of effects will be studied. Again, for Positive Determinations, early consultation with your MEO is recommended.

IEE 4.2 Mitigation, Monitoring, and Evaluation

The generic outline for the IEE indicates Mitigation, Monitoring, and Evaluation as one section. You can discuss the three topics together by activity under Section 4.2 or you can organize separate sections for each. In this discussion, only Mitigation and Monitoring (related to the IEE specifically) are treated, on the assumption that evaluation will be dealt with as part of your overall monitoring and evaluation (M&E) framework.

The process of environmentally sound project development does not stop when project or program environmental effects have been identified or decisions have been reached. An environmental mitigation and monitoring strategy is part of the environmental documentation process and should be included in or annexed to the Reg. 216 documentation.

! ***Identify Mitigation Options***

Mitigation is the purposeful implementation of decisions or activities that are designed to reduce the undesirable impacts of a proposed action on the affected environment. Consider using a structure such as that provided in Table 4.1 below to organize mitigation options. Mitigation is a general concept that may include the following list of categories:

C *Avoiding* impacts altogether by not taking a particular action

C *Minimizing* impacts by limiting the degree or magnitude of the action and its implementation

C *Rectifying* impacts by repairing, rehabilitating, or restoring particular features of the affected environment

C *Reducing* or *eliminating* impacts over time by performing maintenance and preservation activities over the life of the action

C *Compensating* for impacts by replacing or providing substitute resources or environments that are, or might be, affected by the action. (Compensation might include, for example, enhancing the ecological value of another wetland or protected area, if you have destroyed one. Or it might be the provision of replacement housing and land for relocated people. Generally, it is easier to provide compensation for people than it is to provide replacements or compensation for the biophysical environment.)

C *Monitoring impacts* of an activity can be considered a form of mitigation when decisions contain uncertainty and monitoring becomes a form of agreement among affected stakeholders, to be used to help define a shared strategy for addressing future problems as they are identified.

Note that the mitigation categories are arranged hierarchically according to desirability. In other words, avoiding impacts is preferable to having to rectify impacts or provide compensation for them.

Elements of an environmental mitigation plan or management plan are summarized in Box 4.6.

Key issues to consider in developing your mitigation strategies

- How costly are the mitigative measures relative to project cost? If they are more than ten percent of the cost, perhaps you should recommend redesign.

- Who will be responsible for design, implementation, and monitoring of the effectiveness of your proposed mitigative measures?

- It is very important to incorporate any mitigative measures in bids or tenders, if contracts for construction are needed as part of an activity. Monitor whether measures are carried out. These could be construction-related mitigative measures (such as reducing soil erosion, protecting vegetation during construction, restoring a landscape, or ensuring sound environmental practices in a construction camp) or they could be mitigative measures that need to be put in place (such as special devices for drainage flow to protect a wetland or replanting or reseeding denuded areas).

Table 4.1 Mitigation Strategy by Activity Phase

Strategy ° Phase	Planning and Design	Construction	Operation	End of Useful Life
Avoid Impact				
Minimize or Diminish Effect				
Rectify by Repair or Rehabilitation				
Reduce or Eliminate over Time				
Provide Compensation				
Monitoring				
Other				

Box 4.6. Environmental Mitigation or Environmental Management Plan

1. A mitigation or environmental management plan consists of the set of measures to be taken during implementation and operation to eliminate, offset, or reduce adverse environmental impacts to acceptable levels. Also included in the plan are the actions needed to implement them. During the preparation of a mitigation plan, one should (a) identify the set of responses to potentially adverse impacts; (b) determine requirements for ensuring that those responses are made effectively and in a timely manner; and (c) describe the means for meeting those requirements.

2. A mitigation or management plan should include the following items:

   (a) identification and summary of all the significant adverse environmental impacts that are anticipated;
   (b) description and technical details for each mitigation measure, including the type of impact to which it relates and the conditions under which it relates and the conditions under which it is required (e.g., continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate;
   (c) institutional arrangements—the assignment of the various responsibilities for carrying out the mitigatory measures (e.g., responsibilities which involve operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting, and staff training);
   (d) implementation schedule for measures that must be carried out as part of the project, showing phasing and coordination with overall project implementation plans;
   (e) monitoring and reporting procedures to (i) ensure early detection of conditions that necessitate particular mitigation measures, and (ii) provide information on the progress and results of mitigation; and
   (f) integration into the activities' cost estimates and sources of funds for both the initial investment and the recurring expenses for implementing the mitigation plan.

3. To strengthen environmental management capability for implementation, most mitigation plans cover one or more of the additional topics identified below:

   (a) technical assistance programs;
   (b) staff development;
   (c) procurement of equipment and supplies, and;
   (d) organizational changes.

4. Specific links should exist for (a) funding, (b) management and training (strengthening local capabilities), and (c) monitoring. The purpose of the first link is to ensure that the proposed actions are adequately financed. The second link helps embed in the overall management plan the training, technical assistance, staffing, and other institutional strengthening needed to implement the mitigatory measures. The third link is necessary to provide a critical path for implementation and to enable evaluation of the success of mitigation and as a means for improving future projects.

(Adapted from World Bank Environmental Assessment Sourcebook Electronic Copy (1991), by using keyword 'mitigation'.)

Box 4.7. Designing an Environmental Monitoring Plan

Environmental monitoring plans differ depending on the severity of impacts on the environment, and on the kinds of environmental factors that need to be monitored. Plans should state clearly *how, by whom, and at what cost in human and financial resources* monitoring will be accomplished.

Monitoring components should describe how:

(i) monitoring will be accomplished to determine if mitigation is meeting expectations; and

(ii) other monitoring will be provided to serve as "caution lights" to inform activity implementers and communities of changes that may require additional mitigation (ideally an effort should be made to select indicators that measure both beneficial and adverse effects).

Effective monitoring plan development and implementation requires a participatory approach, especially in development settings where constraints on financial and technical resources may require innovative approaches to monitoring involving local communities, farmers, pastoralists, etc. The results of the monitoring should be provided to the USAID MEO and in some cases might warrant reporting to the host country institution in charge of the environment, e.g., if the monitoring were to detect overall patterns of degradation that warranted area-wide action or policy solution.

For more information on environmental mitigation and monitoring see the references in Annex G.1 and those on file with FAM's Food Security Resource Center listed in Annex G.2. Of particular interest are the mitigation and monitoring tables contained in the *World Bank's Environmental Assessment Source Book - Volume II Sectoral Guidelines* (1991), and Charlotte Bingham's paper *Role of Monitoring and Auditing in EIA* (1993). Also explore the IAIA website home page at http://iaia.ext.nodak.edu/iaia.

! *Identify Monitoring Needs*

There may be potential environmental impacts you are unsure of, or for which mitigation may or may not be necessary. These potential impacts are candidates for monitoring. Certain mitigative measures may require maintenance or checking to see if they are having their intended effects. These too are candidates for monitoring. Box 4.7 describes basic elements of a monitoring plan.

Because monitoring can be a costly undertaking, consider:

- Is the monitoring needed?
- Will comparisons be made to the baseline situation, a control site/situation, or both?
- How often will the indicators be monitored?
- Who will be responsible for the monitoring?
- What will be the approximate cost (including person-days per month or year, if you can estimate that) for measuring each indicator? Can the monitoring and monitoring budget be sustained long enough to provide useful data?
- Can the indicators be derived from data already being collected? Could they contribute to regional, national, or other monitoring efforts?
- Can the stakeholders benefitting from the activity be involved in or trained to perform any of the monitoring?
- How will the results be used and with whom will results be shared, either for information purposes or because action needs to be taken?
- How will this monitoring be incorporated into your overall monitoring plan or program?

- ***What environmental factors and indicators are to be monitored?***

Indicators used for monitoring need to be clearly identified and described during activity and monitoring plan design. The monitoring plan identifies and describes the environmental and natural resources parameters to monitor, such as pH, salinity, productivity, etc. It also identifies indicators or "proxies" to use to measure or estimate changes (presence of plants in a specific environment, plants with different tolerances to changes in soil fertility, exotic species, etc.). The selection of parameters to be monitored, as well as associated indicators, depend on the type of activities, and how those activities affect the environment. If environmental monitoring specialists are not on staff, consider obtaining short-term technical assistance and use an interdisciplinary team approach.

- ***The special case of water quality monitoring***

Testing and monitoring for water quality has become an issue of increasing importance to USAID and CSs. USAID and other donors, including the World Health Organization, are raising new concerns regarding the frequent occurrence of health-threatening heavy metals like arsenic, and other contaminants in rural and urban public water supplies, including coliform bacteria, nitrates and nitrites. (See Box 3.4.) Prior to initiating water development programs, CSs should assess water quality, and take results into account in the design of water development activities. Monitoring also should be done to ensure future quality is maintained. A 1998 USAID official cable (98 STATE 108651) on testing potable water provides "supplemental guidance for conducting USAID's 22 CFR 216 Initial Environmental Examinations (IEE) and Environmental Assessments (EA) when funding activities involving drinking water." Reference to this cable is made in Box 4.8.

This guidance is under development as research continues on arsenic field evaluation and mitigation. CS's should consider the following questions:

< What should be tested? Where? The answers depend on factors that include, but are not limited to, the hydrogeological conditions of the area, nature of surface and groundwater flow patterns and quantities, or proximity to potential sources of contamination (sometimes many miles from the proposed water development activity).

< How frequently will testing need to be done?

< Will sample surveys suffice? Does every well need to be tested for everything? For example, if wells are all part of one uniform aquifer, in uniform geological formations, would one-shot sampling be sufficient? If the hydrogeology is know to vary, or if it is largely unknown, what should the approach be?

< How will testing be done? Who will do it? How often? How much will it cost? Again these answers are shaped by hydrogeological conditions and proximity to known or potential contamination sources, but they are also determined by the context of geography and available human and financial resources. For example, what are the cost and labor advantages of conducting tests and analyzing samples in the field versus sending samples to laboratories? What are the advantages/disadvantages of kits versus lab work, taking into account factors such as reliability, ease and cost of transport, length of time required to receive and apply analysis results, etc.

Box 4.8 Arsenic Testing in Potable Water

Recent concern over arsenic was sparked by a situation in Southern Bangladesh and West Bengal, India, where very large rural populations have been exposed to elevated levels of arsenic from wells drilled over the last forty years, leading to increased incidences of poisoning. Naturally occurring high levels of arsenic in groundwater have also been identified in Mexico, Romania and several other countries. These occurrences are not associated with mining or industrial sources or with any particular geologic formation, so they would have been impossible to predict. Initial thinking is that these situations may be more likely to occur in areas with thick sediments such as deltas or deserts, or areas with current or former geothermal activity, but there is no reliable prediction model yet.

In general, USAID no longer undertakes large-scale well-drilling programs. Nevetheless, in those cases when USAID does fund provision of potable water supplies, either new ones or restoring old ones, prudent practice would dictate that environmental reviews carried out in accordance with 22 CFR 216 should include testing for arsenic in addition to the usual testing for coliform bacteria and nitrite/nitrate. Tests for additional contaminants should also be performed, as appropriate, when a nearby pollution source (e.g., industry, mining, heavy pesticide or fertilizer use) suggests that additional contaminants may be present.

There is no cause for undue alarm at this time because elevated arsenic concentrations are not anticipated at most locations. This guidance is being issued to avoid potential problems and to resolve actual problems more effectively should they arise.

Should concentrations of arsenic exceeding the current drinking water recommendations be found in a location, a dilemma may arise as to whether to allow people to continue to use polluted traditional water supplies or to use USAID funds to provide water tainted with arsenic. Options will depend upon how the water is used (drinking and cooking, irrigation, livestock watering, or industry), the actual concentration of arsenic in the water, and the duration of the use. Should such a dilemma arise, the Strategic Objective Team in charge should consult the PHN Center in the Global Bureau and other partners as well as the potentially affected populations to find a workable resolution. G/PHN point of contact is: John Austin, at (202) 712-5623.

USAID is working with the U.S. Geological Survey to address this problem. Close coordination is recommended among the field, the responsible Bureau Environmental and Health Officers and the Cooperating organizations (including PL-480 Title II Cooperators) that provide wells, as G/HPN's additional guidance on appropriate sampling and testing for arsenic is being developed. This coordination is also recommended to ensure appropriate analysis of this important issue in an activity's 22 CFR 216 documentation.

The Global Bureau's Centers for Environment and PHN will continue to monitor current research and field evaluations aimed at mitigation of arsenic in water supplies. Your input and ideas on developing guidance that is on the one hand, sensible, and on the other, protective of public health, are welcome. Please send input and ideas to Jim Hester, PPC/ENV, at (202) 712-5176.

(USAID's cable communication Agency-wide, State 108651 16 June 1998)

- Whose water quality standards should be used? The World Health Organization's? The host country's? The U.S. Environmental Protection Agency's? Other?

- If testing reveals water quality is lower than agreed upon standards, what mitigative measures are available?

The preceding questions could be more or less difficult to handle, and answers must typically be developed on a case-by-case basis. There is no one "requirement" for water quality testing—it's a matter of appropriateness. Do what makes sense based on local expertise and realism. Sampling about a half-dozen key parameters at the outset, and twice a year, or more often if called for, may in fact be a significant improvement over past practice and a major step in helping to improve the health and well-being of rural and urban populations. Remember to consult members of the community on their perceived problems with water quality and how the think they might best be solved. For more information on the key contaminants and the health risk they pose; recommended standards; various testing methodologies; technologies and costs; consult the references available through FAM's Food Security Resource Center and listed in Annex G.2. Note particularly those published by the World Health Organization (PEEM) and CIDA. Seek advice, when appropriate, from your MEO, REO (if one exists in your region), or your geographic or BHR BEO.

! ***Environmental Mitigation and Monitoring and the Environmental Status Report***

Updates on mitigation and monitoring are to be included in the annual PAA Environmental Status Report as discussed in Section 3.2.

IEE Section 5

! A self-explanatory abstract of the IEE

U **IEE Section 5: Summary of Findings**

Include your Summary Table of activities in this section. Summarize the findings, typically using the same organizational scheme adopted for Section 1, limiting yourself to a brief description of the activity, the nature of the impacts (if any), the recommended determination, the rationale for this determination, and applicable mitigative measures and monitoring.

Environmental Compliance Facesheet

! 2-3 pages including first page, summary, and approvals.

U **Environmental Compliance Facesheet**

Complete the Environmental Compliance Facesheet (see Section 3.5). You may need to abbreviate your summary (Section 5 of the IEE). The Facesheet first page, the summary, and the approval lines would ideally consist of two pages, and no more than three.

4.4 What if the IEE Results in a Positive Determination?

Discuss the Positive Determination with the BHR BEO to make certain the determination is appropriate, i.e., an EA or PEA is indeed necessary to study further the impacts of an activity or grouping of activities. Assuming that an EA or PEA is needed, read Reg. 216.6 thoroughly to gain an understanding of the process. You must first prepare a scoping statement (see Section 5.5.2) to identify the key issues to be treated in the EA or PEA. Reg. 216 encourages you to engage in consultations with the host country. If USAID has required

an EA or PEA, your host country may also require a similar document. This is an issue that should be addressed in the scoping statement so that one document satisfies both USAID and host country procedures. The scoping statement requires BHR BEO approval and he/she may choose to circulate it to other federal agencies. EA or PEA preparation usually requires a team of specialists. When subjective judgments about scale or magnitude are involved, it may be prudent to involve a team with varied technical expertise in the determination process. Perhaps an EA that provides an in-depth assessment of the effects of an activity might be warranted. The Africa Bureau *Environmental Guidelines*, Section 5, provides guidance on approaches to EAs, as do numerous other sources, such as the World Bank *Environmental Assessment Sourcebooks* (3 volumes) (1991). See Annex G for other resources. The scoping statement will also help you define Terms of Reference for consultant(s) or an in-house multi-disciplinary team.

EA or PEA analysis and writing of the document will take time and money (see Sections 5.5.1 and 5.6.1). Try to involve local consultants.

The completed EA or PEA will require BHR BEO approval and should be shared with the host country authorities. Public dissemination of the document is to be encouraged. While not required, collaboration with the host country throughout this process (e.g., scoping, analysis of issues and recommendations on alternatives, and mitigation and monitoring) can be very useful in helping build institutional capacity and developing country-specific approaches to environmental assessment, mitigation, and strategic management.

Section 5

Frequently Asked Questions about DAP/PAA Environmental Compliance

5 FREQUENTLY ASKED QUESTIONS ABOUT DAP/PAA ENVIRONMENTAL COMPLIANCE

The following questions are synthesized from Title II PVO reactions to the earlier drafts of the Environmental Documentation Manual, originally called the Environmental Information Package.[17] These questions arose repeatedly when PVOs and other food aid professionals began the process of understanding and responding to USAID's Environmental Procedures. To assist in cross-referencing, the questions are organized thematically. The questions themselves, paraphrased and combined, are in bold face type.

5.1 Understanding the Rationale for Title II Environmental Compliance

5.1.1 Why is DAP/PAA compliance with USAID environmental regulations being required now, when the Agency did not require it in the past?

There are several reasons. While historically international disaster assistance has been and continues to be exempt from the regulations, Title II activities are not and were not exempt, unless "notwithstanding" authority was granted. In addition, USAID is placing greater emphasis on promoting long-term sustainable development. Experience has also proven that taking environmental factors into account makes good development sense. Food aid must be used to enhance food security (frequently through agricultural production) and where environmental degradation occurs, agricultural productivity and food security are often jeopardized.

5.1.2 What is Regulation 216?

Regulation 216 is the commonly used shorthand term for the Agency's Environmental Procedures, which are codified in the Code of Federal Regulations (CFR) as 22 CFR Part 216 (also referred to informally as Reg. 216 or Reg. 16).

5.1.3 What happens if an activity is undertaken without adequate environmental analysis?

USAID and those involved in the certification process are open to potential lawsuits, and the good name of all those involved is jeopardized. Most important, without environmental review and underlying environmentally sound design, an activity may not yield the results sought and may not be sustainable. Furthermore, Title II funds cannot be obligated unless activities receive prior Reg. 216 concurrence from the BHR BEO.

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[17] Many of the questions were generated during several rounds of meetings and e-mail exchanges with Title II PVOs during 1997 and 1998 among USAID staff, the CS Environmental Working Groups of FAM and USAID/Ethiopia, the Africa Bureau Environmental Capacity Building workshop for Title II PVOs in Ethiopia (February 1997), and other meetings with the Ethiopian environmental working group.

5.2 Responsibilities and Timelines

5.2.1 What is the timeline for Environmental Compliance of Title II partners?

Since this may change from year to year, you should check the most recent annual *P.L. 480 Title II Guidelines for Fiscal Program Proposals.* However, submissions for review in the field by the USAID Mission or Representative are normally suggested for mid-February and to BHR/FFP by early-March.

- Environmental documentation should begin as soon as possible, and be completed expeditiously.
- All DAP or DAP Amendment submissions should include an IEE or Categorical request cleared by the Mission Director or his/her designee (typically an MEO), unless an IEE or Categorical Exclusion for the respective project has already been approved by USAID.
- All PAA submissions should be accompanied by an Environmental Status Report as outlined in Section 3.2 of the EDM.
- FFP will continue to collaborate with Title II development partners and USAID geographic Bureaus to offer training in environmental analysis for CS field staff.

5.2.2 Who does what?

PVOs: Cooperating Sponsor field staff will prepare an environmental analysis of their activities, which will form the basis of the appropriate USAID environmental documentation. In addition to the EDM, PVO staff can draw on outside expertise (MEO, REO, local and U.S. consultants as needed). The environmental documentation is incorporated by the PVO in the DAP design process.

CSs should seek Mission review and clearance on DAP Environmental Documentation prior to official submission of the DAP to FFP/Washington. The same is true for PAA Environmental Status Reports and IEE/Categorical Exclusion Amendments for PAAs or DAP Amendments. Environmental documentation, marked draft, may be submitted informally through the Mission to the Bureau Environmental Officer. If environmental documentation is submitted with the DAP, amended DAP or PAA without having been cleared by the Mission, the CS should insure that it is clearly labeled as "**DRAFT -- Not Yet Cleared by Mission**" and **dated** (be sure your computerized date mode is not set on automatic update, so that you are able to track possible future revisions). All draft Reg 216 documentation must be returned to the Mission for required clearance and the Mission may request revisions to ensure that Mission objectives, consideration of local conditions and consistency with environmental documentation of other Sponsors in the same country is achieved. PVOs first submit environmental documentation to the USAID Mission Environmental Officer, in consultation with the Mission's FFP Country Backstop Officer (if any). The MEO obtains Mission clearance, and the PVO submits to the Office of FFP through the FFP officer for clearance by the Director, preferably via the FFP Country Backstop Officer.

USAID Missions: The MEO assesses information, recommends how an activity is to be classified, and works with the Title II partner and the Food for Peace Officer to finalize documentation. Thus, it's important for the PVO to discuss preparation with the Mission before assembling the documentation. It is common practice for

the MEO to clear on the documentation and for the Mission Director to approve it. The Mission Director or his/her designee must clear the IEE or Categorical Exclusion request prior to final Environmental Documentation and DAP approval by USAID/Washington. Once the Mission has cleared the IEE/Categorical Exclusion, a signed copy should be sent to BHR/FFP (as part of the DAP submission).

In a Mission's PAA comments and/or approval cable to BHR/FFP, the Mission should state whether it concurs with the Environmental Status Report.

USAID/W: The IEE must be cleared by the Director of FFP as a request for BHR BEO concurrence. Concurrence by the USAID BHR BEO constitutes the last step in the approval process. Geographic Bureau clearances are not required, though CSs are free to send geographic bureau environmental officers informational copies of environmental documentation, and to seek the guidance and expertise of these individuals during the IEE preparation and project design process. The BHR BEO will also provide informational copies of IEEs to the relevant geographic BEOs and seek their input, as appropriate. However, since the **IEE/Categorical Exclusion or IEE Amendment must first be cleared by the Mission Director or his/her designee prior to final Environmental Documentation and DAP approval by USAID/Washington** all drafts circulated for comment and/or information to BEOs or the REO should be clearly marked as such.

Following review of the IEE by the Mission and USAID/W, the CS may be asked to modify current activity designs or budgets. An EA (a more comprehensive analysis than an IEE) may be required if the IEE recommends a Positive Determination, i.e., when significant (adverse) environmental consequences have been identified in the IEE and activity approval process. It is a good idea to give the BHR BEO a “heads up,” and to keep both the BHR BEO and geographic BEO in the loop, to avoid surprises and help answer specific questions.

5.2.3 In the case of DAPs and some PAAs, IEEs may be written for sets of activities that are modified or even eliminated from the DAP or PAA (if major changes are being made) during the FFP review. What happens if the IEE were to be approved prior to approval of the DAP or PAA, thereby making it inconsistent with the proposal?

The CS must take responsibility for making the necessary environmental documentation revisions and seeking necessary approvals and concurrences. Review again Section 3.3 of the EDM on roles and responsibilities.

If an IEE has been submitted and approved by the MEO and the BHR BEO, but there are changes to the DAP or PAA, the CS point person for the DAP/PAA proposal should inform the CS’s staff responsible for Reg. 216 documentation preparation in the field (and the BHR BEO and MEO) that a revised IEE must be prepared to accord with the final DAP or PAA. If the DAP/PAA gets revised in Washington, then the CS must work out a mechanism whereby the BHR BEO is informed and sends the IEE back to the Mission for reworking with the revisions of the DAP or PAA.

In any case, a note regarding the revisions needed and made should accompany any re-submission and the date and sequence of the submissions should be clearly noted for the MEO’s and BEO’s information.

5.2.4 Is the DAP approved before the environmental documentation is approved, or only after the approval of environmental documentation (this would likely be an IEE or Categorical Exclusion)? Is obligation of funds dependent on approved environmental documentation? Could a DAP be approved, but funds not be obligated until after environmental documentation is approved?

In principle, fully approved environmental documentation is to be submitted with the DAP, DAP Amendment or PAA, because **future obligations cannot be made until the documentation is approved** and approval of the DAP or PAA will not be possible unless there is suitable environmental documentation.

5.2.5 What if I do an IEE and submit it with my DAP, but the IEE recommends a positive determination indicating that I will need to do an EA? Can I use the monies that I might get via that DAP to expend on the EA process so that I would be in compliance?

PVOs must defer activities affected by the EA, but would be able to implement other approved activities. PVOs could request a Categorical Exclusion to conduct the study itself, per 22 CFR 216.2(c)(iii). If an EA is needed, PVOs should budget for it, by requesting 202(e) funds. It is recommended that provision for IEE-related environmental review be made as a line item in the monetization component's budget as submitted with the DAP proposal. In ex post facto cases, budgeting would require a budget amendment proposing a shift of funds from one or more line items to an IEE/EA line item. An explanation of how the shift was made, without compromising the schedule of activities the budget was originally designed to support, should accompany the amendment request[18] (see also Section 5.6.1).

5.2.6 Does environmental documentation have to be redone each time a PAA is submitted?

Although PAA submissions need not include the previously approved environmental documentation (e.g., an IEE), if the documentation has already been approved by USAID for the subject TII activities and these activities have not changed, nevertheless, the PAA must be accompanied by an Environmental Status Report. In 2-10 pages, the Report will discuss the status of the mitigation plans and environmental monitoring. The instructions for preparing the Environmental Status Report will you determine if the previously approved environmental documentation needs to be amended because of changes in the activities mitigation plans or monitoring. The format and instructions are found in Section 3.2.

Note: If a CS's submission contains changes that require a DAP Amendment, it will also include amended Reg. 216 environmental documentation.

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[18] Source: David Nelson, BHR/FFP/DP, Dec. 19, 1997 e-mail to Paul des Rosiers, G/ENV and BHR BEO.

5.2.7 What kind of documentation is needed for a Transition Activity Program (TAP)?

It is recommended that CSs go ahead and begin preparing Reg. 216-like environmental documentation, in anticipation of the TAP becoming a DAP. Please check with your FFP officer, MEO, REO, BEO or other appropriate resource persons for specific guidance, as this is an evolving issue.

5.2.8 Why does environmental documentation require USAID/Washington concurrence and clearances if USAID is trying to empower PVOs and USAID/Missions to make decisions for themselves, and increase their responsibility for compliance with Reg. 216?

By statute, USAID cannot fully delegate authority for environmental decision-making from the BEO to the field under the concurrence process mandated by Reg. 216. The regulations cannot be changed internally by USAID, since they are established Federal Regulations that can only be changed by a process that involves formal notifications, public review, public comment and publication of new draft and final regulations in the Federal Register. Nevertheless, the approval and concurrence process should not cause delay in most cases. The BEOs typically have quick turn-around times for decisions.

The regulations stipulate that a threshold decision about the significance of environmental impacts and the appropriate level of documentation must have the concurrence of the BEO in USAID/Washington. The BEO will either concur or request reconsideration by the officer who made the threshold decision. Differences of opinion between these officers are submitted for resolution first to the Agency's Environmental Coordinator for resolution, or (in rare circumstances) are passed on to the Assistant Administrator (216.3[a][2]).

BEO concurrence provides a check against inadvertent error, as well the possibility that an implementing office might downplay environmental issues to expedite an activity. Furthermore, many Missions do not have staff fully conversant with the regulations and are not able to provide the level of knowledge required. It is the BEO's job to worry about the regulation and the environment.

5.3 DAP and PAA Environmental Compliance Documentation

5.3.1 If the DAP or PAA contains several activities, do I submit separate environmental documentation for each activity?

Typically, no. You can cover several activities in one document. The EDG and additional guidance in this manual on compliance (see Sections 3 and 4) explains how to do this. If the DAP consists of a suite of different activities, such as agricultural credit, irrigation, and/or road building, it may make sense to organize Sections 1.0 through 4.0 of the IEE under the topical activity-cluster headings so that the sets of activities are analyzed separately by sector (thematic area). Thus, the sections would be repeated for each set of activities, and IEE Section 5.0 and the Facesheet summary would become the synopsis of all the parts. See also the response to Question 5.4.2.

5.3.2 What does the PVO do if the activities are not known or fleshed out in any detail at the time of the DAP submittal?

Consider a deferral or preparing an "umbrella" IEE. Annex F provides information about preparing environmental documentation that can be submitted with the DAP when activities have not yet been designed in full. Annex F also provides guidance on how to do subsequent screening and environmental reviews of these activities as they are designed, without requiring that each submission receive USAID/Washington approval.

5.3.3 If deferrals are not encouraged, why are they provided as an option?

Deferrals merely postpone the inevitable, but they do buy time and they do allow you to separate out those activities that can proceed from those that cannot. Deferrals may be unavoidable in certain situations where some DAP elements need further definition (e.g., specific location, nature, and time), before they can be reviewed environmentally. Decisions on implementing those elements are also deferred, and **no commitment of resources should be made.** Multiple-activity DAPs typically have a combination of multiple determinations, of which the deferral needs to be an available option. **In situations where a deferral might be appropriate, a Negative Determination with Conditions involving screening and review processes is an alternate option** (again, see Annex F).

5.4 Environmental Analysis

5.4.1 Is there a recommended way to organize DAP activities for the purpose of environmental decision making?

Drawing on the sets or suites of activities and interventions in the PVO's DAPs, and preferably parallel to the format of your performance-monitoring plan and strategic framework, you could identify the nature and scale of the activities, geographic distribution, and relative proportion of resources devoted to the activities. Environmental decisions are ultimately site-specific and activity-specific, so having a sense of locations and activity characteristics will allow the overall potential for environmental impacts to be evaluated as well as the document preparation effort.

You may organize this information in a table (see Section 2, Table 2.2). Note that this preparatory exercise provides an overview, so only ballpark figures are needed to arrive at a reasonably accurate order of magnitude. With this information in hand, use the EDG. The format presented is intended as a guide only, and not meant to be the only way to present this information. Modify yours if necessary as long as the essential headings and their intent are addressed. Subsequent steps in preparing the documentation may require other tables and report formats appropriate to the nature and location of the activities.

5.4.2 If a DAP/PAA consists of a large number of different activities, is there a way to organize the IEE to minimize repetition and make it easier to both prepare and review?

For large multisectoral programs it might be easier to retain the Environmental Compliance Facesheet and Summary as is, but as a means of trying to simplify the documentation process, it is suggested that the CS

consider preparing a series of documents that follow the IEE format but with each sector standing alone, e.g., roads, agriculture, health, soil conservation, etc. It is therefore recommended that the writeup for the first sector contain relevant background to the sector and program (without describing the whole program). If there are portions of IEE Section 1 *Background and Activity Description* that are applicable to other sectors, they do not need to be repeated in the next sector's documentation, but can be cross-referenced. This also may be possible for IEE Section 2 *Country and Environmental Information* with similar cross-referencing. Go to EDM Sections 4.2 and 4.3 for a more detailed discussion of this issue.

5.4.3 How do I determine whether environmental documentation must be done for each separate activity proposed or if programmatic documentation would be a more logical approach?

Environmental analysis is needed prior to and as input to any IEE, EA, or PEA. The approach to the conduct of environmental analyses depends on whether the proposed activities are generic or site-specific. Highly site-specific activities, such as an irrigation intervention, require analysis specific to the site within a "classic" IEE or as part of a post-IEE environmental review conducted under an "umbrella" IEE (see Question 5.3.2). If the scale of the activity is "significant" (a positive determination), it normally requires an EA. A group of similar "significant" activities in a region can also be treated within the framework of a PEA. More generic activities, such as soil erosion and terracing in several locations within a particular area, may be analyzed as a group within a "classic" IEE or, if an umbrella IEE has been prepared, similarly grouped and analyzed as part of a post-IEE environmental review. As in the example of highly site-specific activity(ies), activities considered "significant" would normally require an EA or a PEA.

5.4.4 How do I determine whether the scale or magnitude of my activities may result in significant effects? Reg. 216 is unclear as to what scale or magnitude of a proposed action of group of actions is considered significant and therefore would trigger an EA. For example, in interpreting Reg. 216 compliance requirements, certain essential specifications as to what constitutes a "large" vs "micro" dam, "major" irrigation project, etc., are not given. Without this information, how can PVOs/NGOs make determinations on their activities? More detailed specifications seem to be needed.

The very purpose of an IEE is to provide initial recommendations regarding a threshold decision, based on environmental analysis. Also, remember that coming to conclusions about what constitutes "significant" scale or magnitude for activities is often a matter of judgment among professionals. Scale and magnitude decisions often involve reasoned subjective decisions rather than objective science, depending on the environmental context, e.g., the same intervention near a protected area may be "significant" but "not significant" in another location. Therefore, it is often useful in making such decisions to form and involve a team with varied environmental expertise in these decisions.

In some cases, a USAID Mission may take responsibility for acquiring specifications and data already developed (for example, by the host government) and for identifying parameters needed to assist PVOs/NGOs in making their determinations. Although these kinds of specifics may not currently be available, the NGO/PVO can still proceed with an environmental analysis, begin the documentation process, and identify mitigation and monitoring measures to be taken to ensure that the activity is optimally sustainable and will not cause unintended harm to the environment.

In addition, the environmental analysis serves as an informal process for identifying mitigation measures linked to activity implementation. This process will give you a sense of the scale and magnitude of potential impacts. Begin the environmental analysis by simply listing all activity categories, and focus the collection of information on those activities that you consider to be not categorically excludable. That information will be essential for the IEE. If you believe your activities will have no significant (adverse) effects, provide the rationale in your IEE.

Remember that the umbrella IEE process (which provides for a Negative Determination with conditions) may be used if you have a large set of multiple activities and most of your activities are small-scale and not yet defined in much detail. In the course of refining other environmental review tools for country-specific situations, including country-specific IEE and post-IEE Environmental Screening Forms under an "umbrella" IEE process, you should expect to develop additional specifications for what locally are considered to constitute "significant" scale and magnitude.

5.5 Questions Regarding Preparation of Environmental Assessments (EAs) or Programmatic Environmental Assessments (PEAs)

5.5.1 How much time and effort does a PEA or EA take to carry out?

A good-quality EA or PEA process, from the scoping sessions and development of the scope of work, to data collection, analysis, preparation, internal review, and external review, typically takes no less than a year. However, with aggressive workers and committed reviewers, six calendar months is feasible. This length of time is little different for an EIS under U.S. procedures, although complex projects take considerably longer. For a good-quality EA or PEA, experience demonstrates that approximately six to eight person-months of effort is typical, with a minimum of three person-months, not counting the efforts of Mission Environmental Officers or Project/Results Package Managers. If document translation is required to achieve host country participation, more effort is needed. Nevertheless, despite the time commitments this may require, the intent of an EA or PEA is not to let this detailed assessment process discourage you from carrying out important development initiatives. Rather, the EA or PEA should be viewed as a key element of sound design.

5.5.2 What is "scoping" exactly?

Under Reg. 216, Section §216.3(a)(4), scoping as applied to an EA typically involves a consultative process that characterizes the "scope and significance of issues to be analyzed" and eliminates from further discussion issues that will not have a significant effect on the environment. Scoping involves gathering information from a variety of public and private sources, locally and nationally. It also provides a mechanism for public and technical concerns to be evaluated and presented to assist decision-making and priority setting. It informs and involves people potentially affected, takes into account local values, considers reasonable approaches and practical alternatives, determines the procedures for consultation and analysis, and establishes the terms of reference. Under Reg. 216, the scoping statement—actually a summary of the results of the scoping session(s)—provides a description of: *"(1) the timing of the preparation of the environmental analyses, including phasing if appropriate, (2) variations required in the format of the Environmental Assessment, and (3) the tentative planning and decision-making schedule...."* It also provides a "*description of how the analysis will be conducted and the disciplines that will participate in the analysis*." Note that **the scoping document requires BEO approval in Washington, per Reg. 216.6(e).**

5.5.3 Who does the scoping document?

If an EA is required, first consult with your Mission Environmental Officer (MEO), your Regional Environmental Officer (REO), if one exists, and/or your Bureau Environmental Officer (BEO). Remember that EAs are usually not necessary for PVO small-scale development activities. The BHR BEO will confirm whether an EA is needed and should be able to provide you with sample scopes of work (SOWs) and assessments. Different combinations of actors are responsible for the scoping document, depending on the situation. Ideally, the EA process is cast as a development tool and learning opportunity for all partners. In any case, scoping precedes the Environmental Assessment. The party carrying out the program of activities being assessed, in this case the PVO, is usually responsible for the EA, but USAID can provide initial advice and the BEO must also approve the EA. In the case of a Programmatic Environmental Assessment, it may make sense for a combination of USAID, PVO, and host country representatives to be involved.

5.6 Designing and Managing More Environmentally Sound Activities

5.6.1 What are some options for providing resources to support proper environmental analysis, assessment, and the associated measures that will likely result? Should PVOs be working on amending 202(e) grants or monetization funds to account for the cost of these assessments?

The answer depends on the specific situation and an analysis of the needs and applicable options. It is perfectly normal, understandable and acceptable that outside assistance may be needed in some situations. USAID and its PVO partners do need to ensure that participation by PVOs, NGOs, affected communities, and interested parties is incorporated.

The main options include at least a combination of one or more of the following, depending on each situation:

- PVOs include appropriate budgetary support in their 202(e) grant requests, amendment requests to budgets, or monetization budgetary outlays.
- USAID Missions support suitable assessments or analysis and technical assistance from Mission operating budgets.
- BHR/FFP supports [via the USAID Global Bureau's Environmental Policy and Institutional Strengthening IQC (EPIQ) or other modality] mutually agreed upon technical assistance.
- Groups of PVOs combine resources in a joint contracting action, or a "lead PVO" may be mutually selected and receive special support to serve as a resource for other PVOs and NGOs.
- USAID geographic bureaus may provide some resources, expertise, or support mechanisms.

5.6.2 How might CSs improve information sharing, communication and distribution of materials on environmentally sound design and compliance?

FAM, through its staff and the Food Security Resource Center, serves as a repository for documents on environmentally sound design and management as well as compliance with Reg. 216. Already there is a significant reference library available (See Annex G.2 of the EDM). An effort is being made to store many of the key documents electronically or to refer CSs to sites where they can be obtained over the Internet.

Several model IEEs for different types of Title II DAPs are on file electronically. It is hoped that for those CSs who do not have Internet access, FAM's *Food Forum* newsletter will provide the latest news related to the environment and Title II Food Aid programming.

Electronic information-sharing networks are needed, on both environmental compliance and environmentally sound small-scale activity management.

FAM and the EWG are taking steps to strengthen their capacity to provide these kinds of services. It is also hoped that USAID and CSs will help support and develop linkages with the International Association for Impact Assessment (IAIA) and their website list of Environmental Organizations provided at **http://iaia.ext.nodak.edu/IAIA/eialist** to further strengthen electronic information exchange through existing networks, rather than through creating new websites.

ANNEXES

Annex A

Title II Environmental Compliance Forms

Templates for Use by
USAID Bureau for Humanitarian Response
BHR/FFP/DP
Cooperating Sponsors

Annex A.1 Title II Environmental Compliance Facesheet

Annex A.2 Request for a Categorical Exclusion

Annex A.3 Outline of the IEE Narrative: Template

Annex A.4 Annotated IEE Narrative

Annex A.5 Environmental Status Report Facesheet

Annex A.6 Environmental Status Report Instructions and Format

Note: To use these forms as templates, remove the headers and footers, the Annex number headings, and other information points.

Annex A.1

TITLE II ENVIRONMENTAL COMPLIANCE FACESHEET

Title of DAP/PAA Activity:

CS name/Country/Region:

Funding Period: FY_____- FY_____

Resource Levels: Commodities (dollar equivalent, incl. monetization): _____
Total metric tonnage request: _____
202(e) grant: $_____

Statement Prepared by: Name _____ Date _____
Title _____

IEE Amendment (Y/N)? ____ Date of Original IEE: _____

Environmental Media and/or Human Health Potentially Impacted (check all that apply):
air___ water___ land___ biodiversity (specify)_____ *human health____ other____ none_____*

Environmental Action(s) Recommended (check all that apply):

_____ 1. *Categorical Exclusion*(s)

_____ 2. Initial Environmental Examination:

____ *Negative Determination*: no significant adverse effects expected regarding the proposed activities, which are well defined over life of DAP/PAA. IEE prepared:
____ without conditions (no special mitigation measures needed; normal good
____ with conditions (special mitigation measures specified to prevent unintended impact)

____ *Negative Determination:* no significant adverse effects expected, but multiple sites and sub-activities are involved that are not yet fully defined or designed.
? Umbrella IEE? prepared [go to Annex B and Annex F for examples]
____ conditions agreed to regarding an appropriate process of environmental

____ *Positive Determination*: IEE confirms potential for significant adverse effect of one
____ EA to be / being / has been (circle one) conducted. Note that the activities affected cannot go forward until the EA is approved.

____ *Deferral:* one or more elements not yet sufficiently defined to perform environmental analysis; activities will not be implemented until amended IEE is approved. Briefly describe the nature of the deferred activities:_____

Summary of Findings:

Briefly describe (in 1 or 2 paragraphs) the activities being implemented or proposed and those deferred. Justify the reason for the recommended action(s) and cite appropriate sections of Reg. 216 as needed. For IEEs, reproduce here the Summary from Section 5 of the IEE narrative, and/or Section 2 of the Request for Categorical Exclusion.

USAID APPROVAL OF ENVIRONMENTAL ACTION(S) RECOMMENDED:

Clearance:

Mission Director: _____ Date: _____

Food For Peace Director: _____ Date: _____

Concurrence:

Bureau Environmental Officer: _____
(BHR)

Approved: _____

Disapproved: _____

Optional Clearances:

FFP Officer: _____ Date: _____

Mission Food Aid Manager: _____ Date: _____

Mission Environmental Officer: _____ Dat

Regional Environmental Officer: _____ Dat

Geographic Bureau Environmental Officer: _____ Dat

General Counsel: _____ Date: _____

Annex A.2

REQUEST FOR A
CATEGORICAL EXCLUSION

1. **Background and Activity Description**

More in-depth information than what was provided on the cover sheet, especially if activities are relatively diverse, complex, and likely to operate for several years. This will allow the environmental recommendation to be more self-explanatory and free-standing, especially for the BEO?s record keeping and tracking purposes.

2. **Justification for Categorical Exclusion Request**

Refer to appropriate guidance from Reg. 216, especially 22 CFR 216.2(c)

Annex A.3

Outline of the IEE Narrative: Template

INITIAL ENVIRONMENTAL EXAMINATION

Program/Project Data:
DAP/PAA Program/Activity:
CS Name, Country/Region:

1. BACKGROUND AND ACTIVITY DESCRIPTION

- **1.1 Background**
- **1.2 Description of Activities**
- **1.3 Purpose and Scope of IEE**

2. COUNTRY AND ENVIRONMENTAL INFORMATION (BASELINE INFORMATION)

- **2.1 Locations Affected**
- **2.2 National Environmental Policies and Procedures (of host country both for environmental assessment and pertaining to the sector)**

3. EVALUATION OF ACTIVITY/PROGRAM ISSUES WITH RESPECT TO ENVIRONMENTAL IMPACT POTENTIAL

4. RECOMMENDED MITIGATION ACTIONS (INCLUDING MONITORING AND EVALUATION)

- **4.1 Recommended IEE Determination**
- **4.2 Mitigation, Monitoring, and Evaluation**

FOR UMBRELLA IEE, THE FOLLOWING MIGHT BE USED:

- **4.1 Recommended Planning Approach**
- **4.2 Environmental Screening and Review Process**
- **4.3 Promotion of Environmental Review and Capacity Building Procedures**
- **4.4 Environmental Responsibilities**
- **4.5 Mitigation, Monitoring, and Evaluation**

5. SUMMARY OF FINDINGS

- **5.1 Environmental Determinations**
- **5.2 Conditions**

Annex A.4

Annotated IEE Narrative

INITIAL ENVIRONMENTAL EXAMINATION

Program/Project Data:
DAP/PAA Program/Activity:
CS Name, Country/Region:

The following narrative should be organized around the major activity sub-headings, if the activity categories are rather distinct, e.g., road construction, agricultural development, and irrigation works. As in sample IEEs (Annex B.4 & B.5), treat each major activity under each section. Alternatively, one could organize by activity and then each major heading would cover the Sections 1 to 4. The summary in Section 5 is to cover all categories addressed, with an overview of the summaries at the end.

If you are preparing an ?Umbrella? IEE, please refer to Annex F for the detailed description of what the outline might include.

1.0 BACKGROUND AND ACTIVITY DESCRIPTION

Describe why the activity is desired and appropriate, and outline the key activities proposed for Title II funding. A current activity description should be provided and the purpose and scope of the IEE indicated (amendment, why needed, what it covers).

2.0 COUNTRY AND ENVIRONMENTAL INFORMATION

This section is critical and should briefly assess the current physical environment that might be affected by the activity. Depending upon the activities proposed, this could include an examination of land use, geology, topography, soil, climate, groundwater resources, surface water resources, terrestrial communities, aquatic communities, environmentally sensitive areas (e.g., wetlands or protected species), agricultural cropping patterns and practices, infrastructure and transport services, air quality, demography (including population trends/projections), cultural resources, and the social and economic characteristics of the target communities.

The information obtained through this process should serve as an environmental baseline for future environmental monitoring and evaluation. Be selective in the country and environmental information you provide, as it should be specific to the activity being proposed and more information is not necessarily better.

Finally, indicate the status and applicability of host country, Mission, and CS policies, programs and procedures in addressing natural resources, the environment, food security, and other related issues.

3.0 EVALUATION OF ACTIVITY/PROGRAM ISSUES WITH RESPECT TO ENVIRONMENTAL IMPACT POTENTIAL

This section of the IEE is intended to define all potential environmental impacts of the activity or project, whether they be considered direct, indirect, beneficial, undesired, short-term, long-term, or cumulative.

4.0 RECOMMENDED MITIGATION ACTIONS (INCLUDING MONITORING AND EVALUATION)

For each proposed activity or major component recommend whether a specific intervention included in the activity should receive a categorical exclusion, negative determination (with or without conditions), positive determination, etc., as well as cite which sections of Reg. 216 support the requested determinations.

Recommend what is to be done to avoid, minimize, eliminate or compensate for environmental impacts. For activities where there are expected environmental consequences, appropriate environmental monitoring and impact indicators should be incorporated in the activity?s monitoring and evaluation plan.

5.0 SUMMARY OF FINDINGS

This should summarize the proposed environmental determinations and recommendations.

Annex A.5

TITLE II ENVIRONMENTAL STATUS REPORT FACESHEET

Title of Activity:

CS name/Country/Region:

Funding Period: FY_____- FY_____

Resource Levels: Commodities (dollar equivalent, incl. monetization):_____
Total metric tonnage request: _____

Status Report Prepared by: Name:_____ Title _____
Date: _____

Date of Previous Status Report: _____

A. Status of the IEE/Categorical Exclusion/EA or PEA

IEE Reference: Date of most recent IEE or Categorical Exclusion (If all activities were CEs): _____

_____ No revisions or modifications needed. IEE/CE or CE and all activities still applicable.

_____ Amended IEE submitted, based on attached report, summary, etc., (referencing the body).

_____ EA or PEA needs to be amended to cover additional or modified activities. [Note: If yes, immediately notify the MEO, REO (where one exists) or the BHR BEO. Amended EA or PEA submitted, based on_____

B. Status of Fulfilling Conditions in the IEE, including Mitigative Measures and Monitoring

_____ Environmental Status Report describing compliance measures taken is attached.

_____ For any condition that cannot be satisfied, a course of remedial action has been provided within an IEE Amendment. [Note: For conditions under an EA or PEA, consult the MEO, REO (where one exists) and/or BEO].

USAID APPROVAL OF ENVIRONMENTAL STATUS REPORT:

Clearance:

Mission Environmental Officer:* _____ Date: _

Food For Peace Officer: _____

*or USAID Environmental Representative, if MEO does not exist.

Annex A.6

ENVIRONMENTAL STATUS REPORT (ESR) INSTRUCTIONS AND FORMAT

In 2-10 pages or less, the Environmental Status Report should indicate whether steps need to be taken to amend previous environmental documentation and whether conditions are being met, e.g., mitigation plans are on schedule and the monitoring and evaluation measures are being undertaken by the Cooperating Sponsor. In a Mission's PAA comments and/or approval cable to BHR/FFP, the Mission should state whether it concurs with the Environmental Status Report.

Section A. Status of the IEE/Categorical Exclusion/EA or PEA

Use the answers to the following questions to determine if the status of the IEE has changed.

Use the same instructions for a Categorical Exclusion submission in the event all CS activities were Categorical Exclusions.

If any activities are covered under an EA which is typically activity or site-specific? or a broader sectoral, thematic or geographic PEA? the questions below need to be interpreted in the context of the specific activity, sector or area.

A1. Modified or New Activities:

Have new activities been added or activities substantially modified?

Note what these are and reference an amended IEE, if the DAP or PAA has an approved IEE. Reference a Categorical Exclusion Document in the event the DAP or PAA required only a Categorical Exclusion Document **and** the new/modified activities are also categorically excluded. If they are not, a full IEE will need to be prepared.

Note: An amended DAP requires an IEE Amendment. Also remember that activities can be changed or added that do not require an amended DAP, but which do alter Reg. 216 threshold decisions and would require an IEE Amendment.

A2. Resolution of Deferrals:

Did the previous IEE have deferrals? List these.

State if they are being resolved through an amended IEE to be submitted with this year's PAA. If not, indicate when an amended IEE will be submitted in order to be able to go ahead with the activities.

If the deferred activities have been dropped from the sponsor's program, amend the current IEE to state that and recommend to the BEO that the deferral is no longer applicable.

A3. Conditions:

If experience has shown that conditions in the IEE cannot be complied with, note and reference an amended IEE, which discusses what substitute conditions are recommended in order to comply with the spirit of the original conditions (to avoid or reduce environmental effects).

Many conditions in IEEs relate to **Mitigation and Monitoring.** If based on Section B2 below, it proved not

feasible to carry out all mitigation and monitoring and the sponsor desires to change the conditions for mitigation and monitoring spelled out in the IEE, discuss and reference an amended IEE.

A4. Amendments:

Based on the above, is an amended IEE needed?

___ Yes If yes, attach here. No___

If the previous documentation was a Categorical Exclusion Submission, is an amended Categorical Exclusion needed to deal with new Categorical Exclusions for new activities?

___ Yes If yes, attach here. No___ Not Applicable___

Is the Sponsor unable to meet recommendations and/or conditions that are part of an EA or PEA or does the Sponsor believe an EA or PEA needs to be amended to cover additional or modified activities?

___ Yes No____ Not Applicable___

If yes, immediately notify the MEO, REO (where available) or the BHR BEO.

A5. Remember it is necessary to obtain the Mission?s concurrence on an Environmental Status Report prior to proposal approval. Be sure to complete the ESR Facesheet. Proceed to Section B.

Section B. Status of Fulfilling Conditions in the IEE, including Mitigative Measures and Monitoring

Take this opportunity to re-evaluate your mitigation and monitoring plan. Make sure the commitments made in the IEE are doable and realistic, in other words, not beyond the capabilities and resources of the CS to implement. Mitigation and monitoring can be part of normal visits to an area to check on activities, unless specific testing, surveys or the like have been required. Alternatively, experience to date may indicate that the IEE's mitigation and monitoring plan is not sufficiently specific or is lacking in some respect. If conditions or mitigation and monitoring are part of an activity-specific EA or sectoral PEA, the instructions below still apply.

B1. For each component of the program, list or reproduce (as an Annex to this report) the mitigative measures and monitoring or other conditions. [For activities placed under an umbrella process according to EDM Annex F, do not reproduce the standard Environmental Screening Form and Review conditions; follow instructions at B3 below.]

B2. Describe status of complying with the conditions. Examples of the types of questions a Sponsor should answer to describe "status" follow.

1) What mitigative measures have been put in place? How is the successfulness of mitigative measures being determined? If they are not working, why not? What adjustments need to be made?

2) What is being monitored, how frequently and where, and what action is being taken (as needed) based on the results of the monitoring? In some situations, a CS will need to note that the monitoring program is still being developed with intent to satisfy the conditions.

Alternatively, it could happen that the conditions cannot be achieved because of various impediments.

Sponsors are encouraged to construct table(s) of relevant status indicators.

For any conditions that cannot be satisfied, propose a course of remedial action and amend the IEE. In the case of an EA or PEA, consult the MEO, REO (where available), and the BHR BEO, as amending an EA or PEA is a more elaborate process.

B3. If the CS is using Environmental Screening Forms (ESFs) and environmental reviews, prepare: i) a table listing the ESFs prepared and submitted; (ii) the Category(ies) the activity(ies) was/were placed in; and (iii) whether the ESF has been approved by the MEO. For any Category 2 or above activities, the chart should include the status of the Environmental Reviews, e.g., in preparation; submitted to MEO; approved by MEO; MEO referred to REO and BEO; and the date of approval by MEO or by REO or BEO, if appropriate.

Section C. Cooperating Sponsor Recommendations for Beyond Compliance and Institutionalization of Environmentally Sound Practices

Please outline plans or recommendations (in a page or less) for institutionalizing environmentally sound design and management practices in future activities of a similar nature.

Annex B

Examples of Categorical Exclusions and Initial Environmental Examinations

Note: This Annex presents a selection of illustrative approved CE/IEEs from the Africa Bureau, and two draft IEEs of Title II food aid for development activities using the recommended BHR/FFP environmental documentation format. Each Bureau tries to maintains reasonable internal consistency in its IEE format, and while the Bureaus? formats are comparable, they are not necessarily the same.

Annex B.1

TITLE II ENVIRONMENTAL COMPLIANCE FACESHEET[1]

Title of DAP/PAA Activity: PL 480 Title II CARE/India

CS name/Country/Region: CARE/India

Funding Period: FY 99 - FY 04

Resource Levels: Commodities (dollar equivalent, incl. monetization): $343.4 million*
(Title II commodities inclusive of Monetization and Ocean Freight)

(* subject to yearly approvals)

Total metric tonnage request: _____

202(e) grant: $2.5 million
(Section 202 (e) grant fund)

Statement Prepared by: Name Richard L. Edwards Date _____
Title Deputy Director, USAID/India Office of Environment, Energy and Enterprise

IEE Amendment (Y/N)? N **Date of Original IEE:** _____

Environmental Media and/or Human Health Potentially Impacted (check all that apply):
*air*___ *water*___ *land*___ *biodiversity* (specify)_____ *human health* X *other*____ *none*_____

Environmental Action(s) Recommended (check all that apply):

X 1. *Categorical Exclusion*(s)

_____ 2. Initial Environmental Examination:

____ *Negative Determination*: no significant adverse effects expected regarding the proposed activities, which are well defined over life of DAP/PAA. IEE prepared:
____ without conditions (no special mitigation measures needed; normal good practices and engineering will be used)
____ with conditions (special mitigation measures specified to prevent unintended impact)

____ *Negative Determination:* no significant adverse effects expected, but multiple sites and sub-activities are involved that are not yet fully defined or designed. ?Umbrella IEE? prepared
[go to Annex B and Annex F for examples]
____ conditions agreed to regarding an appropriate process of environmental

[1] The original format has been readjusted to more closely follow that used in the Environmental Documentation Manual

capacity building and screening, mitigation and monitoring.

____ *Positive Determination*: IEE confirms potential for significant adverse effect of one or more activities. Appropriate environmental review needed/conducted.

____ EA to be / being / has been (circle one) conducted. Note that the activities affected cannot go forward until the EA is approved.

____ *Deferral:* one or more elements not yet sufficiently defined to perform environmental analysis; activities will not be implemented until amended IEE is approved. Briefly describe the nature of the deferred activities:_____

Summary of Findings:

The Integrated Nutrition and Health Program (NHP) of CARE - India aims to improve the nutritional and health status of women and children, especially pregnant women, lactating mothers and children under 2 years of age. INHP works with government and non-government counterparts in this endeavor. CARE-India focuses on activities with the greatest potential to reduce malnutrition and mortality.

USAID APPROVAL OF ENVIRONMENTAL ACTION(S) RECOMMENDED:

Clearance:

Mission Director: LEM Date:
Linda E. Morse

Food For Peace Director: Jeane Markuras, Acting Date: 8/21/98
Wm Thomas Oliver

Concurrence:

Bureau Environmental Officer: JPDR Date: 8/21/98
(BHR)

Approved: X

Disapproved: _____

Optional Clearances:

FFP Officer: _____ Date: _____

Mission Food Aid Manager: _____ Date: ___

Mission Environmental Officer: _____

Regional Environmental Officer: _____

Geographic Bureau Environmental Officer: _____

General Counsel: _____ Date: _____

REQUEST FOR A
CATEGORICAL EXCLUSION

INDIA - INTEGRATED NUTRITION & HEALTH PROGRAM

August 1998

1. Background and Activity Description

The Integrated Nutrition and Health Program (NHP) of CARE - India aims to improve the nutritional and health status of women and children, especially pregnant women, lactating mothers and children under 2 years of age. INHP works with government and non-government counterparts in this endeavor. CARE-India focuses on activities with the greatest potential to reduce malnutrition and mortality.

The program is implemented in 7 states - Andra Pradesh, Hihar, Madha Pradesh, Orissa, Rajesthan and West Bengal, spread over 912 blocks and 114,273 Angamwadi Centers (AWCs). This program reaches 6.6 million women (who are pregnant, a nursing and mothers of children under 24 months of age) and children up to 6 years of age. In addition to the program administration and monitoring/evaluation related costs, other activities funded through this program are supplementary feeding conducted under Title II (Public Law 480), provision of communication aids/teaching aids and capacity building of Government, non-government counterparts, Community Based Organizations, community members and leaders to enable women to learn and practice positive nutrition and health practices, thus empowering the community to be responsible for their own health.

2. Justification for Categorical Exclusion Request

The INHP program consists exclusively of technical assistance, a capacity building, supplementary feeding . under Title I I (Public Law 480) and program administration cost. These activities are clearly within the Class of programs listed in paragraph (c:) (1), ?Categorical Exclusions" of Sector 216.2, ?Applicability of Procedures? of Title 22 CFR Part 216, "AID Environmental Procedures."

Pursuant to 22 CFR 216.2 (c) (2) (i) (viii) (xi):

(i) ?Education, technical assistance, or training except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.)?

(viii) ?Programs involving nutrition, health care or population and family planning services designed to include activities directly affecting the environment (such as construction of facilities, etc.)?

(xi) ?Programs of maternal or child feeding conducted under Title II of Public Law 480.?

Pursuant to CFR 216.2 (c) (2) the proposed program is categorically excluded from further environment review. As per 22 CFR 216.2 (c) (i), environmental assessment is not required for the activities that are determined to fall within one of the categories listed in 22 CFR 216.2 (c) (2).

Authority

AID Environmental Procedures in 22 CFR 216.2 (c) (3) state that a categorical exclusion determination shall be reviewed by the Bureau Environmental Officer in the same manner as a Threshold Decision under 216.3 (a) (2). You may signify your concurrence with the foregoing determination by signing on the attached face sheet for this amendment.

ANNEX B.2

TITLE II ENVIRONMENTAL COMPLIANCE FACESHEET
SAVE THE CHILDREN NICARAGUA

Title of DAP/PAA Activity: Targeted Food Assistance to Malnourished and At-Risk Mothers and Children, Region II, Leon and Chinandega

Funding Period: FY 99 to FY 99

Resource Levels:

Commodities (dollar equivalent, incl. Monetization)	$ 550,000
Total Metric tonnage request	1090MT
202 (e) grant:	$285,102

Statement Prepared by: **Name:** Margarita Clark **Date:** September 17, 1998
Title: Program Manager

IEE Amendment (YES/N): N **Date of original IEE:** _____.

Environmental Media and/or Human Health Potentially Impacted (check all that apply):
Air ____ *water* ____ *biodiversity (specify)* ____ *human health* ____ *other* ____ *none* x

Environmental Action(s) Recommended. (check all that apply)

x 1. Categorical Exclusion
due to types of activities: *1. Education & training programs 216.2 c (2) (t)*
2. Nutrition & health care program 216.2 c (2) (viii) & (xi)

____ 2. Initial Environmental Examination:

____ *Negative Determination:* no significant adverse effects expected regarding the proposed activities which are well defined over life of DAP/PAA. IEE prepared:

____ without conditions (no special mitigation measures needed; normal good practices and engineering will be used)
____ with conditions (special mitigation measures specified to prevent unintended impact)

____ *Negative Determination:* no significant adverse effects expected, but multiple sites and subactivities are involved that are not yet fully defined or designed. "Umbrella IEE" prepared (go to Annex B and Annex F for examples)

____ conditions agreed to regarding an appropriate process of environmental capacity building and screening, mitigation and monitoring.

____ *Positive Determination:* IEE confirms potential for significant adverse effects on one or more activities. Appropriate environmental review needed/conducted.

____ EA to be 'being? has been (circle one) conducted. Note that the activities affected cannot go forward until the EA is approved.

REQUEST FOR A
CATEGORICAL EXCLUSION
SAVE THE CHILDREN NICARAGUA

1. Background and Activity Description

The project: "Targeted Food Assistance to Malnourished and At-Risk Mothers and children of Region 11, Leon and Chinandega? provides PL 480 Title II food commodities in the form of CSB and Vegetable Oil as take-home rations for program participants to improve their health and nutritional status. In combination with Save the Children?s Child Survival Program, the project uses a variety of integrated nutrition and health interventions to address the household food security of pregnant women, lactating women and children under three. Additionally through direct feeding in community services for children ages three through five, the program contributes towards more integral child development and on-going parent education.

Activities implemented do riot have any adverse affects on the environment, as they are focused on maternal-child health and nutrition involving education and training as well as nutritional surveillance.

2. Justification for Categorical Exclusion Request

1. Education & training programs 216.2 c (2) (i)
2. Nutrition & health care program 216.2 c (2) (viii) & 216.2 c (2) (xi)

Summary of Findings:

Briefly (1 or 2 paragraphs) describe the activities being implemented or proposed, justify the reason for the recommended action(s), and cite appropriate sections of Reg. 216 as needed. For IEEs, reproduce here the Summary from Section 5 of the IEE narrative, and/or Section 2 of the Request for Categorical Exclusion.

USAID APPROVAL OF ENVIRONMENTAL ACTION(S) RECOMMENDED:

Mission Director: Liliana Ayalde for Date: 9/22/98

Food For Peace Director: Jeane Markuras, Acting Date: 9/23/98

Concurrence:

Bureau Environmental Officer: J Paul des Rosiers Date: 9/23/98
(BHR)

Approved: X

Disapproved:

Optional Clearances:

FFP Officer: _____ Date:

Mission Food Aid Manager: _____ Date:

Mission Environmental Officer: Margaret M Hawey Date: 9/21/98

Regional Environmental Officer: _____ Date:

Geographic Bureau Environmental Officer: _____ Date:

General Counsel: _____ Date:

Annex B.3

INITIAL ENVIRONMENTAL EXAMINATION

TITLE II ENVIRONMENTAL COMPLIANCE FACE SHEET

Title Of DAP/PAA Activity: Manica Oil Seed Food Security Initiative (FY?99 PAA)
CS Name/Country/Region: Africare/Mozambique/Africa

Funding Period: FY 1997 - FY 2001

Resource Levels: Commodities (dollar equivalent): $3,737,486
Total Metric Tonnage Request: 18,690 MT?s (Wheat)
202 (E) Request: $647,522
USAID/M Request: $569,077
PVO Contribution: $189,693

Statement Prepared by: Name: William Noble Date: 05/18/98
Title: Country Representative

IEE Amendment (Y/N?) No **Date Of Original IEE**: _____

Environmental Media and/or Human Health Potentially Impacted (check all that apply):
air___ water _X_ land _X_ bio-diversity(specify)___human health___other___none___

Environmental Action (s) Recommended (check all that apply):

_X__1. *Categorical Exclusion (s)*

_X__2. Initial Environmental Examination:

_X_ *Negative Determination*: no significant adverse effects expected regarding the proposed actions, which are well-defined over life of DAP/PAA. Prepare IEE:
___ without conditions (no special mitigation measures needed; normal good practices and engineering will be used)
_X_ with conditions (special mitigation measures specified to prevent unintended impact)

___ *Negative Determination*: no significant adverse effects expected, but multiple sites and sub-activities are involved that are not yet fully defined or designed. ?Umbrella IEE? prepared:
___ condition agreed to regarding an appropriate process of environmental capacity-building and screening, mitigation and monitoring.

___ *Positive Determination*: IEE confirms potential for significant adverse effect of one or more activities.
___ EA to be / being / has been (circle one) conducted. Note that the activities affected cannot go forward until EA is approved.

___ *Deferral*: one or more elements not yet defined, will not be implemented until amended IEE is

approved.

Summary Of Findings:

This IEE has been completed under the guidelines issued by USAID/BHR/FFP and Africa Bureau to Title II Cooperating Sponsors implementing Development Activity Programs (DAP) for Environmental Compliance Procedures. Included is an analysis of all activities that have been begun by Africare (since FY?97) of its on-going Title II activity - the Manica Oil Seed Food Security Initiative - and other activities that will be completed during the expected life of activity. Based on this analysis, including a review of field experience, project impact and existing national and USAID regulations, the following determinations are being recommended:

Categorical Exclusions are recommended for the following activities:

Per 22 CFR 216.2 (c) (1) (i): 1) Monetization of agricultural commodities; 2) Support private sector to import and maintain stocks of presses and spare parts.

Per 22 CFR 216 2 (c) (2) (i): 1) Training and extension support in improved oil seed husbandry techniques; 2) Training and technical assistance to Press Owners; 3) Train rural artisans to provide repair services at the village level; 4) Training of sales agents to market oil presses.

Per 22 CFR 216 2 (c) (2) (ii): 1) Field level research of different varieties of oil seed.

Per 22 CFR 216 2 (c) (2) (v): 1) Oil press demonstrations at the community level; 2) Identification of different outlets for the sale of increased oil seed production (village presses and/or commercial refineries).

Per 22 CFR 216 2 (c) (2) (viii). 1) Formation and support of Village Food Security Committees (VFSC?s); 2) Training and support of Community Nutrition Activists; 3) Development of a nutritional education curriculum (with IEC materials); 4) Monthly growth-monitoring/educational sessions of under-five children; 5) House to house visits with members of the VFSC?s that have children with serious nutritional problems 6) Transfer and reenforcement of a series of nutritional-related messages, presented during culinary demonstrations, traditional theatre, radio ?spots? and group discussions about diet, good health and obstacles to improve these; 7) Establishment of a ?Micro-Project Fund? that supports community-based efforts to reduce constraints to improved household food security and nutrition.

Per 22 CFR 216 2 (c) (2) (x): 1) Sale and marketing of manual oil presses, including credit provision.

Negative Determinations with conditions are recommended for the following activities:

Per 22 CFR 216.3 (a) (2) (iii):

1) Promotion of open-pollinated high oil-content seeds for the small-scale farmer.

Ensure that no adverse conditions are created, such as increased pest infestations for other crops or overly-depleted fields.

2) Promotion of improved methods of post-harvest drying and storage of oil seeds.

Drying tables on farmer?s fields and storage sheds in the target districts will be properly sited to not increase soil erosion and will not be near fragile or inappropriate land.

3) Promotion of the appropriate mix of oil seed ?cake? for improved animal feed.

Ensure that oil seed cake is disposed of properly, to not contaminate ground water sources.

Per 22 CFR 216.3 (b) (1): 1) Establishment of a private-sector-driven seed multiplication system, including the application of insecticide to planting seed prior to long-term storage.

Conditions as specified in Appendix A (Pesticide Analysis and Action Plan).

USAID APPROVAL OF ENVIRONMENTAL ACTION(S) RECOMMENDED:

Clearance:

Mission Director: _____ Date: _____

Food For Peace Director: _____ Date: _____

Concurrence:

Bureau Environmental Officer: _____ Date: _____
(BHR) Approved: _____
Disapproved: _____

Optional Clearances:

FFP Officer: _____ Date: _____

Mission Environmental Officer: _____ Date: _____

Regional Environmental Officer: _____ Date: _____

Geographic Environmental Officer: _____ Date: _____

General Counsel: _____ Date: _____

INITIAL ENVIRONMENTAL EXAMINATION

Program/Project Data:

DAP/PAA Program/Activity:	Manica Oil Seed Food Security Initiative
Activity Numbers:	FFP -G-00-97-00034-01 (BHR/FFP)
	# 656-0229-G-7063-00 (USAID/Mozambique)
CS Name/Country/Region:	Africare/Mozambique

1. BACKGROUND AND ACTIVITY DESCRIPTION

1.1 Background

During FY?97, Africare began implementation of the Manica Oil Seed Food Security Initiative (MOSFSI), in five districts of Manica Province in the central part of Mozambique. Years of war and drought have left the vast majority of Mozambique?s population in poverty, and they face challenges in achieving minimum conditions of food availability, access and utilization necessary for survival let alone meeting "dietary needs for a productive and healthy life." The twin problems of low levels of agricultural productivity and malnutrition are felt in different ways depending on the region of the country (north, central and south). The central province of Manica, bordering Zimbabwe, possesses significant potential for improved agricultural production but is just now beginning to respond to the damages caused by war and drought.

Within Manica province since the end of the war in 1992, the majority of households have returned to using hoe culture and have not been able to cultivate all the land area formerly used by each household. The civil war and the attendant insecurity in the province resulted in the uprooting of a large numbers of the rural households. Initiatives are critically needed to increase agricultural production but a variety of measures are also required to improve utilization both of existing food and any additional food which becomes available through increased production and/or incomes. These practices combined with the general poverty translate into statistics on nutritional status for the area which are extremely poor.

Although conditions vary within the districts, the area as a whole has a high potential for agriculture as it is highly suitable for the production of a wide range of crops. Historically, Manica Province was a net exporter of surplus production, both food and cash crops. The agricultural production system in the family (small-scale) farm sector was formerly based primarily on a mixed cultivation system using animals for draught power, transport and manure and smaller livestock for meat. A variety of crops were grown by households and those with access to irrigation (for which there is a high potential in the area) cultivated a variety of vegetables in gardens with in-field banana and other fruit trees for erosion control.

Africare's DAP was designed to address both the problems of agricultural productivity and of household nutrition within Manica Province through an activity which integrates the promotion of oil seed production and processing with an initiative to improve household nutrition. Oil seed production and processing is an appropriate activity to be promoted because it is the cash crop with the largest participation from the "family"/small-scale farm sector (based on historical experience and its proven ease of application), the documented positive impact oilseed will have in the short run on household income levels and that the most severe nutritional problems are evident within the small-scale farming sector. The intervention will increase agricultural productivity/processing capabilities and target improved household nutrition simultaneously. The interface being created between these two components will increase the impact of the DAP considerably beyond what could be achieved by either as a stand alone activity to improve the food security situation within the target districts.

The MOSFSI?s twin emphasis on increasing household income and improved nutritional status strongly supports the strategies of both USAID/Mozambique and USAID/BHR/FFP. Strategic Objective #1 of

USAID/Mozambique is focused on increased rural household income, especially as influenced by the establishment and enhancement of rural enterprises such as small-scale oil pressing and the planting of cash crops such as oil seed. Improvements in nutritional status that will be impacted by the Household Nutrition Component (e.g. stunting, underweight, exclusive breast-feeding) are part of the ?Generic Indicators? included in BHR/FFP?s ?Results Framework?.

1.2 Description Of Activities

The goal of the Manica Oil Seed Food Security Initiative (MOSFSI) is to significantly enhance food security in the Sussundenga, Gondola, Manica, Guro and Barue districts of Manica Province. There are two objectives of this activity, which are of equal priority. The first is development of a sustainable, small scale oil seed production and processing industry in the five districts. The second is increased awareness and application of improved nutrition and health practices. The Oils Promotion Component and the Household Nutrition Component are designed to reinforce each other as well as increase the success and impact of each component beyond that which it could achieve as a stand alone activity. A map of the implementation area is on the following page.

A table presenting the activities to be completed under each objective and the recommended environmental decisions is on the following pages. Further information about these activities is presented below:

- **Monetization of Agricultural Commodities:** Working in collaboration with five other PVO?s, Africare has begun the importation and monetization of wheat (4,620 MT?s in FY?97 and 4,460 in FY?98; a proposed LOA total of 18,690 MT?s), a key food commodity that is not produced in Mozambique. The wheat is sold to national millers, who are producing wheat flour for poor urban consumers and to be marketed in outlying rural districts. The umbrella monetization program in Mozambique is jointly-managed by all six PVO?s, with World Vision as the Lead Agency. In addition to wheat, unrefined sunflower oil is also monetized, to be sold to national oil refineries. The local currency generated from the sale of both of these commodities is distributed among the collaborating PVO?s to support their technical interventions.

- **Oil Seed Production:** Activities focus on training and extension support for small-scale farmers and outreach staff of other agencies in improved oil seed husbandry techniques; the provision of open-pollinated high oil-content seeds for the small-scale farmer through primarily private sector outlets; establishment of a private-sector-driven seed multiplication system that will provide high-germination planting seed for the small-scale farming sector at a reasonable cost; identification of different outlets for the sale of increased oil seed production (village presses and/or commercial refineries); field level research of different varieties of oil seed to determine ?optimum? planting conditions and highest oil content; promotion of improved methods of post-harvest drying and storage of oil seeds.

- **Oil Seed Processing:** Activities focus on oil press demonstrations at the community level; sale and marketing of manual oil presses at the village level, including the provision of credit for this purchase; training and technical assistance to press owners to improve oil extraction rates, market locally-processed oil, maintain accurate business and inventory records and ensure a regular supply of crushing seed; provide training and support rural artisans to provide repair services at the village level; training of sales agents from rural stores and companies in how to market oil presses; establish the private sector?s role in the support given to these rural enterprises, including importing and maintaining stocks of presses and needed spare parts; promotion of the appropriate mix of oil seed ?cake? to increase the nutritional benefits of animal feed for local livestock.

- **Nutrition Education And Monitoring:** Activities focus on the formation and support of Village Food Security Committees (VFSC?s) as a community-based mechanism to organize improved levels of awareness and applications; training and support of Community Nutrition Activists that will support the VFSC?s; development of a nutritional education curriculum (with IEC materials) that will be the basis of outreach with

the VFSC?s and the field staff of other agencies involved in community health; monthly growth-monitoring/educational sessions of under-five children to reenforce the impact that improved nutrition has with weight gain and general well-being; house to house visits with members of the VFSC?s that have children with serious nutritional problems; transfer and reenforcement of a series of nutritional-related messages that form the nutritional curriculum, presented during culinary demonstrations, traditional theatre, radio ?spots? and group discussions about diet, good health and obstacles to improve these; establishment of a ?Micro-Project Fund? that will make a limited amount of funds available to each VFSC (maximum of $800) to reduce constraints to improved household food security and nutrition.

Field activities in Manica Province are being completed with a participatory approach in the five districts that integrates the activities of both the Oils Promotion and Household Nutrition components, working in collaboration with the Ministries of Agriculture, Health and other development agencies operating in the province. Monetization activities are completed in Maputo (the capital city) and are managed by the PVO Executive Committee that meets on a regular basis to coordinate the importation and sale of Title II commodities with local traders.

During FY?97, a comprehensive baseline survey was completed within the more than 80 communities that will receive assistance during the five year Life Of Activity. Separate surveys were completed for both agriculture (including oil seed crops) and health (including nutritional status and food consumption practices). There are 49,354 households within Africare?s DAP implementation area. With an average household size of 6.5 people, there is an estimated 320,801 people for a target population. More information about Africare?s baseline information can be found in the FY?97 Baseline Monitoring and Evaluation Report, submitted to USAID/BHR/FFP in November 1997.

1.3 Purpose And Scope Of IEE

This IEE is accompanying the FY?99 Previously-Approved Activity (PAA) submission and addresses all the activities in the FY?97 DAP for Africare/Mozambique?s Manica Oil Seed Food Security Initiative. Included in the analysis are all activities that have been implemented since FY?97 and any others to be begun during the last three years of implementation within the five target districts. Appendix A is a Pesticide Analysis and Action Plan for a key sub-activity to be completed during the final quarter of FY?98: the application of post-harvest insecticide to protect multiplied seed to be stored for five months (August - December 1998), prior to being marketed to small-scale farmers during the 1999 planting season (detailed below).

Included in the PAA is a proposed expansion of oils promotion activities into two districts of neighbouring Sofala Province. This expansion would take place during FY?99. If approved, an amended IEE would be submitted to include an analysis of the activities to be completed in these two additional districts.

2. COUNTRY AND ENVIRONMENTAL INFORMATION (BASELINE INFORMATION)

2.1 Country Overview

Since the signing of the General Peace Accord in 1992 that ended seventeen years of fighting and subsequent multi-party elections in 1994, Mozambique has turned in one of the most positive sets of macro-economic conditions of any country on the African continent. Inflation in 1997 was estimated to be 17%, with an economic growth rate of 8%; this is expected to improve during 1998. A significant amount of private investment has begun in different sectors of the country (much of this from South Africa) to develop key infrastructure links and the basis for increasing manufacturing and processing industries.

Agricultural production levels have continually increased during the same period. Since the official declaration by the Mozambican government to end the ?Emergency Period? in December 1995, the agricultural

sector has generally performed beyond expectations. Significant marketing and rural transport bottlenecks remain, and the government is re-evaluating its role vis-a-vis the establishment of producer prices for key food and cash crops (to become ?market-determined?). The 1998 agricultural harvest will be the third consecutive good harvest that should make the country virtually self-sufficient in terms of cereals (in 1997, the cereals harvest represented 88% of total cereals available for consumption). With the exception of flooding in different parts of the country during the past three years, the principal constraint to increased food availability has been poorly-developed infrastructure to improve transport from the cereals-surplus north to the population-dense southern part of the country.

Mozambique is a predominantly tropical country with a total area of 784,000 square kilometers. It has a long coastline of approximately 2,500 KM?s. Topographically, the country can be divided into four zones: coastal, middle plateau, northern plateau and western highland. The majority of USAID-funded activities take place in the middle plateau and northern plateau zones in the provinces of Nampula, Zambezia, northern Sofala and northern Manica. This area has traditionally been the most agriculturally-productive of the country. A key assumption of USAID?s Country Program Strategy is that the impact from improving services, inputs and capacity in this region is critical to the rehabilitation of the rest of the country.

The results of the August 1997 Population and Housing Census indicate a total population of 15 million people, significantly less than what had been estimated (this was the first census in fourteen years and was completed after the repatriation and internal re-settlement of approximately 5.5 million people after the end of the war). Despite the macro-economic improvements the country has had since 1994, it remains one of the poorest countries in the world. Per capita income is estimated to be $90; even with ten years of 10% annual growth (USAID?s income growth target for its current strategy period), the country would still be extremely poor.

2.2 Manica Province

Located in the central part of the country, bordering Zimbabwe to the west and Sofala Province to the east, Manica Province is part of the middle plateau zone, but with mountains on its western borders. Historically a net exporter of surplus production for both food (maize and sorghum) and cash crops (sunflower and tobacco), these levels were reduced significantly during the initial fifteen years of independence. Livestock was virtually eliminated during the war and a large percentage of the land that had been cultivated by the small-scale farming sector was abandoned because of insecurity.

Conditions within the province have improved greatly during the past five years, mirroring the rest of the country. However, this process has been uneven and not without difficulties. At the time of the design of Africare?s DAP (early 1996), it was estimated that only 20% of the arable land within the province was actually being planted. This reflects the fact that while most people had returned to the country by 1995 (the end of the repatriation), many were still reluctant to resume farming in the more isolated parts of the province. Since the beginning of Africare?s activities, it has been determined that more land is being brought under production, especially by the small-scale sector, often with support from one of several large agri-business concerns (in tobacco and cotton) or with support from agricultural development initiatives similar to Africare?s.

Because Manica is slightly higher than neighboring Sofala Province, and has mountains on the western side, rainfall levels are significantly higher in the central part of the province (these are the areas where Africare is working). Beside the ?Beira Corridor? linking Beira with the Zimbabwean border, that passes through the center of the province, there is a good road that goes through the northern part of the province and links Chimoio, the capital city, with Tete Province. These two roads are the principal conduit by which the agricultural surplus that has been produced during the past three years in this area is transported to Beira and the three southern provinces to improve the country?s structural food availability deficit situation.

The five districts in which Africare is working are considered to have the highest potential for improved agricultural production and marketing. The eastern part of these districts are considered more marginal, with slightly lower rainfall, but still possessing significant potential for production agriculture. Each district has one or both of the principal roads running through it; most of the communities where Africare is promoting oil seed production and processing are within 40 kilometers of one of these principal roads. The estimated population of these five districts is 563,000 people (from the 1997 census). The population of the target area surveyed by Africare in its baseline field work contains 49,354 households (320,801 people). Not surprisingly, this is the area with the most fertile soils, much of which has only been brought back into production during the past three years.

There are no protected areas or conservation zones (e.g. game reserves or national parks) within the five target districts. There are several rivers that flow through these areas, including the Honde (Barue), the Revue (Sussendenga, Gondola), the Pungue (Manica, Gondola) and the Rotanda (Sussendenga). The Chicamba Dam in Manica district is the principal water source for the capital city of Chimoio. In normal rainfall years, water availability is not a constraint for small-scale agriculture. Average annual rainfall is more than 1,000 mm; slightly less in the more marginal areas. This part of Manica Province has been classified as a ?semi-intensive? agro-ecological zone (USAID/M SEA 1994).

Soil conditions[2] in the areas with more than 1,000 MM of annual rainfall are very conducive to production agriculture. They are well-drained, highly weathered, deep to moderately deep, stable red soils with good permeability and water holding capacity. In areas with lower rainfall, the soils are generally brown to dark brown, moderately shallow sandy loams of moderate fertility. Areas of moderately deep soils occur on the crests of ridges between the major rivers. Alluvial soils have a scattered distribution pattern along the major streams and rivers. They have provided the nucleus for settlement and intensive cultivation.

Vegetation zones in the five districts include the following: semi-deciduous high rainfall woodland (Sussendenga, Gondola, Barue), moist semi-deciduous forests (Guro, Barue, Sussendenga, Manica), deciduous savana woodlands (Gondola, Sussendenga) and deciduous lowland savanna woodlands (Guro - area of marginal rainfall). Beginning in northern Barue district, the vegetation begins to change most clearly, to a drier ecology (rainfall levels in Guro district have always been significantly lower than the other target districts).

A principal reason for promoting oil seed in this area, besides its historical importance to the small-scale sector, is its inherent drought-resistant qualities (the roots of the sesame plant especially will grow significantly down into the soil to capture retained moisture). Part of the area where Africare is working has more fragile soils and lower rainfall levels (in the eastern part of the province). Despite this fact, oil seed is still considered a viable (and profitable) crop, albeit at lower levels of production.

The mean number of plots cultivated in 1997 by the farmers interviewed in Africare?s baseline was 2.4 (each with no more than .3HA/plots). The percentage of small-scale farmers who used chemical fertilizers was 1% and the percentage that used other inputs (improved seed, insecticide, herbicide etc.) was 5%. In 1993, it was estimated throughout the province that 106,349 small-scale operators were cultivating 120,000 HA?s of land (1.1 HA/farm family). This average has increased (for example, during 1997, the average amount planted in oil seed alone was .14 HA?s/family; this planting took place before Africare?s outreach began).

Oil seed fits well into the Manica farmer?s planting schedule. Land clearing and planting for maize and sorghum is completed during mid-November through the end of December. It is often inter-cropped with cassava

[2] The discussion on soils conditions and vegetative zones in Manica Province is taken from the Integrated Rural Development Strategy Plan for Manica Province, prepared by GTZ?s Mozambique Agricultural Rural Reconstruction Program, January 1995.

or ground nuts (especially in the northern part of the province). Oil seed is planted during the period mid-January through the end of February. There is limited competition between the principal food crops and oil seed.

Most of the labor provided for small-scale agriculture comes from the family. Given the large amounts of arable land to be brought back into production and that the secondary return movement of the population from the urban and rural commercial centers to the more isolated parts of the districts would be somewhat restricted due to insecurity, Africare determined (in 1996) that labor scarcity would be the principal constraint to increase land under cultivation by the small-scale sector (beyond 2 HA?s/family). Because of its prior large livestock population and a tradition of using animal traction, it was hypothesized that this would be the most appropriate method by which more land could be tilled, and planted in oil seed. The experience to date supports that hypothesis, available outside labor remains scarce, but a significant number of farmers who have received support from Africare are using animal traction to prepare their land for planting (animal traction promotion is not an explicit activity of Africare?s program).

2.3 Mozambican Environmental Policies And Procedures

In May 1996, the Ministry of Coordination For Environmental Action (MICOA) published the *Programa Nacional De Gestão Ambiental* (National Program Of Environmental Management - NPEM). This document represents several years of effort to present the Mozambican government?s policies on environmental monitoring and objectives. This document identifies the government?s principal environmental policy challenges as 1) a weak institutional capacity for rational management of its national resources, weak technical capacity, lack of intra-sectorial coordination and over-centralization of authority; 2) an inappropriate and/or incomplete sectorial legislation; 3) lack of an environmental education program; 4) limited information and research about the environment, especially in relation to coastal development.

Mozambique?s environmental policy can be summarized as follows:

> ?Targeting the progressive eradication of poverty and the improvement in the quality of life as well as a reduction in environmental damage. The principal objective is to guarantee sustainable development, considering specific conditions, via an acceptable and realistic compromise between socio-economic progress and environmental protection? (page 63).

In relation to rural communities (such as where Africare is working), the NPEM seeks to create incentives in the rural population to increase agricultural production and to establish the legal and institutional capacity for decentralization and a community management system of natural resources. The ?service delivery? implied in the NPEM is to be provided by other ministries and governmental agencies that work in rural zones. As such, the NPEM is a comprehensive policy document with limited resources to support its implementation at the local level.

The time frame for the implementation of the NPEM is ten years. Since it publication, much effort has been made by the MICOA to secure donor support for its activities at the provincial and district level. Inter-sectorial coordination is being promoted, with MICOA providing general guidance. At the local level, the active participation of communities is being solicited, including the development of environmental education materials.

Africare has negotiated a Project Accord with the Manica Provincial Government in support of the MOSFSI, and separate Protocols of Cooperation with the Provincial Directorates of Agriculture and Health. The Ministry of Agriculture recognizes the importance of oil seed to the small-scale farmer, and has welcomed Africare?s involvement in this crop?s promotion. During the 1997 and 1998 planting seasons, government extension agents did not have an extension strategy for oil seed; no policy guidance was prepared (at either the national or provincial levels) and most of the field staff were not minimally-trained in this crop?s husbandry techniques. Part

of Africare?s support has been to become well-integrated within the MOA?s planning efforts, specifically for oil seed. This regular collaboration takes place at both the provincial and district level, and has included specific training activities for government extension agents in oil seed crop husbandry practices. This support has been well-received and it is probable that by the end of the DAP implementation period, ministry guidelines for oil seed cultivation in Manica Province will be a direct result of Africare?s outreach and collaboration.

EVALUATION OF PROJECT/PROGRAM ISSUES WITH RESPECT TO ENVIRONMENTAL IMPACT POTENTIAL.

3.1 Introduction

Many of the activities being completed under the technical components of the MOSFSI are related to training and the provision of technical assistance and are having little impact on the local environment. There are certain aspects of the program that deserve analysis, these are presented below.

3.2 Monetization

The importation and monetization of agricultural commodities is one of the principal sources of funding for Africare?s DAP (and the other five Cooperating Sponsors that participate in the joint monetization program). The commodities are shipped from the US and are turned over to local traders at a Mozambican port. The PVO?s do not physically import, clear, nor store the commodities; that is the responsibility of the trader. Sufficient storage exists at each of the three principal ports where both of the commodities are physically received (wheat and unrefined oil). This is confirmed by annual updates of the Bellmon Determination and Disincentive Analysis (the most recent copy of this analysis is included in the FY?99 PAA). All processing of the commodities takes place within the same city where it is received, using existing infrastructure owned by the traders (wheat mills and oil refineries), including packaging and marketing to urban consumers and rural commercial centers. There is limited present or future changes to the environment anticipated from the monetization activity.

3.3 Oils Promotion Component

The principal activities being completed by the Africare Oils staff in Manica Province are presented and analyzed below for potential environmental impact.

Oil Seed Production:

1) Training and extension support in improved oil seed husbandry techniques.

Africare has established a system for the transfer and reenforcement of key husbandry messages to small-scale farmers to improve yields of both sunflower and sesame. Fifty Lead Farmers have been trained in these techniques and are responsible to transfer them to the different farmer groups with whom they are working. This process is supervised by an Africare extensionist (one per district). Africare?s agronomist spends most of his time in the field, observing the transfer of these messages (proper planting space, number of seeds per station, appropriate time for ?rogueing?, thinning and weeding) and making needed refinements. During FY?98, approximately 3,500 families have received extension support by Africare?s staff, in addition to other extension support provided by ministry officials and other agencies (with whom Africare works closely). All of the farmers with whom Africare is working are planting fields of less than one hectare. No chemical inputs are included in the husbandry package being promoted and there are no natural reserves or special protected land zones within the target areas. The use of

improved seed is the key to ensuring higher yields, in addition to solid farm management. The LOA target for number of hectares planted with oil seed is 17,783 HA?s (planted by an estimated total of 42,402 farmers).

The environmental impact of adoption of these messages within the farmer?s farm management include reduced erosion (proper plant spacing), maintain soil fertility (timely weeding and thinning) and improved stalk development (limited number of seeds planted within each station). These impacts will be sustainable because experience with similar activities in Mozambique and Southern Africa (in addition to Africare?s initial planting season in 1998) make clear that the impact of these management practices are a significantly higher yield of high-oil content seeds. Small farmers will rationally continue these practices after they have ?seen? the positive result.

2) Promotion of open-pollinated high oil-content seeds for the small-scale farmer.

Open-pollinated varieties of oil seed are superior in oil content to other varieties that have been harvested in the province during the past several years (including promotion by other organizations of second and third generation hybrid seed). The advantages to the small-scale farmer of open-pollinated oil seed include an acceptable germination rate in the second and third generations with no increased field managements inputs and a significantly lower cost per hectare for planting seed when compared to hybrid varieties. These advantages have been documented by the on-going oil seed promotion activities throughout Southern Africa (Zimbabwe, Zambia, Tanzania, Kenya, Uganda and northern Mozambique). The seed that is being sold through the Lead Farmers and private sector sales points is the ?Black Record? variety, originally from Romania, that has been brought to and successfully adapted within Southern Africa during the past fifteen years.

A principal difference between open-pollinated and hybrid seeds (besides cost) is that hybrid seeds are much more responsive to chemical inputs, which are quite expensive and generally unavailable in the Mozambican market. Traditional small-scale farming practices include the ?selecting out? of part of each year?s harvest to be planted the following year. The promotion of open-pollinated varieties is preferred because 1) no chemical inputs are required to receive acceptable yields and 2) their use directly complements the farmer?s existing practices to select part of each year?s harvest to be planted the following season and still receive positive germination rates and yields of higher oil content seed.

From an environmental perspective, open-pollinated seed offers additional important advantages. Research completed by the ?Sunflower Project? of Universidade Eduardo Mondlane indicates that open-pollinated sunflower (including Black Record) produces well under reduced rainfall conditions, with minimal nutrient depletion of the soil. Both the sunflower and sesame plants have the ability to grow significantly into the soil horizons to access retained moisture and nutrients at these lower levels. This is especially important within the context of Mozambique?s susceptibility to drought. There is a strong tradition of oil seed planting in Manica Province (see Africare?s DAP, pages 1 -5) and small-scale farmers with whom Africare is working have been able to plant open-pollinated seeds on the same plot 2-3 years consecutively with minimal reductions in yields. One of the reasons for this is the fact that soils in the province (especially in the majority of the implementation area within the five target areas) are generally well-drained and fertile. Manica province is one of the major cereals producers for the southern part of the country; the amount of marketed agricultural production has grown significantly during the past three years. Another environmental advantage to sesame in Manica is its inherent resistance to nemotode development within the soil. Sesame is used in rotation with several cash crops in the province (principally tobacco and cotton) because of this characteristic.

Working with the university and the National Seed Service, Africare has supported training of provincial-based Seed Inspectors to improve their ability to monitor plant development of sunflower in the field. One aspect of this training has been to ensure that oil seed planted in the province is not creating unforseen environmental impacts. Examples include identification of the most appropriate sites (e.g. well-drained) for seed multiplication to take place (Africare consulted with SNS to identify the plots being used for multiplication on several commercial

farms), recognition of the possible types of pests that can attack sunflower or sesame during plant growth and the types of response to these infestations (pests have not been a problem during the 1998 growing season) and assessment of stalk development after germination to determine if the field is well-maintained.

Selected parts of the eastern half of Africare?s target districts are considered more marginal, because of slightly lower rainfall levels and a higher prevalence of the tse-tse fly, reducing the possibility of using animal traction to increase land under production. However, the drought-resistence qualities of open-pollinated seed are recognized by local farmers in these areas, especially during minimal rainfall seasons, making it superior to staple food crops such as maize. Sunflower is successfully inter-cropped with beans, taking advantage of the ?nitrogen fixing? characteristics of the latter crop, while both plants? root systems do not compete because they are accessing water and nutrients at different soil horizons.

The possibility of increased pest infestation and/or disease exists with oil seed, as with any other crop. This is being monitored by Africare staff, as are any other unforseen changes in environmental conditions as a result of increased oil seed planting (See Section 4.2 below).

Africare has supported the formation of an ?Oils Consortium?, comprised of the PVO?s working in the oils sector, commercial oil refineries and the university?s Sunflower Project. The consortium meets twice per year to review activities, compare experiences and jointly plan collaborative research activities. This latter activity includes the sharing of different oil seed varieties for applied research under different agronomic conditions and the dissemination of any unforseen changes, including environmental impacts.

3) Establishment of a private-sector-driven seed multiplication system.
4) Identification of different outlets for the sale of increased oil seed production (village presses and/or commercial refineries).

These two activities are jointly discussed because they are focused on how the farmer receives planting seed and sells harvested seed for crushing. Africare has developed a seed provision system that satisfies several needs. For the 1998 planting campaign, 14 MT?s of planting seed was purchased from CARE?s oil program in Nampula Province (this has been sold and planted during the current planting year).. In addition, a limited amount of ?basic? and ?pre-basic? seed was sourced from Africare?s oils program in Zambia and from the government?s research station in Sussendenga. Contracts have been made with three commercial agricultural enterprises to multiply a large amount of basic seed during 1998, to provide 60 MT?s planting seed that will be sold during 1999. A limited amount of ?pre-basic? seed will be selected out of the 1998 harvest, that will be the ?basic or bulking? seed for 1999, that will provide the planting seed for 2000. Seed multiplication has been established within the province to develop locally-produced open-pollinated, high oil content varieties of oil seed that are most appropriate to Manica?s soils, in addition to providing an ample supply of crushing seed to satisfy local demand.

These multiplication contracts require the commercial farmer to provide a stipulated amount of seed, that will be purchased at an agreed upon price after the harvest. The multiplier must follow Africare?s husbandry practices (timing for weeding etc.), allow the field to be inspected by the National Seed Service, have irrigation available (if necessary) and apply the micro-nutrient ?Boron? to the plant at flowering. During FY?98, the role of the commercial farmer will be limited to the provision of the multiplied seed to Africare. One of the commercial farms has been contracted to clean and bag the seed, prior to its being stored by Africare until the 1999 planting season. It is expected that these companies will increase their role in this system, eventually to include all aspects of wholesale promotion of planting seed as a fully commercial activity.

The packaging of the seed to be promoted involves placing each type of oil seed (sunflower and sesame) in 1 KG or ? KG bags, that will be sold to individual farmers. It is necessary to store the planting seed for several months after the harvest, prior to the subsequent planting season. For this reason, the multiplied or certified seed

must be cleaned immediately after harvest, and have Actellic Powder applied (an insecticide that protects the seed during storage from pest infestation) and package the seeds, prior to secure storage for several months. The Actellic Powder dissolves 7 - 14 days after application and is necessary to minimize damage prior to planting. It is applied only once prior to storage, by trained Africare senior technical staff. Per CFR 216.3 (b) (1), Appendix A is a *Pesticide Analysis And Action Plan* that details the conditions under which this sub-activity will take place.

A farmer makes the decision to plant oil seed based on the opportunities for selling the harvest. Establishment of manual presses is an obvious sales source (and press owners are involved in the sale of planting seed within their communities). Africare is also facilitating contacts with a commercial expeller in Chimoio and a large refinery in Beira, to purchase large amounts of crushing seed.

5) Field level research of different varieties of oil seed.

Working in collaboration with several other agencies (Agricultural Research Service, World Vision and SEMOC/Seed Co.), research plots have been established within the target districts, to compare performance of open-pollinated and hybrid varieties of oil seed. These plots cover less than .25 HA. In addition, Results Demonstration Plots were established by both Africare extensionists and Lead Farmers, near principal roads, to provide an example to other farmers. These plots are also on less than .25 HA?s of land. No chemical inputs are used in either type of plot. The research plots are based on a comparison of different management techniques (amount of weeding, thinning) and the reaction of different varieties to local conditions. Another important objective of this activity is to determine if there are any unforseen environmental consequences to oil seed planting (i.e. reduced drainage).

6) Promotion of improved methods of post-harvest drying and storage of oil seeds.

During the 1998 harvest, a limited number of ?drying tables? will be established at Leader Farmer fields. These will be constructed from local materials, and use plastic sheeting as the key component to improve drying of the seed. They will be used by Leader Farmers as an example to other farmers of the improvement in oil extraction from properly dried seeds.

Africare will build ten small storage facilities (maximum capacity of 10 MT?s of seed each) at selected points in the target districts. These facilities will be constructed from local materials and be designed to reduce pest infestation and maintain the most appropriate air environment for short-term seed storage. The seed that is harvested by small-scale farmers to be sold to village presses and/or commercial refineries will be placed in these facilities during April - July (the pressing season). The seed treated with insecticide will be multiplied and stored in these same facilities during August - December.
The land onto which these sheds will be constructed will be level and well-drained. No site will be selected on fragile soils nor any ?sensitive? areas.

Besides being an on-field storage site, they will be used in collaboration with several store owners to improve marketing of large amounts of seed, to be sold to commercial refineries (i.e. provide another local outlet for a farmer to sell his harvest in addition to the village-based press). The seed stored in these facilities during the harvest season will not be there for longer than several weeks, because the demand for crushing seed will be high.

Oil Seed Processing:

7) Oil press demonstrations at the community level.

The most effective method to generate demand for manual processing technology is the community press demonstration. Africare has completed more than 150 demonstrations to date. Often in collaboration with a press

owner from a neighboring community, the press is presented to the people in attendance and a limited amount is pressed. This oil is then passed through a ?bucket? filter or is boiled in water (these are the two methods to complete the processing). An explanation is given about the way to acquire a press. Because the press is mobile, the demonstration can take place anywhere within the district. Each demonstration takes place within the community (at a public meeting place) and takes approximately two hours to complete.

8) Sale and marketing of manual oil presses, including credit provision.

The sale of oil presses involves contact between interested people and Africare?s oil promotion staff (often after a community press demonstration). The terms to purchase a press are presented and an agreement signed. If the press owner cannot pay the entire amount up front, there are several credit options (including leasing). Of the 27 press sales during FY?97, 75% were made by credit. Africare?s target for operating presses in the target districts by the end of FY?98 is 85 (370 by LOA).

Manual oil press technology is considered ?environmentally friendly? because the entire oil seed is effectively used. In addition to the oil that is produced, the remaining ?cake? is an excellent source of livestock feed. The press itself is mobile (less than 40 KG?s) and no construction is required prior to pressing.

9) Training and technical assistance to Press Owners.

A variety of training is provided to new press owners, about daily maintenance that is required, the most effective pressing techniques, the different ways by which pressing services can be offered, and establishment of an inventory and cash flow system. This support continues throughout the pressing season (at least weekly visits).

10) Train rural artisans to provide repair services at the village level

This training will take place during the second half of FY?98, and provide local blacksmiths and bicycle mechanics with the knowledge they need to repair the most common problems that manual presses have.

11) Training of sales agents to market oil presses.

12) Support private sector to import and maintain stocks of presses and spare parts.

Contacts between Africare and the private sector are focused on increasing the latter?s participation in support of processing activities. This includes training private company employees and rural store owners about the advantage of the press and its proven profit-making qualities. A large amount of presses will be imported from Zimbabwe during FY?98 by a commercial operator in Chimoio. This importation is being made for Africare and will increase the private sector?s involvement in the provision of presses and spare parts.

13) Promotion of the appropriate mix of oil seed ?cake? for improved animal feed.

The ?cake? that remains in the press after oil extraction is a high nutrient product that can be used to make an improved livestock feed. Because livestock in Manica is relatively important (and has increased significantly during the past five years), the sale of oil seed cake to livestock producers is an additional sources of income for the press owner. When mixed properly with other types of grain ?chaff?, it is an excellent feed for small livestock. Working with the Press Owners and Lead Farmers, the use of cake for livestock feed will be promoted. No chemical by-products will be used (salt will be added to the feed).

One possible environmental consequence from oil seed cake is if it were not to be used as a livestock feed and simply ?thrown away? (i.e. possibly entering ground water sources). This will not occur for several reasons. The

cake represents an additional source of income for the press owner (most of the cake produced during the 1997 pressing season was sold for livestock feed). Small-scale livestock is an important secondary activity for most families in the province. The cake is especially appropriate for goats, chickens, pigs and turkeys which are raised in every community that will have an oil press. Part of Africare?s outreach is to encourage the use of oil seed cake for livestock feed and to monitor if existing stocks are not being consumed. Africare staff have received training in the most appropriate mixes of oil seed cake for small-scale livestock; this training has been incorporated into the recommendations being made within the target communities.

3.4 Household Nutrition Component

The principal activities being completed by the Africare Nutrition staff in Manica Province are presented and analyzed below for potential environmental impact.

1) Formation and support of Village Food Security Committees (VFSC?s).
2) Training and support of Community Nutrition Activists.
3) Development of a nutritional education curriculum (with IEC materials)

The three activities presented above are the basis of Africare?s training and outreach within nutrition education. An important part of this process is the facilitation of a community analysis to identify constraints to improved food security. Fifty VFSC?s will have been established and operating by the end of FY?98 (80 by LOA).

4) Monthly growth-monitoring/educational sessions of under-five children.

The purpose of the weighing sessions is to reenforce to the mother that if the child eats a better balanced diet, monthly weight gain will be improved. These sessions are directed by Africare?s nutritionists and/or nutrition activists, using a weighing scale that is designed to show illiterate mothers how a child?s weight fluctuates from month to month. These sessions are conducted outdoors and no local materials are needed.

5) House to house visits with members of the VFSC?s that have children with serious nutritional problems.

As a follow-up to support for Village Food Security Committees, Africare staff are completing house to house visits to provide more specific training to mothers with children in difficult nutritional circumstances.

6) Transfer and reenforcement of a series of nutritional-related messages, presented during culinary demonstrations, traditional theater, radio ?spots? and group discussions about diet, good health and obstacles to improve these;

The culinary demonstrations take place with small groups of mothers, focusing on enriched weaning foods and increased consumption of leafy vegetables and oil. Only local foods are used, with an increasing amount of the food used in the demonstrations to be provided by the mothers. These sessions are followed by group discussions of food preparation and the relationship different foods have with health and nutritional well-being. Theater and radio are reenforcing activities for improved nutritional practices.

7) Establishment of a ?Micro-Project Fund? that supports community-based efforts to reduce constraints to improved household food security and nutrition.

This activity will begin during the second half of FY?98. A limited amount of funding will be provided to those Village Food Security Committees that have proven to be well-organized and willing to work with Africare staff. The funding will be used to purchase items in support of an activity that will improve food security for the members. Examples are gardening tools, vegetable seeds and improved storage containers. All labor must be

provided by the community. No micro-projects will involve construction or land clearing/development.

RECOMMENDED MITIGATION ACTIONS (INCLUDING MONITORING AND EVALUATION).

4.1 Recommended IEE Determinations

A **Categorical Exclusion** is recommended for the following activities, per 22 CFR 216.2 (c) (1) (i)...*having no adverse effect on the natural or physical environment*.

- Monetization of agricultural commodities
- Support private sector to import and maintain stocks of presses and spare parts

A **Categorical Exclusion** is recommended for the following activities, per 22 CFR 216 2 (c) (2) (i)...*education, technical assistance or training programs to the extent such programs includes activities directly affecting the environment:*

- Training and extension support in improved oil seed husbandry techniques.
- Training and technical assistance to Press Owners.
- Train rural artisans to provide repair services at the village level
- Training of sales agents to market oil presses.

A **Categorical Exclusion** is recommended for the following activities, per 22 CFR 216 2 (c) (2) (ii)...*controlled experimentation exclusively for the purpose of research and field evaluation which are confined to small areas and carefully monitored:*

- Field level research of different varieties of oil seed.

A **Categorical Exclusion** is recommended for the following activities, per 22 CFR 216 2 (c) (2) (v)...*document and information transfers*:

- Oil press demonstrations at the community level.
- Identification of different outlets for the sale of increased oil seed production (village presses and/or commercial refineries).

A **Categorical Exclusion** is recommended for the following activities, per 22 CFR 216 2 (c) (2) (viii)...*Program involving nutrition, health care or population & family planning services except to the extent designed to include activities directly affecting the environment*

- Formation and support of Village Food Security Committees (VFSC's).
- Training and support of Community Nutrition Activists.
- Development of a nutritional education curriculum (with IEC materials)
- Monthly growth-monitoring/educational sessions of under-five children.
- House to house visits with members of the VFSC's that have children with serious nutritional problems.
- Transfer and reenforcement of a series of nutritional-related messages, presented during culinary demonstrations, traditional theater, radio 'spots' and group discussions about diet, good health and obstacles to improve these;

- Establishment of a 'Micro-Project Fund' that supports community-based efforts to reduce constraints to improved household food security and nutrition

A **Categorical Exclusion** is recommended for the following activities, per 22 CFR 216 2 (c) (2) (x)...*?support for intermediate credit institutions when the objective is to assist in the capitalization of the institution or part thereof and when such support does not involve reservation of the right to review and approve individual loans made by the institution?*:

C Sale and marketing of manual oil presses, including credit provision

A **Negative Determination With Conditions** is recommended for the following activities, per 22 CFR 216.3 (a) (2) (iii)...*?a Negative Determination will be recorded if the proposed activity will have no significant impact on the environment?:*

C Promotion of open-pollinated high oil-content seeds for the small-scale farmer.
C Promotion of improved methods of post-harvest drying and storage of oil seeds.
C Promotion of the appropriate mix of oil seed ?cake? for improved animal feed.

While negative environmental impact is not expected with an increased planting of open-pollinated oil seed, monitoring by Africare staff will ensure that no adverse conditions are created, such as increased pest infestation for other crops or overly-depleted fields.

The drying tables on farmer?s fields and storage sheds at selected points in the districts will be properly ?sited? to not increase soil erosion and will not be near fragile land.

An important part of Africare?s outreach and monitoring of oil seed cake usage will be to ensure that the cake is disposed of properly, to not contaminate ground water sources.

A **Negative Determination With Conditions** is recommended for the following activity, per 22 CFR 216.3 (b) (1) (iii)...*?assistance for procurement or use, or both, of pesticides registered for the same or similar uses by USEPA...?:*

C Establishment of a private-sector-driven seed multiplication system, including the packaging and protection of planting seed (with insecticide) prior to long-term storage.

The potential for adverse impact is significantly reduced because the insecticide is only applied once, under the direct supervision of trained Africare senior staff, prior to completing the bagging of the seeds and placement for storage (these will be the only individuals to physically handle the product). Promotion with small-scale farmers to use this type of storage insecticide is <u>not</u> included in Africare?s program. Specific conditions are included in Appendix A (Pesticide Analysis and Action Plan).

4.2 Mitigation, Monitoring And Evaluation

Despite the fact that most of the activities to be completed under the MOSFSI are being recommended as having no direct adverse impact on the environment, Africare staff will complete regular monitoring of field implementation to ensure that no unforseen impacts develop. The majority of this environmental monitoring is taking place with the Oils Promotion Component. It is unlikely that any changes in the monetization program will create adverse environmental impacts. The Household Nutrition Component will also not likely develop environmental impacts, given that outreach activities such as immunization, blood testing or family planning promotion services are not included (nor are they expected to be added at a later date). However, should major modifications to the Household Nutrition Component occur that would incorporate new and potentially damaging activities, appropriate modifications to the recommended Threshold Decisions for each activity would be made.

The improved husbandry techniques being promoted for oil seed by Africare are ?environmental friendly?.

Proper plant spacing, limiting the number of seeds per planting station and timely weeding are recommended techniques for any type of improved farming. Land preparation prior to planting is not included in the outreach program, but techniques such as contour planting, wind break establishment and animal traction are being promoted by other agencies and complement Africare?s program. The initial experience with farmers during the 1998 planting season is that it is critical to reenforce the messages that are transferred; a significant amount of oil seed was ?broadcast planted? despite repeated messages and demonstrations about the advantages of proper line spacing that result in higher yields.

Africare staff are responsible for monitoring any detrimental effects that result from an increase in oil seed planting and confirming that open-pollinated varieties continue to be the most appropriate from a financial and environmental perspective. Support is being provided to local farmers as they identify land to be prepared for oil seed planting. Fragile soils more prone to excessive erosion will be identified. Possible impacts on the local environment are included in the husbandry messages being transferred to farmers. Problems resulting from pest infestation and/or disease will be reported to Africare to expand collaborative work with other organizations to identify solutions, including Integrated Pest Management techniques, or more appropriate inter-cropping planting combinations. Research trials with other PVO?s, the Sunflower Project and the Agricultural Research Station in Sussendenga will continue through the end of the DAP implementation period. The sharing of research conducted in other parts of Mozambique (through the Oils Consortium) is a source of information to overcome any negative environmental impacts that might be recorded.

Should increased soil erosion or poor drainage be identified by Africare staff (especially in the eastern more marginal rainfall areas of the target districts), specific recommendations will be made to the farmer to reduce this adverse impact (i.e. selection of land to be planted and/or specific land preparation techniques). An important monitoring activity is the tracking of yields on a representative sample of the farmers planting oil seed, and how this changes from one year to the next. Significant reductions in yields due to insufficient nutrients in the soil would require the farmer to leave plots of land in fallow on a regular basis (although experience in Manica suggests that most farmers already do this).

This field monitoring takes place with government and research service personnel; one of the objectives of the Research and Results Demonstrations Plots is to identify the most appropriate combination of seed variety with different agronomic and climatic conditions, to receive high yields and minimal land degradation. All improved seeds that are being promoted have been certified for minimal oil content and germination rates by the National Seed Service.

Pesticides and fertilizers are not part of the Oils Promotion extension program. However, the use of fertilizer can effectively increase oil seed production (this has been little used in Mozambique to date, due to its prohibitive cost per hectare). Should Africare staff become aware of individual farmers using chemical fertilizers or a decision be made to include this input into the package being promoted, this would be included in an annual update of the IEE for the DAP, before promotion of this input. Any changes in the recommended IEE determinations would require USAID approval (e.g. to include chemical inputs in the outreach program).

The establishment of oil processing enterprises is also considered ?environmental friendly? because the press is portable and requires no construction prior to its use. More importantly, it uses the entire harvested seed, first during the oil extraction process and second by the ?cake? that provides the basis for improved animal feed. The farmers and press owners that are involved in the oil seed industry being created in the five target districts receive regular support from Africare staff throughout the growing season and the pressing season, respectively.

In addition to the district-based Oil Promoters/Extensionists, there are four technical staff that spend 50-60% of their time in the target districts. Finally, Africare has a full time M&E Officer that spends the majority of his time in the districts, recording the types of activities being completed and, more importantly, the impacts (both

positive and negative) these activities are having at the community and household level. An important part of this monitoring includes the proper siting of on-farm drying tables and improved storage facilities and confirming that oil seed cake is being effectively used for livestock feed and not disposed of in an environmentally inappropriate manner. The storage sheds to be constructed during FY?98 will be directly managed by Africare and no further construction of similar structures will take place during the remaining three years of the DAP.

The initial experience with the packaging and storage of planting seed (identified above) will take place during the last quarter of FY?98. The multiplication of the seed is being completed under contract with commercial farmers. The cleaning and bagging of the seed will be completed by one commercial farm. Insecticide application and storage of the seed until the subsequent planting season will be completed by Africare staff. It is expected that in future years, commercial farmers will become more involved in this process (as part of the general objective to increase the role of the private sector in support of an oils industry), including the packaging and storage of seed prior to the subsequent planting season. This would also involve the application of insecticide to the seed by the multiplier, which would take place under the supervision of Africare staff.

As presented in Appendix A, post-harvest insecticide will be applied within an enclosed structure by trained Africare staff, in the appropriate quantities to provide long-term protection from pest infestation. The recommended product for this application, Actellic, is registered by both USEPA and the Mozambican Department of Plant Protection for use with stored grains. This product is available in Manica and appropriate equipment and protective clothing will be used. Provincial agricultural authorities will be requested to monitor this application, to ensure that Africare adhere?s to existing guidelines. The use of this product is not being promoted within the small-scale farming sector.

5. SUMMARY OF FINDINGS

This IEE has been completed under the guidelines issued by USAID/BHR/FFP and Africa Bureau to Title II Cooperating Sponsors implementing Development Activity Programs (DAP) for Environmental Compliance Procedures. Included is an analysis of all activities that have been begun by Africare (since FY?97) of its on-going Title II activity - the Manica Oil Seed Food Security Initiative - and other activities that will be completed during the expected life of activity. Based on this analysis, including a review of field experience, project impact and existing national and USAID regulations, the following determinations are being recommended:

A **Categorical Exclusion** is recommended for the following activities per 22 CFR 216.2 (c) (1) (i): 1) Monetization of agricultural commodities; 2) Support private sector to import and maintain stocks of presses and spare parts.

A **Categorical Exclusion** is recommended for the following activities, per 22 CFR 216 2 (c) (2) (i): 1) Training and extension support in improved oil seed husbandry techniques;
2) Training and technical assistance to Press Owners; 3) Train rural artisans to provide repair services at the village level; 4) Training of sales agents to market oil presses.

A **Categorical Exclusion** is recommended for the following activities, per 22 CFR 216 2 (c) (2) (ii)*:* 1) Field level research of different varieties of oil seed.

A **Categorical Exclusion** is recommended for the following activities, per 22 CFR 216 2 (c) (2) (v): 1) Oil press demonstrations at the community level; 2) Identification of different outlets for the sale of increased oil seed production (village presses and/or commercial refineries).

A **Categorical Exclusion** is recommended for the following activities, per 22 CFR 216 2 (c) (2) (viii). 1) Formation and support of Village Food Security Committees (VFSC?s);

2) Training and support of Community Nutrition Activists; 3) Development of a nutritional education curriculum (with IEC materials); 4) Monthly growth-monitoring/educational sessions of under-five children; 5) House to house visits with members of the VFSC?s that have children with serious nutritional problems 6) Transfer and reenforcement of a series of nutritional-related messages, presented during culinary demonstrations, traditional theater, radio ?spots? and group discussions about diet, good health and obstacles to improve these; 7) Establishment of a ?Micro-Project Fund? that supports community-based efforts to reduce constraints to improved household food security and nutrition.

A **Categorical Exclusion** is recommended for the following activities, per 22 CFR 216 2 (c) (2) (x): 1) Sale and marketing of manual oil presses, including credit provision.

A **Negative Determination with conditions** is recommended for the following activities, per 22 CFR 216.3 (a) (2) (iii):

1) Promotion of open-pollinated high oil-content seeds for the small-scale farmer.

Ensure that no adverse conditions are created, such as increased pest infestations for other crops or overly-depleted fields.

2) Promotion of improved methods of post-harvest drying and storage of oil seeds.

Drying tables on farmer?s fields and storage sheds in the target districts will be properly sited to not increase soil erosion and will not be near fragile or inappropriate land.

3) Promotion of the appropriate mix of oil seed ?cake? for improved animal feed.

Ensure that oil seed cake is disposed of properly, to not contaminate ground water sources.

A **Negative Determination with conditions** is recommended for the following activity, per 22 CFR 216.3 (b) (1): 1) Establishment of a private-sector-driven seed multiplication system, including the packaging and protection of planting seed (with insecticide) prior to long-term storage.

Conditions as specified in Appendix A (Pesticide Analysis and Action Plan).

REFERENCES

Africare: Manica Oil Seed Food Security Initiative, FY?97 Development Activity Proposal, May 1996.

_____: Manica Oil Seed Food Security Initiative, FY?99 Previously-Approved Activity Request, April 1998.

CARE/Mozambique, Request For Authorization To Apply Post Harvest Pesticide, Submitted To USAID/Mozambique, August 1995.

GTZ MARRP: Integrated Rural Development Strategy for Manica Province, January 1995.

Ministry of Agriculture Department Of Plant Protection: ?Guia De Pesticidas?, January 1994.

USAID Bureau for Africa: Environmental Guidelines For Small-Scale Activities in Africa, June 1996.

USAID Bureau for Humanitarian Response: Environmental Documentation Manual, Final Draft January 1998.

USAID/Mozambique: Supplemental Environmental Assessment Of Pest Management and Pesticide Use In the Private Voluntary Organization Support Projects of USAID/Mozambique, January 1994.

Appendix A: Pesticide Analysis And Action Plan

Africare/Mozambique Title II IEE/CE Request
Post-Harvest Insecticide Application On Oil Seed

Background

During the 1998 planting season, Africare contracted three commercial farmers in Manica Province to multiply ?basic? open-pollinated sunflower and sesame seed on their own fields. The seed that will be harvested on these farms will be the planting seed to be sold to small-scale farmers within Africare?s target districts during the 1999 planting season. The original target of multiplied seed to be received was 60 MT?s. The harvest period has begun (at the time of this writing - May 1998). It is expected that at least 40 MT?s will be harvested during the period June - July 1998.

It will be necessary to store this multiplied seed for up to five months (through December 1998), prior to beginning the marketing of this planting seed to small-scale farmers. The seed will be stored in improved storage sheds that are being constructed under Africare?s management (see IEE text, section 3.3). To further protect this seed from insect damage, authorization is requested to apply the ?Actellic? insecticide to the seed prior to it being bagged and stored.

Analysis

The following analysis follows the recommended outline, as per 22 CFR 216.3 (b) (1) (a-l):

USEPA?s registration status of the requested pesticide:

Actellic (generic name perimiphos-methyl) is a USEPA-registered pesticide that is classified for ?general use?. It is an organophosphate with a USEPA Toxicity Class of III (Caution). It controls a wide range of pests affecting grains and other stored products. It is a rapid acting chemical with a 7 day toxicity cycle and is effective in warm and humid climates. Actellic acts through fumigation and ingestion and has a low mammalian toxicity. Authorization is requested to use this product in powder form.

Basis for selection of the requested pesticide:

Actellic is highly recommended for use on stored grains (and is approved for this purpose in the Supplementary Environmental Assessment completed for USAID/M?s PVO Support I Project). Attached is a copy of a table from the SEA that identifies perimiphos-methyl as approved for use with stored grains. It is registered by the Mozambican Ministry of Agriculture?s Department of Plant Protection for use on stored grains and is the least toxic of other available products. Previous experience by other PVO?s (CARE/Nampula) has confirmed that it is the most effective product for this purpose.

Extent to which the proposed pesticide is part of an IPM:

This application is not part of an Integrated Pest Management strategy because post-harvest insecticide application is <u>not</u> included in Africare?s outreach and training with small-scale farmer?s in Manica Province. This application is to be made to protect multiplied seed in storage prior to being sold to small-scale farmers. Its use will take place within a secure environment (i.e. within an enclosed structure) by trained Africare staff.

Proposed method or methods of application, including availability of appropriate application and safety equipment:

The application of this product will take place prior to the bagging of the seed into 1 KG polyurethane bags. The bagging and cleaning will take place within a large warehouse on the grounds of one of the commercial farms that have multiplied seed during 1998. This farm has been contracted by Africare to clean the seed that will then be placed into large sacks, capable of holding up to 50 KG?s of seed each. The Actellic powder will be applied directly (dusted) onto the seed in these large bags (an application rate of 20 - 50 grams of powder per 100 KG?s of seed). This will take place at the warehouse where the bagging will take place. The seed will be sealed in these large bags for 15 days prior to initiating bagging into the smaller bags.

After it has been bagged in 1 KG bags, the seed will be stored in ten different storage sheds located throughout Africare?s target districts. Each shed has a maximum capacity of 10 MT?s; part of the walls will be wire-mesh, providing appropriate ventilation. Prior to placing the bagged seed in each storage shed, it will be disinfected with a common cleaning product.

The following equipment will be used by Africare staff during this application:

C Protective mask
C Rubber gloves and boots
C A set of overalls

The precautionary recommendations included on the packaging of this product will be strictly followed, including the use of a mask over mouth and nose, immediate removal of clothing used during application and burning of used containers. Prior to application and as per recommendations on the Actellic container, the product will be stored in its original container in Africare/Chimoio?s warehouse. The warehouse will be locked and well-ventilated. Any person entering the warehouse will be informed of its existence and be aware of the toxicity of the product.

Any acute and long-term toxicological hazards, either human or environmental, associated with the proposed use and measures available to minimize such hazards:

Acute toxicity (LD50 in MG/KG) of Actellic is ?2,000 oral and ? 4,592 dermal. Eye effects are no corneal opacity, irritation is reversible in seven days. Skin effects are moderate irritation at 72 hours. Soap, water and hand towels will be available during application for immediate washing of hands and eyes (if necessary).

Effectiveness of the requested pesticide for the proposed use:

According to the Department of Plant Protection?s ?Guia de Pesticidas Registados em Moçambique? (1994), Actellic is ?registered for use in public health and to control pests in stored products?. It has a toxicity level of ?Ligeiramente? (USE WITH CAUTION). As per the SEA completed for USAID/Mozambique in 1994, Actellic is most appropriate to be used with stored grain (see attached table and presentation of Actellic uses).

Compatibility of the proposed pesticide with target and non-target ecosystems:

The proposed application of Actellic by Africare will take place within an enclosed structure only. The use of Actellic powder within an enclosed, ventilated warehouse is recommended (see attached information). Because of the controlled conditions under which application will take place, no contact with non-target ecosystems is expected.

Conditions under which the pesticide are to be used, including climate, flora, fauna, geography, hydrology and soils:

The use of Actellic as presented for post-harvest storage protection (within an enclosed warehouse) will not contact flora, fauna, open water sources or fragile soils.

Availability and effectiveness of other pesticides or non-chemical management methods:

While there are other pesticides available that are effective for the proposed use, it has been determined that Actellic is the least toxic and has been used successfully for similar purposes within Mozambique (post-harvest storage protection of oil seed). Due to the length of time required to store this seed, it has also been determined that an exclusive non-chemical storage management strategy would result in significant losses due to pest infestation.

Requesting country's availability to regulate or control the distribution, storage, use and disposal of the requested pesticide:

As presented in the SEA for USAID/M, there is limited control of pesticide use in the country and "*...much of the responsibility for safe and effective pesticide use by PVO's must be borne by the PVO Support Project and the PVO's themselves* (page 38)". Limited support has been provided to the Ministry of Agriculture in warehouse inspection and plant quarantine, but this has not covered the entire country. Africare's own contacts in Manica Province indicates that very little, if any, regulation of pesticide use takes place on a regular basis. The Manica Provincial Directorate of Agriculture will be informed of this pesticide application and requested to inspect the facilities and preparations prior to application.

Provisions made for training of users and applicators:

Actellic will be applied by Africare/Chimoio's agronomist (trained at a "technical-vocational level), who has 10 years experience working in agricultural development projects, including the use of pesticides. He has been involved with research activities and on-farm trials of different chemical inputs in small-scale agricultural initiatives and has worked with Actellic previously. The expatriate Oils Promotion Coordinator will supervise this application. He also has worked with Actellic previously and has 6 years experience working with oil seed crops.

Provisions made for monitoring the use and effectiveness of the pesticide:

Actellic is available within Manica Province in sufficient quantities to complete this application (with detailed instructions in Portuguese). It will be transported to the application sites in the back of Africare vehicles, well-secured to ensure no spillage if there are sudden stops, starts or turns. There will no sharp objects in the vehicle that could puncture the containers during transport. Only the amount necessary to protect the multiplied seed will be acquired; no additional containers of Actellic will be purchased and stored (in the medium term) by Africare.

During application, preparations to apply Actellic powder to the seed will follow the instructions on the label, in the proper sequence. No one will handle the product without the proper protective clothing and soap and water will be available for immediate cleaning of hands and eyes. Partially-used containers will be securely sealed during the application process and returned to storage. After completing the application, the empty containers will be burned (per the Mozambican "Pesticide Guide"). The clothing and other equipment used during the application will be thoroughly cleaned (the clothes will be washed separately from other clothes). They will be stored in the Africare/Chimoio warehouse.

Because the application will take place within an enclosed warehouse, there should not be ?drifting? problems (movement of pesticide dust away from the seed to be treated). Application will take place in the early morning (prior to 10:00 AM), avoiding the hottest part of the day. No food or drink will be consumed within the warehouse during application. Should anyone show signs of pesticide poisoning, the application will be stopped and first aid will be immediately sought.

The treated seed will be sealed for 15 days prior to initiating the bagging into 1 KG bags. There will be no subsequent applications during the storage period.

Annex B.4

INITIAL ENVIRONMENTAL EXAMINATION
SUSTAINABLE FOOD SECURITY FOR
THE MOST VULNERABLE IN HONDURAS - CARE/HONDURAS

Project Location: Honduras

Project Title: Sustainable Food Security for the Most Vulnerable in Honduras

Funding Source: PL-480 Title II CARE Grant provided by the BHR Bureau in USAID/Washington

Life of Project: 1996 to 2000 (5 years)

Life of Project Funding: $23,100,000

IEE Prepared by: Becky Myton, Honduras Environmental Consultant — Date submitted: September 11, 1997

Gerald P. Bauer, USAID/Nicaragua
Natural Resource Management Officer

Scott Solberg, CARE/Honduras
Food Security Advisor

IEE Reviewed By: Albert L. Merkel
Mission Environmental Officer

Threshold Decision for Activities during FY97 through FY00

A. Categorical Exclusions for the following actions:

1. Education and training programs (216.2 (c) (2) (i))

2. Nutrition and health care programs (216.2 (c) (2) (viii) & 216.2 (2) (xi))

B. Negative Determinations for the following actions (216.3 (a) (2) (iii)):

1. Agricultural demonstration plots.

2. Physical improvement of markets.

3. Construction of new markets.

4. Physical improvements to homes.
5. Environmental protection and reforestation

Under no circumstances will funds for new activities be used for, 1) the purchase of equipment which

could be used for commercial timber harvesting, 2) activities, projects, or programs involving commercial timber harvesting, unless the appropriate EA is considered, and approved by the BHR Environmental Officer.

C. The following actions merit a Positive Threshold Decision and, hence, require Environmental Assessments:

1. Improvement of existing roads (216.2 (d) (1))
2. Construction of new roads (216.2 (d) (2))

Mission Director's Decision

Approved: EB Disapproved: _____

Elena Brineman
Mission Director

Elena Brineman
Mission Director

USAID APPROVAL OF ENVIRONMENTAL ACTION(S) RECOMMENDED:

Clearance:

BHR/FFP WTO Date: 2/4/98

William T. Oliver, Director

Concurrence:

BHR/BEO PEDR Date: 2/5/98

Paul E. des Rosiers
Environmental Officer

Annex B.5

TITLE II ENVIRONMENTAL COMPLIANCE FACESHEET

Title of DAP/PAA Activity:

Development Activity Proposal
FY 1997 ? 2000
Catholic Relief Services/Kenya Project Number 648-96-013
CS name Country/Region

Catholic Relief Services ? USCC Kenya Program

Funding Period: FY 1997 ? FY 2000

Resource Levels: Commodities (dollar equivalent, incl. Monetization) $6,722,250
Total metric tonnage request: 24,483MT
202(e) grant: $ _____

Statement Prepared by: Name: Jean Marie Adrian **Date**: July 9, 1998
Title: Country Representative

IEE Amendment (Y/N)? N Date of Original IEE _____

Environmental Media and/or Human Health Potentially Impacted (check all that apply):

Air _N__Water_Y__land _Y__biodiversity(specify) _N__human health_Y_other __none _N__

Environmental Action(s) Recommended (check all that apply):

Yes___1. Categorical Exclusion(s)

Yes_ 2. Initial environmental Examination

_____ Negative Determination: no significant adverse effects expected regarding the proposed activities, which are well defined over life of DAP/PAA. IEE prepared:

____ without conditions (no special mitigation measures needed; normal good practices and engineering will be used)

with conditions (special mitigation measures specified to prevent unintended impact)

Yes__ Negative Determination: no significant adverse effects expected but multiple sites and sub-activities are involved that are not yet fully defined or designed ? Umbrella IEE? prepared (go to Annex B and Annex F for examples)

Yes__ conditions agreed to regarding an appropriate process of environmental

capacity building and screening, mitigation and monitoring

_____ Positive Determination: IEE confirms potential for significant adverse effect of one or more activities. Appropriate environmental review needed/conducted.

_____ EA to be/being/has been (circle one) conducted. Note that the activities affected cannot go forward until the EA is approved.

_____ Deferral: one or more elements not yet sufficiently defined to perform environmental analysis; activities will not be implemented until amended IEE is approved.

SUMMARY OF FINDINGS

a) **For activities associated with the Food Assisted Child Survival (FACS)**

The activities under FACS fall into Categorical Exclusion (CE) as per section 2(c) (2) of 22 CFR 216. The specific citations are 216.2(c) (2)(i),216.2(c) (2)(iii), 216.2(c)(2)(viii), and 216.2(c)(2)(xi), hence require no mitigation.

b) **Complementary Activities** ? Negative Determination with conditions (Umbrella IEE)

This Initial Environmental Examination (IEE) satisfies the conditions of the environmental procedures for umbrella activities and delegation of environmental review responsibilities to Missions for PVO/NGO umbrella-type projects (Cable 95 STATE 257896). A screening form and environmental reviews will be prepared.

Environmental Determinations
Negative Determination with Conditions (Umbrella IEE)

Based on environmental review procedures, promotion of environment review capacity building monitoring, evaluation, and mitigation procedures specified in this IEE, to which the Mission commits itself, a **Negative Determination with Conditions (Umbrella IEE)** is recommended for complementary activities of FACS. The complementary activities of FACS which use of the umbrella IEE process is recommended are:

I. sustainable agriculture with emphasis on soil fertility improvement by using farm yard manure and/or compost, practicing organic farming, crop rotation, mixed farming and minimizing land degradation;
I. improving agricultural production by facilitating access to high quality germplasm, credit for draught animals and improving extension services to small holder farmers;
I. agroforestry practices;
I. increasing livestock production through training small holder farmers in livestock management and offering them credit to purchase bulls and dairy animals;
I. providing potable water in shallow wells, bore holes, small earth dams/pans, de-silting of earth dams, by rain water harvesting and protecting springs;
VI improving sanitation by constructing pit latrines;
VII community training;

VIII community organization and mobilization;
IX technical assistance; and
X small enterprise promotion by providing credit to the poor

This IEE specifies a set of steps, in accordance with the Africa Bureau's *Environmental Guidelines for Small-Scale Activities in Africa*, to ensure adequate environmental review of USAID supported activities, including capacity building elements. This negative determination is also conditioned on the provision of supplemented project technical assistance and training support to augment existing efforts. These capacities will be developed and implemented in close collaboration with USAID/Kenya and CRS/Kenya local implementing partners.

The screening form will be used to confirm a Categorical Exclusion for these complementary activities: community training, community organization and mobilization, food rations, technical assistance, small enterprise promotion by providing credit facilities to the poor. They have no physical intervention and no direct effects on the environment pursuant to 22 CFR 216.2(c)(2)(i), 216.2(c)(2)(iii), 216.2(c)(2)(viii) and 216.2(c)(2)(xi). These activities will be grouped under Category 1 in the Screening Form to be prepared.

USAID APPROVAL OF ENVIRONMENT ACTION(S) RECOMMENDED:

Clearance:

Mission Director: _____ Date: _____
Dennis Weller (Acting)

Food for Peace Director: _ _____ Date: _____
William T. Oliver

Concurrence:

Bureau Environment Officer: _____ Date: _____
(BHR) J. Paul DesRosiers

Approved: _____

Disapproved: _____

Optional Clearances:

FFP Officer/Mission Food Aid Manager: _____ Date: _____
George Mugo

Mission Environmental Officer: _____ Date: _____
Dennis Weller

Regional Environmental Officer: _____ Date: _____
Charlotte Bingham

Geographical Bureau Environmental Officer: _____ Date: _____
Carl Gallegos

General Counsel: _____ Date: _____
Stephen Tisa

INITIAL ENVIRONMENTAL EXAMINATION

Program Data:
DAP (FY 1997-2000); CRS Project Number - 648-96-013
Catholic Relief Services, Kenya, East Africa Region

1.0 BACKGROUND AND ACTIVITY DESCRIPTION

1.1 Background

Kenya is a low income, food insecure country with a per capita income of US$ 270. A majority of its inhabitants suffer from food insecurity, drought and famine conditions and 80% of the population lives in rural areas, which are classified as Arid and Semi-Arid Lands (ASAL). Food production of these farmers is insufficient to meet household needs. Reports from these areas indicate that childcare practices are deficient and that knowledge of other preventive health practices, including those for pregnant women and children, is woefully inadequate. Inadequate feeding practices, high levels of anemia and poor nutrition for women and children are common in these arid and semi-arid areas. Furthermore, recent statistics demonstrate that vaccination coverage and feeding practices in these regions are some of the lowest in the country (GOK, 1995).

The goal of the Catholic Relief Services (CRS) Kenya Program is to contribute to the reduction in infant and child mortality and morbidity through improved knowledge and health practices among women from food insecure households, and their communities. CRS? s sub-goal is to improve utilization of food by pregnant/lactating women and children under the age of 24 months. Our strategic objective I is improved health status of women and children.

The CRS/Kenya program focuses on proven low cost Child Survival interventions which addresses inadequate infant feeding practices and maternal and newborn care knowledge, practice and coverage that present adequate the consumption/utilization of food. In addition, CRS/Kenya has moved from center-based to community-based health care programming for health interventions because of its proven effectiveness in improving the targeting of food resources and sustainability of health activities at the community level.

1.2 Description of Activities

Catholic Relief Services- Kenya Program FY 1997-2000 Development Activity Proposal (DAP) addresses several factors relating to food security in multiple targeted geographic areas in Kenya through food assisted child survival (FACS) and complementary activities which include sustainable agricultural, savings and credit, water and sanitation.

For the purpose of this Initial Environmental Examination (IEE), CRS activities have been categorized into two, namely activities which fall under FACS, and complementary activities. Specifically CRS/Kenya focuses its efforts on the communities which are located in areas plagued by food insecurity.

The CRS/Kenya Title II Program proposed in this four-year DAP focuses primarily on one intervention- Food Assisted Child Survival (FACS) - which was formerly the Maternal and Child Health intervention. CRS/Kenya focuses on an integrated approach to achieve success in the FACS program. That is, the FACS

program activities take place in specifically defined communities and will be complemented by projects in sustainable agriculture, potable water, sanitation, and savings/credit. This integrated approach allows CRS/Kenya to achieve a greater level of program impact in the area of food security, and results in a greater concentration of resources in fewer geographical areas under stronger management structures.

1. FACS ACTIVITIES

The FACS activities can be grouped in the following major categories:

Community training on child survival messages
Community organization and mobilization
- Targeted, monthly food rations
- Community-based data collection
- Child growth monitoring
- Counseling and home visits
- Provision/distribution of de-worming medicine, iron, folic acid and vitamin supplements

2. COMPLEMENTARY ACTIVITIES

The complementary projects, will be decided as needs are identified by the FACS target communities after community mobilization and training. It is expected that, after community mobilization and training, the target community will identify other needs to improve their food security. These needs, prioritized by the community, will be considered for support by CRS. The support of the selected interventions will be determined by 1) their technical soundness 2) community capacity to implement and operate; 3) availability of the required natural resources and 4) future sustainability. The complementary activities can be grouped under the following major interventions:

I sustainable agriculture with emphasis on soil fertility improvement by using farm yard manure and/or compost, practicing organic farming, crop rotation, mixed farming and minimizing land degradation;
I. improving agricultural production by facilitating access to high quality germplasm, credit for draught animals and improving extension services to small holder farmers;
I. agroforestry practices;
I. increasing livestock production through training small holder farmers in livestock management and offering them credit to purchase bulls and dairy animals;
I. providing potable water in shallow wells, bore holes, small earth dams/pans, de-silting of earth dams, by rain water harvesting and protecting springs;
VI improving sanitation by constructing pit latrines;
VII community training;
VIII community organization and mobilization;
IX technical assistance; and
X small enterprise promotion by providing credit to the poor

1.3 Purpose and Scope of IEE

This IEE is for the approved DAP for 1997-2000. It is presented with the PAA for FY 1999 due to the recent focus on the necessity of environmental review for Title II activities within USAID. This IEE covers

activities for monetization and activities supported by such funds, namely Food Assisted Child Survival (FACS) and complementary activities for the period FY 1999 - 2000.

2.0 COUNTRY AND ENVIRONMENTAL INFORMATION

2.1 Locations affected

The locations affected are only briefly described, because for any complementary activity they will be described specifically and in more details in the Environmental Review following the procedure for environmental screening and review under umbrella procedures.
The four major areas in which the above mentioned activities will be implemented are

South Nyanza (Homa Bay and Suba Districts),
North Eastern (Tana and Lamu Districts), and
the semi-arid communities of Laikipia/ Nyandarua/ Nyeri Districts.

All the areas affected are in the arid and semi-arid lands (ASAL) of Kenya. The description of the physical environment of the ASAL herein is per GoK (1992) policy document titled ?Development Policy for the Arid and Semi-Arid?.

Climate and Rainfall of ASAL

Evapotranspiration rate is twice the annual rainfall. Rainfall is low and highly variable. Average annual rainfall (mm) range from 200 - 850 mm. Rains come in two seasons, long and short. ASAL soils are variable, ranging from light to medium texture and are shallow. The soils are subject to compaction and susceptible to erosion. In the very dry areas, soils have problems of salinity and sodicity.

Vegetation of ASAL

The vegetation is a variety of grasslands, bushlands, woodlands and some forest cover. River plains become important grazing fields during dry seasons. Density of tree and bush cover is very low, but evergreen forest occurs along the major rivers and highlands. Degradation of wood resources occurs locally, but elsewhere the fuelwood needs of low population densities are met.

Patterns of land use in the affected locations in ASAL

In Homa Bay, and Suba districts of South Nyanza, the farming system is mixed. The main crops are maize, beans and cotton. Cattle, goats and sheep are of local breeds. Productivity is much related to rainfall amount and pattern. In Tana River and Lamu districts, it is pastoralism and mixed farming.

2.2 Environmental policies and procedures

(a) Government of Kenya Laws, Policies and Procedures

The Government of Kenya addresses issues of the environment through:

Agriculture Act, Chapter 318 Section 48 of the Laws of Kenya on the preservation of the soil and its fertility. Under the law, whenever the Minister for Agriculture considers it necessary or expedient so to do for the purposes of the conservation of the soil of, or the prevention of the adverse effects of soil erosion on, any land, he may, with the concurrence of the Central Agricultural Board make rules that preserve the soil and its fertility. CRS/Kenya undertakes to abide by any rule made by the Minister for Agriculture according to Section 318 Section 48 of the laws of Kenya.

Water Act, Chapter 372 Section 50 and 53 of the Laws of Kenya does not allow the construction of wells within a half a mile from each other. In cases where the wells are within a half a mile from each other, the Water Apportionment Board will specify particular tests to be carried out. Such tests may include rate of pumping and rest levels of water. In case of high pumping rate or low water rest levels, the Board will stop further pumping. Section 68 of the Act deals with the contamination and pollution of ground water. The section also gives measures to be taken to control contamination and pollution of ground water such us effective sealing of the top of wells, disposal of wastewater, dispose of effluent or drainage from any household. For small dams, the guidelines for the design, construction and rehabilitation of small dams and pans in Kenya published in 1992 by the Ministry of Water Development will be used, also the provision of the Water Act Part XI will be followed.

According to the Ministry of Water Resources, Design Manual for Water Supplies in Kenya, gives guidelines on testing bacteriological and chemical quality of potable water. The guidelines are similar to those of World Health Organization (WHO).

Bacteriological and chemical quality of water source should be tested before selecting a water source, and routinely during the operation of a supply. The manual also gives guidelines on sampling and maximum acceptable values. CRS/Kenya and its partners will follow the recommendations.

A number of registered water testing laboratories are available in Nairobi. These include the Government of Kenya (GoK) Chemist, the Ministry of Water laboratory, the University of Nairobi in Kenya and several other private laboratories. These registered laboratories will be utilized. The parameters to be tested will include coliform organisms, arsenic, fluoride, nitrate and nitrites and other. All water sources will be tested for both chemical and bacteriological quality before being put to use, according to GoK and USAID guidelines.

i. Environment Action Plan (NEAP) of Kenya of the Ministry of Environment and Natural Resources. The NEAP report addresses environmental issues in a cross- sectoral and in an integrated fashion.

(b) Catholic Relief Services standards for community health, poverty lending, gender responsive programming, capacity building.

(c) Catholic Relief Services complies with USAID environmental compliance procedures.

3.0 EVALUATION OF ACTIVITIES/PROGRAM ISSUES WITH RESPECT TO ENVIRONMENTAL IMPACT POTENTIAL

3.1 Activities associated with the Food Assisted Child Survival (FACS)

Activities under FACS are not expected to have potential significant (deleterious) effects on the environment, and fall into Categorical Exclusions (CE) as per section 2(c) of 22 CFR 216. Please refer to Appendix I for the specific citations of Regulation 216 for each activity of FACS.

3.2 Complementary Activities

In addition to FACS, CRS will address food security through complementary activities. These complementary activities were listed in section 1.2 number 2 herein.

All complementary activities are small-scale and are not expected to have significant adverse environmental impacts. They are recommended for a **Negative Determination** with conditions for use of the Screening Form and preparation of an Environmental Review when the application of the Screening Form so requires. Items 7, 8, 9, and 10 have no direct impacts on the environment, and will qualify as Category I under the screening form, which will be used to verify that there are no environmental impacts.

The potential environmental impacts of some of complementary activities may be:

- *Under Sustainable Agriculture*
  - insignificant depletion of vegetation
  - soil loss and erosion

- *Under provision of potable*
  - deplete/lower ground water table causing damage to agricultural crops or natural vegetation
  - lowering the ground water head/level may affect the yield of other wells e.g. shallow wells
  - increase incidence of diseases (i.e., for dams)

- *Under latrine construction*
  - groundwater contamination

- *Under small enterprise promotion by providing credit to the poor*
  - no foreseeable affects (note that activities to be promoted by credit will be determined by borrowers)

The physical and topographic conditions, climate, soils, and ecosystems as well as social and economic characteristic that could be encountered are quite variable. Because the specific characteristics and locations of these activities are not definitive, the potential for adverse environmental impacts cannot be excluded until additional information about design and location becomes available. Each therefore, require environmentally sound design and review to determine the specific nature and magnitude of potential impacts. Activities do share the common characteristic of being small in scale. The complementary activities are small. The funds are limited to $200,000 for all the complementary activities. Also, the implementing

partners prefer small-scale initiatives that reach between 50 ? 300 families.

4.0 RECOMMENDED MITIGATION ACTIONS (INCLUDING MONITORING AND EVALUATION)

This IEE evaluates each of the main FACS and complementary activities.

a) For Activities associated with the Food Assisted Child Survival (FACS)

The activities under FACS fall into Categorical Exclusions (CE) as per section 2(c) of 22 CFR 216 hence require no further mitigation.

b) For Complementary Activities

Complementary activities are expected to have no significant adverse impact on the environment, and, therefore, a Negative Determination (ND) with conditions is preferred. Due to the factors outlined above, CRS/Kenya proposes to prepare and submit this screening forms and environmental reviews under umbrella IEE.

4.1 Recommended planning approach

Complementary Activities

The complementary activities will be in the field of Sustainable Agriculture, Small Enterprise Development, Water and Sanitation, rural credit and, training/capacity building. The complementary activities will be integrated with FACS activities to maximize participant?s benefits. Through this integrated approach, CRS will address, in the most cost effective way, problem of food insecurity in the target communities. For maximum efficiency and effectiveness, these review procedures are to be applied within the context of development plans, natural resource management plans, or land use plans developed for the areas in which the activities will take place.

4.2 Environmental Screening and Review Process for Complementary Activities

These environmental screening and review procedures specify how the complementary activities to be undertaken by CRS/Kenya, will be examined on an individual basis in order to comply with the determinations of this IEE in accordance with Reg. 216, Section 216.3. These procedures are intended to result in environmental accountability and soundness, by requiring that USAID/Kenya put in place specific mechanisms to promote environmental review capacity and other environmental capacity for the implementing partners. To ensure that the interventions are designed in a sound and sustainable manner, the Mission Environmental Officer (MEO) and/or USAID Project Manager will work with CRS/Kenya and the local implementing partners to achieve compliance with these procedures.

CRS/Kenya is the primary co-operating sponsor of the complementary activities. The Catholic Dioceses of Kenya are by large, the local implementing partners (sub-grantees) for the complementary activities.

These procedures are based upon utilization of a Screening Form. This form is consistent with the "Environmental Screening Form for NGO/PVO Activities and Grant Proposals" contained in the African

Bureau *Environmental Guidelines for Small-Scale Activities in Africa.* USAID/Kenya will facilitate the refinement of this form with CRS/Kenya and the REO/MEO to meet project needs and to incorporate, where appropriate, information that will serve to identify any need for environmental assessment in accordance with Kenyan's environmental assessment policy and future legislation.

If it becomes necessary to construct small dams/pans, the Ministry of Water Development guidelines in the design, construction and rehabilitation of small dams in Kenya will be used. The guidelines have a section on environmental considerations.

Adherence to the procedures in this IEE, it must be emphasized, can not be considered in lieu of Kenyan requirements or vice versa. Efforts will be made, however, in the refinement of the Screening Form to dovetail respective assessment information requirements to the maximum extent allowable.

This IEE does not cover pesticides or other activities involving procurement, use, transport, storage or disposal of toxic materials, and any situation dealing with such will require an amended IEE, except to the extent covered in Category 2 of the Screening Form that will be attached.

The complementary activities, including grants and sub grants will be individually screened using the Screening Form (to be prepared and sent to USAID/Kenya), which utilizes a four-tier categorization process consistent with Africa Bureau's *Environmental Guidelines.* The complementary activities are categorized as below.

Category 1*: Activities that do not require environmental review under the Environmental Screening Form.*

- community training
- community organization and mobilization
- technical assistance
- small enterprise promotion by providing credit to the poor

Category 2: *Activities that would normally qualify for a negative determination under Reg. 216, based on an environmentally-sound approach to the activity design and incorporation of appropriate mitigation and monitoring procedures.*

- sustainable agriculture with emphasis on soil fertility improvement by using farm yard manure and/or compost, practicing organic farming, crop rotation, mixed farming and minimizing land degradation
- improving agricultural production by facilitating access to high quality germplasm, credit for draught animals and improving extension services to small holder farmers
- agroforestry practices
- increasing livestock production through training small holder farmers in livestock management and offering them credit to purchase bulls and dairy animals
- providing potable water using shallow wells, bore holes, small earth dams/pans and protecting springs
- improving sanitation by constructing pit latrines

CRS/Kenya will employ the Screening Form (to be refined as needed with consultation with the REDSO/REO or REA) and the Environmental Review Reports prepared as a result of the categorization process to evaluate activities/or proposals. CRS/Kenya will ensure that all proposals from the local implementing partners (sub-grantees), seeking to implement any of the above referenced complementary

activities, must comply with Advisory Committee approval criteria and review procedures, which will also include this requirement for environmental screening and review, as well as any other CRS/Kenya or USAID/Kenya requirements designed to ensure developmentally sound and sustainable activities.

An Environmental Review Report shall be prepared for all Category 2 activities. The MEO or Mission Director, or Acting Director, on behalf of USAID/Kenya, shall be responsible for clearances on category determination and Environmental Review Reports. Since majorities of complementary activities fall within Categories 1 and 2, they can be approved locally by USAID/Kenya without further external review.

Each activity will be proposed based on need arising from communities following mobilization and training by FACS program. In planning and design of these activities, approved procedures and standards will be used to reduce adverse environmental effect.

A project proposal will be prepared for each specific intervention and location. The proposal format is being revised to include environmental issues, and a strong monitoring and evaluation component. Each project proposal is vigorously reviewed at several different levels, starting internally within CRS Kenya by competent staff members. Only project proposals which meet the review criteria are submitted to the Regional Technical Commission (RTC). The RTC members are appropriate CRS regional technical staff. Key staff members from the region, who are members of the RTC, have received training on USAID Environmental Compliance Procedures. The CRS Regional Office oversees the review process and maintains a high standard of project conceptualization before approval/funding is authorized.

Catholic Relief Services commit to USAID/Kenya approval of environmental reviews for the complementary activities under Category 2 for the whole period. CRS/Kenya shall fully co-operate with USAID Mission Environmental Officer (MEO), Regional Environmental Officer (REO) and Bureau Environmental Officer (BEO). CRS/Kenya shall give to USAID/Kenya, an annual report on the status of environmental compliance with regard to complementary activities. The reporting format shall be based on, but not limited to, section 4.0 - 4.5 of Annex F in the Environmental Documentation Manual of 1998.

4.3 Promotion of Environmental Review and Capacity Building Procedures

The partner organizations will be involved in all stages of project development and this will form part of capacity building. Awareness on the importance of environmental protection already exists among CRS/Kenya partners. In essence, implementation of the complementary activities, for example, agroforestry and sustainable agriculture, will augment sustainable use of the environment.

CRS/Kenya project officers have attended a training workshop on USAID Environmental Compliance Procedures, therefore they will in turn, up grade the capacity of CRS/Kenya local implementing partners through training, monitoring and project development. CRS/Kenya project staff, together with partners, will include environmental indicator in project monitoring and evaluation systems. Environmental monitoring and evaluation process will be put in place and used by CRS/Kenya, its partners, in collaboration with USAID/Kenya and the following Kenyan Government agencies:

a) Ministry of Environment and Natural Resources specifically, the Kenya National Environment Secretariat
b) Ministry of Agriculture
c) Ministry of Water Resources

CRS/Kenya and its partners will continue applying appropriate Kenyan Environmental assessment policies and procedures.

4.4 Environmental Responsibilities

1. USAID/Kenya will be responsible for environmental review and decision making for all USAID assisted CRS/Kenya complementary activities.

2. CRS/Kenya undertakes to work with the local implementing partners to ensure that proposals for the complementary activities take into consideration potential environmental impacts and their mitigation, including avoidance, and will design the complementary activities with an environmental monitoring system in place.

3. The local implementing partners (sub grantees) and CRS/Kenya will use the Screening Form to categorize proposals, and the MEO will review and pass on to the REO and BEO any category 3 or 4 and, as he/she determines, some Category 2 activities.

4. The local implementing partners for the complementary activities, with assistance of CRS/Kenya, will ensure implementation of agreed upon mitigation measures and environmental impact monitoring.

5. USAID/Kenya's Food for Peace Officer will be ultimately responsible for monitoring environmental impacts of all project-financed activities, as further specified below (Section 4.5).
6. Periodic visits of the REO or REA will also be requested for advice, refresher training and validation that environmental processes are in place.

4.5 Mitigation, Monitoring, and Evaluation

CRS together with implementing partners will incorporate appropriate mitigation and monitoring procedures as follows:

By utilizing the Environmental Guidelines for Small-Scale activities in Africa to assist them in determining what potential impacts should be of concern for different complementary activities in various settings. Thereafter, CRS/Kenya will determine which impacts to mitigate and monitor for each complementary activity.

- by abiding by appropriate policies, procedures and regulations contained in the National Environment Action Plan (NEAP) of Kenya, Agricultural Act and Water Act of Kenya and other environmental enforcing agencies

- by including environmental issues as a part of the project planning process

- by including environment indicators, and monitoring effects as a part of the overall Monitoring and Evaluation System.

CRS/Kenya and the local implementing partners commit to identify in each proposal each proposal for

funding of complementary activities, and in the accompanying environmental review reports all proposed environmental mitigation and monitoring requirements.

The generic monitoring and mitigation measures CRS/Kenya will put in place for some of the complementary activities falling in Category 2 are summarized in the Table 1 below. The mitigation and monitoring activities, specifically defined, will be incorporated within the specific Environmental Review report for each activity or groupings thereof.

An Illustrative Table 1:
Monitoring and Mitigation Procedures for Complementary Activities

Activity	Sub Activity	Monitoring	Mitigation measures
Improving Agricultural Production	land tillage	soil erosion depletion of vegetation	- contour farming - terracing - planting trees (agroforestry)
Providing potable water	constructing shallow wells, bore holes, small earth dams/pans	deplete/lower ground water table incidence of diseases (i.e., for dams)	- avoid wells being close by. - regular monitoring of water levels - water quality testing will be carried out for arsenic, coliform, nitrates and nitrates in accordance with USAID and GoK guidelines. - proper sealing of wells top - proper drainage around wells -introducing fish in the dams - fencing around the dams - provide livestock drinking troughs
Improving sanitation	constructing pit latrines	ground water contamination	- proper siting of latrines -latrines to be at least 30 m from wells - proper drainage around the latrines

Since the complementary activities are not yet fully defined, the specific monitoring and mitigation procedures might vary at time of implementation.

Once the environmental review reports are approved, the mitigative measures and monitoring procedures stated in the environmental report shall be considered a requirement.

The local implementing partners, with the assistance of CRS/Kenya and other appropriate partners will be responsible for the implementation of the agreed-upon measure and monitoring of impacts. All periodic

reports of CRS/Kenya and its local implementing partners, under these procedures to CRS/Kenya, and of CRS/Kenya to USAID/Kenya shall contain a section on environmental impacts, success or failure of mitigative measures being implemented, results of environmental monitoring, and any major modifications/revisions to the complementary activities, mitigative measures or procedures.

USAID/Kenya ultimately is responsible for:

- Monitoring and evaluation of activities after implementation with respect to environmental effects that may need to be mitigated, a process which should be integrated into the Mission's pertinent Performance Monitoring and Evaluation Plan;
- Review of CRS/Kenya reports with respect to results of environmental mitigation and monitoring procedures;

- Incorporating into Mission field visits and consultation with implementing partners periodic examination of the environmental impacts of activities and associated mitigation and monitoring; and

- Reporting on implementation of mitigation and monitoring requirements as part of the summary of activities and their status that is passed to the REO and BEO.

5.0 SUMMARY OF FINDINGS

a) **For activities associated with the Food Assisted Child Survival (FACS)**

The activities under FACS fall into Categorical Exclusion (CE) as per section 2(c) (2) of 22 CFR 216. The specific citations are 216.2(c) (2)(i),216.2(c) (2)(iii), 216.2(c)(2)(viii), and 216.2(c)(2)(xi), hence require no mitigation.

b) **Complementary Activities** ? Negative Determination with conditions (Umbrella IEE)

This Initial Environmental Examination (IEE) satisfies the conditions of the environmental procedures for umbrella activities and delegation of environmental review responsibilities to Missions for PVO/NGO umbrella-type projects (Cable 95 STATE 257896). A screening form and environmental reviews will be prepared.

Environmental Determinations

Negative Determination with Conditions (Umbrella IEE)

Based on environmental review procedures, promotion of environment review capacity building monitoring, evaluation, and mitigation procedures specified in this IEE, to which the Mission commits itself, a **Negative Determination with Conditions (Umbrella IEE)** is recommended for complementary activities of FACS. The complementary activities of FACS for which use of the umbrella IEE process is recommended are:

I. sustainable agriculture with emphasis on soil fertility improvement by using farm yard manure and/or compost, practicing organic farming, crop rotation, mixed farming and minimizing land degradation;
II. improving agricultural production by facilitating access to high quality germplasm, credit for

draught animals and improving extension services to small holder farmers;
III. agroforestry practices;
IV. increasing livestock production through training small holder farmers in livestock management and offering them credit to purchase bulls and dairy animals;
V. providing potable water in shallow wells, bore holes, small earth dams/pans, de-silting of earth dams, by rain water harvesting and protecting springs;
VI. improving sanitation by constructing pit latrines;
VII. community training;
VIII. community organization and mobilization;
IX. technical assistance and
X. small enterprise promotion by providing credit to the poor.

This IEE specifies a set of steps, in accordance with the Africa Bureau's *Environmental Guidelines for Small-Scale Activities in Africa*, to ensure adequate environmental review of USAID supported activities, including capacity building elements. This negative determination is also conditioned on the provision of supplemented project technical assistance and training support to augment existing efforts. These capacities will be developed and implemented in close collaboration with USAID/Kenya and CRS/Kenya local implementing partners.

The screening form will be used to confirm a Categorical Exclusion for these complementary activities: community training, community organization and mobilization, technical assistance, small enterprise promotion by providing credit facilities to the poor. They have no physical intervention and no direct effects on the environment pursuant to 22 CFR 216.2(c)(2)(i). These activities will be grouped under Category 1 in the Screening Form to be prepared.

APPENDIX 1: SUMMARY OF IEE ACTIVITIES AND EXPECTED DETERMINATIONS

GOAL: CONTRIBUTE TO THE REDUCTION IN INFANT AND CHILD MORTALITY AND MOBILITY THROUGH IMPROVED KNOWLEDGE

SUB-GOAL: IMPROVED UTILIZATION OF FOOD BY PREGNANT/LACTATING WOMEN AND CHILDREN UNDER THE AGE OF 24 MONTHS.

SO1: Improved health status of women and children

IR1: Improved infant feeding practices
IR2: Improved nutritional status of children
IR3: Improved maternal and newborn care

SO2: Developed sustainable community structures for the health of women and children

IR1: Transition from center based to community based health care

Types of Activities	**Geographical Location. (provinces)**	**Sites/ Projects (districts)**	**Scale & Quantity**	**Unit**	**% of Title II**	**Expected Determination**
Community training on child survival	-Nyanza -N. Eastern -Semi-arid communities (see districts to the right)	-Homa Bay, Suba - Tana, Lamu - (s-arid) Laikipia, Nyandarua, Nyeri				CE 216.2(c)(2)(i)
Community organization and mobilization	?	?				CE 216.2(c)(2)(i)
Targeted monthly food rations	?	?				CE 216.2(c)(2)(xi)
Community based data collection	?	?				CE 216.2(c)(2)(iii)
Child growth monitoring	?	?				CE 216.2(c)(2)(iii) and 216.2(c)(2)(viii)
Counseling and home visits	?	?				CE 216.2(c)(2)(i) and 216.2(c)(2)(viii)
Provision and distribution of de-worming medicine, iron, folic acid & vitamin supplements	?	?				CE 216.2(c)(2)(viii)
Complementary activities	?	?				216.3(a) (2) (iii) Environmental Guidelines for Small-Scale Activities in Africa.

Annex B.5

ENVIRONMENTAL SCREENING/REPORT FORM
FOR NGO/PVO ACTIVITIES & GRANT PROPOSALS
[See EDM Annex F]

Annex B.6

Preamble for Africare Uganda Food Security Initiative (UFSI): FY 1998 IEE

Here's an IEE that puts roads under an umbrella procedure. The process used was devised collaboratively by the Cooperating Sponsor and the Mission Environmental Officer. This is NOT the only way to handle roads under an umbrella screening and review process. In Mozambique, for example, the CSs are using a screening and review process that entails use of a specific form for roads that was already in use for roads being funded by the Mission itself. USAID/Tanzania has an IEE process for non Title II roads that is a combination of the process in place in Mozambique and Uganda. Thus, sponsors contemplating roads may wish to consult with USAID/Mozambique (or USAID/Madagascar which has a similar process for roads) or look at other variations.

Some CSs will also have community-proposed (demand-driven) activities that are not roads or in which roads are only one possibility among a variety of interventions. Under such circumstances, the more generic environmental screening and review process described in Annex F would be more applicable.

Annex B.6

DRAFT (2 October 1997)

INITIAL ENVIRONMENTAL EXAMINATION
AND REQUEST FOR A CATEGORICAL EXCLUSION

PROGRAM/ACTIVITY DATA:

Title of Activity: Uganda Food Security Initiative (UFSI): FY 1998 IEE
Program/Activity Number: FFP-G-00-97-00040-00
Country/Region: Africare/Uganda
Funding Begin: 1 Oct 97 **Funding End:** 30 Nov 01
Sub-activity Amounts: N/A

Resource Levels: Commodities (dollar equivalent, incl. Monetization): $ 4,665,690
Total metric tonnage request: 16,089 MT
202(e) grant: $ $ 783,978

Statement Prepared By: G. Bellas, Africare Oct 1997 and revised by Karen Menczer, USAID Mission Environmental Officer, May 1998

Environmental Media and/or Human Health Potentially Impacted (Check all that apply):
air X water X land X biodiversity (specify) X (potential deforestation) human health __ other __ none

Environmental Action(s) Recommended (Check all that apply):

X 1. Categorical Exclusion(s)

X 2. Initial Environmental Examination:

X Negative Determination: no significant adverse effects expected regarding the proposed activities, which are well defined over life of DAP/PAA. Prepare IEE-
X without conditions (no special mitigation measures needed; normal good practices and engineering will be used)

X with conditions (special mitigation measures specified to prevent unintended impact)

X Negative Determination: no significant adverse effects expected, but multiple sites and sub-activities are involved which are not yet fully defined or designed

T Umbrella IEE prepared
X condition agreed to regarding an appropriate process of environmental capacity building and screening, mitigation and monitoring.

__ Positive Determination: IEE confirms potential for significant adverse effect of one or more activities. Appropriate environmental review needed/conducted.

__ EA to be/being/has been (circle one) conducted. Note that the activities affected cannot go

forward until the EA is approved.

__ Deferral: one or more elements not yet defined, will not be implemented until amended IEE is approved.

SUMMARY OF FINDINGS:

Based on the environmental review presented in this IEE, the following determinations are made:

1. A **Categorical Exclusion** is recommended for training and technical assistance activities in support of the proposed agricultural production/postharvest handling/nutrition programs pursuant to 22 CFR 216.2(c)(2)(i). These activities will not have adverse effects on the environment.

2. **A Negative Determination** (22 CFR 216.3(a)(2)(iii)) is recommended for physical interventions under the agricultural production/postharvest handling/nutrition programs (i.e., provision of agricultural inputs such as improved seed, and hand tools); and for monetization of commodity imports. These activities will not result in adverse environmental impacts.

3. **A Negative Determination with Conditions** (22 CFR 216.3(a)(2)(iii)) is recommended for proposed soil conservation/soil fertility interventions and rural road improvement. These activities involve physical interventions which could result in environmental impacts. The conditions presented in this IEE are intended to make certain that these activities will be implemented and monitored by Africare, in conjunction with its local partners, in a manner which ensures that they have no significant environmental impacts.

Potential environmental impacts (identified in this IEE) of the planned soil conservation/soil fertility activities shall be mitigated by adopting the measures detailed in Section 4.1 of this IEE.

Community road improvement activities shall be implemented in accordance with environmental criteria adapted for Uganda - specific circumstances from USAID/Mozambique, USAID/Madagascar and USAID/Cambodia approved rural road environmental criteria. Local partners, a District Engineer's representative, and Africare**?**s on-site road engineer will be trained to use the criteria to conduct Environmental Reviews (ER). ERs shall be submitted to Mission Environmental Officer for approval prior to beginning rehabilitation work. Local implementation partners will be made fully aware of, and made responsible for adhering to the environmental mitigation and monitoring requirements presented in this IEE and in follow-on ERs.

Proposed community road improvements do not pass through undegraded forest nor do they pass adjacent to protected areas. Road rehabilitation will not indirectly affect undegraded forest nor protected areas.

New activities introduced into the project which are substantively different from those presented in this IEE will require submission of an amended IEE to USAID/Uganda. No activities will be conducted prior to receiving approval of the amended IEE.

This IEE does not cover activities involving assistance for the use or procurement of pesticides or activities involving procurement, transport, use, storage, or disposal of toxic materials, which will require an amended IEE submitted to USAID/Uganda.

USAID APPROVAL OF ENVIRONMENTAL ACTION(S) RECOMMENDED:

Clearance:
Mission Director: _____ Date:
Donald Clark

Food for Peace Office Director: _____ Date: _____
W. Tom Oliver

Concurrence:
Bureau Environmental Officer: _____ Date:
Paul E. des Rosiers

Approved _____

Disapproved _____

File No:_____ (AID/W)

CLEARANCES:

Mission Project Manager: _____ Date: _____
Greg Farino

Mission Environmental Officer: _____ Date: _____
Karen Menczer

Regional Environmental Advisor: _____ Date: __
Charlotte Bingham

Africa Bureau Environmental Officer: _____ Date: _____
Carl Gallegos

General Counsel: _____ Date: _____

Annex B.6

INITIAL ENVIRONMENTAL EXAMINATION

PROGRAM/PROJECT DATA:
Program Number: FFP-G-00-97-00040-00
Country/Region: Uganda/Africa
Program/Activity Title: Uganda Food Security Initiative (UFSI)

1.0 BACKGROUND AND PROJECT DESCRIPTION

1.1 Background

Africare has recently begun implementation of the Uganda Food Security Initiative (UFSI) in the southwestern district of Kabale in support of the national efforts being made by the Government of Uganda to increase food production. Agriculture has been cited as the "engine of economic growth". The strong correlation between agricultural growth and poverty reduction in Uganda is based on the large number of poor rural farmers who derive their incomes from agriculture.[3] The Government of Uganda has articulated several key means of raising rural incomes. Among these are increased agricultural production; improved trunk, feeder, and community roads; and better dissemination of information on agricultural markets, prices, and technology. In addressing many of these issues the UFSI is at the same time addressing the USAID/Uganda Mission Strategic Objectives (SO1) of helping to increase rural household incomes and the GHAI objective of enhancing food security in the Greater Horn of Africa region.

For decades Kabale District has been a key food producing region of Uganda. However, as a result of high population density and intensive land use, the district is rapidly approaching a soil degradation crisis which, if it continues, will render significant areas of land useless for cultivation. While terracing and other soil conservation measures have long been used in the region, they are increasingly neglected, in part due to the pressure to maximize planted areas. In association with declining agricultural productivity, Kabale District is faced with increasing levels of nutrition deficiencies. According to a 1993 World Bank study, with a rate of 54%, Kabale District has the country?s highest level of stunting of children (lower than normal height-for-age)[4].

Kabale District Agricultural Production Unit ranks production and post harvest interventions as top priorities. The National Agricultural Research Organization of the Ministry of Agriculture (NARO) has developed improved yielding varieties of seed and planting stock suitable to the area for crops such as beans, potato, sorghum and maize. Unfortunately, dissemination of the improved varieties is inadequate. The post harvest handling unit of the Kawanda Agricultural Research Station has researched and identified a variety of post harvest handling and storage interventions that could significantly reduce the loss rate of harvested and stored crops, but these also have not adequately reached Kabale farmers.

The rural road system in Kabale District is inadequate for providing farmers with an efficient means for transporting agricultural products to market and is a constraint on expanded extension efforts. While feeder

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Background to the Budget, 1995-1996: Economic Performance and Medium Term Strategy 1995/96-1997/98", Republic of Uganda, Ministry of Finance and Economic Planning, June 1995.

Uganda: Agriculture - World Bank Country Study; The World Bank, 1993.

road improvements are currently being carried out at the district level by the Ministry of Local Government, improvements to the network of smaller ?community roads?, which connect villages and farms to the feeder roads, are the responsibility of the Local Councils. Often steep terrain or stream crossings present challenges which the rural population does not have the technical or financial resources to overcome. Improvements to these farm-to-market access routes will have a direct impact on lowering production and transportation costs, thus raising income among the rural farming families of the district.

1.2 Project Description

The Uganda Food Security Initiative is a multi-year integrated rural development project which will operate in three counties in Kabale District. The overall goal of the project is to improve food security in Uganda thus strengthening the country?s role in enhancing food security for the Greater Horn of Africa. The specific objectives of the UFSI are: to increase the quantity of food available for home consumption and commercial sale in Uganda; improve farm family access to food for home consumption in Kabale District; and enhance household utilization of food in Kabale District. Africare intends to accomplish these goals and objectives through four areas of intervention:

- Monetization of Commodity Imports. Africare proposes to import and monetize, through Agricultural Cooperative Development International (ACDI), up to 16,089 MT of hard winter wheat. This activity will supply a desired high energy commodity to the country, complement locally available soft wheat, encourage the growth of the local flour milling industry, and generate local currency needed to implement UFSI activities.

- Agriculture Production/Postharvest Handling/Nutrition. These interventions will involve providing information and inputs to farmers on improved farm practices such as the use of improved seed varieties and weeding; provide training in organic farming, promoting techniques for decreasing postharvest losses such as appropriate drying and storing methods; and providing education to farm families related to improved dietary and sanitation practices as well as maternal and child nutrition. Twenty-one villages in the sub-counties of Kaharo, Kitumba, and Bubare have been targeted for this assistance.

- Soil Conservation/Soil Fertility. These activities are intended to increase awareness of destructive farming practices and promote terrace construction/maintenance, agroforestry interventions, crop rotation, and zero grazing practices. These activities will be implemented in the 21 targeted villages.

- Community Road Improvements. This intervention will involve providing technical and financial assistance to Local Councils, typically at the parish level (LC3), to improve existing village level farm-to- market roads. The objective of this intervention is to make sufficient improvements so that these roads can provide year round vehicle access for farmers to efficiently transport agricultural products to market. The types of improvements which will be undertaken are all small-scale and will primarily utilize local materials and village-based manual labor, and available machines, where feasible. Typically the individual community road segments to be improved are under 10 km in length, with a total of 120 km of road scheduled for improvement during the five-year implementation period of the project. The Local Council at the district level (LC5) is committed to maintaining the roads once they have been improved.

UFSI staff will take an interdisciplinary, participatory rural appraisal (PRA) approach in working with district and community level organizations to establish long-term, sustainable solutions to the identified household food security problems. For the village based-components of the project, the UFSI will focus on simple small-scale interventions that can be easily organized, carried out, sustained, and replicated. USFI will make full use of local agencies as implementing partners.

1.3 Purpose and Scope of IEE

This IEE, to be included in the 1999 PAA, presents a review of the reasonably foreseeable effects on the environment of the actions proposed under the UFSI. The IEE provides the basis for a threshold decision as to whether an Environmental Assessment or an Environmental Impact Statement will be required.

Adherence to the procedures in this IEE is not in lieu of any environmental assessment procedures required under Ugandan law, nor can adherence to Uganda's environmental procedures be substituted for compliance with the procedures in this IEE. However, efforts will be made to ensure a maximum degree of compatibility of the two respective assessment information requirements.

2.0 COUNTRY AND ENVIRONMENTAL INFORMATION (BASELINE INFORMATION)

2.1 Country Overview

Despite impressive economic recovery from the disastrous mismanagement during the period 1971-86, Uganda?s per capita income level of $225 USD (an increase from $170 in 1990) places it in the ranks of the world?s poorest countries. Nearly 90% of the population are rural dwellers, making their living from increasingly fragmented smallholder agriculture. Approximately 85% of rural households have an average of two hectares or less for all food, cash-crop, and livestock needs; in many cases this total is split between a number of non-contiguous plots.

In 1995 the total population of Uganda was estimated at 18.4 million, with an annual growth rate of 2.5%. Poverty and population growth represent major sources of pressure on the country?s rich natural resource base.

Although not a large country by African standards (241,000 km^2), Uganda is among the continent?s richest countries with respect to its natural environment. Nearly 20% of the national surface area is covered by bodies of water, most notably Lake Victoria. Seven of Africa?s 18 biogeographic regions (the highest concentration on the continent) and some 90 vegetation communities are represented. Occupying a transition zone between East African savanna systems and the moist tropical forests of the Congo Basin, Uganda?s highly diverse landscape includes rift valleys, highlands and mountain ranges, papyrus swamps, acacia savannas, and an extensive network of interconnected rivers and lakes. Pronounced differences in elevation help define Uganda?s agro-ecological zones: the Albert Nile valley along the northwestern border with Sudan is just 600 m above sea level, while the Rwenzori mountain range, along the western border with the Democratic Republic of Congo, and Mt. Elgon on the southeastern border with Kenya, exceed 5,000 and 4,000 m respectively. Annual rainfall varies from 500 mm in the arid northeast to over 2000 mm in mountainous areas and along the larger lakes.

Forest and woodland cover has declined in modern times, from an estimated 45% of land area in 1890 to around 21% at present. Agricultural conversion has played a major role in this process, although urbanization, infrastructure development, harvesting of wood fuels, and logging are also factors. Population pressure has increased sharply: population density per unit of land is now more than four times higher than in 1950. Cropland increased by 18% between 1980 and 1990.

2.2 Kabale District

Kabale District is located in southwestern Uganda with Ntungamo and Rukungiri Districts to the north, Kisoro District to the west, and the Republic of Rwanda to the south and east. Kabale District covers an area of 1,827 km^2 It is divided into four administrative counties including the Municipality of Kabale and is further divided into 22 sub-counties.

Altitudes in Kabale District range from 1,200 m to over 2,300 m above sea level. The topography is dominated by steep hills with typical slopes of 25% to 35%. Long northwest trending ridges form valleys which are generally 400 m to 500 m lower in elevation. Valley bottoms are typically nearly level swamp lands which, in relatively recent times, have been partially drained and are now used for grazing and crops. Located within Kabale District is Lake Bunyonyi which is approximately 20 km long and from 1 to 2 km wide. It is reported to be the second deepest lake in Africa.

Temperatures in Kabale District range from a mean maximum of 23EC to mean minimum of 10EC. The district receives an average annual rainfall of 1,000 - 1,480 mm and has two rainfall seasons. The two agricultural seasons for short rotation crops are March - May, harvesting in June - August and September - December, harvesting in January - March. The long rotation crops, such as sorghum and sweet potatoes, are grown from September - July, with harvesting in August.

The soils of the district are mainly sandy loam volcanic andosols and nitosols. Although the steep terrain subjects these soils to soil erosion, they are moderately fertile and can support vegetables, legumes, bananas, coffee, and other food crops and livestock. Anti-erosion bunds with natural grass and in a few cases planted elephant grass are common features forming a terrace landscape. Mineral fertilizers are, for the most part, not used and even manuring generally only occurs on fields close to homesteads. The major crops grown in Kabale District are sweet potatoes, sorghum, beans, Irish potatoes, field peas, maize, wheat, and vegetables. Sorghum is the main cash crop. Few families keep cattle, while small stock (goats, sheep, pigs, poultry) are kept by most families. The animals are grazed on marginal hill land, valley bottoms, roadsides, and interseasonal fallows. Trees are found around homesteads and in small woodlots. They are mainly eucalyptus and black wattle.

Kabale District is one of the most densely populated districts in Uganda with a total population of 483,846 (projected from 1991 census) and a population density of about 265 persons per sq km . Of the total population, 111,285 are women between the ages of 15 - 49. The people are Bakiga, a Bantu speaking ethnic group. Their major occupation is subsistence farming. The land tenure system is customarily private land ownership. Over 95% of the population in Kabale District is rural and land is scare with most of the farm families owning or controlling less than one hectare. The household size averages between 6 and 10 people. The homesteads are found mainly in the valleys with a few on the slopes. The slopes and ridge tops are otherwise completely cultivated with terraced plots. The family is the main source of labor. Hired labor

is sometimes used where people have small families or are aged and do not have relatives in the area. Labor is also used in exchange for renting land for the season by those who do not have enough land. Women and children are mainly responsible for farming and taking care of the home. The men are engaged in off-farm activities such as building and maintaining the home, fencing, and employment often outside the district.

2.3 Uganda Environmental Policies and Procedures

The Uganda Environment Statute of 1995 establishes general principles for environmental management in Uganda as well as requirements for environmental planning at both national and local (district) levels; a framework for environmental impact assessment (EIA); requirements for adoption of environmental standards; environmental management measures for sensitive resources; provisions for environmental restoration orders; and other requirements. EIA guidelines and standards have recently been finalized. The development of both the Statute and the implementing regulations for environmental review was influenced considerably by USAID technical assistance. As a result, the regulations and processes in place closely resemble those of the United States.

3.0 EVALUATION OF ENVIRONMENTAL IMPACT POTENTIAL OF PROJECT

3.1 Introduction

Many of the proposed UFSI activities are either training oriented or very small-scale and as such will have little or no direct effect on the environment. There are, however, some aspects of the proposed interventions which, unless carefully implemented and monitored, could potentially result in negative environmental effects.

3.2 Monetization

Monetization of commodity imports, which is the funding mechanism for the UFSI, is being carried out by ACDI. This process of import and sale of wheat at market prices will involve sea and land transportation, storage, and some packaging activities all of which will utilize existing infrastructure. Therefore there is limited present or future impacts to the environment anticipated from this intervention.

3.3 Agricultural Production/Post Harvest Handling/Nutrition

The village-based activities planned under this group of interventions are primarily training oriented but will include the provision of some agricultural inputs such as improved seeds and hand tools. UFSI will not supply or promote the use of agricultural chemicals.

The input of improved seeds is intended to increase farmers' yields. The traditional practice of obtaining seed from the annual harvest has, over time, lead to a degradation of seed quality. UFSI, through a local implementing partner, will assist farmers in obtaining high-quality sanitized seeds to enhance the yields from their farms. The source of these seeds will be institutions such as Kaleyengere and Kawanda Research Stations as well as commercial seed growers sanctioned by the government of Uganda. Given that the provision of this input will be limited to seeds for crops which are currently grown in the District, there is no foreseeable environmental impact as a result of this activity.

UFSI will also assist in the construction of simple home-based food storage systems. While this is a physical activity, because of its scale it is unlikely to have any adverse affect on the environment.

UFSI will not fund activities involving assistance for the use or procurement of pesticides without submitting an amended IEE to USAID/Uganda.

This component will not result in the conversion of natural areas, such as swamp and forest, to agricultural land. Because agricultural productivity will be increased, there will be less need to clear additional land for crops. See Table 1 for a breakdown of potential environmental impacts and mitigation measures.

3.4 Soil Conservation/Soil Fertility

While project interventions related to soil conservation and soil fertility are primarily training activities on the part of the UFSI and local partners, when implemented by the participating farmers they have a potential for environmental impact. UFSI intends these impacts to be positive, and to improve the deteriorating environmental condition in Kabale; and any unintentional or unavoidable adverse effects will be kept to an absolute minimum. The following activities have some potential for affecting the environment:

- Soil conservation and soil fertility enhancement using agroforestry interventions. This activity, to be implemented by a local partner, will be a comprehensive program aimed at promoting the establishment of fodder producing hedgerows, tree crops for fallowing, and wood lots on slopes which are inappropriate for tilling. The highly defined fixed-duration program held in interested participating villages will include formal training, field trips to demonstration plots and successful farm applications, provision of seedlings and tools, work sessions, and follow up visits. There are few adverse environmental impacts, short or long-term, envisioned as an outcome of these activities. The program will, however, involve the propagation of exotic as well as native tree species, and if not well designed or monitored, this could result in uncontrolled spread of a particularly aggressive species or in the introduction of new pests into an area. Mitigation measures are detailed in the next section.

- Soil conservation and soil fertility workshops. These short duration workshops are intended to promote construction and maintenance of terraces and other erosion control techniques such as grass strips, minimal tilling, and zero grazing. Soil fertility enhancement through crop rotation and organic farming techniques will be emphasized. The introduction of chemical fertilizers will not be a UFSI activity. The workshops will primarily be training activities which will likely also include tool distribution. Little negative environmental impact is anticipated as a result of the activities promoted other than the possible adverse health effects of increased handling and concentration of animal waste near homesteads as a result of the promotion of zero grazing. Mitigation measures are detailed in the next section. The retention of natural woody vegetation for wind breaks, erosion control, and boundary markings will help promote forest conservation and decrease the area cleared for agriculture.
  See Table 1 for a breakdown of potential environmental impacts and mitigation measures.

3.5 Community Road Improvements

More than any other component of the USFI, the Community Road Improvement activities will result in direct physical effects on the environment. However, if these roads are properly designed, carefully constructed, and regularly maintained, there is likely to be a net improvement on the present conditions of uncontrolled soil erosion on the typical existing non-engineered, poorly maintained community road. In addition to the needed financial and material inputs, UFSI will provide the Local Councils with technical assistance to evaluate the environmental impacts of the proposed community road activities. Besides direct environmental impacts, road rehabilitation could result in indirect environmental impacts. The environmental criteria/environmental review process detailed in section 4.2 will ensure that direct and indirect environmental impacts are evaluated and that negative environmental effects are minimal.

The road improvement activities are small-scale and will typically be undertaken with manual labor, although mechanical labor (bulldozer, grader, compactor) will be used as necessary and where possible. The construction activities and the potential environmental impacts include:

- Clearing of right of way. Potential environmental impacts include loss of arable land, loss of vegetation, and possible soil erosion during and immediately after construction.

- Limited road widening typically involving cut and fill on hillsides. Potential environmental impacts include increased soil erosion and minor failures of cuts until stabilized with vegetation, and loss of vegetation.

- Drainage improvements such as road side ditches and cross drainage culverts. Potential environmental impacts include concentration of flow causing gully formation and erosion at culvert outfalls.

- Addition of fill to cross valley bottom land. Potential environmental impacts include loss of wetland vegetation and altering of natural water courses.

- Installation of culverts at stream crossings. Potential environmental impacts include constriction of channel flow resulting in upstream flooding.

- Improved road surface material (gravel) and grading in some locations. Potential environmental impacts include water ponding in abandoned borrow pits and creating breeding grounds for mosquitos. In addition, the use of a motor grader will create dust during operation.

After improvements are completed there will be an inevitable increase in traffic on the community roads. This will likely result in an increase in dust, noise, and possibly traffic accidents. In addition, there may be a greater population concentrated along the road.

4.0 RECOMMENDED MITIGATION MEASURES, CRITERIA, MONITORING, AND EVALUATION

4.1 Mitigation Measures for Soil Conservation/Soil Fertility Interventions

- To the extent that exotic tree, shrub, or grass varieties are introduced into the area, UFSI will ensure

  that these are well tested, non-nuisance varieties approved by the Government of Uganda, Ministry of Agriculture.

- Inputs of seedlings to any group or individual will include a variety of plant species.

- If improved seed, treated with material toxic to humans, will be dispensed to farmers, UFSI staff will ensure that warning labels are intact, and that end-user awareness is incorporated into the UFSI extension service. UFSI will provide field workers involved with dispensing seed and monitoring its use, training in safe handling and use of treated seed.

- In conjunction with soil conservation and soil fertility workshops, the concerns and costs of chemical inputs will be emphasized.

- In association with the promotion of zero grazing activities, training will emphasize the need for proper handling of animals and animal waste.

4.2 Environmental Criteria for Community Road Improvements

The full spectrum of environmental impacts of road improvement can only be evaluated and mitigated on a site-specific basis. Most importantly, to assess indirect and cumulative impacts of rural road upgrade, site-specific information is necessary.

Therefore, this IEE sets up an umbrella process of environmental review. Environmental criteria will be developed to guide a reviewer through a site-specific Environmental Review (ER). An ER will be conducted for each segment, and submitted for MEO approval prior to beginning repair activities. The umbrella process will ensure that the BEPs are implemented; and that site-specific analysis is conducted, environmental concerns are assessed, potential impacts mitigated, and indirect and cumulative effects are considered for each segment.

Environmental Criteria for community road improvements will be revised from already approved criteria in use in other USAID missions and they will be submitted to BHR/BEO for project files. The USAID/Uganda MEO will train relevant UFSI partners to use the environmental criteria, and to conduct an ER. Africare will be responsible for submitting ERs for MEO approval prior to beginning repair activities. If, based on the ER, MEO determines that a significant impact could result from rehabilitation activities, UFSI will be notified that work must not begin until an EA is conducted and approved. BEO will be notified in the case of possible significant impacts; otherwise the MEO will approve the ER (with or without conditions), and repair work may begin.

The ER should require approximately one field day/segment (</= 10 km), and the ER will be approximately three pages in length plus maps of the road segment showing baseline data and areas of concern. The ER will consist of a field check of the baseline environment at the site of the road segment; an evaluation of the potential environmental effects of the proposed action; an analysis of the indirect effects, with emphasis on

the potential for increased migration into the area due to road repair (both positive and negative effects) and effects of possible changes in farming strategies (subsistence versus cash crop); and site-specific mitigation measures recommended to minimize environmental impacts, direct (using BEPs established in this IEE and others developed during on-site review) and indirect.

In addition, Section 118 of the Foreign Assistance Act requires that ? the construction, upgrading, or maintenance of roads (including temporary haul roads for logging or other extractive industries) which pass through relatively undegraded forest lands must be conducted in compliance with an Environmental Assessment (EA). The USAID/Uganda MEO has determined, through a field check of the proposed road segments, through maps and interviews, that roads proposed for upgrade pass through land under cultivation, villages, and small tracts of eucalyptus. Proposed road upgrades do not pass through relatively undegraded forest. If during the ER, reviewer finds that a segment passes through relatively undegraded forest, an EA must be conducted prior to beginning repair, and the ER should include notification of this. USAID/Uganda MEO will then notify BHR/BEO.

4.3 Promotion of Environmental Review and Capacity Building

Africare intends to carry out most of the activities of the UFSI through a variety of contract and sub-grant arrangements with local implementing partners. While these local partners will be given comprehensive responsibility for implementation of various project activities, the objective and detailed scope of work for a given activity will be clearly established. Contracts, letters of understanding, and other types of formal agreements will be the norm. Within this framework, relevant environmental mitigation and monitoring measures established in this IEE will be incorporated into the agreements with local partners.

In addition, UFSI staff will strive to sensitize local government agencies and NGOs, which have less formal relationships to the project, to the environmental issues associated with project implementation. All local partners involved with project activities which have a potential for environmental impact will be given a copy of the USAID Africa Bureau Environmental Criteria for Small-scale Activities in Africa (June 1996).

4.4 Monitoring and Evaluation

During the five year UFSI implementation period, Africare is required to monitor and evaluate the project's success against indicator benchmarks. Africare is designing a Monitoring and Evaluation (M and E) Plan which will incorporate the monitoring of environmental indicators into this program. Specifically, UFSI will carry out the following monitoring activities related to the soil conservation/soil fertility and community road improvement interventions.

Soil Conservation/Soil Fertility:

- C UFSI will monitor the type and mix of trees and shrubs which are being supplied to farmers participating in agroforestry programs to ensure that they are well tested, non-nuisance varieties approved by the Government of Uganda, Ministry of Agriculture.

- C Where zero-grazing practices have been promoted, UFSI will monitor the sanitary conditions in and around animal enclosures, and if determined to be necessary, will initiate additional training in the proper handling of the animals and animal waste.

Community Road Improvements:

- During the design, layout, and construction phases of each road improvement project, UFSI will monitor activities to ensure that the recommended mitigation measures are incorporated into the work, and that ERs are carried out as required.

- The integrity of the completed road improvements will be checked after the first heavy rain and at three month intervals for one year. Specific indicators that will be monitored include formation of gullies in roadside ditches, on road surfaces, or on adjacent slopes affected by the work; soil erosion at culvert outfalls; stability of cut and fill slopes; and reestablishment of vegetation along right of way and borrow areas.

- UFSI will take responsibility for coordinating any remedial action which is required within the first year of completion of the road improvements.

- Upon completion of each road improvement project, UFSI will formally notify the Local Council at the district level (LC 5) that it is officially responsible for implementing the road maintenance program according to their agreement. After three months this will be followed up to confirm that appropriate arrangements have been made.

- UFSI will monitor the implementation of any mitigation measures required and/or conduct additional monitoring as required in the site-specific ERs.

USAID/Uganda will:

- Assist in designing rural road environmental criteria and provide training in using the criteria so that on-site UFSI staff can conduct ERs.

- Review and approve ERs for each road repair segment.

- Review UFSI reports on results of environmental mitigation and monitoring activities.

- Incorporate into Mission field visits and consultations with UFSI staff, field examination of the environmental impacts of activities and feedback on mitigation and monitoring.

- Report on implementation of mitigation and monitoring requirements as part of the summary of activities and their status based on monitoring reports submitted by Africare.

- Assist Africare to monitor and evaluate activities after implementation with respect to environmental effects that may need to be mitigated.

5.0 SUMMARY OF FINDINGS:

Based on the environmental review presented in this IEE, the following determinations are made:

1. A **Categorical Exclusion** is recommended for training and technical assistance activities in support of the proposed agricultural production/postharvest handling/nutrition programs pursuant to 22 CFR 216.2(c)(2)(i). These activities will not have adverse effects on the environment.

2. **A Negative Determination** (22 CFR 216.3(a)(2)(iii)) is recommended for physical interventions under the agricultural production/postharvest handling/nutrition programs (i.e., provision of agricultural inputs such as improved seed, and hand tools); and for monetization of commodity imports. These activities will not result in adverse environmental impacts.

3. **A Negative Determination with Conditions** (22 CFR 216.3(a)(2)(iii) is recommended for proposed soil conservation/soil fertility interventions and rural road improvement. These activities involve physical interventions which could result in environmental impacts. The conditions presented in this IEE are intended to make certain that these activities will be implemented and monitored by Africare, in conjunction with its local partners, in a manner which ensures that they have no significant environmental impacts.

Potential environmental impacts (identified in this IEE) of the planned soil conservation/soil fertility activities shall be mitigated by adopting the measures detailed in Section 4.1 of this IEE.

Community road improvement activities shall be implemented in accordance with environmental criteria adapted for Uganda - specific circumstances from USAID/Mozambique, USAID/Madagascar and USAID/Cambodia approved rural road environmental criteria. Local partners, a District Engineer's representative, and Africare**?**s on-site road engineer will be trained to use the criteria to conduct Environmental Reviews (ER). ERs shall be submitted to Mission Environmental Officer for approval prior to beginning rehabilitation work. Local implementation partners will be made fully aware of, and made responsible for adhering to the environmental mitigation and monitoring requirements presented in this IEE and in follow-on ERs.

Proposed community road improvements do not pass through undegraded forest nor do they pass adjacent to protected areas. Road rehabilitation will not indirectly affect undegraded forest nor protected areas.

New activities introduced into the project which are substantively different from those presented in this IEE will require submission of an amended IEE to USAID/Uganda. No activities will be conducted prior to receiving approval of the amended IEE.

This IEE does not cover activities involving the use or procurement of pesticides or activities involving procurement, transport, use, storage, or disposal of toxic materials, which will require an amended IEE submitted to USAID/Uganda.

Annex B.6

ENVIRONMENTAL CRITERIA FOR COMMUNITY ROAD REHABILITATION

BACKGROUND

As required by USAID Environmental Procedures, an Initial Environmental Examination was conducted on the Africare UFSI Title II Program, and a Conditional Negative Determination for community road improvements was issued by the Bureau of Humanitarian Relief (BHR) Bureau Environmental Officer (BEO) in USAID/Washington. This decision means that road improvements are not expected to result in adverse environmental impacts, provided that environmental criteria are followed. This document contains the environmental criteria that must be used to plan, design, implement, and monitor activities to ensure adverse environmental impacts do not occur.

PHILOSOPHY OF ENVIRONMENTAL REVIEW

USAID is required by law to ensure that environmental factors and values are integrated into its decision making process, and to assess the environmental effects of its actions. But not only does USAID view the environmental review process as a legal requirement, it is also one of the best practical methods to incorporate the views of partners/collaborators/beneficiaries, and to guarantee that environmental aspects are considered and integrated into all phases of a project.

Besides specific environmental procedures that USAID must comply with to minimize adverse environmental effects of its actions, USAID must also deny financial assistance for: the construction, upgrading, or maintenance of roads (including temporary haul roads for logging or other extractive industries) which pass through relatively undegraded forest lands unless a formal Environmental Assessment is conducted.

Therefore, these environmental criteria are for use only in cases where there is no undegraded forest. USAID-Africare field checks have confirmed that planned community road improvement activities in Kabale District will not pass through relatively undegraded forest.

ROLES AND RESPONSIBILITIES

Use of these environmental criteria constitutes the "Environmental Review" (ER) of the activity (road rehabilitation/ repair/maintenance). Each road segment will go through an ER. The report to be submitted (by Africare to USAID/Uganda's Mission Environmental Officer - MEO) documenting the process of using these environmental criteria is called the "Environmental Review Document" (ERD). An ERD should be submitted for each road segment (it is up to the Environmental Reviewer to define "segment," however, every stretch of road to be repaired must have an ER completed prior to construction).

Africare has the ultimate responsibility to ensure that ERs are carried out as necessary, and that USAID receives the appropriate ERD. Africare should ensure that all those responsible for, and involved in road rehabilitation and maintenance, including beneficiaries, have the chance to participate in ERs.

The principal person(s) responsible for using the environmental criteria (roles to be assigned by Africare), is speaking for the environment (this includes the human environment, i.e., sociocultural aspects). The ER Specialist must remove her/himself from any other role while conducting the ER. Others involved in planning,

design, implementation, maintenance, and monitoring will be concerned with engineering aspects, funding aspects, employment aspects, etc. But the ER Specialist speaks for the environment.

TIMING AND LEVEL OF EFFORT

These criteria are designed to be used at all stages of the project: planning and design; implementation; maintenance; and monitoring. The ER is a process involving field observation and discussions with local people and experts. The ERDs that Africare will provide to USAID document that process and analyze the results of the process.

The level of effort for an ER should be commensurate with the expected extent of environmental impacts. Mainly, the ER Specialist should use common sense when determining the level of effort necessary for each ER. An estimate, from field checks of the project area, is that an ER for a typical 10 km stretch of repair work will require one to two days of field time, including on-site interviews and fieldwork. The ERD should normally be approximately a three page report (one page-indirect effects; one page-direct effects; one page-best engineering practices/ mitigation, and monitoring) plus maps. However, the report may be adjusted according to information that is elicited from the fieldwork and interviews.

USE OF ENVIRONMENTAL CRITERIA - GENERAL

These environmental criteria do not purport to contain the full range of environmental impacts that may result from road repair; nor do they contain all possible questions regarding road repair activities and their effect on the environment. They are a framework to guide the ER Specialist, and as questions and issues become apparent, they should be included in the ERD. The ER should be viewed as a learning process for all involved, and so that future ERs will have the benefit of experience, any information deemed useful should be appended to these criteria.

These criteria are not meant to be a technical design guide. Technical design aspects are in the road engineer's realm. The ER Specialist will no doubt use the road engineer's expertise to assist in conducting the ER, and may design a mitigation measure that will require the road engineer to modify his design. But it is not part of the ER Specialist's job to design the technical aspects of road rehabilitation.

The ER should be just as concerned with increasing the possible positive benefits as it is with decreasing the negative effects. Therefore, the ER Specialist should document where the road repair activities are having a positive, as well as a negative, effect, and try to build on the positive.

These environmental criteria are to be used specifically for community road improvement activities. They are designed to evaluate environmental impacts from the repair of community roads designated in Figure 1, "Community Roads System Map." Through field checks by USAID/Uganda's MEO and Africare, potential environmental impacts of repair work of those roads designated in Figure 1 are filtered down to:

1. Direct Impacts

Potential environmental impacts that are at the location of the road repair (on-site) and a direct effect of repair activities.

- Erosion/sedimentation increased
- Drainage pattern altered
- Vegetative cover altered
- Dust pollution increased

2. Indirect Impacts

To the extent possible, from field checks and review of documents, these issues have been determined not to be significant. However, typical of indirect impacts, they are difficult to predict, do not necessarily become obvious at the time of project implementation, and are sometimes difficult to link to the project activity - although a link may exist. Therefore, it is critical that the ER Specialist understands all forces acting upon the environment in the project area so that a reasonable prediction of indirect impacts can be made. These criteria will give the ER Specialist tools to help make these predictions.

- Effect on forest cover extent
- Land use changes
- Effect on water availability (quality and quantity)
- Sociocultural changes
- Changes in wildlife populations
- Changes in farming practices

STEPS FOR ENVIRONMENTAL REVIEW

Step 1

Define the Road Segment and Repair Activities

In step 1, the ER Specialist will use a map to define the road segment under consideration (location, length, type of road); and will review the construction/engineering plan to determine the specific actions of concern.

Possible actions of concern:

- bridge or culvert repair/replacement
- movement of roadfill material
- side casting of material (temporary or permanent)
- brush cutting
- constructing passing lanes
- mining of roadfill material from borrow pits
- land-take

Step 2

Assessment of Direct Environmental Impacts

First, the ER Specialist should review the objective of the road repair--to improve access from where to where?; to improve access for whom?; where is the demand and where is the supply? Is the selected segment the most

rational choice to fulfill the purpose or is there another possible choice? If there are other possible routes that will accomplish the same objectives, document them, since later it may become necessary, due to degree of environmental impacts along the chosen route, to search for alternative routes.

To evaluate direct impacts along the chosen segment, the ER Specialist should have a clear picture of the exact actions that will take place: repair directly on the road; repair to culverts/drainage systems beneath the road; construction of passing areas along the road; road widening; mining material from borrow pits; road realignments (if necessary to complete a road segment, however, these criteria assume that realignments will be for very minor stretches of the roadway, only where the original alignment is impossible to repair, or where a realignment will benefit the natural environment).

In addition, the ER Specialist must obtain information on the type of construction--mechanical and/or manual that will be used to undertake repairs. Each type of construction method will have particular concerns that go with it.

The ER Specialist must go to the location (including borrow pits) of each action (see list of possible actions of concern under step 1), and evaluate the effect of the action on the environment. In addition to looking at each discrete action, look at the road segment as a whole, and imagine the construction process along the entire road segment.

We know from preliminary field checks by USAID-Africare that potential impacts have been filtered down to:

- Erosion/sedimentation increased
- Drainage pattern altered
- Vegetative cover altered
- Dust pollution increased

Increases, decreases, or other types of changes in the above could affect natural resources of concern. Will the action affect:

- waterways parallel to and/or perpendicular to the road segment or in the vicinity of the road repair.
- drinking water sources (natural waterways or wells).
- wetlands (depressions that contain water or waterlogged soils - of course this depends on the season during which the field check is conducted - however, regardless of the season, there will be evidence in the soil, vegetation, or microgeography of the area to determine if there is a wetland present, i.e, (a swamp).
- other natural vegetation adjacent to the road (shrubby vegetation, forested areas, live fences).
- prime agricultural land.

Step 2B

Rating the importance of the natural resource:

The ER Specialist may wish to talk to local people to determine the importance of the natural resource, rather than solely relying on the field check. Some questions to ask to determine the importance of the natural resource are:

Waterway/Wetland:

Is this a source of drinking water or does it flow into a drinking water source?

Are people fishing along the waterway?

Is the water flowing or is it still? (if water is flowing, there may be a fishery resource, and could indicate wildlife habitat; if the water is still, it may be a wetland of value, where aquatic species lay eggs, where wildlife may feed).
Natural Vegetation:

Does the vegetation support important wildlife populations/species? (forest, shrubby areas, woodlands may be prime wildlife habitat)

Is the shoulder of the road sloping, and the vegetation serving to hold soil in place?

Are live fences mitigating dust pollution?

Are live fences providing wildlife habitat?

If the answer is yes to any of the above, the natural resource is important. The "possible actions of concern" could affect these natural resources, and best engineering practices (BEPs) should be implemented (see annex 2). Implementation of BEPS is probably sufficient to ensure impacts will be minimal. Although BEPs are standard practices, the ER Specialist needs to document the areas of concern, and the BEPs that should be implemented to ensure these areas will not be adversely affected.

If the answer is no to all the above questions, the resource may not be important, and BEPs may not be warranted. The ER Specialist is the judge, and must determine how important the resource is, and if it requires protection against possible impacts. All decisions must be documented in the ERD.

Remember, the environmental review process is not only for decreasing the negative effects, it is for increasing the positive effects. Therefore, if a degraded natural resource (an unimportant resource) could benefit by implementing BEPs, the ER Specialist must determine if this is a worthwhile effort, and document the necessary BEPs.

There may be potential impacts that cannot be mitigated using the BEPs in Annex 2. In this case, the ER Specialist may design other BEPs/mitigation measures. Or if the ER Specialist determines that a natural resource is important, but is unable to design any BEP/mitigation measures to protect it, the ER Specialist will need to bring this to the attention of Africare, Kampala Office. The particular action affecting the resource of importance may need to be deleted from the design plans; or an alternative route which will accomplish the same objectives may need to be chosen, and an ER conducted on it.

The result of this assessment of direct effects should be documentation - a map and narrative - of the specific areas of concern, the specific repair activities of concern, and the BEPs chosen to mitigate impacts.

Step 3

Assessment of Indirect Environmental Impacts

The ER Specialist must next evaluate the potential for indirect impacts. This will involve discussions with local people, review of landuse maps, if available, and prediction.

This is where the ER Specialist will need to be especially thoughtful and creative because there are no standard procedures for predicting indirect effects nor standard practices for minimizing them.

To assess indirect impacts, the ER Specialist should have a clear picture of the region: Who will benefit as a result of road repair? What areas will the road make accessible that were previously inaccessible? Now that these areas have become accessible, what can be expected to occur (i.e., increased trade in timber products, increased trade in wildlife products, increased migration to the area, increased provision of health services, increased availability of economic opportunities to local people etc.).

Some of these potential long range outcomes my be positive for the environment, some may be negative. If negative outcomes are predicted, are there any actions that can be taken to offset the negative effects? (see mitigation measures in Annex 3).

Included in this evaluation should be a consideration of what would happen if the road was not repaired (No Action).

This step will result in a short narrative discussion of findings from interviews with local people and with environment/ development NGOs working in the area, and results of the map review.

The narrative should answer the questions:

- How will the road affect extent of forest cover?
- How will the road affect land use?
- How will the road affect the quality and quantity of water availability?
- What sociocultural changes are expected as an outcome of the road repair?
- How will wildlife populations be affected?
- How will the road work affect farming practices (i.e., growing high value crops instead of subsistence?)

In summary, what changes will the road repair bring over a five year period? How will the affected area look in five years?

Step 4

Final Confirmation of Absence of Relatively Undergraded Forest; Absence of Threatened/Endangered Species; and Effect of Activity on Protected Areas

This portion of the ERD should be conducted in close coordination with the District Environmental Officer.

The absence of relatively undergraded forest (as defined in Annex 1) along the road segment was confirmed by Africare-USAID field check, as discussed above. The ER Specialist should confirm this finding in the ERD.

If the ER Specialist determines that relatively undegraded forest my be present along the road, the Africare Project Manager must be notified, and he must alert the USAID/Uganda MEO. Further ecological studies may be needed to make the final confirmation; an Environmental Assessment may be needed to prior to construction; or that road segment may need to be deleted from repair plans.

USAID-Africare field and map checks confirmed the absence of legally protected areas in the vicinity of road improvement activities. The ER Specialist should confirm through field check, and state in the ERD whether legally protected areas may be affected by the proposed activity. If the ER Specialist finds that repair work may

affect protected areas, the notification process described above should be implemented.

The ER Specialist must confirm the absence of threatened or endangered species (TES) by coordinating with the District Environmental Officer and by reviewing available documentation such as District Environmental Plans, State of the Environment Reports, etc. The ER Specialist may find the most effective means of confirming the presence and effect on TES is to coordinate with a local environmental NGO and share the design plans with them. Again, if activities may affect TES, follow notification procedures outlined above.

Step 5

Develop Environmental Monitoring Plan

At this point: The ER Specialist has identified natural resources of importance; identified possible actions that could affect those resources; identified BEPs that will protect them; devised a possible long-range scenario for the region; and developed mitigation measures to ensure the long-range scenario will be positive for the environment.

To ensure that the BEPs/mitigation measures are implemented, and
that no unforeseen impacts have occurred, one or more compliance checks will be necessary.

Rather than adding additional reporting requirements, compliance checks can be incorporated into Africare's Monitoring and Evaluation Plan, and reported on to USAID accordingly. If BEPs/mitigation measures required in the ERD have not been implemented, Africare, Kampala must be notified immediately, and remedial action must be taken.

Step 6

Presentation to, and Discussion with Team

Prior to finalizing the ERD, the ER Specialist should present the findings to the UFSI Team, and as necessary, to the affected communities. Be prepared to discuss any BEPs or mitigation measures recommended. Make sure the people responsible for final design and repair understand what is required regarding BEPs/mitigation measures. Incorporate relevant comments from the Africare Team into the ERD. Determine who will be responsible for conducting compliance checks and documenting the results in Reports to USAID.

THE ERD PACKAGE

The ERD must be submitted through Africare to USAID/Uganda's MEO for approval prior to construction. Allow sufficient time between submitting the ERD and construction for Africare, Kampala and the MEO to review and approve the ERD.

The ERD should be a narrative, as discussed above. It should also include maps showing the location of the road segment under consideration and areas/actions of concern. Copies of any other maps that were used to make determinations/assumptions should also be included. The following ERD format should be followed:

- Location maps (Big picture)
- Sketch route with actions and natural resources of concern (step 1 of criteria)

- Narrative with reference to sketch map

< Direct environmental impacts (step 2)
< Indirect environmental impacts (step 3)
< Confirmations (step 4)

- BEP and mitigation measures (narrative and sketch map)

< For direct impacts
< For indirect impacts

- Monitoring and evaluation (step 5)
- Document presentation to team and community (step 6)

Annex 1

RELATIVELY UNDEGRADED FOREST DEFINITION

Definition:

Terrestrial broadleaf forest formations not classified as "mosaic" or "secondary."

Relatively undegraded forest "along" or "adjacent to" the road segment is determined to mean relatively undegraded forest within two kilometers on either side of the road segment. This determination of "impact zone" is made based on the topography of the area: steep slopes and hilly; movement is constrained due to few connecting roads or paths. There is little commercial activity and no industrial activity in the vicinity of the road repair activities. Transport is mainly by bicycle or foot. Trade and other commercial activities are mostly limited to adjacent communities.

Annex 2

BEST ENGINEERING PRACTICES

BEPs to decrease erosion/sedimentation:

- Compact road materials timely and properly
- Provide minimal slope on roadside
- Minimize vegetation removal on roadside
- Revegetate slopes where vegetation was removed or destroyed during construction
- Use erosion control barriers (concrete, filter fabric, whatever is available)
- Do not stockpile construction material adjacent to waterways/woodlands or on slopes
- Cover stockpiled material with fabric or other material, as available

BEPS to avoid obstructing waterflow/to enhance drainage pattern:

- Provide adequate culvert size and type
- Do not stockpile construction material in waterway or woodland
- Confine construction activities to original road footprint
- Provide bridge or culverts to ensure adequate water and fish passage
- Conduct construction activities in the dry season
- Provide for drainage in low-lying areas to ensure wetlands on both sides of the roadway will receive water flow
- Return areas to original or improved (to enhance drainage/improve wetland condition) contours following construction
- In roadside ditches on steep grades, install masonry check structures and drop inlets to control gully formation
- Provide liberal use of cross drainage culverts and offshoots (discharge points)
- Install rock energy dissipaters at culvert outfalls as necessary to prevent erosion

BEPs to minimize alteration of vegetative cover:

- Minimize brush cutting along the roadside--retain or replant live fences
- Do not stockpile material on vegetated areas
- Confine construction activities to original footprint, except where it is necessary to reduce an unacceptable grade or minimize cut and fill
- Keep road width to a minimum
- Revegetate areas where vegetation was removed or destroyed during construction
- Retain tree(s) along the roadside
- Construct passing lanes in areas with natural resources of low importance
- Use manual labor rather than mechanized where protection of natural resources is important

BEPS To Minimize Dust Pollution:

- Use low dust, standard road surface materials
- Cover stockpiled material with fabric

- Retain live fences
- Compact road materials timely and properly
- Do not leave soil surface exposed; revegetate immediately
- Plant tree and hedge buffers between road and homes

BEPS To Minimize Land-Take Issues:

- Involve communities at all steps in the road rehabilitation process including designing road width, right of way, and alignments; timing of construction activities; and planning for future maintenance.

BEPS TO Minimize Impacts from Borrow Pit Excavation:

- Limit borrow excavation to banks rather than pits and use a number of smaller sources
- Revegetate after use.

Annex 3

ENVIRONMENTAL MITIGATION: INDIRECT EFFECTS

Broad categories of possible mitigation measures to ensure forest cover, land use, water availability, wildlife, and sociocultural aspects, including small farming practices, will be affected positively by road repair activities could include:

- Environmental Education
- Agroforestry
- Water provision/sanitation activities
- Community Development Plans

The ER Specialist should use these categories as guidance in developing enforceable mitigation measures. Coordinate with the District Environmental Officer and Education Officer to elaborate on possible mitigation measures. Also, coordinate with interested local environmental NGOs.

This list should be expanded and details added as more is learned from the ER process. The ER Specialist should also use this opportunity to involve other donors, and to provide recommendations to USAID and other donors on possible future initiatives.

Annex B.6

Africare/Uganda
Uganda Food Security Initiative

Activity/ Environmental Impact Summary
24 September 1997 - DRAFT

PROJECT ACTIVITIES	POTENTIAL ENVIRONMENTAL IMPACTS	RECOMMENDED MITIGATION ACTION	DEGRE (As
1. MONETIZATION			
A. Sale of Wheat at Market Rates	no negative impacts anticipated		
2. AGRICULTURAL PRODUCTION / POST HARVEST HANDLING / NUTRITION			
A. Improved Seeds, Tools & Training (no introduction of commercial fertilizers or pesticides)	no negative impacts anticipated		
B. Organic Farming Workshops (promote increase in organic material, weeding, ...)	no negative impacts anticipated		
C. Post Harvest Handling Workshops (improved drying and storage methods...)	no negative impacts anticipated		
D. Nutrition Workshops (improved dietary and sanitary practices, maternal and child nutrition)	no negative impacts anticipated		
3. SOIL CONSERVATION / SOIL FERTILITY			
A. Agroforestry Interventions (promote hedgerows to stabilize terraces and retain soil, tree crops for fallowing, tree planting on slopes inappropriate for tilling)	problems with uncontrolled spread of exotic species pest problems with mono-cropping	uncontrolled spread not a problem in area because of intense demand for land and fuel, introduce only well tested, non-nuisance varieties approved by GOU introduce a variety of species	
B. Soil Conservation Workshops (promote terrace construction and	no negative impacts anticipated		

Annex B.6

Africare/Uganda
Uganda Food Security Initiative

Activity/ Environmental Impact Summary
24 September 1997 - DRAFT

PROJECT ACTIVITIES	POTENTIAL ENVIRONMENTAL IMPACTS	RECOMMENDED MITIGATION ACTION	DEGRE (As
maintenance...)			
C. Soil Fertility Workshops (promote crop rotation., organic farming techniques, and provide training in hazards and costs of commercial fertilizer use...)	no negative impacts anticipated		
D. Zero Grazing Workshops (promote manual harvest of fodder.....)	concentration of animal waste near homes	in conjunction with soil fertility interventions, promote safe collection and use of waste as organic fertilizer	
4. COMMUNITY ROAD IMPROVEMENTS			
A. Planning & Design			
staking	minor loss of vegetation	limit clearing to only that required	minimal
B. Construction			
clearing of right of way	loss of vegetation, increased soil erosion	keep design width to min req?d to achieve objective of all-weather vehicle access, re-vegetation	moderate minimal t
cut & fill on hillsides (primarily by manual labor - to widen roads or minor realignment where required to reduce grade or minimize cuts)	increased soil erosion, minor failures of cuts	heavy reliance on manual labor vs earth moving equipment, keep design width to min req?d to achieve objective of all-weather vehicle access, extensive tree & bush planting along cut & fill slopes	moderate minimal l improved
drainage improvements (roadside ditches and cross drainage culverts)	concentration of flow causing gully formation, erosion at culvert outlets	drop structures or checks in roadside ditches on steep grades, drop inlets at cross drainage culverts,	anticipate compared condition

Annex B.6

Africare/Uganda
Uganda Food Security Initiative

Activity/ Environmental Impact Summary
24 September 1997 - DRAFT

PROJECT ACTIVITIES	POTENTIAL ENVIRONMENTAL IMPACTS	RECOMMENDED MITIGATION ACTION	DEGRE (As
culverts)		liberal use of cross drainage culverts and outboard offshoots (discharge points), promote vegetation in roadside ditches, rock energy dissipaters at culvert outlets	on poorly tracks wi
culvert placement at stream crossings	constriction of channel flow,	install sufficient number and size of culverts to minimize upstream ponding	minimal
fill across swamps (in conjunction with culvert placement)	loss of vegetation, altering of water courses, loss of wetlands	use existing road alignment, locate culverts and install sufficient number and size to minimize altering of water courses or ponding, keep design road width to min req?d to achieve objective of all-weather vehicle access	minimal i now activ used for g productio
road surface (granular material in select areas and use of motor grader on some roads)	borrow pits could pond water, grader will create dust	limit borrow source excavation to banks rather than pits, use a number of smaller borrow sources	minimal
C. Operations			
increased traffic	increase dust, noise and accidents	limit improvements to min req?d to achieve objective of all-weather vehicle access without encouraging high speed or use of community roads over feeder roads, extensive tree, & hedge planting along right of way and especially between road and homes	
road maintenance (carried out by LC5 through local manual labor contracts - primarily filling holes and clearing ditches, culvert inlets, and offshoots)	no negative impacts anticipated		

Annex B.6

Africare/Uganda
Uganda Food Security Initiative

Activity/ Environmental Impact Summary
24 September 1997 - DRAFT

Annex C

Programmatic Environmental Assessments: Special Application

Annex C

PROGRAMMATIC ENVIRONMENTAL ASSESSMENTS: SPECIAL APPLICATION

C.1 What Are Programmatic Assessments?

C.1.1 Programmatic Approaches

Occasionally it is necessary and/or helpful to carry out an environmental assessment a sector (agriculture, road construction, etc.) or a larger program that will eventually contain several projects or sub-grants. Such an overall assessment is known as a Programmatic Environmental Assessment (PEA) and can serve as a general assessment of a sector or provide the basis for future environmental reviews, at either project or sub-project level.

The basis for PEAs lies in Section 216.6(d) of Reg. 216:

> *...(d) PROGRAM ASSESSMENT: Program Assessments may be appropriate in order to:*
>
> *-- assess the environmental effects of a number of individual actions and their cumulative environmental impact in a given country or geographic area, or*
> *-- the environmental impacts that are generic or common to a class of agency actions, or*
> *-- other activities which are not country-specific.*
>
> *In these cases, a single, programmatic assessment will be prepared in A.I.D./Washington and circulated to appropriate overseas Missions, host governments, and to interested parties within the United States. To the extent practicable, the form and content of the Programmatic Environmental Assessment will be the same as for project Assessments. Subsequent Environmental Assessments on major individuals actions will only be necessary where such follow-on or subsequent activities may have significant environmental impacts on specific countries where such impacts have not been adequately evaluated in the Programmatic Environmental Assessment. Other programmatic evaluations of classes of actions may be conducted in an effort to establish additional categorical exclusions or design standards or criteria for such classes that will eliminate or minimize adverse effects of such actions, enhance the environmental effect of such action or reduce the amount of paperwork or time involved in these procedures. Programmatic evaluations conducted for the purpose of establishing additional categorical exclusions under ?216.2(c) or design considerations that will eliminate significant effects for classes of action shall be made available for public comment before the categorical exclusions or design standards or criteria are adopted by A.I.D. Notice of the availability of such document shall be published in the Federal Register. Additional categorical exclusions shall be adopted by A.I.D. upon the approval of the Administrator and design consideration in accordance with usual agency procedures.*

The concept of sectoral or programmatic assessment is not new to the donor community, although USAID was the first to apply it to international development assistance. For example, the World Bank has published an outline of the essential elements of such assessments (*World Bank EA Sourcebook* Update No. 4, October 1993), which contains much basic information on the process. The description of a PEA in subsequent sections of this Annex draws heavily on the World Bank concept of sectoral assessment.

The *World Bank EA Sourcebook* Update No. 15, June 1996, provides guidance on Regional Environmental

Assessment. Regional EA in the Bank?s terminology, differs from other forms of EA because of its distinct emphasis on the spatial setting, but is closely allied to Sectoral EA. The term Strategic Environmental Assessment (SEA) has gained favor as a concept to refer generically to sectoral, programmatic, policy, or regional EA. While there is considerable debate about the use of various terms, all these terms, in general, refer to forms of EA that are broader than a project-specific EA. *The International Study of Effectiveness of Environmental Assessment, Strategic Environmental Assessment,* Ministry of Housing, Spatial Planning and the Environment, Publication #53 (Sadler and Verheem, 1996) provides a comprehensive review of SEA.

C.1.2 Advantages of a Programmatic Approach

The following advantages of PEAs are worth highlighting:

? Sectoral EAs can prevent serious environmental impacts through analysis of sector policies and investment strategies, before major decisions are made.

? They can assist in forming a long-term view of the sector and can increase the transparency of the sectoral planning process (i.e., show the reasoning behind development plans), thereby decreasing the opportunities for purely political decisions that might be environmentally harmful.

? They are suitable for analysis of institutional, legal, and regulatory aspects related to the sector, and for making comprehensive and realistic recommendations regarding, for example, environmental standards, guidelines, law enforcement, and training, thus reducing the need for similar analysis in later EA work.

? They provide opportunities to consider alternative policies, plans, strategies or project types, taking into account their costs and benefits, particularly the environmental and social costs that are often ignored in least-cost project planning.

? PEAs help to alter or eliminate environmentally unsound investment alternatives at an early stage, thus reducing overall negative environmental impacts, while also eliminating the need for project-specific EAs for all these alternatives.

? They are well-suited to consider cumulative impacts of multiple ongoing and planned investments within a sector, as well as impacts from existing policies and policy changes.

? They are valuable for collecting and organizing environmental data into usable information and, in the process, identifying data gaps and needs at an early stage, and for outlining methods, schedules, and responsibilities for data collection and management during program or project implementation.

? They allow for comprehensive planning of general sector-wide mitigation, management, and monitoring measures, and for identifying broad institutional, resource, and technological needs at an early stage.

? They provide a basis for collaboration and coordination across sectors, and help to avoid duplication of efforts and policy contradictions between sector agencies and ministries.

? They may strengthen preparation and implementation of sub-projects by recommending criteria for environmental analysis and review, and standards and guidelines for project implementation.

C.2 When Is a PEA Approach Appropriate?

C.2.1 When Are PEAs Recommended instead of EAs?

An Environmental Assessment (EA) or Programmatic Environmental Assessment (PEA), in USAID?s procedures, is a document that is typically drawn up for actions that normally have a significant (adverse) effect on the environment. (If actions have a significant effect on the United States, the global environment, or areas outside the jurisdiction of a nation, an Environmental Impact Statement is prepared.)

PEAs assess the environmental effects of multiple actions and their environmental impact in a given country or geographic area in order to determine the additive, synergistic, cumulative effects of discrete activities in a development context (for example, multi-donor efforts in a particular region of a country). They may also be applied when the environmental impacts are generic or common to a class of actions, or to other activities which are not country-specific.

The PEA can serve as a reference document from which Supplemental or individual Environmental Assessments, which can be done more efficiently or with a better foundation because of the PEA, are spawned, typically called tiering. For example, the *USAID PEA for Locust and Grasshopper Control in Africa and Asia* is a classic application, from which 20 subsequent country Supplemental EAs have been tiered.

If a positive determination under USAID regulations is made with the resulting legal requirement for an EA, there is no reason to require a PEA, especially if it is likely to call for Supplemental EAs, unless such an approach makes sense. It may be more efficient to do a first EA and use it as a model for others, thus having saved at least one EA process in this way. Even better is to do one PEA and have it result in a process of environmental documentation that is simpler than the EA. When PVOs have similar activities they might want to do a PEA together with the Mission and cover broadly their common issue activity types. However, no PEA should be done without close Mission interaction and agreement about its purposes.

Based on the processes, types of impacts and recommendations made in the PEA with respect to mitigative measures and monitoring, the specific conditions appropriate to a particular setting and activity would be identified in subsequent, activity or geographic-specific IEEs. The PVOs would commit themselves to the set of conditions laid out in the IEE.

C.2.2 Criteria for Choosing PEA

Three situations, may trigger PEA work:

The first type of situation is development of a portfolio in one particular sector (e.g., agriculture) or where there is a series of independent projects in a given sector. Types of projects in this first context may include:

?. a national or sub-national sector program,

?. a series of projects in the same sector,

?. a large project with sectoral implications,

?. a sectoral intermediate credit operation, or

?. a sectoral investment operation.

The second situation would be a case where a PEA is prepared to complement the planning process. These

PEAs may be triggered by USAID when a broad set of issues lies beyond the immediate purview of a project.

In the third situation, a series of issues or interventions are expected to proceed in parallel with a particular project. This PEA approach may be appropriate, for example, in sectors with a reputation for widespread and well-known environmental damage, e.g., the livestock sector or water supply efforts, where previous water drilling has led to desertification. Although the particular project supported by USAID may not create any significant additional problems, you may want the kind of information provided by a PEA to justify program design options.

The following questions will help identify when a sectoral approach may be particularly appropriate and useful in a project or program where Reg. 216 applies. If the answer to the following question is positive, PEA should be seriously considered:

? Is the sponsor considering any activity in a sector with significant environmental issues?

? If the answer to the next three questions is also positive, a PEA is highly recommended:

? Are there major existing environmental problems associated with the sector, and/or sector-wide potential environmental impacts resulting from the proposed program or series of projects?

? Is there a clear potential for significant environmental improvement or avoidance of major problems in the sector?

? Are there clear policy, regulatory, and/or institutional weaknesses having to do with environmental management in the sector?

In addition, some conditions increase the potential value of PEAs but are not sufficient or completely necessary requirements:

? Is the program or project still at an early planning stage or at a new major investment phase, where important strategic decisions have not yet been made?

? Are conditions in the sector relatively stable and predictable (rather than changing rapidly and unpredictably) allowing for a medium to long-term planning horizon and allowing a better chance of gaining long-term value from the PEA?

? Are the implementors likely to give weight to the findings and recommendations?

C.3 PEAs in Operation

C.3.1 What Should Be in a PEA?

These sections are illustrative, not required. (See also Annex D for Reg. 216 recommended outline).

Section 1. Project Description

The nature and objectives of the program, plan, series of projects or other context to which the PEA is attached should be described, and the main environmental issues associated with the sector and these programs identified.

Section 2. Baseline Data/Affected Environment

This section should describe and evaluate the sector?s current environmental situation. Where a project-specific EA would describe conditions such as ambient air and water quality or existing impacts from pollution around a proposed project site, the PEA should concentrate on the issues and problems that are typical of the sector as a whole. For example, occupational health may be a concern across enterprises within a specific industry; seepage of heavy metals into streams and groundwater may be a recurring problem in the mining sector; or deforestation may result from activities in the agriculture sector. Another important function of the PEA is to note major data gaps.

Section 3. Environmental Impacts (or Consequences)

The single most difficult challenge in PEAs is to produce a precise impact analysis in the face of uncertainties related to final investment decisions and their individual and combined impacts. In recent years, advances have been made in the technologies for assessing cumulative impacts in relation to development plans and programs. Means include quantitative modeling, forecasting, and various qualitative analyses. If any proposed sub-project is expected to cause particularly significant impacts, the PEA should recommend an appropriate course of action to address them, including carrying out project-specific EAs.

All cumulative effects should be considered: positive and negative, direct and indirect, long-term and short-term. Aggregate problems such as sewage discharge, acid rain, ozone depletion, and deforestation usually result from several activities, sometimes stemming predominantly from a single sector. Cumulative impacts on environmentally important and sensitive areas and assets, such as coastal zones and wetlands or inland water resources, are also important when the sector activities heavily affect these areas and/or resources.

The PEA is an appropriate instrument for considering issues related to long-term sustainable development. Specifically, the PEA may discuss how a proposed investment program may influence long-term productivity of environmental resources affected by the program.

Section 4. Analysis of Alternatives (This section is often considered earlier as Section 2.)

A PEA?s major purpose is to analyze alternative design options and strategies in terms of environmental costs and benefits. For example, if a proposed agricultural program emphasizes conversion of wetlands to rice production, alterative approaches would be intensification of production in existing fields, conversion of other land types, crop rotation, etc.

All major activities under consideration, in addition to the option being considered, should be considered at this stage, whether complementary or alternative to the USAID option chosen. The other options may include investments by the private and the public sectors. A comparative analysis of alterative programs is recommended, applying indicators of environmental and social impacts and methods to evaluate and compare the indicators and, ultimately, the alterative options. If several donors are involved in the sector, the PEA should review their existing and/or planned activities and suggest ways to coordinate efforts.

The PEA can also be used to evaluate the environmental effects of sector policy alternatives. For example, changes in tax and subsidy rates on the use of natural resources may influence rates and methods of extraction.

If appropriate, the analysis should conclude with a list of sector proposals, ranked according to environmental preference. The analysis of impacts and alternatives should result in an optimal investment strategy, in terms of environmental and social costs and benefits.

Section 5. Mitigation Plan (This section is sometimes combined with Section 7.)

Mitigation measures are usually detailed and technical, and therefore are normally addressed in project-specific EAs. However, if planned or existing production and process technologies in a sector are relatively uniform, the PEA could recommend broad options for eliminating, reducing to acceptable levels, or mitigating environmental impacts. This is particularly important in the case of PVO/NGO-type programs where interventions tend to follow a similar pattern of design. PEA mitigation and monitoring recommendations should draw on findings from the analysis of policy, legal, and institutional issues as well as the analysis of impacts and alternatives. USAID provision of guidelines for use in several sectors is important here. Such

guidelines provide environmentally sound development principles that could reduce the amount of mitigation needed later.

A PEA is an effective tool for designing and recommending mitigation measures and monitoring that can be implemented only at the national or sectoral level for regulatory or economic reasons. Similarly, in a sector program involving multiple investments, the PEA may be better placed than project-specific EAs to consider sector-wide mitigation solutions that require economies of scale to be cost-effective. Construction of a solid waste recycling plant for an entire country is one example.

Note: When specific screening and review procedures are processed, or specifications for a set of activities are defined, these form the basis of a separate chapter. For certain types of infrastructure activities, such as roads or dams, it is important to *include recommendations for the requirements to be put into bids and tenders* for construction contractors.

Section 6. Environmental Management and Training

One of a PEA?s main outputs should be an institutional plan for improving environmental management in the sector based on findings of the previous sections. The plan might recommend training existing staff, hiring additional staff, reorganizing units or agencies, or redefining roles and responsibilities. This section might also include recommendations on policy and regulatory instruments for environmental management and enforcement in the sector. A screening process to separate sub-projects needing a project-specific EA from those not requiring further analysis should be designed, if it is not already in place.

Section 7. Environmental Monitoring Plan

The PEA should provide general guidelines for long-term, sector-wide environmental monitoring to ensure adequate implementation of investments. A monitoring plan should use the findings of the baseline data section to measure progress in mid-term review and final evaluation. The plan should also recommend measures needed to collect and organize missing data.

Section 8. Public Consultation

Public consultation is an integral part of the EA process, whether a project-specific EA or PEA is being prepared. However, since a PEA normally covers an entire sector (in a national or subnational context) and is conducted before concrete investment decisions are made, it is not always possible to consult representatives of all potentially affected people during its preparation. It is often more feasible and appropriate to carry out consultations with national NGOs (for example, for nature protection), scientific experts, relevant government agencies, and perhaps industrial and commercial interests as well. A successfully implemented consultation process will help ensure public support for the final sector program.

See the Sample Table of Contents for a Rural Road Rehabilitation PEA, at end of Annex C.

C.3.2 Observations on PEA in Practice

A classic PEA is beneficial when a broad examination of a class of impacts is needed, typically in situations where previous environmental assessments have not been performed, and there is little past experience to use as a guide. The PEA serves as the document of reference, from this programmatic perspective, for subsequent Supplemental or individual Environmental Assessments, which can be done more efficiently or with a better foundation because of the PEA.

The PEA can also be useful when considering a very unusual or special ecosystem in which a variety of activities might occur and for which special considerations need to be studied, for example, a coastal zone, major wetlands ecosystem or buffer zone surrounding a protected area.

Sometimes the PEA is applied in examining the impacts of activities in a regional or geographic setting to determine the additive, synergistic, or cumulative effects of discrete activities in a development context (for example, water resource development in a state, province, or district or multi-donor efforts in a particular region of a country). This type of PEA is often referred to as a **Strategic Environmental Assessment** (see C.1.1 above). To be useful, it must consider impacts at the planning or policy level of a variety of planned and unplanned interventions undertaken by the private sector, governments, donors, etc. Thus, it typically needs to be performed or sponsored by a government that has jurisdiction over the area (or it could be an entire sector, such as power) in question.

One might call a rolled-together series of EAs in one document a PEA. Such a document could cover a set of similar activities, **if** sufficient information were known about the specific situation of each, and some processing efficiencies could be achieved. For example, if four dams with similar structural characteristics exist in the same region with similar ecosystems, one might roll the four together in one document. However, if specific characteristics were not known, then the PEA **optimally** would provide a set of generic information about dam impacts and a **procedure or process to be followed.**

The observation has been made that EAs or PEAs are better than IEEs, because they involve the host country in participation. However, there is no reason that stakeholder participation cannot occur through other levels of environmental documentation, such as an IEE. Thus, the need for public participation need not be a criterion that triggers a PEA (or an EA).

When the PEA is applied to groups of project activities in the same sector, these lessons learned merit consideration:

- PEAs are helpful when they address issues for which there is little generic information available and/or when there is substantial commonality among impacts from a project activity.

- PEAs are not *usually* useful for routine activities for which manuals of impacts and mitigative measures already exist. (*Nevertheless, there are exceptions.)*

- An EA may be needed legally for a routine activity for which manuals and the like exist, but there is no reason to require a PEA, especially if it is likely to call for Supplemental EAs. An EA of the specific intervention(s) would be as useful as, and less costly than, an ambiguous PEA that did not provide sufficient guidance on design and mitigative measures to allow future EAs to be avoided. Thus, an EA that serves as a model, or a PEA that results in simpler environmental documentation than individual EAs, is more efficient.

- Activities that are presumed to require an EA in USAID?s Reg. 216, which lack reference to scale or magnitude, will need documentation, justification, or a rationale to show why an EA (or PEA) was not necessary.

C.3.3 Practical Considerations and Potential Obstacles

- Where USAID activities are concerned, no PEA should be considered without close Mission interaction and agreement about the purposes it will and will not serve.

- Multi-purpose/multi-sector PEAs are difficult to accomplish and should be approached carefully. They generally require a large budget. Effective PEAs for PVOs are likely to be linked to a particular sector within a delimited geographic region that has shared characteristics and other commonalities.

- PEAs should not be linked to a particular implementor, just because an element is common to all sectors. This approach does not translate into useful PEA practice. For example, you would probably not choose to do a PEA for PVO A's multiple activities. One could do a PEA more efficiently for activities of several PVOs operating within the same sector, e.g., dam and irrigation interventions of PVOs A, B and C. If the implementor is responsible for a broad set of related interventions in a sector, a PEA might be warranted for that implementor, or the PVO could have many types of interventions such that several PEAs are warranted.

- *A good-quality PEA (or EA) process, from a Scope of Work through scoping, data collection, analysis, preparation, internal review, and external review typically takes up to one year*. With aggressive workers and committed reviewers, six calendar months is feasible. Experience has shown that approximately six to eight person-months of effort is usually needed, with a minimum of three person-months, not counting effort for Mission Environmental Officers or Project/Results Package Managers. If document translation is required to achieve host-country participation, an additional level of effort is needed.

- PEAs should not be viewed as a convenience, but rather as a serious, analytical process that takes time to do properly. To the extent that PEAs are not necessary and are not squarely on target with respect to achieving larger purposes that can be easily and generically applied, *other forms of environmental documentation to accomplish environmentally sound and sustainable activities are to be preferred*, because they are less time-consuming, more targeted, and more useful.

- PEAs should be applied judiciously to situations in which they can be genuinely useful as a planning tool.

Attachment to Annex C

SAMPLE TABLE OF CONTENTS FOR A PEA

USAID/MADAGASCAR PROGRAMMATIC ENVIRONMENTAL ASSESSMENT OF RURAL ROAD REHABILITATION ACTIVITIES[5]

5 Source: Bingham, C., E. Loken, M. Enders, S. Gupta, R. Hanchett and T. Herlehey. 1995. USAID.

Annex D

Official USAID Guidance

Annex D **USAID Environmental Procedures: Text of Title 22, Code of Federal Regulations, Part 216: (Reg. 16)**

Annex D

USAID ENVIRONMENTAL PROCEDURES: TEXT OF TITLE 22, CODE OF FEDERAL REGULATIONS PART 216 (Reg. 216)

ENVIRONMENTAL PROCEDURES[6]

These procedures have been revised based on experience with previous ones agreed to in settlement of a law suit brought against the Agency in 1975. The Procedures are Federal Regulations and therefore, it is imperative that they be followed in the development of Agency programs.

In preparing these Regulations, some interpretations and definitions have been drawn from Executive Order No. 12114 of 4 January 1979, on the application of the National Environmental Policy Act (NEPA) to extraterritorial situations. Some elements of the revised regulations on NEPA issued by the President?s Council on Environmental Quality have also been adopted. Examples are: The definition of significant impact, the concept of scoping of issues to be examined in a formal analysis, and the elimination of certain USAID activities from the requirement for environmental review.

In addition, these procedures: 1) provide advance notice that certain types of projects will automatically require detailed environmental analysis thus eliminating one step in the former process and permitting early planning for this activity; 2) permit the use of specially prepared project design considerations or guidance to be substituted for environmental analysis in selected situations; 3) advocate the use of indigenous specialists to examine pre-defined issues during the project design stage; 4) clarify the role of the Bureau?s Environmental Officer in the review and approval process, and 5) permit in certain circumstances, projects to go forward prior to completion of environmental analysis.

Note that only minimal clarification changes have been made in those sections dealing with the evaluation and selection of pesticides to be supported by USAID in projects or of a non-project assistance activity.

Authority: 42 U.S.C. 4332; 22 U.S.C. 2381.
Source: 41 CFR 26913, June 30, 1976.

6 Title 22 of the Federal Code of Federal Regulations, Part 216, with preamble, is presented here in its entirety. Spelling errors have been corrected from the original. This represents the most recent version, dated October 9, 1980.

Even with a ?re-engineered? assistance process, USAID must fully comply with 22 CFR 216, except to the extent some of its terms are not used in the new operations assistance processes (i.e. PID, PP, etc.). In those cases the terms used in the Automated Directives System (ADS, which are intended to be as parallel as possible to the original terms) are used instead. However, 22 CFR 216 is controlling in the event of a conflict between ADS Chapter 204 on USAID?s Environmental Procedures and 22 CFR 216. If there are questions, consult your BEO, the AEC, or Agency legal counsel.

?216.1 INTRODUCTION

(a) Purpose

In accordance with sections 118(b) and 621 of the Foreign Assistance Act of 1961, as amended, (the FAA) the following general procedures shall be used by A.I.D. to ensure that environmental factors and values are integrated into the A.I.D. decision-making process. These procedures also assign responsibility within the Agency for assessing the environmental effects of A.I.D.?s actions. These procedures are consistent with Executive Order 12114, issued January 4, 1979, entitled Environmental Effects Abroad of Major Federal Actions, and the purposes of the National Environmental Policy Act of 1970, as amended (42 U.S.C. 4371 et seq.)(NEPA). They are intended to implement the requirements of NEPA as they effect the A.I.D. program.

(b) Environmental Policy

In the conduct of its mandate to help upgrade the quality of life of the poor in developing countries, A.I.D. conducts a broad range of activities. These activities address such basic problems as hunger, malnutrition, overpopulation, disease, disaster, deterioration of the environment and the natural resource base, illiteracy as well as the lack of adequate housing and transportation. Pursuant to the FAA, A.I.D. provides development assistance in the form of technical advisory services, research, training, construction and commodity support. In addition. A.I.D. conducts programs under the Agricultural Trade Development and Assistance Act of 1954 (Pub. L. 480) that are designed to combat hunger, malnutrition and to facilitate economic development. Assistance programs are carried out under the foreign policy guidance of the Secretary of State and in cooperation with the governments of sovereign states. Within this framework, it is A.I.D. policy to:

(1) Ensure that the environmental consequences of A.I.D.-financed activities are identified and considered by A.I.D. and the host country prior to a final decision to proceed and that appropriate environmental safeguards are adopted;

(2) Assist developing countries to strengthen their capabilities to appreciate and effectively evaluate the potential environmental effects of proposed development strategies and projects, and to select, implement and manage effective environmental programs;

(3) Identify impacts resulting from A.I.D.?s actions upon the environment, including those aspects of the biosphere which are the common and cultural heritage of all mankind; and

(4) Define environmental limiting factors that constrain development and identify and carry out activities that assist in restoring the renewable resource base on which sustained development depends.

(c) Definitions

(1) CEQ Regulations. Regulations promulgated by the President?s Council on Environmental Quality (CEQ) (Federal Register, Volume 43, Number 230, November 29, 1978) under the authority of NEPA and Executive Order 11514, entitled Protection and Enhancement of Environmental Quality (March 5, 1970) as amended by Executive Order 11991 (May 24, 1977).

(2) Initial Environmental Examination. An Initial Environmental Examination is the first review of the reasonably foreseeable effects of a proposed action on the environment. Its function is to provide a brief statement of the factual basis

for a Threshold Decision as to whether an Environmental Assessment or an Environmental Impact Statement will be required.

(3) Threshold Decision. A formal Agency decision which determines, based on an Initial Environmental Examination, whether a proposed Agency action is a major action significantly affecting the environment.

(4) Environmental Assessment. A detailed study of the reasonably foreseeable significant effects, both beneficial and adverse, of a proposed action on the environment of a foreign country or countries.

(5) Environmental Impact Statement. A detailed study of the reasonably foreseeable environmental impacts, both positive and negative, of a proposed A.I.D. action and its reasonable alternatives on the United States, the global environment or areas outside the jurisdiction of any nation as described in ?216.7 of these procedures. It is a specific document having a definite format and content, as provided in NEPA and the CEQ Regulations. The required form and content of an Environmental Impact Statement is further described in ?216.7 infra.

(6) Project Identification Document (PID). An internal A.I.D. document which initially identifies and describes a proposed project.

(7) Program Assistance Initial Proposal (PAIP). An internal A.I.D. document used to initiate and identify proposed non-project assistance, including commodity import programs. It is analogous to the PID.

(8) Project Paper (PP). An internal A.I.D. document which provides a definitive description and appraisal of the project and particularly the plan or implementation.

(9) Program Assistance Approval Document (PAAD). An internal A.I.D. document approving non-project assistance. It is analogous to the PP.

(10) Environment. The term environment, as used in these procedures with respect to effects occurring outside the United States, means the natural and physical environment. With respect to effects occurring within the United States see ?216.7(b).

(11) Significant Effect. With respect to effects on the environment outside the United States, a proposed action has a significant effect on the environment if it does significant harm to the environment.

(12) Minor Donor. For purposes of these procedures, A.I.D. is a minor donor to a multidonor project when A.I.D. does not control the planning or design of the multidonor project and either

(i) A.I.D.?s total contribution to the project is both less than $1,000,000 and less than 25 percent of the estimated project cost, or

(ii) A.I.D.?s total contribution is more than $1,000,000 but less than 25 percent of the estimated project cost and the environmental procedures of the donor in control of the planning of design of the project are followed, but only if the A.I.D. Environmental Coordinator determines that such procedures are adequate.

?216.2 APPLICABILITY OF PROCEDURES

(a) Scope

Except as provided in ?216.2(b), these procedures apply to all new projects, programs or activities authorized or approved by A.I.D. and to substantive amendments or extensions of ongoing projects, programs, or activities.

(b) Exemptions

(1) Projects, programs or activities involving the following are exempt from these procedures:

(i) International disaster assistance;

(ii) Other emergency circumstances; and

(iii) Circumstances involving exceptional foreign policy sensitivities.

(2) A formal written determination, including a statement of the justification therefore, is required for each project, program or activity for which an exemption is made under paragraphs (b)(l) (ii) and (iii) of this section, but is not required for projects, programs or activities under paragraph (b)(l)(i) of this section. The determination shall be made either by the Assistant

Administrator having responsibility for the program, project or activity, or by the Administrator, where authority to approve financing has been reserved by the Administrator. The determination shall be made after consultation with CEQ regarding the environmental consequences of the proposed program, project or activity.

(c) Categorical Exclusions

(1) The following criteria have been applied in determining the classes of actions included in ?216.2(c)(2) for which and Initial Environmental Examination, Environmental Assessment and Environmental Impact Statement generally are not required:

(i) The action does not have an effect on the natural or physical environment;

(ii) A.I.D. does not have knowledge of or control over, and the objective of A.I.D. in furnishing assistance does not require, either prior to approval of financing or prior to implementation of specific activities, knowledge of or control over, the details of the specific activities that have an effect on the physical and natural environment for which financing is provided by A.I.D.;

(iii) Research activities which may have an affect on the physical and natural environment but will not have a significant effect as a result of limited scope, carefully controlled nature and effective monitoring.

(2) The following classes of actions are not subject to the procedures set forth in ?216.3, except to the extent provided herein;

(i) Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.);

(ii) Controlled experimentation exclusively for the purpose of research and field evaluation which are confined to small areas and carefully monitored;

(iii)Analyses, studies, academic or research workshops and meetings;

(iv) Projects in which A.I.D. is a minor donor to a multidonor project and there is no potential significant effects upon the environment of the United States, areas outside any nation?s jurisdiction or endangered or threatened species or their critical habitat;

(v) Document and information transfers;

(vi) Contributions to international, regional or national organizations by the United States which are not for the purpose of carrying out a specifically identifiable project or projects;

(vii) Institution building grants to research and educational institutions in the United States such as those provided for under section 122(d) and Title XII of Chapter 2 of Part I of the FAA (22 USCA ??2151 p. (b) 2220a. (1979));

(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, waste water treatment, etc.)

(ix) Assistance provided under a Commodity Import Program when, prior to approval, A.I.D. does not have knowledge of the specific commodities to be financed and when the objective in furnishing such assistance requires neither knowledge, at the time the assistance is authorized, nor control, during implementation, of the commodities or their use in the host country.

(x) Support for intermediate credit institutions when the objective is to assist in the capitalization of the institution or part thereof and when such support does not involve reservation of the right to review and approve individual loans made by the institution;

(xi) Programs of maternal or child feeding conducted under Title II of Pub. L. 480;

(xii) Food for development programs conducted by food recipient countries under

Title III of Pub. L. 480, when achieving A.I.D.?s objectives in such programs does not require knowledge of or control over the details of the specific activities conducted by the foreign country under such program;

(xiii) Matching, general support and institutional support grants provided to private voluntary organizations (PVOs) to assist in financing programs where A.I.D.?s objective in providing such financing does not require knowledge of or control over the details of the specific activities conducted by the PVO;

(xiv) Studies, projects or programs intended to develop the capability of recipient countries to engage in development planning, except to the extent designed to result in activities directly affecting the environment (such as construction of facilities, etc.); and

(xv) Activities which involve the application of design criteria or standards developed and approved by A.I.D.

(3) The originator of a project. program or activity shall determine the extent to which it is within the classes of actions described in paragraph (c)(2) of this section. This determination shall be made in writing and be submitted with the PID, PAIP or comparable document. This determination, which must include a brief statement supporting application of the exclusion shall be reviewed by the Bureau Environmental Officer in the same manner as a Threshold Decision under ?216.3(a)(2) of these procedures. Notwithstanding paragraph (c)(2) of this section, the procedures set forth in ?216.3 shall apply to any project, program or activity included in the classes of actions listed in paragraph (c)(2) of this section, or any aspect or component thereof, if at any time in the design, review or approval of the activity it is determined that the project, program or activity, or aspect or component thereof, is subject to the control of A.I.D. and may have a significant effect on the environment.

(d) Classes of Actions Normally Having a Significant Effect on the Environment

(1) The following classes of actions have been determined generally to have a significant effect on the environment and an Environmental Assessment or Environmental Impact Statement, as appropriate, will be required:

(i) Programs of river basin development;

(ii) Irrigation or water management projects, including dams and impoundments;

(iii) Agricultural land leveling;

(iv) Drainage projects;

(v) Large scale agricultural mechanization;

(vi) New lands development;

(vii) Resettlement projects;

(viii) Penetration road building or road improvement projects;

(ix) Powerplants;

(x) Industrial plants;

(xi) Potable water and sewerage projects other than those that are small-scale.

(2) An Initial Environmental Examination normally will not be necessary for activities within the classes described in ?216.2(d), except when the originator of the project believes that the project will not have a significant effect on the environment. In such cases, the activity may be subjected to the procedures set forth in ?216.3.

(e) Pesticides. The exemptions of ?216.2(b)(l) and the categorical exclusions of ?216.2(c)(2) are not applicable to assistance for the procurement or use of pesticides.

?216.3 PROCEDURES

(a) General Procedures

(1) Preparation of the Initial Environmental Examination. Except as otherwise provided, an Initial Environmental Examination is not required for activities identified in ?216.2(b)(1), (c)(2), and (d). For all other A.I.D. activities described in ?216.2(a) an Initial Environmental Examination will be prepared by the originator of an action. Except as indicated in this section, it should be prepared with the PID or PAIP. For projects including the procurement or use of pesticides,

the procedures set forth in ?216.3(b) will be followed, in addition to the procedures in this paragraph. Activities which cannot be identified in sufficient detail to permit the completion of an Initial Environmental Examination with the PID or PAIP, shall be described by including with the PID or PAIP:

(i) an explanation indicating why the Initial Environmental Examination cannot be completed;

(ii) an estimate of the amount of time required to complete the Initial Environmental Examination; and

(iii) a recommendation that a Threshold Decision be deferred until the Initial Environmental Examination is completed. The responsible Assistant Administrator will act on the request for deferral concurrently with action on the PID or PAIP and will designate a time for completion of the Initial Environmental Examination. In all instances, except as provided in ?216.3(a)(7), this completion date will be in sufficient time to allow for the completion of an Environmental Assessment or Environmental Impact Statement, if required, before a final decision is made to provide A.I.D. funding for the action.

(2) Threshold Decision.

(i) The Initial Environmental Examination will include a Threshold Decision made by the officer in the originating office who signs the PID or PAIP. If the Initial Environ-mental Examination is completed prior to or at the same time as the PID or PAIP, the Threshold Decision will be reviewed by the Bureau Environmental Officer concurrently with approval of the PID or PAIP. The Bureau Environmental Officer will either concur in the Threshold Decision or request reconsideration by the officer who made the Threshold Decision, stating the reasons for the request. Differences of opinion between these officers shall be submitted for resolution to the Assistant Administrator at the same time that the PID is submitted for approval.

(ii) An Initial Environmental Examination, completed subsequent to approval of the PID or PAIP, will be forwarded immediately together with the Threshold Determination to the Bureau Environmental Officer for action as described in this section.

(iii) A Positive Threshold Decision shall result from a finding that the proposed action will have a significant effect on the environment. An Environmental Impact Statement shall be prepared if required pursuant to ?216.7. If an impact statement is not required, an Environmental Assessment will be prepared in accordance with ?216.6. The cognizant Bureau or Office will record a Negative Determination if the proposed action will not have a significant effect on the environment.

(3) Negative Declaration. The Assistant Administrator, or the Administrator in actions for which the approval of the Administrator is required for the authorization of financing, may make a Negative Declaration, in writing, that the Agency will not develop an Environmental Assessment or an Environmental Impact Statement regarding an action found to have a significant effect on the environment when (i) a substantial number of Environmental Assessments or Environmental Impact Statements relating to similar activities have been prepared in the past, if relevant to the proposed action, (ii) the Agency has previously prepared a programmatic Statement or Assessment covering the activity in question which has been considered in the development of such activity, or (iii) the Agency has developed design criteria for such an action which, if applied in the design of the action, will avoid a significant effect on the environment.

(4) Scope of Environmental Assessment or Impact Statement

(i) Procedure and Content. After a Positive Threshold Decision has been made, or a determination is made under the pesticide procedures set forth in ?216.3(b) that an Environmental Assessment or Environmental Impact Statement is required, the originator of the action shall commence the process of identifying the significant issues relating to the proposed action and of

determining the scope of the issues to be addressed in the Environmental Assessment or Environmental Impact Statement. The originator of an action within the classes of actions described in ?216.2(d) shall commence this scoping process as soon as practicable. Persons having expertise relevant to the environmental aspects of the proposed action shall also participate in this scoping process. (Participants may include but are not limited to representatives of host governments, public and private institutions, the A.I.D. Mission staff and contractors.) This process shall result in a written statement which shall include the following matters:

(a) A determination of the scope and significance of issues to be analyzed in the Environmental Assessment or Impact Statement, including direct and indirect effects of the project on the environment.

(b) Identification and elimination from detailed study of the issues that are not significant or have been covered by earlier environmental review, or approved design considerations, narrowing the discussion of these issues to a brief presentation of why they will not have a significant effect on the environment.

(c) A description of

(1) the timing of the preparation of environmental analyses, including phasing if appropriate,

(2) variations required in the format of the Environmental Assessment, and

(3) the tentative planning and decision-making schedule; and

(d) A description of how the analysis will be conducted and the disciplines that will participate in the analysis.

(ii) These written statements shall be reviewed and approved by the Bureau Environmental Officer.

(iii) Circulation of Scoping Statement. To assist in the preparation of an Environmental Assessment, the Bureau Environmental Officer may circulate copies of the written statement, together with a request for written comments, within thirty days, to selected federal agencies if that Officer believes comments by such federal agencies will be useful in the preparation of an Environmental Assessment. Comments received from reviewing federal agencies will be considered in the preparation of the Environmental Assessment and in the formulation of the design and implementation of the project, and will, together with the scoping statement, be included in the project file.

(iv) Change in Threshold Decision. If it becomes evident that the action will not have a significant effect on the environment (i.e., will not cause significant harm to the environment), the Positive Threshold Decision may be withdrawn with the concurrence of the Bureau Environmental Officer. In the case of an action included in ?216.2(d)(2), the request for withdrawal shall be made to the Bureau Environmental Officer.

(5) Preparation of Environmental Assessments and Environmental Impact Statement. If the PID or PAIP is approved, and the Threshold Decision is positive, or the action is included in ?216.2(d), the originator of the action will be responsible for the preparation of an Environmental Assessment or Environmental Impact Statement as required. Draft Environmental Impact Statements will be circulated for review and comment as part of the review of Project Papers and as outlined further in ?216.7 of those procedures. Except as provided in ?216.3(a)(7), final approval of the PP or PAAD and the method of implementation will include consideration of the Environmental Assessment or final Environmental Impact Statement.

(6) Processing and Review Within A.I.D.

(i) Initial Environmental Examinations, Environmental Assessments, and final Environmental Impact Statements

will be processed pursuant to standard A.I.D. procedures for project approval documents. Except as provided in ?216.3(a)(7), Environmental Assessments and final Environmental Impact Statements will be reviewed as an integral part of the Project Paper or equivalent document. In addition to these procedures, Environmental Assessments will be reviewed and cleared by the Bureau Environmental Officer. They may also be reviewed by the Agency?s Environmental Coordinator who will monitor the Environmental Assessment process.

(ii) When project approval authority is delegated to field posts, Environmental Assessments shall be reviewed and cleared by the Bureau Environmental Officer prior to the approval of such actions.

(iii) Draft and final Environmental Impact Statements will be reviewed and cleared by the Environmental Coordinator and the Office of the General Counsel.

(7) Environmental Review After Authorization of Financing.

(i) Environmental review may be performed after authorization of a project, program or activity only with respect to subprojects or significant aspects of the project, program or activity that are unidentified at the time of authorization. Environmental review shall be completed prior to authorization for all subprojects and aspects of a project, program or activity that are identified.

(ii) Environmental review should occur at the earliest time in design or implementation at which a meaningful review can be undertaken, but in no event later than when previously unidentified subprojects or aspects of projects, programs or activities are identified and planned. To the extent possible, adequate information to undertake deferred environmental review should be obtained before funds are obligated for unidentified subprojects or aspects of projects, programs or activities. (Funds may be obligated for the other aspects for which environmental review has been completed.) To avoid an irreversible commitment of resources prior to the conclusion of environmental review, the obligation of funds can be made incrementally as subprojects or aspects of projects, programs or activities are identified; or if necessary while planning continues, including environmental review, the agreement or other document obligating funds may contain appropriate covenants or conditions precedent to disbursement for unidentified subprojects or aspects of projects, programs or activities.

(iii) When environmental review must be deferred beyond the time some of the funds are to be disbursed (e.g., long lead times for the delivery of goods or services), the project agreement or other document obligating funds shall contain a covenant or covenants requiring environmental review, including an Environmental Assessment or Environmental Impact Statement, when appropriate, to be completed and taken into account prior to implementation of those subprojects or aspects of the project, program or activity for which environmental review is deferred. Such covenants shall ensure that implementation plans will be modified in accordance with environmental review if the parties decide that modifications are necessary.

(iv) When environmental review will not be completed for an entire project, program or activity prior to authorization, the Initial Environmental Examination and Threshold Decision required under ?216.3(a)(l) and (2) shall identify those aspects of the project, program or activity for which environmental review will be completed prior to the time financing is authorized. It shall also include those subprojects or aspects for which environmental review will be deferred, stating the reasons for deferral and the time when environmental review will be completed. Further, it shall state how an irreversible commitment of funds will be avoided until environmental review is completed. The

A.I.D. officer responsible for making environmental decisions for such projects, programs or activities shall also be identified (the same officer who has decision-making authority for the other aspects of implementation). This deferral shall be reviewed and approved by the officer making the Threshold Decision and the officer who authorizes the project, program or activity. Such approval may be made only after consultation with the Office of General Counsel for the purpose of establishing the manner in which conditions precedent to disbursement or covenants in project and other agreements will avoid an irreversible commitment of resources before environmental review is completed.

(8) Monitoring. To the extent feasible and relevant, projects and programs for which Environmental Impact Statements or Environmental Assessments have been prepared should be designed to include measurement of any changes in environmental quality, positive or negative, during their implementation. This will require recording of baseline data at the start. To the extent that available data permit, originating offices of A.I.D. will formulate systems in collaboration with recipient nations, to monitor such impacts during the life of A.I.D.?s involvement. Monitoring implementation of projects, programs and activities shall take into account environmental impacts to the same extent as other aspects of such projects, programs and activities. If during implementation of any project, program or activity, whether or not an Environmental Assessment or Environmental Impact Statement was originally required, it appears to the Mission Director, or officer responsible for the project, program or activity, that it is having or will have a significant effect on the environment that was not previously studied in an Environmental Assessment or Environmental Impact Statement, the procedures contained in this part shall be followed including, as appropriate, a Threshold Decision, Scoping and an Environmental Assessment or Environmental Impact Statement.

(9) Revisions. If, after a Threshold Decision is made resulting in a Negative Determination, a project is revised or new information becomes available which indicates that a proposed action might be ?major? and its effects ?significant?, the Negative Determination will be reviewed and revised by the cognizant Bureau and an Environmental Assessment or Environmental Impact Statement will be prepared, if appropriate. Environmental Assessments and Environmental Impact Statements will be amended and processed appropriately if there are major changes in the project or program, or if significant new information becomes available which relates to the impact of the project, program or activity on the environment that was not considered at the time the Environmental Assessment or Environmental Impact Statement was approved. When ongoing programs are revised to incorporate a change in scope or nature, a determination will be made as to whether such change may have an environmental impact not previously assessed. If so, the procedures outlined in this part will be followed.

(10) Other Approval Documents. These procedures refer to certain A.I.D. documents such as PIDs, PAIPs, PPs and PAADs as the A.I.D. internal instruments for approval of projects, programs or activities. From time to time, certain special procedures, such as those in ?216.4, may not require the use of the aforementioned documents. In these situations, these environmental procedures shall apply to those special approval procedures, unless otherwise exempt, at approval times and levels comparable to projects, programs and activities in which the aforementioned documents are used.

(b) Pesticide Procedures

(1) Project Assistance. Except as provided in ?216.3 (b)(2), all proposed projects involving assistance for the procurement or use, or both, of pesticides shall be subject to the procedures prescribed in ?216.3(b)(l)(i) through (v). These procedures shall also apply, to the extent permitted by agreements entered into by A.I.D. before the effective date of these pesticide procedures, to such projects that have been authorized but for which pesticides have not been procured as of the effective date of these pesticide

procedures.

(i) When a project includes assistance for procurement or use, or both, of pesticides registered for the same or similar uses by USEPA without restriction, the Initial Environmental Examination for the project shall include a separate section evaluating the economic, social and environmental risks and benefits of the planned pesticide use to determine whether the use may result in significant environmental impact. Factors to be considered in such an evaluation shall include, but not be limited to the following:

(a) The USEPA registration status of the requested pesticide;

(b)The basis for selection of the requested pesticide;

(c)The extent to which the proposed pesticide use is part of an integrated pest management program;

(d) The proposed method or methods of application, including availability of appropriate application and safety equipment;

(e) Any acute and long-term toxicological hazards, either human or environmental, associated with the proposed use and measures available to minimize such hazards;

(f) The effectiveness of the requested pesticide for the proposed use;

(g) Compatibility of the proposed pesticide with target and nontarget ecosystems;

(h) The conditions under which the pesticide is to be used, including climate, flora, fauna, geography, hydrology, and soils;

(i) The availability and effectiveness of other pesticides or nonchemical control methods;

(j) The requesting country?s ability to regulate or control the distribution, storage, use and disposal of the requested pesticide;

(k) The provisions made for training of users and applicators; and

(l) The provisions made for monitoring the use and effectiveness of the pesticide.

In those cases where the evaluation of the proposed pesticide use in the Initial Environmental Examination indicates that the use will significantly affect the human environment, the Threshold Decision will include a recommendation for the preparation of an Environmental Assessment or Environmental Impact Statement, as appropriate. In the event a decision is made to approve the planned pesticide use, the Project Paper shall include to the extent practicable, provisions designed to mitigate potential adverse effects of the pesticide. When the pesticide evaluation section of the Initial Environmental Examination does not indicate a potentially unreasonable risk arising from the pesticide use, an Environmental Assessment or Environmental Impact Statement shall nevertheless be prepared if the environmental effects of the project otherwise require further assessment.

(ii) When a project includes assistance for the procurement or use, or both, of any pesticide registered for the same or similar uses in the United States but the proposed use is restricted by the USEPA on the basis of user hazard, the procedures set forth in ?216.3(b)(1)(i) above will be followed. In addition, the Initial Environmental Examination will include an evaluation of the user hazards associated with the proposed USEPA restricted uses to ensure that the implementation plan which is contained in the Project Paper incorporates provisions for making the recipient government aware of these risks and providing, if necessary, such technical assistance as may be required to mitigate these risks. If the proposed pesticide use is also restricted on a basis other than user hazard, the procedures in ?216.3(b)(l)(iii) shall be followed in lieu of the procedures in this section.

(iii) If the project includes assistance for the procurement or use, or both of:

(a) Any pesticide other than one registered for the same or similar uses by

USEPA without restriction or for restricted use on the basis of user hazard; or

(b) Any pesticide for which a notice of rebuttable presumption against reregistration *[since 1985, known as Special Review*], notice of intent to cancel, or notice of intent to suspend has been issued by USEPA, The Threshold Decision will provide for the preparation of an Environmental Assessment or Environmental Impact Statement, as appropriate (?216.6(a)). The EA or EIS shall include, but not be limited to, an analysis of the factors identified in ?216.3(b)(l)(i) above.

(iv) Notwithstanding the provisions of ?216.3(b)(l)(i) through (iii) above, if the project includes assistance for the procurement or use, or both, of a pesticide against which USEPA has initiated a regulatory action for cause, or for which it has issued a notice of rebuttable presumption against reregistration, the nature of the action or notice, including the relevant technical and scientific factors will be discussed with the requesting government and considered in the IEE and, if prepared, in the EA or EIS. If USEPA initiates any of the regulatory actions above against a pesticide subsequent to its evaluation in an IEE, EA or EIS, the nature of the action will be discussed with the recipient government and considered in an amended IEE or amended EA or EIS, as appropriate.

(v) If the project includes assistance for the procurement or use, or both of pesticides but the specific pesticides to be procured or used cannot be identified at the time the IEE is prepared, the procedures outlined in ?216.3(b)(i) through (iv) will be followed when the specific pesticides are identified and before procurement or use is authorized. Where identification of the pesticides to be procured or used does not occur until after Project Paper approval, neither the procurement nor the use of the pesticides shall be undertaken unless approved, in writing, by the Assistant Administrator (or in the case of projects authorized at the Mission level, the Mission Director) who approved the Project Paper.

(2) Exceptions to Pesticide Procedures. The procedures set forth in ?216.3 (b)(i) shall not apply to the following projects including assistance for the procurement or use, or both, of pesticides.

(i) Projects under emergency conditions. Emergency conditions shall be deemed to exist when it is determined by the Administrator, A.I.D.. in writing that:

(a) A pest outbreak has occurred or is imminent; and

(b) Significant health problems (either human or animal) or significant economic problems will occur without the prompt use of the proposed pesticide; and

(c) Insufficient time is available before the pesticide must be used to evaluate the proposed use in accordance with the provisions of this regulation.

(ii) Projects where A.I.D. is a minor donor, as defined in ?216.1(c)(12) above, to a multi-donor project.

(iii) Projects including assistance for procurement or use, or both, of pesticides for research or limited field evaluation purposes by or under the supervision of project personnel. In such instances, however, A.I.D. will ensure that the manufacturers of the pesticides provide toxicological and environmental data necessary to safeguard the health of research personnel and the quality of the local environment in which the pesticides will be used. Furthermore, treated crops will not be used for human or animal consumption unless appropriate tolerances have been established by EPA or recommended by FAO/WHO, and the rates and frequency of application, together with the prescribed preharvest intervals, do not result in residues exceeding such tolerances. This prohibition does not apply to the feeding of such crops to animals for research purposes.

(3) Non-Project Assistance. In a very few limited number of circumstances A.I.D. may provide non-project assistance for the procurement and use of pesticides. Assistance in

such cases shall be provided if the A.I.D. Administrator determines in writing that

(i) emergency conditions, as defined in ?216.3(b)(2)(i) above exist; or

(ii) that compelling circumstances exist such that failure to provide the proposed assistance would seriously impede the attainment of U.S. foreign policy objectives or the objectives of the foreign assistance program. In the latter case, a decision to provide the assistance will be based to the maximum extent practicable, upon a consideration of the factors set forth in ?216.3(b)(l)(i) and, to the extent available, the history of efficacy and safety covering the past use of the pesticide the in recipient country.

?216.4 PRIVATE APPLICANTS

Programs, projects or activities for which financing from A.I.D. is sought by private applicants, such as PVOs and educational and research institutions, are subject to these procedures. Except as provided in ?216.2(b), (c) or (d), preliminary proposals for financing submitted by private applicants shall be accompanied by an Initial Environmental Examination or adequate information to permit preparation of an Initial Environmental Examination. The Threshold Decision shall be made by the Mission Director for the country to which the proposal relates, if the preliminary proposal is submitted to the A.I.D. Mission, or shall be made by the officer in A.I.D. who approves the preliminary proposal. In either case, the concurrence of the Bureau Environmental Officer is required in the same manner as in ?216.3(a)(2), except for PVO projects approved in A.I.D. Missions with total life of project costs less than $500,000. Thereafter, the same procedures set forth in ?216.3 including as appropriate scoping and Environmental Assessments or Environmental Impact Statements, shall be applicable to programs, projects or activities submitted by private applicants. The final proposal submitted for financing shall be treated, for purposes of these procedures, as a Project Paper. The Bureau Environmental Officer shall advise private applicants of studies or other information foreseeably required for action by A.I.D.

?216.5 ENDANGERED SPECIES

It is A.I.D. policy to conduct its assistance programs in a manner that is sensitive to the protection of endangered or threatened species and their critical habitats. The Initial Environmental Examination for each project, program or activity having an effect on the environment shall specifically determine whether the project, program or activity will have an effect on an endangered or threatened species, or critical habitat. If the proposed project, program or activity will have the effect of jeopardizing an endangered or threatened species or of adversely modifying its critical habitat, the Threshold Decision shall be a Positive Determination and an Environmental Assessment or Environmental Impact Statement completed as appropriate, which shall discuss alternatives or modifications to avoid or mitigate such impact on the species or its habitat.

?216.6 ENVIRONMENTAL ASSESSMENTS

(a) General Purpose

The purpose of the Environmental Assessment is to provide Agency and host country decision-makers with a full discussion of significant environmental effects of a proposed action. It includes alternatives which would avoid or minimize adverse effects or enhance the quality of the environment so that the expected benefits of development objectives can be weighed against any adverse impacts upon the human environment or any irreversible or irretrievable commitment of resources.

(b) Collaboration with Affected Nation on Preparation

Collaboration in obtaining data, conducting analyses and considering alternatives will help build an awareness of development associated

environmental problems in less developed countries as well as assist in building an indigenous institutional capability to deal nationally with such problems. Missions, Bureaus and Offices will collaborate with affected countries to the maximum extent possible, in the development of any Environmental Assessments and consideration of environmental consequences as set forth therein.

(c) Content and Form

The Environmental Assessment shall be based upon the scoping statement and shall address the following elements, as appropriate:

(1) Summary. The summary shall stress the major conclusions, areas of controversy, if any, and the issues to be resolved.

(2) Purpose. The Environmental Assessment shall briefly specify the underlying purpose and need to which the Agency is responding in proposing the alternatives including the proposed action.

(3) Alternatives Including the Proposed Action. This section should present the environmental impacts of the proposal and its alternatives in comparative form, thereby sharpening the issues and providing a clear basis for choice among options by the decision-maker. This section should explore and evaluate reasonable alternatives and briefly discuss the reasons for eliminating those alternatives which were not included in the detailed study; devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits; include the alternative of no action; identify the Agency?s preferred alternative or alternatives, if one or more exists; include appropriate mitigation measures not already included in the proposed action or alternatives.

(4) Affected Environment. The Environmental Assessment shall succinctly describe the environment of the area(s) to be affected or created by the alternatives under consideration. The descriptions shall be no longer than is necessary to understand the effects of the alternatives. Data and analyses in the Environmental Assessment shall be commensurate with the significance of the impact with less important material summarized, consolidated or simply referenced.

(5) Environmental Consequences. This section forms the analytic basis for the comparisons under paragraph (c)(3) of this section. It will include the environmental impacts of the alternatives including the proposed action; any adverse effects that cannot be avoided should the proposed action be implemented; the relationship between short-term uses of the environment and the maintenance and enhancement of long-term productivity; and any irreversible or irretrievable commitments of resources which would be involved in the proposal should it be implemented. It should not duplicate discussions in paragraph (c)(3) of this section. This section of the Environmental Assessment should include discussions of direct effects and their significance; indirect effects and their significance; possible conflicts between the proposed action and land use plans, policies and controls for the areas concerned; energy requirements and conservation potential of various alternatives and mitigation measures; natural or depletable resource requirements and conservation potential of various requirements and mitigation measures; urban quality; historic and cultural resources and the design of the built environment, including the reuse and conservation potential of various alternatives and mitigation measures; and means to mitigate adverse environmental impacts.

(6) List of Preparers. The Environmental Assessment shall list the names and qualifications (expertise, experience, professional discipline) of the persons primarily responsible for preparing the Environmental Assessment or significant background papers.

(7) Appendix. An appendix may be prepared.

(d) Program Assessment

Program Assessments may be appropriate in order to assess the environmental effects of a number of individual actions and their cumulative environmental impact in a given country or geographic area, or the environmental impacts that are generic or common to a class of agency

actions, or other activities which are not country-specific. In these cases, a single, programmatic assessment will be prepared in A.I.D./Washington and circulated to appropriate overseas Missions, host governments, and to interested parties within the United States. To the extent practicable, the form and content of the programmatic Environmental Assessment will be the same as for project Assessments. Subsequent Environmental Assessments on major individual actions will only be necessary where such follow-on or subsequent activities may have significant environmental impacts on specific countries where such impacts have not been adequately evaluated in the programmatic Environmental Assessment. Other programmatic evaluations of class of actions may be conducted in an effort to establish additional categorical exclusions or design standards or criteria for such classes that will eliminate or minimize adverse effects of such actions, enhance the environmental effect of such actions or reduce the amount of paperwork or time involved in these procedures. Programmatic evaluations conducted for the purpose of establishing additional categorical exclusions under ?216.2(c) or design considerations that will eliminate significant effects for classes of actions shall be made available for public comment before the categorical exclusions or design standards or criteria are adopted by A.I.D. Notice of the availability of such documents shall be published in the Federal Register. Additional categorical exclusions shall be adopted by A.I.D. upon the approval of the Administrator, and design
consideration in accordance with usual agency procedures.

(e) Consultation and Review

(1) When Environmental Assessments are prepared on activities carried out within or focused on specific developing countries, consultation will be held between A.I.D. staff and the host government both in the early stages of preparation and on the results and significance of the completed Assessment before the project is authorized.

(2) Missions will encourage the host government to make the Environmental Assessment available to the general public of the recipient country. If Environmental Assessments are prepared on activities which are not country - specific, the Assessment will be circulated by the Environmental Coordinator to A.I.D.?s Overseas Missions and interested governments for information, guidance and comment and will be made available in the U.S. to interested parties.

(f) Effect in Other Countries

In a situation where an analysis indicates that potential effects may extend beyond the national boundaries of a recipient country and adjacent foreign nations may be affected, A.I.D. will urge the recipient country to consult with such countries in advance of project approval and to negotiate mutually acceptable accommodations.

(g) Classified Material

Environmental Assessments will not normally include classified or administratively controlled material. However, there may be situations where environmental aspects cannot be adequately discussed without the inclusion of such material. The handling and disclosure of classified or administratively controlled material shall be governed by 22 CFR Part 9. Those portions of an Environmental Assessment which are not classified or administratively controlled will be made available to persons outside the Agency as provided for in 22 CFR Part 212.

?216.7 ENVIRONMENTAL IMPACT STATEMENTS

(a) Applicability

An Environmental Impact Statement shall be prepared when agency actions significantly affect:

(1) The global environment or areas outside the jurisdiction of any nation (e.g., the oceans);

(2) The environment of the United States; or

(3) Other aspects of the environment at the discretion of the Administrator.

(b) Effects on the United States: Content and Form An Environmental

Impact Statement relating to paragraph (a)(2) of this section shall comply with the CEQ Regulations. With respect to effects on the United States, the terms environment and significant effect wherever used in these procedures have the same meaning as in the CEQ Regulations rather than as defined in ?216.l(c)(12) and (13) of these procedures.

(c) Other Effects: Content and Form

An Environmental Impact Statement relating to paragraphs (a)(l) and (a)(3) of this section will generally follow the CEQ Regulations, but will take into account the special considerations and concerns of A.I.D. Circulation of such Environmental Impact Statements in draft form will precede approval of a Project Paper or equivalent and comments from such circulation will be considered before final project authorization as outlined in ?216.3 of these procedures. The draft Environmental Impact Statement will also be circulated by the Missions to affected foreign governments for information and comment. Draft Environmental Impact Statements generally will be made available for comment to Federal agencies with jurisdiction by law or special expertise with respect to any environmental impact involved, and to public and private organizations and individuals for not less than forty-five (45) days. Notice of availability of the draft Environmental Impact Statements will be published in the Federal Register. Cognizant Bureaus and Offices will submit these drafts for circulation through the Environmental Coordinator who will have the responsibility for coordinating all such communications with persons outside A.I.D. Any comments received by the Environmental Coordinator will be forwarded to the originating Bureau or Office for consideration in final policy decisions and the preparation of a final Environmental Impact Statement. All such comments will be attached to the final Statement, and those relevant comments not adequately discussed in the draft Environmental Impact Statement will be appropriately dealt with in the final Environmental Impact Statement. Copies of the final Environmental Impact Statement, with comments attached, will be sent by the Environmental Coordinator to CEQ and to all other Federal, state, and local agencies and private organizations that made substantive comments on the draft, including affected foreign governments. Where emergency circumstances or considerations of foreign policy make it necessary to take an action without observing the provisions of ?1506.10 of the CEQ Regulations, or when there are overriding considerations of expense to the United States or foreign governments, the originating Office will advise the Environmental Coordinator who will consult with Department of State and CEQ concerning appropriate modification of review procedures.

?216.8 PUBLIC HEARINGS

(a) In most instances AID will be able to gain the benefit of public participation in the impact statement process through circulation of draft statements and notice of public availability in CEQ publications. However, in some cases the Administrator may wish to hold public hearings on draft Environmental Impact Statements. In deciding whether or not a public hearing is appropriate, Bureaus in conjunction with the Environmental Coordinator should consider:

(1) The magnitude of the proposal in terms of economic costs, the geographic area involved, and the uniqueness or size of commitment of the resources involved;

(2) The degree of interest in the proposal as evidenced by requests from the public and from Federal, state and local authorities, and private organizations and individuals, that a hearing be held;

(3) The complexity of the issue and likelihood that information will be presented at the hearing which will be of assistance to the Agency; and

(4) The extent to which public involvement already has been achieved through other means, such as earlier public hearings, meetings with citizen representatives, and/or written comments on the proposed action.

(b) If public hearings are held, draft Environmental Impact Statements to be discussed

should be made available to the public at least fifteen (15) days prior to the time of the public hearings, and a notice will be placed in the Federal Register giving the subject, time and place of the proposed hearings.

?216.9 BILATERAL AND MULTILATERAL STUDIES AND CONCISE REVIEWS OF ENVIRONMENTAL ISSUES

Notwithstanding anything to the contrary in these procedures, the Administrator may approve the use of either of the following documents as a substitute for an Environmental Assessment (but not a substitute for an Environmental Impact Statement) required under these procedures:

(a) Bilateral or multilateral environmental studies, relevant or related to the proposed action, prepared by the United States and one or more foreign countries or by an international body or organization in which the United States is a member or participant; or

(b) Concise reviews of the environmental issues involved including summary environmental analyses or other appropriate documents.

?216.10 RECORDS AND REPORTS

Each Agency Bureau will maintain a current list of activities for which Environmental Assessments and Environmental Impact Statements are being prepared and for which Negative Determinations and Declarations have been made. Copies of final Initial Environmental Examinations, scoping statements, Assessments and Impact Statements will be available to interested Federal agencies upon request. The cognizant Bureau will maintain a permanent file (which may be part of its normal project files) of Environmental Impact Statements, Environmental Assessments, final Initial Environmental Examinations, scoping statements, Determinations and Declarations which will be available to the public under the Freedom of Information Act. Interested persons can obtain information or status reports regarding Environmental Assessments and Environmental Impact Statements through the A.I.D. Environmental Coordinator.

(22 U.S.C. 2381; 42 U.S.C. 4332)
Dated October 9, 1980
Joseph C. Wheeler
Acting Administrator

Annex E

Sample Tables and Environmental Checklists

Annex F

Information on Use and Preparation of the Umbrella IEE and Use of Environmental Screening and Report Form

Attachment: **Environmental Screening and Report Form for NGO/PVO Activities and Grant Proposals**

NOTE: The process described here is entirely optional and open to adaptation. This umbrella process was designed by USAID's Bureau for Africa together with PVOs carrying out activities under umbrella grants in which there is a proposal review and sub-granting process. The reporting and accountability provisions are subject to change under Title II.

A screening process is applied during the activity-design stage, and mitigation measures thereby identified are built into implementation. It has not yet been fully evaluated for applicability to Title II program contexts. Food for development resources may not be commonly used to provide grants to sub-recipients, but sub-granting does occur, and perhaps will be used increasingly in the future. Thus, the umbrella review process could be adapted to determine the need for environmental mitigation. Also, the screening process could be adapted to downstream review of activities whose specific design is completed after the DAP is approved.

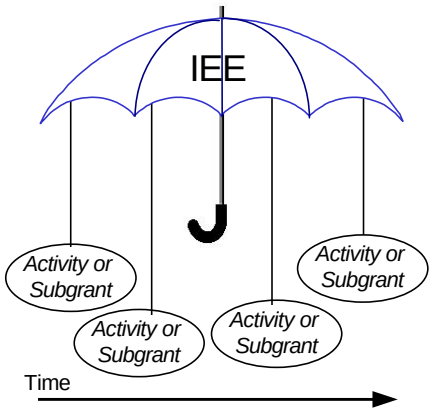
Annex F

Information on Use and Preparation of the Umbrella IEE and Use of Environmental Screening/Report Form

F.1 What is an "Umbrella" IEE and When is It Used?[1]

An "umbrella" IEE addresses a**multiple sets of activities generally expected to be small in scale and where their nature is unknown or insufficient specific information is available** (such as engineering designs or siting data), when the IEE and/or DAP is being prepared (See Figure F.1).

Figure F.1: Multiple Activity DAP with Activities to be More Fully Designed at a Later Date



Prepare Umbrella IEE

- Negative Determination with Conditions (agreement between PVO/NGO & USAID)

- As part of conditions, PVO/NGO:
  - demonstrates environmental assessment capacity (for example, through training or in other ways)
  - screens activities and sites as appropriate
  - follows environmental review process as part of planning & design
  - prepares monitoring & mitigation plans
  - PVO/NGO summarizes status of environmental compliance process as appropriate in annual Title II results report

[1] Within USAID this has sometimes been referred to as a "programmatic" IEE concept, not to be confused with the Programmatic Environmental Assessment (PEA) described in Annex C.

As mentioned in Section 3.5, an umbrella IEE may be appropriate if: the DAP consists of multiple activities, most of which are small-scale **but not yet fully designed**, and which can be subjected to a subsequent review process defined by the CS; or the CS intends to implement a sub-granting program in which as-yet unidentified sub-recipients submit proposals for activities, and these proposals are to be linked to a subsequent environmental review process similar to that laid out below.

An alternative to the umbrella IEE is doing an **IEE with a deferral of those activities for which insufficient information is available,** which will then require amendment of the IEE before you obligate funds for, or implement, that activity (as described in Section 3.5).

Note: It should be understood that CSs, if they so choose, can apply the "umbrella" to only a **portion** of the IEE and not all, if there are a large number of multiple sets of activities that are not yet fully defined (for example, community designed activities lend themselves to an "umbrella process"), while other activities under the DAP are already well-defined (for example, a discrete soil and water conservation project) and thus would be treated in the IEE as an activity outside the "umbrella." Under the IEE, the determination for that part of the program with not yet fully defined activities is a negative determination with conditions (See Figure F.2).

The "umbrella" IEE process allows you to deal with sets of yet-to-be-fully designed activities in a more generic fashion and engages you and your implementing partners in a subsidiary environmental screening and review process, once design and siting information has been obtained. This process allows you to screen and prepare environmental reviews of each activity or set of activities (grouped geographically or in some other fashion) as the information becomes available. If you use the "umbrella" IEE with post-IEE environmental reviews, you should not implement the specific activity or group of similar activities until the screening and review process is complete, including USAID approval, if appropriate. Note that with each umbrella IEE, the respective Mission and PVO, with the concurrence of the BHR BEO, will determine what level of sub-activity review and approval will be carried out by the USAID Mission, if any. The PVO should discuss approval requirements with the Mission when considering an "umbrella" IEE.

Approval of the "umbrella" IEE means that, in most cases, USAID approval of the subsequent environmental reviews (for specific activities or generic sets) is at the PVO or Mission level and does not require Washington concurrence. While the Mission should be kept informed, Washington concurrence will only rarely be called for (e.g., if an activity should trigger a positive threshold decision).

The Environmental Screening Form (ESF) that accompanies an "umbrella" IEE (see sample form at the end of Annex F) is used after the IEE has been approved. It guides you through the subsidiary screening, review and mitigation process for each set of activities as they are designed. The form itself is normally an integral attachment to the approved IEE. It is meant to be **modified or adapted prior to IEE approval** to reflect the **unique suite of situations** that are most likely to be found under **yet to be defined multiple activities.** Thus, the ESF to be used with a given "umbrella" IEE is typically **specifically tailored for that IEE**.

One particularly useful application of the "umbrella" and the ESF is with small-scale road building and repair. A special ESF has been adapted from USAID/Mozambique, USAID/Madagascar, and USAID/Cambodia approved rural road environmental criteria and requires that local partners, the PVOs, and on-site road engineer be trained to use the criteria to conduct Environmental Reviews (ER). As of the date of publication of the EDM, the most recent adaptation for multiple, not yet well defined, road activities was under Africare's Uganda *Food Security Initiative* and is provided in Annex B.6.

In principle, the **advantages of the "umbrella"-type IEE** are that (a) it provides for an adapted post-IEE screening and review process for each activity in the DAP program as the information becomes available, and (b) once the IEE process of environmental screening and review is approved in Washington, all or most activities can be approved at the PVO or Mission level on the basis of local screening and review.

F.2 Conditions on the Use of the "Umbrella" IEE or Use of an "Umbrella" Component within an IEE.

An "umbrella" IEE or an "umbrella" component within an IEE, involves a negative determination *with conditions.* This means that **the "umbrella" process may only be approved if the PVO agrees to a certain set of conditions** (see Figure F.1), which include: (a) demonstrated PVO capacity to carry out environmental reviews (may include attendance at environmental compliance training), (b) post-IEE screening of appropriate activities or clusters of activities, (c) following an environmental review process as part of planning and design, (d) conducting monitoring and mitigation as appropriate, and (e) reporting on the status of environmental compliance in the Annual TII Results Report, as well as to the Mission Environmental Officer, as requested.

If this approach seems potentially applicable, examine the sample IEE provided in Annex B.5 which contains the typical conditions for an "umbrella" IEE. An "umbrella" IEE or an umbrella component within an IEE can use standardized language, described in detail below, since your ability to analyze activities is limited without information. Figure F.1 illustrates the "umbrella" IEE concept and Figure F.2, the concept of an "umbrella" component within an IEE with other activities and determinations.

F.3 Advice on Preparing Sections 1.0 through 4.0 of an "Umbrella" IEE or "Umbrella" Component within an IEE

In preparing the umbrella IEE or umbrella component, you will find the principles and advice offered in Section 4.0, to be pertinent to a large extent. Below are some annotations and advice based on experience with the umbrella IEE approach, involving subgrants by the lead PVO to sub-recipients. In preparing these four sections it will be helpful if you **refer to the IEE in Annex B.5, CRS/Kenya's DAP *Catholic Relief Services - USCC Kenya Program for FY 1998*, as an example**. If you are using the umbrella process as one component within a larger IEE, be aware as you read the instructions below that you will have to modify the language as appropriate.

U IEE Section 1.0: Background and Project Description

You may find it helpful to review the questions and guidance in Section 4 of the EDM, but you will need to interpret the questions generically.

1.1 Background

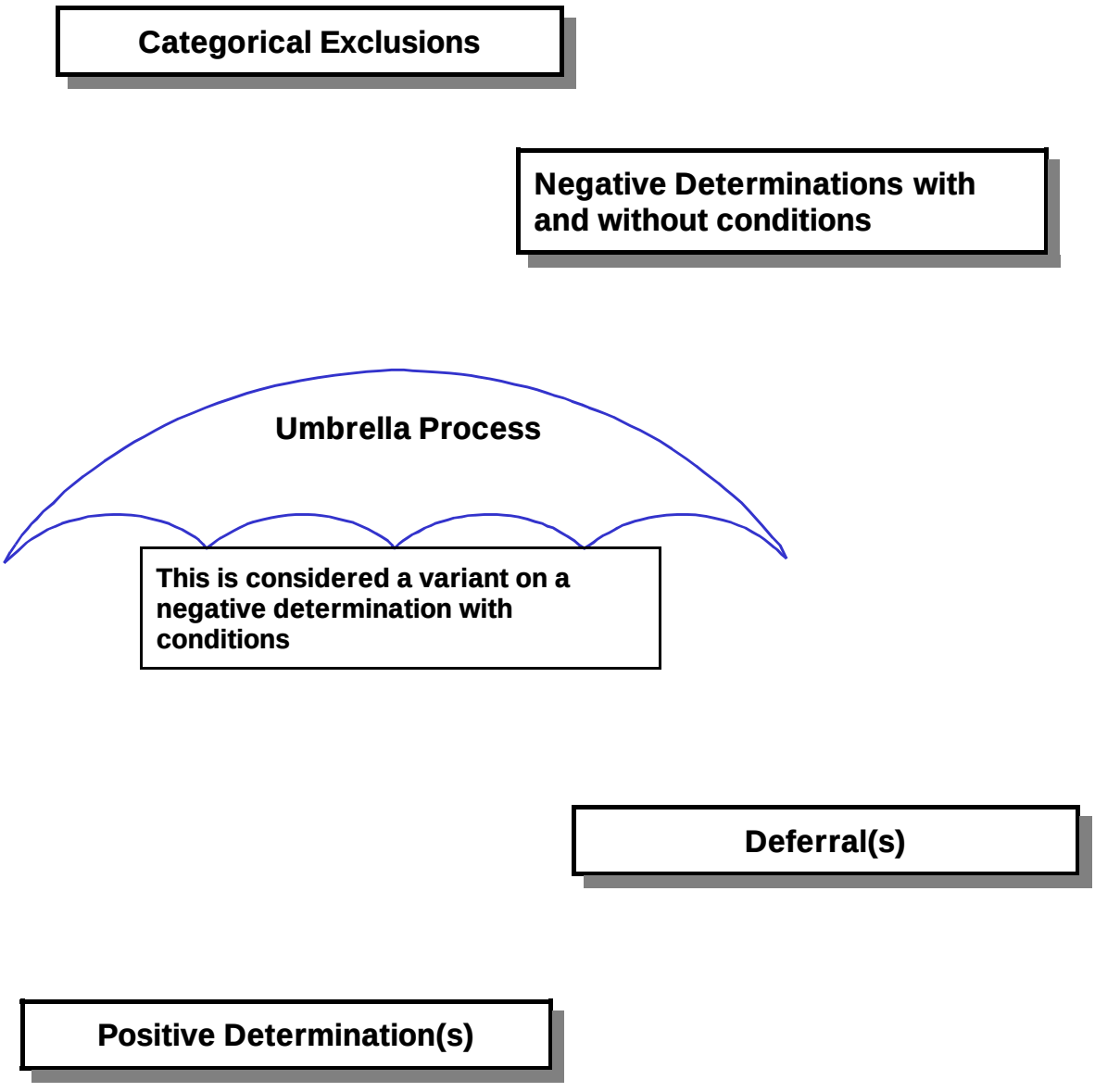
Briefly describe the background of your suite/set of activities and the reasons why they are not well defined. For example, is it because of the need to maintain design flexibility, is it because the activities to be undertaken will be in response to participant generated needs and proposals, or is it for other reasons?

1.2 Current Activity Description

Briefly describe the goals and purposes and types of results expected. Indicate the sectors in which you will work and the types of interventions that are likely. Describe the level of funding, disbursement and

implementation arrangements, including whether the activities are food for work, monetization or entail grants to communities or groups.

Figure F.2 IEE With Multiple Determinations in One IEE, including Use of the Umbrella Process with the IEE



1.3 Purpose and Scope of Amended IEE

Generally this is not needed unless you have already prepared an IEE and plan to amend it so that it uses the umbrella process.

- **IEE Section 2.0: Country and Environmental Information**

Organize this section by location or activity, whichever is most appropriate. This section should provide a brief overall portrait of the setting in those geographic areas where you are planning interventions. Depending on the nature of your DAP or PAA, the "area" could be an entire country, several regions, scattered locations, or a specific region.

Briefly describe environment (including physical, biological, health, socio-economic, and cultural aspects) of the proposed activities' locations. Indicate general environmental issues and trends. Because not all locations for future interventions have been identified and because of the variety of environmental situations that might be encountered, this section of the IEE can be neither comprehensive nor detailed.

- **IEE Section 3.0: Evaluation of Project/Program Issues with Respect to Environmental Impact Potential**

Describe impacts for each activity or sets of activities, using the same organizational framework you adopted for IEE Sections 1 and 2.

If an activity has no impact potential, or a component may be a Categorical Exclusion, briefly note this.

First, provide a brief synopsis of potential interventions. You may simply list these and describe with whatever information you have. Then describe, if you have information, the generic kinds of environmental impacts. (For example, you could draw upon the generic information in the *Environmental Guidelines for Small-scale Activities).*

If your **knowledge of potential environmental impacts is limited, insert the following** or similar wording:

> The physical and topographic conditions, climate, soils, and ecosystems as well as social and economic characteristics that could be encountered are quite variable. Because the specific characteristics and locations of these activities are not definitive, the potential for adverse environmental impacts cannot be excluded until additional information about project design and location becomes available. Each, therefore, requires environmentally sound design and review to determine the specific nature and magnitude of potential impacts. Activities do share the common characteristic of being small in scale.

In addition, you need to think about the potential for cumulative adverse environmental effects as a consequence of multiple activities in a setting or region—those impacts that result when the effects of your actions are added to the existing situation and or other reasonably foreseeable actions, regardless of what organization or agent is undertaking them. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. You probably will not be able to mitigate the effects of activities for which you are not responsible. Nevertheless, where feasible, you should try to coordinate your activities with others, help others to recognize potential impacts of their activities or play a role in fostering an environmentally sound overall development plan.

T IEE Section 4.0 Recommended Mitigation Actions (Including Monitoring and Evaluation)

Under an umbrella IEE, you and USAID commit to following specific procedures for screening, post-IEE environmental reviews, mitigation, and monitoring (see Figure F.1). You and USAID also commit to promoting environmental assessment capacity building for your staff and partners. You could consider and adapt the language below, set off in smaller font and doubly indented, **for this purpose**[2]:

4.1 Recommended Planning Approach

The development activities proposed for support are typically presented and considered as discrete interventions, in isolation from other planned community developments. This linkage argues strongly for the adoption of an integrated approach toward activity planning and implementation. Although such an approach toward program planning and management is more complex and time-consuming "up-front," it will reap significant dividends over the longer term in the form of more cost-effective, sound, and sustainable community investments and improved natural resources management. For maximum efficiency and effectiveness, these review procedures are intended to be applied within the context of development plans, natural resource management plans, or land use plans developed for the areas in which the activities will take place.

4.2 Environmental Screening and Review

These environmental screening and review procedures specify how activities will be examined on an individual basis to comply with the determinations (see Section 5.0) of this IEE in accordance with Reg. 216, Section 216.3(a)(2). These procedures are intended to result in environmental accountability and soundness, by requiring that USAID/[Insert Country name = C from here on] or the CS/sub-recipients put in place specific mechanisms to promote environmental review capacity and other environmental capacity for the implementing partners. To ensure that interventions are designed in a sound and sustainable manner (see Section 4.1), the Mission Environmental Officer (MEO) and/or USAID Project Manager will work with the appropriate implementing partners to achieve compliance with these procedures.

[Insert Cooperating Sponsor = S from here on] is the primary implementing partner of the [Provide DAP or PAA Title here =T from hereon] [Specify other implementing partners and their roles.]

These procedures are based on use of a Screening Form, presented in Attachment 1. This form is consistent with the "Environmental Screening Form for NGO/PVO Activities and Grant Proposals" contained in the Africa Bureau Environmental Guidelines for Small-Scale Activities in Africa. USAID/ C will facilitate the refinement of this form with S and the [Regional Environmental Officer (REO): Insert if one exists] and the Bureau Environmental Officer (BEO) to meet project needs and to incorporate, where appropriate, information that will identify any need for environmental assessment in accordance with C's environmental assessment policy and procedures.

Adherence to the procedures in this IEE cannot be considered in lieu of C's requirements or vice versa. Efforts will be made, however, in the refinement of the Screening Form to dovetail respective assessment information requirements to the maximum extent allowable.

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[2] The relationship between the CSs and USAID may differ from that characterized herein. **The sample language is open to adaptation to the situation at hand.**

This IEE does not cover pesticides or other activities involving procurement, use, transport, storage or disposal of toxic materials, and any situation dealing with such will require an amended IEE, except to the extent covered in Category 2 of the Screening Form attached.

Activities or proposals will be individually screened using the attached Screening Form, which uses a four-tier categorization process:

Category 1: Activities that would normally qualify for a categorical exclusion under Reg. 216 (e.g., community awareness initiatives, training at any level, provision of technical assistance, controlled experimentation exclusively for the purpose of research, and field evaluation that is confined to small areas and carefully monitored, etc.) Certain, specifically defined, small-scale activities entailing rehabilitation of water points and construction or rehabilitation of facilities have also been placed in this category.

Category 2: Activities that would normally qualify for a negative determination under Reg. 216, based on an environmentally sound approach to the activity design and incorporation of appropriate mitigation and monitoring procedures. For example, the design followed, and the manager has access to and will follow, a series of guidelines for the design of small-scale, environmentally sound activities in forestry, natural resource management, infrastructure, etc.

Category 3: Activities that have a clear potential for undesirable environmental impacts and typically under Reg. 216 require an Environmental Assessment, such as those involving land development, planned resettlement, penetration road building, substantial piped water supply and sewage construction, large-scale irrigation projects, and projects involving the procurement and/or use of pesticides, or of large-scale or area-wide application of pesticides. All activities listed in Reg. 216 (Sect. 216.2[d][1]) are automatically included, unless they are small-scale and qualify for a negative determination in accordance with the criteria listed under Category 2.

Category 4: This category groups activities that either USAID cannot fund or for which specific findings must be made in an Environmental Assessment prior to funding. Interventions that are likely to jeopardize a critical habitat for threatened or endangered species or degrade a protected area must be placed in this category. Category 4 covers activities that trigger provisions of Sections 118 or 119 of the Foreign Assistance Act, which generally relate to degradation of national parks or protected areas, introduction of exotic species, or effects on tropical or undegraded forest lands.

_S_ will employ the Screening Form provided as Attachment 1 and to be refined as needed in consultation with the[REO: Insert if one exists] or BEO and the Environmental Review Reports prepared as a result of the categorization process to evaluate activities and/or proposals. Preferably, the direct or actual implementor of an activity will prepare the forms and the environmental reviews, which will be reviewed by_S_ prior to submittal to USAID/_C_. [Insert this sentence if appropriate: Proposals seeking support from the_T_ must also comply with any of its approval criteria and review procedures, which will also include this requirement for environmental screening and review, as well as any other_S_ or USAID/_C_ requirements designed to ensure developmentally sound and sustainable activities for the _T_.]

An Environmental Review Report shall be prepared for all Category 2 activities. The MEO or Mission Director, or Acting Director, on behalf of USAID/_C_, shall be responsible for

clearances on the category determination and Environmental Review Reports. It is assumed that the majority of activities will fall within Categories 1 and 2, and will, therefore, be approvable locally by USAID/ C without further external review. This delegation of responsibility, without regard to dollar amount of activities, is predicated on the assumption that appropriate and environmentally sound implementation and environmental monitoring and mitigation procedures will be in place. The MEO, should he/she have questions, will pass Category 2 activities and their reviews to the [REO: Insert if one exists] and BEO for consultation. An Environmental Review Report shall also be prepared as the first step for all Category 3 activities to help the [REO: Insert if one exists] and BEO determine if an Environmental Assessment is required. While an Environmental Review Report may be prepared for Category 4 activities, it is recommended that developers of activities and proposals consult with the USAID MEO and Project Manager before preparing elaborate documentation. All Category 3 and 4 activities (if there are any) shall be subject to additional environmental evaluation, as deemed appropriate, in consultation with the BEO and REO, and shall be passed on to the [REO: Insert if one exists] and Bureau Environmental and Legal Officers for further review and clearance.

Prior to the approval of an activity, results of the environmental categorization must be available and considered. For Category 2 projects, Environmental Review Reports, including MEO review and, if needed, [REO: Insert if one exists] or BEO review, must be performed prior to funding. For any Category 3 or 4 activities, approval cannot be given until the Environmental Review and any additional environmental documentation as determined by the BEO have been prepared and cleared. S may, if it desires, categorize or review categorization of activities, based on use of the screening form, prior to proposers receiving approval and proceeding with final design. This procedure would allow activities in Category 1 (no environmental review required) to be carried out and allow the proposer to undertake appropriate environmental documentation according to the procedures for Category 2, 3, or 4 activities. Hence, such awards will contain clauses stating that funding of Category 2, 3, or 4 activities is contingent on findings, recommendations and clearance of the environmental documentation.

The MEO and/or Project Manager shall on a routine (semi-annual) basis pass to the [REO: Insert if one exists] and BEO an updated summary of activities and the results of the environmental categorization and review process to keep them apprised of the type/nature, scale, funding levels, and implementation status of the individual activities approved under the process described in this IEE and any corresponding mitigation and monitoring requirements. Reference to this process will also be made in the Mission's R4 submittal.

4.3 Promotion of Environmental Review and Capacity-Building Procedures

The procedures described above and incorporated within the Screening Form are intended to ensure environmental accountability and soundness, on the assumption that the Mission has the following additional elements in effect to build environmental capacity with S and its partners:

- The proposer/implementing agent and its appropriate partners will help design, conduct, participate in, and apply environmental assessment and management training, in conjunction with USAID and host country resource organizations and agencies, such as the Regional Environmental Assessment Training Course, and pursue follow-up training to assist these partners in properly fulfilling the screening and review requirements in conjunction with concerned C organizations and agencies;

- The proposer/implementing agent and its appropriate partners will also be

encouraged to apply appropriate C environmental assessment policies and procedures; and

- A monitoring and evaluation process will be put in place and used by S and its appropriate partners, in collaboration with any concerned C authorities, and USAID project management.

4.4 Environmental Responsibilities

USAID/ C assumes responsibility for environmental review and decision-making for all USAID-assisted T activities as outlined below:

- Through S, and with the assistance of partners (as appropriate), proposers will submit proposals that take into consideration potential environmental impacts and their mitigation, including avoidance, and will design the activities with an environmental monitoring system in place.

- S, with the assistance of partners (as appropriate), will use the Screening Form to categorize proposals, and the MEO will review and pass on to the [REO: Insert if one exists] and BEO any Category 3 or 4 and, as he/she determines, some Category 2 activities.

- The proposer/implementing agent for an activity, with the assistance of appropriate partners, will ensure implementation of agreed-on mitigating measures and environmental impact monitoring.

- USAID/ C's MEO and the Project Manager will be ultimately responsible for monitoring environmental impacts of all project-financed activities, as further specified below (Section 4.5).

- Periodic visits of the [REO: Insert if one exists] or BEO will also be requested for advice, refresher training, and confirmation that environmental processes are in place.

4.5 Monitoring, Evaluation, and Mitigation

An **environmental monitoring, evaluation, and mitigation process** will be established and used by the implementing partners in collaboration with USAID. USAID-supported activities shall incorporate appropriate mitigation and monitoring procedures as listed below.

- The proposer/implementing agent and its partners will use the *Environmental Guidelines for Small-Scale Activities in Africa* (or other appropriate references) to assist them in determining what potential impacts should be of concern for different types of development activities in various settings. Using the information from this and other documents cited therein, S will determine which impacts to mitigate and monitor for the particular development activity.

- The proposer/implementing agent and its partners must identify in each proposal and in the accompanying environmental review reports all proposed environmental mitigation and monitoring requirements.

- Once the environmental review reports are approved, the mitigative measures and monitoring procedures stated in the environmental review report shall be considered a requirement.

- The implementing agent/partner, with assistance of other appropriate partners, shall be responsible for implementation of agreed-on mitigation measures and monitoring of impacts .

- All periodic reports of the implementing partner, under these procedures, to USAID/C shall contain a section on environmental impacts, success or failure of mitigative measures being

implemented, results of environmental monitoring, and any major modifications/revisions to the project, mitigative measures or monitoring procedures.

USAID/ C is ultimately responsible for ensuring conformity with the procedures spelled out above, including environmental categorization and review procedures. With particular respect to monitoring, evaluation and mitigation, the Mission is responsible for:

- monitoring and evaluation of activities after implementation with respect to environmental effects that may need to be mitigated, a process that should be integrated into the Mission's pertinent Performance Monitoring and Evaluation Plan;

- review of the implementing partner's reports with respect to results of environmental mitigation and monitoring procedures;

- incorporating into Mission field visits and consultations with implementing partners periodic examination of the environmental impacts of activities and associated mitigation and monitoring (assistance in preparing guidelines or with the monitoring and evaluation can be solicited from the [REO: Insert if one exists] or BEO); and

- reporting on implementation of mitigation and monitoring requirements as part of the summary of activities and their status that is passed to the [REO: Insert if one exists] and BEO.

T IEE Section 5.0 Summary of Findings

Incorporate the language below:

This Initial Environmental Examination (IEE) satisfies the conditions of the environmental procedures for umbrella activities and delegation of environmental review responsibility to Missions for PVO/NGO umbrella-type projects (Cable 95 STATE 257896).

Environmental Determinations

Based on environmental review procedures, promotion of environment review, capacity building, and monitoring, evaluation, and mitigation procedures specified in this IEE, to which the Mission commits itself, the following environmental determinations are recommended:

1. A **Categorical Exclusion** is recommended for project-financed technical assistance, training and education, institutional strengthening, regional communications and information exchange activities that have no physical interventions and no direct effects on the environment pursuant to 22 CFR 216.2(c)(1)(i) and 216.2(c)(2)(i), (iii) and (v) [Insert others if applicable]. **The screening form will be used to confirm this determination for each activity.** This categorical exclusion does **not** apply to education, technical assistance, or training if such includes activities directly affecting the environment, such as construction of facilities, per 216.2(c)(2)(i), **nor** to studies, projects, or programs intended to develop the capability of recipient countries to engage in development planning when designed to result in activities directly affecting the environment, per 216.2(c)(2)(xiv).

2. A **Negative Determination with Conditions** is recommended for all other activities entailing community development. This IEE specifies a set of steps to ensure adequate environmental review of USAID-supported activities, including capacity-building elements. This negative determination is also conditioned on the provision of supplemental project technical assistance and training support to augment existing efforts. These capacities will be developed and implemented in close collaboration with the USAID/ C and partners.

Conditions

USAID's support for the T will follow a formalized environmental review process for its activities. A key component of this review process is the use of a Screening Form (Attachment 1) to categorize activities, and review and screen them for potential environmental impacts.

The USAID Mission assumes responsibility for environmental review, with clearance by the Mission Environmental Officer (MEO) or USAID Director or Acting Director in accordance with the environmental review procedures outlined herein for Category 1 and Category 2 activities. All activities classified as Category 3 or 4, based on the procedures for categorization and review (in the unlikely event there are any), and possibly some in Category 2, at the discretion of the MEO, will be subjected to additional environmental review, as deemed appropriate, in consultation with the [REO: Insert if one exists] and Bureau Environmental Officer (BEO), and will be passed to the Bureau Environmental and Legal Officers for further review and clearance.

S may, if it desires, categorize or review categorization of activities, based on use of the screening form, prior to proposers receiving approval and proceeding with final design. This procedure would allow Category 1 activities that are in Category 1 (no environmental review required) to be carried out and for the proposer to undertake an appropriate environmental review in accordance with the procedures for Category 2, 3, or 4 activities. No activities classified in Category 2, 3, or 4 will be funded until the environmental documentation required by this IEE has been prepared, reviewed, and cleared. Hence, such awards will contain clauses stating that funding

for such activities is contingent on adherence to the findings and clearance of the environmental documentation.

Partners implementing the T's USAID-supported activities will help design, conduct, participate in and apply appropriate environmental assessment/design and implementation/mitigation procedures for each activity. The Project will support appropriate environmental training and will do follow-up training to assist these partners in properly fulfilling this review requirement, in conjunction with concerned C organizations and agencies.

An environmental monitoring, evaluation and mitigation process shall be established and used by the implementing partners, including grantees, in collaboration with USAID. Updated summaries of activities and their status, based on the procedures described in this IEE, will be submitted periodically to the REO and BEO to keep them apprised of the type, scope and implementation status of the activities and their corresponding mitigation and monitoring requirements. Reference to this process will be made in the Mission's annual R4 submittal.

This IEE does not cover pesticides or other activities involving procurement, use, transport, storage, or disposal of toxic materials, and any situation dealing with such will require an amended IEE, except to the extent covered in Category 2 of the screen form attached.

Adherence to the procedures in this IEE is not in lieu of any environmental assessment procedures required by the C, nor can adherence to host country environmental procedures be substituted for compliance with the procedures in this IEE. Efforts will be made, however, in the development or revisions of the Screening Form to dovetail respective assessment information requirements to the maximum extent allowable.

Attachment to Annex F:

Environmental Screening & Report Form for NGO/PVO Activities and Grant Proposals

Background

USAID, as a "re-engineered, learning institution," has introduced major changes in its new operations systems, with a strengthened focus on results (not activities), greater accountability and empowerment, teamwork, participation and customer orientation. For example, projects are replaced with "results packages" provide USAID operating units and collaborators the flexibility they need to adapt to changes during implementation. The underlying rationale is to focus on results, while still managing inputs and monitoring outputs properly, and to give those responsible (including the host country partners) for achieving results the flexibility to change approaches and tactics as situations change or lessons are learned.

The present Environmental Screening and Reporting Form (ESF) is designed to be consistent with the Initial Environmental Examination process, and to assist USAID Missions and their implementing partners design and implement activities in an environmentally sound manner in accordance with all salient agency policies and procedures. Use of the ESF will greatly reduce the need for review and approval of activities at the regional or Washington levels.

Introduction to Use of this Form

This form is to be utilized to screen activities based upon the umbrella IEE which is attached. ***This form is intended to be adaptable to unique circumstances*. Thus, its final contents and conditions of use are to be refined and jointly determined among the affected partners—PVO, NGO, USAID, host country agencies, etc.** To the extent possible, the form should reflect host government environmental policies and procedures.

In using it, adjustments can be made in consultation with the Regional Environmental Officer (REO, if one exists) and Bureau Environmental Officer. It is strongly advised that the Mission Environmental Officer make on-site visits prior to finalization of the ESF, and that the ESF be rational and fully defensible and without ambiguity as to how the conclusion was reached that the activity(ies) will have no significant impact.

NOTE: This form was designed by USAID's Bureau for Africa with PVOs carrying out activities under umbrella-type or co-financing grants in which there is a proposal review and sub-granting process. The ESF is applied during the activity-design stage, and mitigation measures thereby identified are built into implementation. It has not yet fully evaluated or adapted for applicability to Title II programming contexts. It may occur that CSs will provide grants to sub-recipients, and the ESF process could be adapted to determine the need for environmental mitigation. Also, the ESF could conceivably be adapted to downstream review of activities which are more fully designed after the DAP is approved.

ENVIRONMENTAL SCREENING/REPORT FORM FOR NGO/PVO ACTIVITIES & GRANT PROPOSALS [to be adapted by PVOs to their situations]

PVO/NGO: _____

Other Implementing Partner(s)[if Appropriate]_____

Activity Name: _____

Duration (proposed start and completion dates): _____

Geographic Location: _____

Activity Description (paragraph(s) describing purpose/outputs and potential environmental impacts):

[add space as needed]

Determine the Nature of the Activity

a. **Environmental Review Report Needed.** Does the activity include funds to support any physical natural resource management activities (e.g., land clearing, irrigation), or any community and rural development services (e.g., agroforestry, tree-planting), infrastructure (e.g., dams or water catchments), public facilities (e.g., water and sanitation systems), road construction or rehabilitation? Does it involve development of income-generating or resource management systems? It will likely require an Environmental Review of the kind described in Step 4 of this form. Determine which Category the activity falls under, to establish the need for the Environmental Review.

b. **No Further Environmental Review Required.** Does the activity exclusively provide technical assistance, training, institutional strengthening, or research, education, studies or other information analysis, awareness-building or dissemination activities*with no foreseeable negative impact on the biophysical environment*? This probably qualifies as a Category 1 activity—no further environmental review or action may be necessary. Complete form to establish this circumstance.

c. **Multiple Categories.** Many DAP or PAA activities will have components in more than one category. Simply mark all that apply. The form will guide you to the appropriate next steps.

Step 1. Determine Category of Activity.

! **Africa Bureau *Category 1* -- no further environmental review needed:**

< *Does the activity involve (mark yes, if applicable)*:

___ Provision of education, technical assistance, or training. Does *not* qualify for "Category 1" if such programs include activities directly affecting the environment.
___ Community awareness initiatives.
___ Controlled experimentation exclusively for the purpose of research and field evaluation confined to small areas (normally under 4 ha., i.e., 10 acres) and carefully monitored (when no protected or other sensitive environmental areas could be affected).
___ Technical studies and analyses and other information generation activities not involving intrusive sampling of endangered species or critical habitats.
___ Document or information transfers.
___ Nutrition, health care or family planning. Such programs do *not* qualify for "Category 1" if (a) some included activities could directly affect the environment (construction, water supply systems, etc.) or (b) biohazardous (esp. HIV/AIDS) waste is handled or blood is tested.
___ Rehabilitation of water points for domestic household use, shallow, hand-dug wells or small water storage devices (when no protected or other sensitive environmental areas could be affected). *Note that USAID guidance on potable water requires water quality testing for arsenic, coliform, nitrates and nitrites.*
___ Construction or repair of facilities if total surface area to be disturbed is under 10,000 sq. ft. (approx. 1,000 sq. m.) (*and* when *no* protected or other sensitive environmental areas could be affected).
___ Support for intermediate credit arrangements (when *no* significant biophysical environmental impact can reasonably be expected).
___ Programs of maternal and child feeding conducted under Title II of Public Law 480.
___ Food for development programs under Title III of P.L. 480, when *no* on-the-ground biophysical interventions are likely.
___ Studies or programs intended to develop the capability of recipients to engage in development planning. Do *not* mark "yes" if these involve activities directly affecting the environment.

! **Africa Bureau *Category 2* -- Negative environmental impacts possible, environmental review required (specific conditions, including monitoring, may be applied):**

***Note*:** The Environmental Review (Step 4 below) must address why there will be no potential adverse impacts on protected areas, endangered or threatened species or their critical habitat; or relatively undegraded forest, i.e., justify your conclusion that the proposed Category 2 activities do not belong in Category 3 or 4. Even for activities designed to protect or restore natural resources, the potential for environmental harm exists (e.g., re-introduction of species, controlled burning, fencing, wildlife water points, spontaneous human population shifts in response to activities undertaken, etc.). *If you do not find an exact match listed here for the activity you are undertaking, and it is not in Category 1, 3 or 4, then use the last item in Category 2 to describe the activity and treat it as Category 2 for purposes of environmental review.*

< *Does the activity involve (mark yes, if applicable)*:

___ Small-scale activities in agriculture, NRM, sanitation, etc. (*list and scale to be defined mutually among the appropriate partners* -- NGO, donor, host country agencies, REDSO, etc.).

___ Controlled experimentation exclusively for the purpose of research and field evaluation (*areas of 4 ha. or more,* i.e., 10 acres) and carefully monitored, when neither protected or other sensitive environmental areas could be adversely affected nor threatened and endangered species and their habitat jeopardized.

___ Small-scale construction or rehabilitation of facilities or structures in which the surface area to be disturbed exceeds 10,000 sq. ft and funding level is not in excess of $200,000 and where no protected or other sensitive environmental areas could be affected.

___ Minor construction or rehabilitation of rural roads less than ca. 10 km (with no change in alignment or right of way), with ecologically sensitive areas at least 100 m away from the road and not affected by construction or changes in drainage; likewise, no protected areas or relatively undegraded forest should be within 5 km of the road.

___ Nutrition, health care or family planning, *if* (a) some included activities could directly affect the environment (construction, water supply systems, etc.) or (b) biohazardous (esp. HIV/AIDS) *waste is handled or blood is tested*.

_____ Construction or rehabilitation of small-scale water points or water storage devices for domestic or non-domestic use, not covered in Category 1, when neither protected or other sensitive. environmental areas could be adversely affected nor endangered and threatened species jeopardized *Note that USAID guidance on potable water requires water quality testing for arsenic, coliform, nitrates and nitrites.*

___ Quantity imports of commodities such as fertilizers.

___ Food for Development programs under Title II or III, involving known biophysical interventions with potential to cause environmental harm (e.g., roads, bore holes).

___ Support for intermediate credit institutions when indirect environmental harm conceivably could result .

___ Institutional support subgrants to NGOs/PVOs when the activities of the organizations are known and raise the likelihood of some environmental impact.

___ Technical studies and analyses and other information generation activities that could involve intrusive sampling, including aerial surveys, of endangered species or critical habitats.

___ Small-scale use of USEPA-registered least-toxic *general-use pesticides*, limited to NGO-supervised use by farmers, demonstration, training and education, or emergency assistance. Environmental review must be carried out consistent with USAID Pesticide Procedures as required in Reg. 16 [22 CFR 216.3(b)(1)].

___ Other activities not in Category 1 and not in Category 3 or 4. Specify:_____
_____
_____

< Were the following used by the PVO/NGO in designing the above Category 2 activities (mark yes, if applicable)?

___*USAID/AFR's Environmental Guidelines for NGO and PVO Use in Africa*
___Any applicable Programmatic Environmental Assessments: _____
_____

Other(s):_____

! **Africa Bureau *Category 3* -- Significant environmental impacts likely. Environmental review required, and Environmental Assessment likely to be required:**

< *Does the activity involve (mark yes, if applicable):*

___ River basin or new lands development
___ Planned resettlement of human populations
___ Penetration road building, or rehabilitation of roads (primary, secondary, some tertiary) over 10 km length, and any roads which may pass through or near relatively undegraded forest lands or other sensitive ecological areas
___ Substantial piped water supply and sewerage construction
___ Major bore hole or water point construction
___ Large-scale irrigation
___ Water management structures such as dams and impoundments
___ Drainage of wetlands or other permanently flooded areas
___ Large-scale agricultural mechanization
___ Agricultural land leveling
___ Procurement or use of restricted use pesticides, or wide-area application in non-emergency conditions under non-supervised conditions
___ Light industrial plant production or processing (sawmill operation, agro-industrial processing of forestry products)
___ Potential to significantly degrade protected areas, such as introduction of exotic plants or animals
___ Potential to jeopardize threatened & endangered species or adversely modify their habitat (esp. wetlands, tropical forests)

The above Category 3 activities are consistent with USAID criteria for activities that normally require a USAID-specific document with a defined format and procedure, called the Environmental Assessment (EA). It is recognized that some of these categories are ambiguous. Mark "yes" if they apply, and show in the Environmental Review (Step 4) the extent and magnitude of activities and their impacts, so that USAID and its partners can determine if an EA is necessary or not.

! **Africa Bureau *Category 4* -- Activities not fundable or fundable only when specifically defined findings to avoid or mitigate the impacts are made, based on an Environmental Assessment[3]:**

< *Does the activity* involve (yes, no, N/A):

___ Actions determined likely to significantly degrade protected areas, such as introduction of exotic plants or animals
___ Actions determined likely to jeopardize threatened & endangered species or adversely modify their habitat (esp. wetlands, tropical forests)[4]
___ Conversion of forest lands to rearing of livestock
___ Planned colonization of forest lands
___ Procurement or use of timber harvesting equipment

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[3] Per Foreign Assistance Act Sect. 118 & 119 relating to overseas assistance affecting Tropical Forestry and Biodiversity.

[4] Per USAID Environmental Procedures, §22 CFR 216.5, on Endangered Species

___ Commercial extraction of timber
___ Construction of dams or other water control structures which flood relatively undegraded forest lands
___ Construction, upgrading or maintenance of roads (including temporary haul roads for logging or other extractive industries) which pass through relatively undegraded forest lands.

Step 2. Summarize and Itemize Activities. **List activities by all categories to which *Yes* was answered.**

Category of activities as determined below (add entries as required):

Activity/Sub-Activity	Funding:	Category

Step 3. Determine Need to Prepare Environmental Review.

If all activities are in Category 1, sign and date the form. For any activities in Category 2 and 3, prepare an Environmental Review Report assessing all of these activities' impacts. For Category 3 activities, further documentation would be required, once USAID has confirmed the applicability of Category 3, based on the Review. If Category 4 is possible, consult USAID before proceeding with the Environmental Review to determine if activities can be funded and/or whether required EA findings could be made.

For all Category 2 and 3 activities, proceed to Step 4 to prepare Environmental Review.

Step 4. Prepare Environmental Review.

Suggested Format for Environmental Review

The Environmental Review should be about 5-10 pages long (more if required) and consist of following sections:

1. **Background, Rationale and Outputs/Results Expected** -- summarize and cross-reference proposal if this review is contained therein.

2. **Activity Description --** Succinctly describe location, siting, surroundings (include a map, even a

sketch map). Provide both quantitative and qualitative information about actions needed during construction, how intervention will operate and any ancillary development activities that are required to build or operate the primary activity (e.g., road to a facility, need to quarry or excavate borrow material, need tolay utility pipes to connect with energy, water source or disposal point or any other activity needed to accomplish the primary one but in a different location). If various alternatives have been considered and rejected because the proposed activity is considered more environmentally sound, explain these.

3. **Environmental Situation** -- Affected environment, including essential baseline information available for all affected locations and sites, both primary and ancillary activities.

4. **Evaluation of Activities and Issues with Respect to Environmental Impact Potential** -- Include impacts that could occur before construction starts, during construction and during operation, as well as any problems that might arise with restoring or reusing the site, if the facility or activity were completed or ceased to exist. Explain direct, indirect, induced and cumulative effects on various components of the environment (e.g., air, water, geology, soils, vegetation, wildlife, aquatic resources, historic, archaeological or other cultural resources, people and their communities, land use, traffic, waste disposal, water supply, energy, etc.) Indicate positive impacts and how the natural resources base will be sustainably improved.

5. **Environmental Mitigation Actions (**including **monitoring** and **evaluation) --** For example, indicate means taken to avoid, reduce or compensate for impacts, such as restoration of borrow or quarry areas, replanting of vegetation, compensation for any relocation of homes and residents. Indicate how mitigative measures will be monitored to ensure that they accomplish their intended result or what monitoring might be needed for impacts that one is uncertain about.

6. **Other Information** (as appropriate) -- where possible, include photos of the site and surroundings; list the names of any reference materials or individuals consulted.

Note: Specific plans for monitoring of key environmental indicators and mitigation of impacts during activity implementation are especially important; these must be addressed in the review. Information on monitoring results and mitigation of impacts are to be included in all progress reports. Important information and a criterion for evaluation of environmental soundness is showing how the activity is part of or guided by an integrated, community-based resource and land use plan or planning and management framework that considers the appropriate use of multiple resources.

Drafted by: _____ Date:

Reviewed by: _____ Date:

Clearances: (modify as appropriate)

Title II or FFP Officer: _____ Date:

MEO (including recommendation that an EA be prepared, if called for):
_____ Date:

USAID Mission Director (if responsibility not delegated to MEO):
_____ Date:

Attachment: [applicable umbrella PVO project IEE]

Annex G

References and Information Sources

Annex G.1 References and Information Sources for Environmental Review Assembled by the USAID Bureau for Africa, Office of Sustainable Development

Annex G.2 Bibliography of Environmental Assessment Resources in the Food Security Resource Center (FSRC)

Annex G.1

References and Information Sources for Environmental Review Assembled by the USAID Bureau for Africa, Office of Sustainable Development

African Development Bank. 1997. *Environmental Assessment Guidelines: Education.* Louis Berger International, Inc., Coverdale Organization, Inc., and Tufts University. (March).

African Development Bank. 1997. *Environmental Assessment Guidelines: Energy.* Louis Berger International, Inc., Coverdale Organization, Inc., and Tufts University. (March).

African Development Bank. 1997. *Environmental Assessment Guidelines: Fisheries.* Louis Berger International, Inc., Coverdale Organization, Inc., and Tufts University. (March).

African Development Bank. 1997. *Environmental Assessment Guidelines: Irrigation.* Louis Berger International, Inc., Coverdale Organization, Inc., and Tufts University. (March).

African Development Bank. 1997. *Environmental Assessment Guidelines: Population and Health.* Louis Berger International, Inc., Coverdale Organization, Inc., and Tufts University. (March).

Altieri, Miguel. 1988. *Environmentally Sound Small-Scale Agricultural Projects*. Revised edition. Arlington, Virginia: Coordination in Development (CODEL) and Volunteers in Technical Assistance (VITA). Guidelines for planning, project design, and implementation of agriculture projects with a community development emphasis. Includes technical and ecological information. Aimed at the general user. *To order*: see below.

Bassan, Elizabeth, and Wood, T. 1985. *Environmentally Sound Small-Scale Energy Projects*. Arlington, Virginia: CODEL and VITA. Guidelines for planning, project design, and implementation of energy projects. Addresses use of natural resources for energy in a way that maintains ecological well-being. Aimed at the general user. *To order*: see below.

Brown, Michael, and Wyckoff-Baird, B. 1992. *Designing Integrated Conservation and Development Projects*. Washington, DC: Biodiversity Support Program. Discusses the incorporation of environmental conservation into development projects. Includes case studies and recommendations. *To order*: World Wildlife Fund Publications, PO Box 4866, Hampden Post Office, Baltimore, Maryland 21211. Telephone: (410) 516-6951, Fax: (410) 516-6998.

Catterson, Thomas and Knausenberger, Walter. 1997. *Beyond Compliance: Environmental Review and Public Law 480 Food Aid Programming*. USAID Bureau for Africa, Office of Sustainable Development, AFR/SD. SD Technical Publ. 85 p. Washington, D.C. *To order* contact the Africa Bureau publications dissemination office, AFR/SD/PSGE, Washington, DC., fax: (703)235-3826.

CODEL. 1981-86. Series on environmentally sound small-scale projects. Listed as published by CODEL and VITA. Arlington, Virginia: CODEL and VITA.

Dixon, Talbot, and LeMoigne. 1989. *Dams and the Environment.* Washington, DC: The World Bank. *To order*: Distribution Unit, Office of the Publisher, The World Bank, 1818 H Street, N.W., Washington, D.C. 20433.

Ffolliott, Peter, and Thames, J. 1983. *Environmentally Sound Small-Scale Forestry Projects*. Arlington, Virginia: CODEL and VITA. Guidelines for planning, project design, and implementation of forestry and agroforestry projects. Meant for the general practitioner, with an emphasis on community development. *To order*: see below.

Harza Engineering Company. 1980. *Environmental Design Considerations for Rural Development Projects*. Washington, DC: USAID. A manual for identifying potential societal benefits and undesirable environmental impacts that may accompany small rural projects. The sectors covered are: roads; electrification; water supply and sanitation; irrigation and on-farm water management; and small industries. *To order*: USAID, Center for Development Information and Evaluation, Washington, DC 20523.

International Environmental and Natural Resource Assessment Information Service. 1996. *World Directory of Country Environmental Studies.* Washington, DC: World Resources Institute. (May).

Jacobs, Linda. 1986. *Environmentally Sound Small-Scale Livestock Projects*. Arlington, Virginia: CODEL and VITA. Guidelines for planning, project design, and implementation of livestock and range management projects. Includes material on waste management, health, and husbandry. *To order*: see below.

Knausenberger, Walter I., Booth, G., Bingham, C., Fisher, W and Gaudet, J.J. 1996. *Africa Bureau Environmental Guidelines for Small-Scale Activities in Africa*. USAID Bureau for Africa, SD Technical Paper 18. 205 pp. *To order*: contact the Africa Bureau publications dissemination office, AFR/SD/PSGE, Washington, DC.

Roe, Dilys, Dalal-Clayton, B., and Hughes, R. 1995. *A Directory of Impact Assessment Guidelines*. Nottingham, United Kingdom. Environmental Planning Group, International Institute for Environment and Development. International Environmental and Natural Resources Assessment Information Service (INTERAISE) Project.

Sadler, B. and Verheem, R. 1996. The International Study of Effectiveness of Environmental Assessment, Strategic Environmental Assessment. Ministry of Housing, Spatial Planning and the Environment, Publication #53.

Southerland, Mark. 1994. *Evaluation of Ecological Impacts from Highway Development.* Washington, DC: U.S. Environmental Protection Agency. (April).

Tillman, Gus. 1981. *Environmentally Sound Small-Scale Water Projects*. Arlington, Virginia: CODEL and VITA. Guidelines for planning, project design, and implementation of water resource development projects. Suggests low-cost techniques to avoid adverse impacts of water development. *To order*: see below.

Tobin, Richard. 1996. *Bilateral Donor Agencies and the Environment: Pest and Pesticide Management*. USAID Bureau for Africa, Office of Sustainable Development. Technical Paper No. 42. 98 pp.
December.

UNEP. 1996. Environmental Impact Assessment Training Resource Manual. United Nations Environment Program. Environment & Economics Unit. Nairobi, Kenya. Prepared by Australian Environmental Protection Agency (Barton, Australia) for the United Nations Environment Program, Nairobi, Kenya. 710 pp.

USEPA. 1990. *Suspended, Canceled and Restricted (SCR) Pesticides*. Washington, DC: USEPA Pesticides and Toxic Substances. No. 20T-1002.

USEPA. U.S. Environmental Protection Agency Technical Information Packages (TIPs).

Below is a list of technical brochures from a series published by the US EPA and meant for activities outside the United States. This is not a bibliography of the entire series but a selection of brochures that relate directly to these guidelines. For more information, please contact: The Center for Environmental Research Information, USEPA, PO Box 19963, Cincinnati, Ohio, 45219-0963. Telephone: (513) 569-7562. Fax: (513) 569-7566. When ordering documents, the EPA document number or the exact title is necessary.

USEPA. 1992. *Environmental Impact Assessments*. TIPs Series. Washington, DC: USEPA. Document no. EPA/600/M-91/037.
_____. 1992. *Pesticide Usage Guidelines*. TIPs Series. Washington, DC: USEPA. Document no. EPA/600/M-91/035.
_____. 1992. *Pesticides Waste Disposal*. TIPs Series. Washington, DC: USEPA. Document no. EPA/600/M-91/028.
_____. 1992. *Risk Assessment*. TIPs Series. Washington, DC: USEPA. Document no. EPA/600/M-91/034.
_____. 1991. *Small Community Wastewater Systems*. TIPs Series. Washington, DC: USEPA. Document no. EPA/600/M-91/032.
_____. 1991. *Solid Waste Disposal*. TIPs Series. Washington, DC: USEPA. Document no. EPA/600/M-91/030.
_____. 1991. *Ensuring Safe Drinking Water*. TIPs Series. Washington, DC: USEPA. Document no. EPA/600/M-91/012.

World Health Organization. 1997 (draft). *Health Care Waste Management: A WHO Handbook for the Safe Handling, Treatment and Disposal of Wastes*. Geneva. 192 p.

World Bank. 1991. *Environmental Assessment Sourcebook*. 3 volumes. Washington, DC: The World Bank Environment Department. Provides guidelines for environmental assessment, focusing on those operations with major potential for negative environmental impacts, such as new infrastructure, dams, and highways. Discusses World Bank environmental policies and procedures, as well as “best practice” guidelines regarding design choices. Volume II includes sector guidelines for agriculture; rural development; population; health and nutrition; transportation; urban development; water

supply and sewage; energy; and industry. *To order*: Publications Sales Unit, Department F, The World Bank, 1818 H St. NW, Washington, DC 20433. The latest edition is available free of charge.

Volume I: Policies, Procedures, and Cross-sectoral Issues
Volume II: Sectoral Guidelines
Volume III: Guidelines for Environmental Assessment of Energy and Industry Projects

World Bank*. Environmental Assessment Sourcebook Updates.* A periodic set of updates to the subject sourcebook issued in the form of topical bulletins. Started in 1993. In July 1997, issue no. 18 was released, on Health Aspects of Environmental Assessment. Send inquiries to Environment Department, World Bank, 1818 H Street NW, Washington, DC, 20433. Fax: 202 477 0568.

Wyatt, Alan, et al. 1992. *Environmental Guidelines for PVOs and NGOs: Potable Water and Sanitation Projects*. Arlington, Virginia: Water and Sanitation for Health Project (WASH). Provides a framework to help project designers avoid, minimize, or mitigate the potential adverse impacts of small- and medium-scale water supply and sanitation projects in rural and urban areas. Guidelines are used by USAID to evaluate grant proposals that involve water supply and sanitation activities. *To order*: see below.

Ordering information: Environmental Health Project Officer, Office of Health and Nutrition, Environmental Health Division, Global Bureau, USAID, RRB, Washington, DC 20523-3700. Telephone: (202) 712-5403.

Annex G.2

Selected Bibliography of
FSRC Resources on Environmental Issues
prepared by Jessica Graef
for the
FAM Environmental Working Group
Lessons Learned and Planning Workshop
December 18, 1998

This bibliography represents a sample of the environmental information resources that are available at Food Aid Management's (FAM) Food Security Resource Center (FSRC). The resources are divided into the following categories:

- food security and the environment
- food aid and the environment
- refugees and the environment
- poverty and the environment
- environmental guidelines, manuals, sourcebooks
- environmental assessment
- environmental trends/data
- population and the environment
- sustainable agriculture
- desertification, dryland and marginal areas, drought
- soil conservation/erosion
- environmental monitoring
- environmental policy
- forestry/trees
- water resources management
- health/sanitation and the environment
- war/conflict and the environment
- indigenous knowledge, local practices, participation
- energy and the environment
- gender and the environment
- livestock and the environment
- climate change
- infrastructure and the environment
- management of natural resource management/environment projects
- technology and the environment
- pest control methods and the environment
- other environmental issues

Please note that some documents appear in more than one category. Ordering information appears on the final page of the bibliography.

C ***Food security and the environment***

Critical links: Food security and the environment in the Greater Horn of Africa. *1998. Thrupp, Lori Ann; Megateli, Habiha; World Resources Institute. 57p. FSRC #6828.*
Provides a synthesis of major challenges and opportunities in the food security-environment nexus in the

Greater Horn of Africa. Examines the underlying causes of food insecurity and environmental degradation and presents options to address these complex problems.

Food for all in 2020: Can the world be fed without damaging the environment? *1996. Pinstrup-Andersen, Per and Rajul Pandya-Lorch. Environmental Conservation, Vol. 23, No. 3. IFPRI Reprint No. 363. 9p. FSRC #6803.*
Addresses the question of whether the world can feed future generations and eliminate hunger without further damaging the environment.

2020 vision for food, agriculture, and the environment in Latin America. *1995. Garrett, James L.; International Food Policy Research Institute. 20p. FSRC #05217.*

2020 vision for food, agriculture, and the environment in Sub-Saharan Africa. *1995. Badiane, Ousmane; Delgado, Christopher L.; International Food Policy Research Institute. 56p. FSRC #5215.*

Major natural resource management concerns in South Asia. *1995. Gill, Gerard J.; International Food Policy Research Institute. 29p. FSRC #5219.*
Series of reports on challenges to food, agriculture, and the environment in Latin America, Sub-Saharan Africa, and South Asia. Includes analysis and development of strategies to address these challenges.

Feeding the world, preventing poverty, and protecting the Earth 2020 Vision. *1996. International Food Policy Research Institute. 28p. FSRC #5212.*
Booklet that describes the mission of the 2020 Vision program in non-technical language. Examines the interaction of hunger, poverty, and environmental degradation and proposes solutions.

Green conditionality and food security: Winners and losers from the greening of aid. *1992. Davies, Susanna. 15p. FSRC #2179.*
Examines the consequences of the "greening of aid" - or the conditions needed to be imposed on aid to make aid more environmentally friendly - on food security policies. Discusses policy options and minimize some adverse consequences.

Growing our future: Food security and the environment. *1992. Smith, Katie and Yamamori, Tetsunao (eds.). 172p. FSRC #554.*
Proceedings from Growing Our Future: Food Security and the Environment symposium (November 1991). Presentations cover the following topics: food security and the environment; democracy and the environment; resource wars; food security, environment, and agrarian reform in Latin America; food production and conservation; relationships between coping strategies, food security, and environmental degradation in Africa; and private sector initiatives for sustainable development.

Shrinking fields: Cropland loss in a world of eight billion. *July 1996. Gardner, Gary. Worldwatch Paper*

131. Worldwatch Institute. 56p.
Discusses cropland loss and the policies necessary to reduce degradation, thereby improving food security.
Full house: Reassessing the Earth's population carrying capacity. *1994. Brown, Lester; Kane, Hal. 223p. FSRC #1080.*
Explores food insecurity and environmental degradation in the ocean, rangeland, agriculture, and water resources. Proposes strategies to address the food/population issue.

Constraints to improved food security: Linkages among agriculture, environment, and poverty. *1992. Vosti, Stephen; International Food Policy Research Institute. 42p. FSRC #674.*
Looks at the linkages between poverty, environment, and agriculture. Discusses links between the environment and human welfare and well as the relationship between environment and agricultural production. Also examines impact of the environment, infrastructure, agricultural production, and household and individual characteristics on the nutritional status of adults and children.

Role of fertilizer in sustaining food security and protecting the environment to 2020. *1996. Bumb, Balu L.; Baanante, Carlos A.; International Food Policy Research Institute. 54p. FSRC #5511.*
Examines past fertilizer use trends, estimates future needs, and assesses technical and policy issues for addressing the environmental and energy concerns regarding fertilizer use.

Land degradation in the developing world: Implications for food, agriculture, and the environment to 2020. *1996. Scherr, Sara J.; Yadav, Satya; IFPRI. 36p. FSRC #5225.*
Reports on workshop on agricultural land degradation issues. Presents policy recommendations.

Dividing the waters: Food security, ecosystem health and the new politics of scarcity. *1996. Postel, Sandra; Worldwatch. 76p. FSRC #6224.*
Examines the problem of water scarcity. Emphasizes political ramifications and environmental consequences. Recommends water marketing and price changes.

Growing food security: Challenging the link between pesticides and access to food. *1996. Pesticides Trust; Pesticides Action Network. 98p. FSRC #5504.*
Collection of readings on the economic, political, and environmental issues surrounding pesticide use and high input agriculture.

Conserving land: Population and sustainable food production. *1995. Engelman, Robert; LeRoy, Pamela; Population Action International. 48p. FSRC #5379.*
Investigates the influence of population growth on agricultural sustainability. Discusses the global food supply and the factors which limit food supply ability to meet population growth needs. Presents strategy suggestions.

People's dependency on forests for food security. *1995. International Rural Development Centre;*

Swedish University of Agricultural Sciences; Antonsson-Ogle, Britta. 4p. FSRC #5182.
Analyzes the direct and indirect role that forests play in the livelihood of rural families. Includes case studies in Bolivia, Tanzania, Thailand, and Vietnam.

Forest-dependent livelihoods: Links between forestry and food security. *1995. Dember, S. 6p. FSRC #5183.*
Discusses dependence on tree and forest resources and access to these resources. Includes case studies from Tanzania, Thailand, and Vietnam.

Forestry and food security: Proceedings of a seminar held in Hanoi and Phu Ninh, December 5-8, 1994. *1995. Vietnam Ministry of Forestry; International Rural Development Centre; Forests, Trees and People Programme; Ogle, Britta; Chu Chu, Ha. 56p. FSRC #5179.*
Seminar that reports on findings from pilot studies conducted in Bolivia, Tanzania, Thailand, and Vietnam to examine the reliance on forest and tree product for food security.

Dependency on forests and trees for food security pilot study: Nanguruwe and Mbambakofi villages, Mtwara region, Tanzania. *1994. Missano, H.; Tanzania Food and Nutrition Centre; Swedish University of Agricultural Science; Forests, Trees and People; Food and Agriculture Organization. 48p. FSRC #5177.*
Reports on field survey on dependency on forests and trees for food security in two villages in Tanzania. Draws comparisons between the findings from the two villages and makes suggestions.

Dependency on forest and tree products for food security: Case study of a forest area in northeast Thailand. *1994. Saowakontha, Sastri; Swedish University of Agricultural Sciences; Forests, Trees and People; FAO. Kunarattanapruk, Kiatirat. 103p. FSRC #5178.*
Examines the implications of the closing of a forest area on villagers who depend on the forest and tree products for food security. Compares the effect on villagers living near the forest versus those living further away, but near a sawmill. Identifies the most vulnerable groups. Tests methods to collect information for forestry sector policy and other uses.

Dependency on forest and tree products for food security: Pilot study in Yen Huong Commune, Ham Yen District, Tuyen Quang Province, North Vietnam. *1994. Thi Yen, Nguyen; Quang Duc, Nguyen; Forests, Trees and People; Swedish University of Agricultural Sciences; FAO. 56p. FSRC #5176.*
Findings from study conducted to get information on the relationship between forest products and household food security, the dependency of local farmers on the forest for food security, and their vulnerability to change in availability of this resource.

Food security and the environment: Conflict or complementarity? *1991. Davies, Susanna; Leach, Melissa; David, Rosalind; Institute for Development Studies. Discussion Paper No. 285. 47p. FSRC #5158.*

Investigates the linkages between food security and the environment. Analyzes the policy trade-offs between access to food and conservation. Presents conflicts and complementarities between food security and the environment at the international, national, and local level. Offers suggestions for the future.

Trees for life: World Food Day, 16 October 1991. *FAO. 26p. FSRC #2593. FSRC #2593.*
Theme paper for World Food Day 1991. Discusses role of trees in food, fodder, fuel, medicine, income, culture, biodiversity, and climate.

Household food security and forestry: An analysis of socio-economic issues. *1991. Falconer, J.; Arnold, J.E.M.; FAO. 147p. FSRC #2420.*
Examines socioeconomic aspects of the role of forestry in food security, with focus on quality of life issues.

Forestry and food security. *1990. Food and Agriculture Organization. [7]p. FSRC #5620.*
Brochure on forestry and food security. Discusses roles of trees in timber, food, income, medicine, fuel/energy, and fodder sectors.

Poverty monocultures, the richness of diversity. *1997. Shiva, Vandana. 7p. FSRC #6244.*
Addresses the dominant view that sustainability and food security are conflicting objectives. Outlines a diversity paradigm that favors, biodiversity, gender justice, and food security. Available at www.u-fondet.no/aktuel/konf/2-4.html.

Drought, desertification and food production: Drought follows the plough. *1994. Glantz, Michael H. 21p. FSRC #2731.*
Chapter that deals with issues surrounding drought, desertification, and food production on marginal lands.

NGO perspective on food security and the environment: Acord in the Sahel and Horn of Africa. *1991. Roche, C. IDS Bulletin (vol. 22, no. 3, 1991). 3p. FSRC #4107.*
Examines three case studies and discusses relation between poverty, food insecurity, and environmental degradation and the role of NGOs in addressing these issues.

Projects on food security - environment linkages and agrobiodiversity: France, Kenya, and Ethiopia, April 2-10, 1997. *Thrupp, Ann. 6p. FSRC #6821.*
Reports on trip to East Africa to meet with people and organizations involved in food security-environment and agrobiodiversity initiatives, to plan specific project activities, including planning for a stakeholder workshop and establishing collaboration with partners.

Promoting food security in Rwanda through sustainable agricultural productivity: Meeting the challenges of population pressure, land degradation and poverty. *1995. Michigan State University,*

Department of Agricultural Economics; Clay, D.; Byiringiro, F.; Kangasniemi, J.; Reardon, T. 116p. FSRC #5377.
Explores factors contributing to agricultural productivity decline in Rwanda. Discusses impact of erosion, organic input use, soil conservation, fertilizer and lime, and land use strategies on productivity. Present policy implications.

Overcoming malnutrition: Is there an ecoregional dimension? *1996. Sharma, Manohar; Garcia, Marito; Qureshi, Aamir; Brown, Lynn; IFPRI. 19p. FSRC #05221.*
Presents results of research work on the distribution of poverty across ecoregions rather than individual countries. Discusses linkages between poverty and malnutrition and agroecological environment, defines poverty indicator and data collection process, and presents analysis.

Food security, coping strategies and environmental degradation. *1990. Frankenberger, Timothy R.; Goldstein, Daniel M. 8p. FSRC #2627.*
Investigates trends in coping strategies among small farmers as well as the impact of these practices on the environment. States that these coping strategies can serve as famine early warning indicators.

Water resource interventions and famine mitigation. *1991. Tabor, Joseph Anthony. Famine mitigation: Proceedings of workshops held in Tucson, Arizona, May 20-23, 1991 and Berkeley Springs, West Virginia, July 31-August 2, 1991. 10p. FSRC #4488.*
Examines water management techniques that can help stabilize and rehabilitate drought areas. Discusses domestic and livestock water, water conservation for crops, and other water resource interventions.

Forestry and food security. *1989. Food and Agriculture Organization/SIDA; United Nations; Forest, Trees and People Programme. 128p. FSRC #5173.*
Explores the linkages between forestry and food security. Provides conclusions and recommendations based on a series of papers.

Food security and the environment: Select annotated bibliography. *1991. David, Rosalind; Institute of Development Studies. 53p. FSRC #1375.*
Provides abstracts of resources that include information on the links between food security and the environment.

Politics of ecological degradation and famine: State of development in Ethiopia. *1992. Kebbede, Girma. 47p. FSRC #3211.*
Examines the links between ecological degradation, recurring famines, and the social and political structure in Ethiopia.

Ecological considerations for the future of food security in Africa: Proceedings of the international conference on sustainable agricultural systems, September 1988, Columbus, Ohio. *1990. Brown, H.C.P.;*

Edwards, C.A.; Thomas, V.G. 24p. FSRC #1858.
Evaluates the following two challenges to African agriculture: how to manage land subject to environmental fluctuations so that continuous production can be enjoyed; and how to attain a balance between input-intensive and organic agriculture to achieve productive and environmentally friendly systems.

C ***Food aid and the environment***

Natural resource management and Title II food aid: An evaluation. *1994. Catterson, Thomas; Buccowich, Mark; Helin, William; USAID; USDA. 147p. FSRC #1190.*
Evaluates natural resource activities of NGOs in Ethiopia using P.L. 480 food. Evaluation carried out at the program level and aimed at analyzing the impact of regular food aid on the objectives of improved food security and environmental rehabilitation.

A field guide to USAID environmental compliance procedures: Based on the USAID environmental documentation manual for P.L. 480 Title II Food for Development programs. *March 1998. Burpee, G.; Harrigan, P.; Remington, T. 49p.*
General introduction and reference to USAID environmental regulations and procedures.

Participants' sourcebook: Africa regional environmental assessment training course. Food aid and the environment: Doing better at doing good. Mekelle, Ethiopia, February 24-28, 1997. Participants' sourcebook: Africa regional environmental assessment training course, Tamale, Ghana, December 7-12 1997.
Bingham, Charlotte, Wes Fisher, Walter Knausenberger, Michael Lazarus, Idrissa Samba. USAID.
Covers wide range of topics, including environmentally-sound project design; USAID procedures; environmental assessment methods; IEE; and monitoring and evaluation. Includes case studies, reading, and exercises. FSRC also has accompanying facilitator's guide.

Environmental documentation manual: For P.L. 480 Title II cooperating sponsors implementing food-aided development programs. *Draft, April 1997. USAID Bureau for Africa and Sustainable Development and the Bureau for Humanitarian Response Office of Food for Peace. Bingham, Charlotte; Knausenberger, Walter; Fisher, Wes. 215 p.*
Manual developed to assist cooperating sponsors in the design of environmentally sound development activities and to prepare USAID environmental documentation as required under USAID's environmental regulation 22 CFR 216. (The final version of the Environmental Documentation Manual will be ready for distribution in January 1999.)

Food aid works for the environment. *1993. WFP. 20p. FSRC #785.*
Brochure explaining the role of WFP food aid programs in protecting the environment.

Food aid as a resource in renewable natural resource interventions in Africa: A discussion of the issues. *1992. Owubah, Charles Ebow. 32p. FSRC #811.*
Discusses the role of food-assisted natural resources programs. Presents an overview of the issues that influence the effectiveness of these activities.

Environmental guidelines for small-scale activities in Africa: Environmentally sound design for planning and implementing humanitarian and development activities. *1996. USAID; Knausenberger, Walter I.; Booth, Gregory A.; Bingham, Charlotte S.; Gaudet, John J. 201p. FSRC #5617.*
USAID environmental guidelines developed for PVOs and NGOs for the design, implementation, and monitoring of humanitarian and development programs.

Cost-effectiveness analysis in food-aided forestry. *1990. Nembot, Timothy Fomete; North Carolina State University. 61p. FSRC #103.*
Master's thesis, North Carolina State University. Examines the applicability of cost-effectiveness analysis in food-aided forestry programs. Discusses projects in Ethiopia, Mali, and Haiti. Covers project planning; monitoring and evaluation of projects; and valuation of trees, land, and workers.

Guidelines on aid and environment. *1994. Organisation for Economic Co-operation and Development (OECD). 56p. FSRC #3882.*
Guidelines for development cooperation program staff to inform them of the potential threats of natural hazards and how to reduce their impact on developing nations.

WFP and the environment. *WFP. 23p. FSRC #549.*
Presents background information on WFP environmental activities. Examines the following issues: relationship between poverty and the environment; role of food aid; environment and war; soil degradation; impact of refugee camps on the environment; environment and development; and environmental protection.

Entitlement and ecology: Sustainable food aid. *1990. Skully, David W. 10p. FSRC #6421.*
Examines the problem of recurrent famine and poverty in marginal environments from the perspective of ecological economics. Employs model focusing on relationship between population, the carrying capacity of the resource base, and external transfers. Shows that food aid transfers to marginal areas is not a sustainable solution. Argues that a sustainable solution requires emigration from marginal areas.

Natural resources management and program food aid in Niger. *1993. USAID; Catterson, Thomas; Wilson, Wendy; Gavian, Sarah; Adoum, Carol M. [90]p. FSRC #1091.*
Examines linkages between natural resources management and program food aid. Focuses on Food-for-Work activities targeting land rehabilitation and soil and water conservation in Niger.

Project Syria 2746: Assistance to fruit-tree planting in the green belt. *1995. WFP. 20p. FSRC #1392.*
Appraisal of a development project that uses food aid to tide farmers over the first few years of fruit-tree

cultivation.

Beyond compliance: environmental review and public law 480 food aid programming. *Forthcoming. Catterson, Thomas and Knausenberger, Walter. 1997. USAID Bureau for Africa, Office of Sustainable Development, AFR/SD. SD Technical Publ. 85 p. Washington, D.C.*

C ***Refugees and the environment***

Refugee operations and environmental management: Selected lessons learned. *August 1998. 75p.*
Draws together selected environmental lessons learned from refugee operations, based on a series of case studies in Africa and South Asia. Presents information on chronological phases of refugee assistance, cross-cutting themes, and technical themes.

Refugee operations and environmental management: Key principles for decision-making. *1998. UNHCR. 75p. FSRC #06764.*
Booklet aims to strengthen the ability of refugee operation decision-makers to make judgments that are in the interests of refugees and the local environment.

UNHCR environmental guidelines. *1996. UNHCR. 68p.*
Presents guidelines for "incorporating environmental factors" into UNHCR programs. Covers environmental issues concerning refugee assistance, principles of UNHCR environmental activities, operational guidelines, and conduct of environmental operations.

Environmental guidelines: Forestry in refugee situations. *May 1998. UNHCR. 65p.*
Focuses on forestry issues in refugee programs. Includes the following sections: background information; role of forest-related activities within refugee programs; and monitoring and evaluation activities.

Environmental guidelines: Livestock in refugee situations. *May 1998. UNHCR. 37p.*
Provides guidelines on livestock issues in refugees operations. Includes background information as well as sections on positive and negative impacts of livestock on the environment in refugee situations. Discusses prevention and mitigation of negative impacts.

Environmental guidelines: Domestic energy in refugee situations. *May 1998. UNHCR. 48p.*
Outlines guidelines for preventative planning to reduce overall costs and minimize environmental damage associated with domestic energy supply for refugees.

Forestry projects for refugees and displaced persons: Guidelines for project managers. *1996. Lind, Linda L.; Peniston, Brian J. 50p. FSRC #5775.*
Manual designed for managers of forestry and natural resource projects for refugees and displaced persons.

Includes background information on refugees and displaced persons, policy principles, forestry guidelines, and suggested references. Stresses the importance of local participation by refugees and displaced persons in forestry projects.

UNHCR and the environment: Priorities for 1998. *20p.*
Outlines UNHCR's Environment Programme objectives.

Impact of refugees on the environment: A review of the evidence. *1994. Jacobsen, Karen; Refugee Policy Group. 49p. FSRC #6822.*
Discusses the types of environmental problems which are most closely associated with refugees, including land degradation, water contamination, and deforestation. Offers recommendations for resolving some of these problems through the involvement of local communities and host governments and better management of the local resources.

Refugees and the environment in Africa: Proceedings of a workshop at Bahari Beach, Dar-es-Salaam, Tanzania, 2-5 July 1996. *UNHCR. 230p.*
Includes presentations on UNHCR's response to environmental problems and descriptions of UNHCR refugee related environmental activities in Africa.

Environmentally-induced population displacements and environmental impacts resulting from mass migrations. International symposium, Geneva, 21-24 April 1996. *October 1996. UNHCR, International Organization for Migration, Refugee Policy Group. 128p.*
Covers the following topics: environmentally-induced population displacements; environmental impacts resulting from mass migrations; and bridging migration and environmental impacts.

Environmental change in refugee-affected areas of the Third World: The role of policy and research. *1994. Black, Richard. 9p. FSRC #1775.*
Reviews the current nature of policy responses to environmental change in refugee assistance programs. Points out the lack of effective policy measures to identify and combat environmental degradation.

UNHCR partnership workshop: Environmental management of refugee operations. *1997. Environment Unit, UNHCR. 146p. FSRC#7000.*
Results from the UNHCR workshop designed to share experiences and lessons learned about environmental management of refugee operations to improve field operations, strengthen partnerships, improve planning and coordination of environmental activities, and to develop innovative ideas for future environmental interventions.

Refugee environmental education: A concept paper. *July 1995. Talbot, Christopher. Office of the Senior Coordinator on Environmental Affairs, UNHCR. 27p.*
Presents refugee environmental education approaches and discusses their utility in addressing refugee-generated environmental degradation.

Experience of UNHCR and its partners with solar cookers in refugee camps. October 1996. Umlas, Elizabeth. *Office of the Senior Coordinator on Environmental Affairs, UNHCR. 17p.*
Examines advantages and disadvantages of solar cooking in refugee situations. Offers recommendations concerning the use of solar cookers in refugee camps.

Refugees and the environment: Caring for the future. *UNHCR. 22p.*
Informational publication on UNHCR environmental activities in its refugee operations. Outlines environmental concerns and UNHCR response.

Refugee Environmental Education Pilot Project in Kenya (REEPP-Kenya): Project report. *April 1997. Muigai, Kibe; Office of the Senior Coordinator on Environmental Affairs. UNHCR. 78p.*
Report on objectives, impacts, and lessons learned from REEPP's project aim to strengthen educational and environmental initiatives to reduce environmental impact of refugee operations.

Energy strategy for refugee-affected areas of Kagera and Kigoma areas, Tanzania. *June 1997. Owen, Matthew; Ivan Ruzicka; Environment Unit, UNHCR; European Commission. 180p.*
Study conducted to develop strategy to response to deforestation associated with refugee settlements. Presents findings of energy study and solar cooking assessment as well as policy implications.

Environmentally-friendlier procurement guidelines. *April 1997. UNHCR. 47p.*
Guidelines for procurement of "products and services which have less negative impact on the environment." Presents guidelines and policy information.

Refugee resettlement on the Horn of Africa: Integration of host and refugee land use patterns. *1993. Unruh, Jon D. p.49-66. FSRC #4841.*
Examines a resettlement design that integrates refugee agricultural and use patterns with host pastoralist land use practices in drought areas.

Using remote sensing data to monitor land cover changes near Afghan refugee camps in northern Pakistan. *1998. Lodhi, Mahtab A.; Echavarria, Fermando R.; Keithley, Chris. 6p. FSRC #6834.*
Explores the utility of satellite data to quantify the degree and extent of refugee-related forest degradation in the Siran Valley.

Where have all the flowers gone… and the trees… and the gorillas? *1997. Sanders, Craig. Refugees (No. 110, Winter 1997). UNHCR.*
Reports on impact of large-scale refugee migration on local environments and strategies to address these problems.

Development of a GIS system in UNHCR for environmental, emergency, logistic and planning purposes. *1995. Bouchardy, Jean Yves; UNHCR. 86p.*

Presents a description of the UNHCR environmental database and its role in refugee activities.

C *Poverty and the environment*

Population, poverty and the local environment. *1995. Dasgupta, Partha S. 5p. FSRC #5181.*
Discusses the linkages between poverty, population growth, and degradation of local resources in poor areas of the world. Points out that these factors do not directly cause the others, but they influence one another. Analyzes theoretical models and empirical findings from anthropology, demography, ecology, economics, nutrition, and political science.

International conference on strategies for poverty alleviation and sustainable resource management in the fragile lands of sub-Saharan Africa. *September 1998. McCulloch, Anna Knox, Suresh Babu, Tidiane Ngaido. EPTD Workshop Summary Paper No. 7. IFPRI. 81p.*
Summarizes conference on agricultural growth and food security in Sub-Saharan Africa. Topics include: challenges facing sustainable development of fragile lands; potential interventions for sustainable development of fragile lands; interactions with farmers.

Poverty, population and environmental degradation in China. *June 1997. Rozelle, Scott; Huang, Jikun; Zhang, Linxiu. Food Policy (vol. 22, no. 3). 12p.*
Analyzes the relationship between population, poverty, and the environment in China. Assesses environmental degradation (water pollution, deforestation, grassland destruction, soil erosion, and salinization) in China and the nation's environmental policies.

Alleviating poverty, intensifying agriculture, and effectively managing natural resources. *1994. Pinstrup-Andersen, Per; Pandya-Lorch, Rajul; International Food Policy Research Institute. 21p. FSRC #1104.*
Discussion paper that is part of IFPRI's 2020 Vision initiative that seeks to develop an international consensus on how to meet future world food needs. Shows that poverty and environmental degradation in the developing world are linked with inadequate agricultural intensification.

Land degradation and poverty in Africa: Challenges and opportunities. *1994. 31p. FSRC #5381.*
Reports on workshop held to inform U.S. Congress members of the importance of the issue of desertification and its link to poverty in Africa. Compilation of information presented by representatives of donors, NGOs, and the UN Desertification Convention.

Poverty monocultures, the richness of diversity. *1997. Shiva, Vandana. 7p. FSRC #6244.*
Addresses the dominant view that sustainability and food security are conflicting objectives. Outlines a diversity paradigm that favors, biodiversity, gender justice, and food security. Available at www.u-fondet.no/aktuel/konf/2-4.html.

Poverty and environmental degradation dynamics, Paradox of intentions of the poor in rural Africa: Resorting to one's safety nets for survival purposes. A conceptual background. *Da'ar, Ahmed A.; The Nordic Africa Institute. 28p. FSRC #6862.*
Examines the increase of poverty and environmental degradation in Sub-Saharan Africa. Explores the issue that traditional safety nets such as trees and livestock are being unavoidably consumed for immediate survival purposes.

Where the poor live: Are the assumptions correct? *1992. Kates, Robert; Haarmann, Viola; Allan Shawn Feinstein World Hunger Program; Brown University. 12p. FSRC #1122.*
Presents viewpoint that the widespread notion that impoverished people are concentrated in threatened environments has not been proven.

Why does poverty persist in regions of high biodiversity?: A case for indigenous property right system. *1991. Gupta, Anil K. 21p. FSRC #2817.*
Discusses biodiversity and poverty, examining such issues as compensation of local communities for preserving diversity and property rights concerning genetic resources.

Trees as savings and security for the rural poor. *1993. Chambers, Robert; Leach, Melissa; Conroy, Czech; International Institute for Environment and Development. 15p. FSRC #1995.*
Examines the role of trees as savings and security for many of the rural poor. States that trees and tree products can be used by rural poor as a source of cash to meet contingency needs such as seasonal shortage, disasters, or family-social obligations.

C ***Environmental guidelines, manuals, sourcebooks***

A field guide to USAID environmental compliance procedures: Based on the USAID environmental documentation manual for P.L. 480 Title II Food for Development programs. *March 1998. Burpee, G.; Harrigan, P.; Remington, T. 49p.*
General introduction and reference to USAID environmental regulations and procedures.

Environmental documentation manual: For P.L. 480 Title II cooperating sponsors implementing food-aided development programs. *Draft, April 1997. USAID Bureau for Africa and Sustainable Development and the Bureau for Humanitarian Response Office of Food for Peace. Bingham, Charlotte; Knausenberger, Walter; Fisher, Wes. 215 p.*
Manual developed to assist cooperating sponsors in the design of environmentally sound development activities and to prepare USAID environmental documentation as required under USAID's environmental regulation 22 CFR 216. (The final version of the Environmental Documentation Manual will be ready for distribution in January 1999.)

Environmental compliance supplemental information to Cooperating Sponsor and USAID Mission guidelines for fiscal year 1998, Title II development program DAP and PAA submissions. *1997. USAID; Bureau for Humanitarian Response; Office of Food for Peace; Bureau for Africa. 199p. FSRC #5853.*
Information on the following: why Title II activities are subject to USAID Environmental Procedures; general procedures; how Cooperating Sponsors can proceed in regard to these procedures; who is responsible for what with respect to the procedures; timeline for submission; and approval of specific documents.

Water and sanitation guide (draft). *May 1997. Baer, Franklin C. IMPACT. 37p.*
Indicators guide for monitoring water and sanitation programs. Discusses importance of environmental health indicators in process; health benefits of improved water and sanitation; possible water and sanitation indicators; calculation, definitions, sources, and issues surrounding indicators; and using the indicators in reporting activities.

UNHCR environmental guidelines. *1996. UNHCR. 68p.*
Guidelines for "incorporating environmental factors" into UNHCR programs. Presents environmental issues concerning refugee assistance, principles of UNHCR environmental activities, operational guidelines, and conduct of environmental operations.

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Manual designed for managers of forestry and natural resource projects for refugees and displaced persons. Includes background information on refugees and displaced persons, policy principles, forestry guidelines, and suggested references. Stresses the importance of local participation by refugees and displaced persons in forestry projects.

Participants' sourcebook: Africa regional environmental assessment training course. Food aid and the environment: Doing better at doing good. Mekelle, Ethiopia, February 24-28, 1997.
Participants' sourcebook: Africa regional environmental assessment training course, Tamale, Ghana, December 7-12 1997. *Bingham, Charlotte, Wes Fisher, Walter Knausenberger, Michael Lazarus, Idrissa Samba. USAID.*
Covers wide range of topics, including environmentally-sound project design; USAID procedures; environmental assessment methods; IEE; and monitoring and evaluation. Includes case studies, reading, and exercises. FSRC also has accompanying facilitator's guide.

Environmental guidelines for small-scale activities in Africa: Environmentally sound design for planning and implementing humanitarian and development activities. *1996. USAID; Knausenberger, Walter I.; Booth, Gregory A.; Bingham, Charlotte S.; Gaudet, John J. 201p. FSRC #5617.*
USAID environmental guidelines developed for PVOs and NGOs for the design, implementation, and monitoring of humanitarian and development programs.

Roads and the environment: A handbook. *1997. World Bank; Tsunokawa, Koji; Hoban, Christopher. 225p. FSRC #6791.*
Provides a description of practical methods for the design and execution of effective environmental assessments for those involved in road projects (from planning to construction to maintenance).
Manual of road construction and improvement on rural highways with manual labor.
CARE/Honduras, USAID, Secretary of Governance and Justice Government of Honduras. 60p.
Handbook on construction of roads that have low traffic volumes, with guidance on road maintenance. Provides overview of the necessity in Honduras to form a basic roads extension network in areas of low production and transit volumes. CARE's PODER program (Proyecto de Oportunidades de Desarrollo y Empleo Rural), contributes to this objective by constructing new roads and improving existing roads, using Title II resources in a Food for Work activity. Document is in Spanish language.

Watershed management field manual: Slope treatment measures and practices. *1988. FAO. 144p. FSRC #2594.*
Provides guidance on land preparation for afforestation and cultivation on sloping land affected by water erosion.

Famine mitigation intervention options manual: Niger USAID/Niger disaster preparedness and mitigation program. *1994. Adelski, Elizabeth; Dilley, Maxx; Simon, Lynette; Tabor, Joe; USAID. 84p. FSRC #1509.*

Describes interventions to mitigate drought-related famine in Niger. Includes design papers on vegetable trenches for garden production, water-harvesting for agriculture, water-harvesting on rangelands, phosphate fertilizer, seed collection for revegetation prevention of soil erosion in gullies and streams, and irrigation infrastructure.

Environmentally-friendlier procurement guidelines. *April 1997. UNHCR. 47p.*
Guidelines for procurement of "products and services which have less negative impact on the environment." Presents guidelines and policy information.

Environmental sourcebook for micro-finance institutions. *1997. Pallen, Dean. Asia Branch, CIDA. 58p. FSRC#7004.*
Sourcebook designed to help microfinance institutions improve the environmental performance of their lending activities.

Guidelines on aid and environment. 1994. Organisation for Economic Co-operation and Development (OECD). *56p. FSRC #3882.*
Guidelines for development cooperation program staff to inform them of the potential threats of natural hazards and how to reduce their impact on developing nations.

Environmental assessment sourcebook. Volume 1: Policies, procedures, and cross-sectoral issues. *1991. World Bank Technical Paper No. 139. Environment Department. 227p.*
Sourcebook "designed to assist all those involved in environmental assessment". Examines the environmental review process; global and cross-sectoral issues in environmental review; social and cultural issues in environmental review; economic analysis of projects and policies with consideration of environmental costs and benefits; strengthening local capabilities and institutions; sector and financial intermediary lending and environmental review; and community involvement and the role of NGOs in environmental review.

Environmental assessment sourcebook. Volume II: Sectoral guidelines. *1991. World Bank Technical Paper No. 140. Environment Department. 282p.*
Discusses environmental assessment issues related to the following sectors: agricultural and rural development; population, health, and nutrition; transportation; urban development; and water supply and sewerage.

Environmental assessment sourcebook. Volume III: Guidelines for environmental assessment of energy and industry projects. *1991. World Bank Technical Paper No. 154. Environment Department. 237p.*
Covers environmental assessment issues in relation to the energy and industry sector, examining plant siting and other factors.

Environmental assessment sourcebook update. *Environment Department, World Bank.*
Newsletter updates for Environmental Assessment Sourcebook. Addresses a wide range of issues, including the following: environmental screening, Geographic Information Systems for environmental assessment; sectoral environmental assessment; environmental auditing; international environment agreements and their relevance to environmental assessment; environmental performance monitoring; regional environmental assessment; managing the environmental assessment process; analysis of alternatives in environmental assessment; and health aspects of environmental assessment.

If a tree falls: A VSO guide to raising and planting trees in Kenya. *Carter, Mike. 24p. FSRC #1955.*
Guide to VSO staff for establishing small tree nurseries. Information on seeds, choosing trees, planning a nursery, raising seedlings, nursery management, planting, and establishing trees without a nursery.

Environmental guidelines for selected infrastructure projects. *1988. Environment Unit, Asian Development Bank. 130p.*
Asian Development Bank environmental guidelines for various types of infrastructure projects. Covers EIA methodology and conducting of Initial Environmental Examination (IEE).

Environmental assessment guidelines for Australia's aid program. *October 1996. AusAID. Commonwealth of Australia. 36p.*
Guidelines for environmental assessment for Australian aid programs. Discusses wide range of issues, including strategic environmental assessment, proposal assessment, activity design and feasibility, appraisal, implementation, and evaluation. Available at www.ausaid.gov.au/publications/policy/envguide.pdf.

Catholic Relief Services India program, Initial Environmental Examination report. *September 1998. 28p.*
IEE for 1997-2001 DAP for CRS Title II India program with the following program sectors: human capacity development, safe mother safe child, humanitarian assistance, and agriculture. The IEE focuses on agricultural activities.

CRS/Kenya Initial Environmental Examination (IEE). *1998. Catholic Relief Services. 25p. FSRC #6941.*
IEE for 1997-2000 DAP for CRS/Kenya program which addresses food assisted child survival and complementary activities including sustainable agriculture, savings and credit, and water and sanitation.

CRS/Haiti Initial Environmental Examination (IEE). *October 1998. Catholic Relief Services. 21p.*
IEE for five year Title II project that will address the following sectors: training and education, core food distribution, credit provision, and sanitation. The IEE focuses on latrine construction, warehousing, and vehicle maintenance activities.

Initial Environmental Examination (IEE) – Draft, Gambella food security food initiative. *April 1998. Africare/Ethiopia. 19 p.*
Draft of IEE examination including a draft Pesticide Evaluation Report (PER).

Pesticide Evaluation Report (PER): Food Security Training and Outreach Services Initiative. *OIC International (OICI), Northern Region (NR) of Ghana, West Africa. 4 p*. Attachment to OICI's FY 1999 IEE report as part of the DAP submission. The report proposes the use of *Actellic*, a pesticide registered for the use by the ESEPA. Provides information to evaluate the economic, social, and environmental risks and benefits of the planned pesticide use.

Assessment of agricultural pest status and available control methods in the Guinea Natural Resources Management Project. *July 1994. Chemonics International, USAID/Conakry. 20 p*.
Non-Title II IEE to the Guinea Natural Resource Management Project (GNRMP) with an evaluation of pesticide use in the activity.

Gender and environment: Lessons from social forestry and natural resource management - Sourcebook. *1992. Warren, Sarah T.; Aga Khan Foundation Canada; Winrock Institute for Agricultural Development; Yale School of Forestry and Environmental Studies; Faculty of Environmental Studies. 98p. FSRC #5518.*
Presents background material on gender, environment, and natural resources. Includes case studies, exercises, and bibliography of resources.

Economic appraisal of environmental projects and policies: Practical guide. *1995. Economic Development Institute of the World Bank; Overseas Development Institute. 172p. FSRC #6214.*
Manual for environment decision makers. Introduces environmental valuation methods and economic theory in the environment.

Integrated Wetland System (IWS) for wastewater treatment and recycling for the poorer parts of the world with ample sunshine: Basic manual. *January 1995. Ghosh, Dhrubajyoti. 99p.*
Outlines design, operation and maintenance, and sustainability issues of IWS projects.

Environmental guidelines for irrigation. *1981. Tillman, Robert E. U.S. Man and the Biosphere Programme; USAID. 74p.*
Guidelines prepared for those responsible for environmental aspects in irrigation project planning.

C ***Environmental assessment***

Catholic Relief Services India program, Initial Environmental Examination report. *September 1998. 28p.*

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Programmatic environmental assessment of USAID/Bangladesh Integrated Food for Development program. *1991. USAID/Dhaka; Tropical Research and Development; KBN Engineering and Applied Science Inc. 102p. FSRC #6330.*
Environmental assessment (prepared by outside consultants) of CARE Food for Work program in Bangladesh.

Technical report: Programmatic environmental assessment, Guinea-Bissau. *April 1997. Krahl, Lane et al. Tropical Research and Development, Inc. 59p.*
Programmatic environmental assessment (PEA) that examines environmental impacts of all USAID/Guinea-Bissau programs. Addresses agriculture, fisheries, forestry, and environmental management sectors and the following environmental concerns: deforestation, sustainable resource management, pollution emissions, and institutional authority and capacity. Recommends mitigation options.

Environmental assessment: CARE Title II food security program, Program in environmental security and sustainable development for the most vulnerable in Honduras, 1996-2000. Proyecto de Oportunidades de Desarrollo y Empleo Rural (PODER). *October 1997. Myton, Becky: Medina, Carlos; Perez, Dora Elisa; Borjas, Gerado; Ochoa, Marcos; Reyes, Dagoberto; Solberg, Scott; CARE/Honduras. 100p.*
Environmental evaluation for CARE Honduras' PODER (Project for opportunities in development and rural employment). Evaluation recommends that the road improvement and construction activity component will require further mitigation measures to ensure that there is no significant adverse impact to the environment. Outlines mitigation actions and includes directives for an environmental survey in the

program area. Document is in Spanish language.

Planning for sustainable watershed management: Environmental and institutional assessments: Proceedings of an interdisciplinary workshop, June 26-27, 1990. *Potter, Christopher S. 109p. FSRC #3991*.
Proceedings from workshop on environmental and institutional assessment for watershed management programs. Identifies socioeconomic, institutional, and biophysical information requirements.

Environmental assessment guidelines for Australia's aid program. *October 1996. AusAID. Commonwealth of Australia. 36p.*
Guidelines for environmental assessment for Australian aid programs. Discusses wide range of issues, including strategic environmental assessment, proposal assessment, activity design and feasibility, appraisal, implementation, and evaluation. Available at www.ausaid.gov.au/publications/policy/envguide.pdf.

Coherence in environmental assessment: Practical guidance on development cooperation projects. *1996. OECD. [30]p. FSRC #6236.*
Guide to "coherence" within environmental assessment from project conceptualization to monitoring and evaluation. Focuses on the following three initiatives: terms of reference, developing guidelines for management of projects, and summarizing aid-related guidelines.

Environmental policy paper. *1990. African Development Bank; African Development Fund. 56p. FSRC #1525.*
Examines the environmental issues facing Africa, presents African Development Bank environmental policies, and outlines assessment procedures.

C *Environmental trends/data*

World resources 1998-99: A guide to the global environment. Environmental change and human health. *1998. World Resources Institute, UNEP, UNDP, World Bank. 369p.*
Focuses on the following issues: environmental change and human health, global environmental trends, and sustainable development. Includes data tables.

Vital signs 1998. *1998. Brown, Lester R.; Michael Renner; Christopher Flavin. Worldwatch Institute. 207p.*
Presents global environmental trends, including indicators concerning the following key sectors: food, agricultural resources, energy, atmospheric, economic, transportation, communication, social, and military trends.

State of the world 1998. *1998. Brown, Lester R. et al. Worldwatch Institute. 251p.*
Examines the "environmental effects of continued economic growth as the economy outgrows the earth's ecosystem". Presents strategies to improve environmental situation. The FSRC also holds previous years of the State of the World series.

Worldwatch database disk. *June 1998. Worldwatch Institute.*
Diskette containing data from all Worldwatch publications published over the past two years. Includes tables and graphs of global environmental, social, and economic data. Covers such topics as agriculture, biodiversity, climate change, transportation, population, security, global economics, and alternative energy.

C *Population and the environment*

Malthus revisited: People, population and the village commons in Colombia. *1998. Cardenas, Juan Camilo; International Institute for Environment and Development*
20p. FSRC #6786.
Argues against the common theory that population growth alone is a threat to natural resources. Contends that technological and structural factors play a role in determining the net effect of population density on the conservation of key environmental public goods such as soil, watershed regulation, or natural vegetation that affect the flow of ecological benefits to the community. Illustrates these ideas with statistical evidence from villages in Colombia.

Conserving land: Population and sustainable food production. *1995. Engelman, Robert; LeRoy, Pamela; Population Action International. 48p. FSRC #5379.*
Examines the influence of population growth on agricultural sustainability. Discusses the global food supply and the factors which limit food supply ability to meet population growth needs. Presents strategy

suggestions.

Marginal coping in extreme land pressures: Ruhengeri, Rwanda. *1993. Ford, Robert E. Agricultural change and population growth in Africa.; Turner, B. L.;Katz, Robert; Hyden, Goran (eds). 42p. FSRC #2604.*
Examines population growth, agricultural production, and environmental factors shaping a densely populated district in Rwanda.

The agricultural link: How environmental deterioration could disrupt economic progress. *August 1997. Brown, Lester R. Worldwatch Paper 136. Worldwatch Institute. 73p.*
Considers agriculture, energy, and population policy options that can help secure future food supplies.

Environment-population technology growth nexus: Micro-level African perspective. *1990. Tshibka, Tshikala; International Food Policy Research Institute. 18p. FSRC #6651.*
Calls for the use of mineral and organic fertilizers, high yielding seed varieties, and the development of anti-erosion and other structures, increased education to enhance farmland conservation and reduce pressure on marginal lands.

Poverty, population and environmental degradation in China. *June 1997. Rozelle, Scott; Huang, Jikun; Zhang, Linxiu. Food Policy (vol. 22, no. 3). 12p.*
Analyzes the relationship between population, poverty, and the environment in China. Assesses environmental degradation (water pollution, deforestation, grassland destruction, soil erosion, and salinization) in China and the nation's environmental policies.

Full house: Reassessing the Earth's population carrying capacity. *1994. Brown, Lester; Kane, Hal. 223p. FSRC #1080.*
Examines food insecurity and environmental degradation in the ocean, rangeland, agriculture, and water resources. Proposes strategies to address the food/population issue.

Population, poverty and the local environment. *1995. Dasgupta, Partha S. 5p. FSRC #5181.*
Discusses the linkages between poverty, population growth, and degradation of local resources in poor areas of the world. Points out that these factors do not directly cause the others, but they influence one another. Analyzes theoretical models and empirical findings from anthropology, demography, ecology, economics, nutrition, and political science.

Population pressure, the environment and agricultural intensification: Variations on the Boserup hypothesis. *1989. Lele, Uma; Stone, Steven W.; Managing Agricultural Development in Africa. 79p. FSRC #6146.*
Examines the relationships between population densities, agricultural production, land, labor, and rural incomes. Argues that the faster the improvement of factor productivity, the smaller the amount of land and

population needed in agricultural employment, and the greater the amount of area that can be left fallow or reforested.

Population agriculture and environment nexus in Sub-Saharan Africa. *1993. Cleaver, Kevin; Schreiber, Gotz. Agriculture and Rural Development Series No. 9. World Bank. 229p. FSRC #6157.*
Examines the linkages between rapid population growth, poor agricultural performance, and increased environmental degradation. Makes recommendations for strategies for agricultural intensification, reduced family size, land tenure reform, conservation, and programs to address gender issues.

Migration and the environment. *1992. Refugee Policy Group. [15]p. FSRC #4062.*
Background paper on the relationship between migration and the environment. Discusses environmentally-driven migration and policy issues surrounding this type of migration.

C ***Sustainable agriculture***

Agriculture and the environment: Issues and policies. *1998. OECD. 37p. FSRC #6769.*
Analyzes ways in which governments might promote market solutions and design and implement policies to achieve environmentally, economically, and socially sustainable agriculture at minimal resource cost to the economy and with the least trade distortion.

Alleviating poverty, intensifying agriculture, and effectively managing natural resources. *1994. Pinstrup-Andersen, Per; Pandya-Lorch, Rajul; International Food Policy Research Institute. 21p. FSRC #1104.*
Discussion paper that is part of IFPRI's 2020 Vision initiative that seeks to develop an international consensus on how to meet future world food needs. Shows that poverty and environmental degradation are linked with inadequate agricultural intensification.

The agricultural link: How environmental deterioration could disrupt economic progress. *August 1997. Brown, Lester R. Worldwatch Paper 136. Worldwatch Institute. 73p.*
Examines agriculture, energy, and population policy options that can help secure future food supplies.

Regional workshop on environmental security for Central America and the Caribbean with emphasis on water and sanitation, hillside agriculture and rural road construction. *1998. Solberg, Scott; Walter, Ed; CARE/Honduras; USAID; CRS/Guatemala. 26p. FSRC#6990.*
Summary of workshop held in Honduras in May 1998. Objectives included: improvement in the environmental soundness of food security projects; assist Title II-funded NGOs in complying with USAID Environmental Regulation 216; provide participants with information, tools and training to incorporate environmental design considerations into projects and activities.

2020 vision for food, agriculture, and the environment in Latin America. *1995. Garrett, James L.; International Food Policy Research Institute. 20p. FSRC #05217.*
2020 vision for food, agriculture, and the environment in Sub-Saharan Africa. *1995. Badiane, Ousmane; Delgado, Christopher L.; International Food Policy Research Institute. 56p. FSRC #5215.*

Major natural resource management concerns in South Asia. *1995. Gill, Gerard J.; International Food Policy Research Institute. 29p. FSRC #5219.*
Series of reports on challenges to food, agriculture, and the environment in Latin America, Sub-Saharan Africa, and South Asia. Includes analysis and development of strategies to address these challenges.

Earth's environmental woes: Is agriculture part of the problem or part of the solution? *1994. International Food Policy Research Institute. News and Views. 6p. FSRC #1255.*
Addresses role of agriculture in contributing to environmental degradation.

Land degradation in the developing world: Implications for food, agriculture, and the environment to 2020. *1996. Scherr, Sara J.; Yadav, Satya; IFPRI. 36p. FSRC #5225.*
Report on workshop on agricultural land degradation issues. Presents policy recommendations.

Agriculture, technological change and the environment in Latin America: A 2020 perspective. *1995. Trigo, Eduardo J.; International Food Policy Research Institute. 19p. FSRC #5220.*
Explores the role of technology in addressing rural poverty and environmental degradation. Argues that improved technology can help to bring about the agricultural intensification needed to alleviate poverty and reduce environmental deterioration. Stresses the need for new institutional models to develop and disseminate technologies.

Shrinking fields: Cropland loss in a world of eight billion. *July 1996. Gardner, Gary. Worldwatch Paper 131. Worldwatch Institute. 56p.*
Discusses cropland loss and the policies necessary to reduce degradation, thereby improving food security.

Agroecology: Creating the synergism for a sustainable agriculture. *1995. UNDP. 87p. FSRC #5641.*
Examines the role of agroecology and economics of sustainable farming in sustainable agriculture and rural development programs.

Environmental indicators for agriculture. *1997. OECD. 62p. FSRC #6162.*
Describes OECD's attempt "to meet the demand for data on agri-environmental linkages". Outlines policy and analytical framework. Examines indicator choice and criteria and environmental issues.

Population agriculture and environment nexus in Sub-Saharan Africa. *1993. Cleaver, Kevin; Schreiber, Gotz. Agriculture and Rural Development Series No. 9. World Bank. 229p. FSRC #6157.*
Evaluates the linkages between rapid population growth, poor agricultural performance, and increased

environmental degradation. Makes recommendations for strategies for agricultural intensification, reduced family size, land tenure reform, conservation, and other programs to address gender issues.

Promoting food security in Rwanda through sustainable agricultural productivity: Meeting the challenges of population pressure, land degradation and poverty. *1995. Michigan State University, Department of Agricultural Economics; Clay, D.; Byiringiro, F.; Kangasniemi, J.; Reardon, T. 116p. FSRC #5377.*
Examines factors contributing to agricultural productivity decline in Rwanda. Discusses impact of erosion, organic input use, soil conservation, fertilizer and lime, and land use strategies on productivity. Presents policy implications.

A hidden threat to food production: Air pollution and agriculture in the developing world. *1997. Marshall, Fiona; Ashmore, Mike; Hinchcliffe, Fiona; International Institute for Environment and Development. 24p. FSRC #6783.*
Evaluates the importance of air pollution as a constraint to agricultural productivity in developing countries. Discusses the food production and food security policy implications.

Agriculture as a global polluter. *1989. Pretty, Jules N.; Conway, Gordon R.; International Institute for Environment and Development. 16p. FSRC #4003.*
Overview concerning polluting aspects of gases associated with agriculture, including methane, nitrous oxide, ammonia, and pollutants produced from the burning of vegetation.

Indigenous natural-resource management systems for sustainable agricultural development: A global perspective. *Rajasekaran, B.; Warren, D.M.; Babu, S.C. 24p. FSRC #4029.*
Identifies consequences of the disappearance of indigenous knowledge systems concerning natural resource management and develops model that takes these indigenous practices into account.

Environmental constraints to Pacific Rim agriculture. *1993. USDA; Massey University; PECC Task Force; Meister, Anton D.; Rae, Allan D. 102p. FSRC #6010.*
Assesses constraints to agriculture in Northeast and Southeast Asia related to environmental deterioration of natural resources and environmental policies. Presents cases studies from Korea, Taiwan, the Philippines, Thailand, and Korea.

Recycling organic waste: From urban pollutant to farm resource. *August 1997. Gardner, Gary. Worldwatch Paper 135. Worldwatch Institute. 59p.*
Presents policy options and initiatives to encourage the recycling of organic waste from cities to be used on farms.

Population pressure, the environment and agricultural intensification: Variations on the Boserup hypothesis. *1989. Lele, Uma; Stone, Steven W.; Managing Agricultural Development in Africa. 79p. FSRC*

#6146.
Examines the relationships between population densities, agricultural production, land, labor, and rural incomes. Argues that the faster the improvement of factor productivity, the smaller the amount of land and population needed in agricultural employment, and the greater the amount of area that can be left fallow or reforested.

Environment-population technology growth nexus: Micro-level African perspective. *1990. Tshibka, Tshikala; International Food Policy Research Institute. 18p. FSRC #6651.*
Calls for the use of mineral and organic fertilizers, high yielding seed varieties, as well as the development of anti-erosion and other structures and increased education to enhance farmland conservation and reduce pressure on marginal lands.

Natural process. *1994. Rosetti, Julia. Ceres (September-October 1994). 4p. FSRC #4124.*
Provides overview of composting for fertilizer in tropical regions.

Modified anaerobic composting system. *1994. Kuruvinakunnel, K.T.T. 2p. FSRC #3316.*
Describes the compost-cum-biogas technique, which is part of an integrated rubber-based organic farming system.

New crop varieties in a green revolution for Africa: Implication for sustainability and equity. *1991. Cleveland, David A. Political economy of African famine. Downs, R.E.; Kerner, Donna O.; Reyna, Stephen P. (eds.) 13p. FSRC #2045.*
Chapter that analyzes proposals to adapt the green revolution to Africa's environmental and socioeconomic conditions. Contends that the green revolution approach is not ecologically sustainable or socially equitable.

World agriculture and the environment: Collection of new studies and outstanding dissertations on current issues. *1990. Bruchey, Stuart; Columbia University; Harris, Jonathan M. 227p. FSRC #6047.*
Explores the relationship between agricultural production and the environment. Presents a world agriculture production model and evaluates impact of intensive growth on soil quality, water supplies, and ecosystems.

Managing agricultural research for fragile environments: Amazon and Himalayan case studies. *1991. Overseas Development Institute; Farrington, John; Mathema, Sudarshan B. 99p. FSRC #6012.*
Examines environmentally-sensitive agricultural programs in two fragile environments (Nepal, Bolivia). Presents policy implications.

Marginal coping in extreme land pressures: Ruhengeri, Rwanda. *1993. Ford, Robert E. Agricultural change and population growth in Africa.; Turner, B. L.;Katz, Robert; Hyden, Goran (eds). 42p. FSRC #2604.*
Analyzes population growth, agricultural production, and environmental factors shaping a densely populated district in Rwanda.

Series of reviews prepared for the United Nations Conference on Trade and Environment:

- **Environmental impact of coffee production and processing in El Salvador and Costa Rica**. *August 1993. Olman Segura B. United Nations Conference on Trade and Environment 54p.* Presents overview of the environmental effects of producing and processing coffee in Costa Rica and El Salvador. Examines impact on forests, surface and groundwater, and agriculture. Suggests activities to respond.
- **Natural rubber and the environment: A review**. *August 1993. Goldthorpe, C.C. 13p.* Explains the environmental and ecological issues surrounding tropical tree crop agriculture and the growing and processing of natural rubber.
- **Environmental effects of agricultural production and related measures: Illustrative examples from developing countries**. *June 1994. UNCTAD Secretariat. 20p.* Discusses linkages between commodity production (particularly coffee, cocoa, and rice) and the environment. Examines how agricultural practices impact the environment, how other sectors affect the agriculture-environment links, and how government policies influence the links.
- **L'impact de la production et de la transformation du café, du cacoa et du riz sur l'environnement en Côte d'Ivoire**. *October 1993. Seudieu, Denis Ouhoble. 83p.* Reviews the environmental impact of coffee, cocoa, and rice production and political issues surrounding the environmental issues.
- **Effects of producing and processing cocoa on the environment: A case study of Nigeria**. *August 1993. Akande, S.O. 36p.* Investigates the environmental effects of primary commodity production (focusing on cocoa) and processing in Nigeria. Presents suggestions for sustaining cocoa production and processing while simultaneously improving the environment.
- **Rice and the environment: Environmental impact of rice production, policy review and options for sustainable rice development in Thailand and the Philippines.** *August 1993.Witte, Rob; van Elzakker, Boudewijn; van Mansvelt, Jan Diek. 66p.* Studies the environmental effects of rice production. Examines existing policies that impact rice farming and the environment and presents alternative policy options.
- **Case study on eco-farming in China with special emphasis on rice**. *August 1993. Dongsheng, Chen; Zhong Bingfang; Shen Buxi; Li Xiaoyun; Yu Guoyiao.* Discusses ecological farming in China, an approach based on "traditional organic farming combined with modern science and technology."
- **L'impact de la culture du cacoa et du café sur l'environnement**. *August 1993. CIBLE.42p.* Examines environmental effects of cocoa production and processing on the environment as well as policy options to address these issues.

- **Integrating environmental issues into a strategy for sustainable agricultural development: Case of Mozambique**. *1991. Djenes, Alemneh; Olivare, Jose; World Bank. World Bank Technical Paper No. 146. 32p. FSRC #6338.*
  Analyzes the agricultural and rural development, social, and economic factors affecting the

environment in Mozambique.

Livestock, nutrient cycling and sustainable agriculture in the West African Sahel. *1993. Powell, J.M.; Williams, T.O.; International Institute for Environment and Development. 15p. FSRC #3995.*
Examines nutrient cycling by livestock in West African Sahel and its role in sustaining agricultural productivity. Assesses relationship between ruminant livestock and soil productivity.

Agricultural statistics for environmental monitoring and policy. *Parris, Kevin; Directorate for Food, Agriculture and Fisheries/OECD. 15p. FSRC #6900.*
Discusses the challenges which confront agricultural statisticians, economists, and policy analysts concerned with environmental monitoring and policy analysis. Examines how the OECD has addressed these challenges and describes the overall policy context of OECD work on agriculture and the environment.

Integrated management of agricultural watersheds: Land tenure and indigenous knowledge of soil and crop management. *1991. Taylor-Powell, Ellen. 30p. FSRC #4508.*
Reports on findings of an on-farm survey on land tenure and land management. Assesses land tenure and documents indigenous knowledge of soil and crop management, farmer perceptions of agricultural problems and solutions.

Empowering local communities in land-use management: Chico Mendes extractive reserve, Acre, Brazil. *1995. Brown, I. Foster; Alechandre, Andrea S.; Sassagawa, Hiromi S.Y.; de Aquino, Maria A. Cultural Survival Quarterly (Winter 1995). 4p. FSRC #1859.*
Discusses how to involve local communities in the management of forests and local ecosystems, using the example of a rubber tapping area in the Brazilian Amazon.

Dryland farming in Africa. *1993. Rowland, J.R. 336p. FSRC #4127.*
Addresses the following issues: agricultural development in dryland Africa, dryland farming environment, drought and crop adaptation, dryland farming principles, traditional farming systems, crop production, soil and water conservation, and weed and pest control.

C ***Desertification, dryland and marginal areas, drought***

Rethinking desertification: What do we know and what have we learned? *1991. Rhodes, Steven L. 6p. FSRC #4090.*
Reviews desertification theories that contest conventional wisdom. Points to questionable baseline scientific information and outlines estimates of the scope of desertification. Contends that the problem may be more easily addressed than originally projected.

Drought, desertification and food production: Drought follows the plough. *1994. Glantz, Michael H. 21p. FSRC #2731.*
Analyzes issues surrounding drought, desertification, and food production on marginal lands.

Sand encroachment control in Mauritania. *1991. Grojean, Rene; UNDP. 36p. FSRC #2799.*
Report on United Nations Sudano-Sahelian Office program to combat desertification. Includes background information on desertification as well as description of approaches to combat desertification. Presents lesson learned.

Trends in drought and desertification control strategies of major agencies in the West African Sahel. *1989. Reij, Chris. 31p. FSRC #4072.*
Analyzes drought and desertification control approaches in the West African Sahel since 1975. Points out differences in donor and Club du Sahel strategies.

Regional drought workshop in Southern Africa issues meeting summary. *1994. Machiri, S.T. 5p. FSRC #3468.*
Summary of workshop held to discuss drought mitigation, preparedness, and research strategies.

Dryland farming in Africa. *1993. Rowland, J.R. 336p. FSRC #4127.*
Addresses the following issues: agricultural development in dryland Africa, the dryland farming environment, drought and crop adaptation, dryland farming principles, traditional farming systems, crop production, soil and water conservation, and weed and pest control.

Dryland management and the USAID response in Africa: Combating desertification through development. *1993. Thomas, Stryk; Gaudet, John. 28p. FSRC #4534.*
Overview of Africa Bureau antidesertification and dryland management activities.

International conference on strategies for poverty alleviation and sustainable resource management in the fragile lands of sub-Saharan Africa. *September 1998. McCulloch, Anna Knox, Suresh Babu, Tidiane Ngaido. EPTD Workshop Summary Paper No. 7. IFPRI. 81p.*
Summary of conference on agricultural growth and food security in Sub-Saharan Africa. Includes challenges and potential interventions for sustainable development of fragile lands as well as interactions with farmers.

Land degradation and poverty in Africa: Challenges and opportunities. *1994. 31p. FSRC #5381.*
Report on workshop held to inform U.S. Congress members of the importance of the issue of desertification and its link to poverty in Africa. Compilation of information presented by representatives of donors, NGOs, and the UN Desertification Convention.

Famine mitigation intervention options manual: Niger USAID/Niger disaster preparedness and

mitigation program. *1994. Adelski, Elizabeth; Dilley, Maxx; Simon, Lynette; Tabor, Joe; USAID. 84p. FSRC #1509.*
Manual that describes interventions to mitigate drought-related famine in Niger. Includes design papers on vegetable trenches for garden production, water-harvesting for agriculture, water-harvesting on rangelands, phosphate fertilizer, seed collection for revegetation prevention of soil erosion in gullies and streams, and irrigation infrastructure.

C ***Soil conservation/erosion***

Sustaining the soil: Indigenous soil and water conservation in Africa. *1996. Reij, Chris; Scoones, Ian; Toulmin, Camilla. 260p. FSRC #6737.*
Compilation of chapters on the following issues: soil and water conservation in Africa; local knowledge of water harvesting; expansion of water harvesting; traditional planting; and rehabilitation of degraded land.

Integrated management of agricultural watersheds: Land tenure and indigenous knowledge of soil and crop management. *1991. Taylor-Powell, Ellen. 30p. FSRC #4508.*
Reports on findings of an on-farm survey on land tenure and land management. Assesses land tenure and documents indigenous knowledge of soil and crop management, farmer perceptions of agricultural problems and solutions.

Soil and water conservation in Sub-Saharan Africa: Towards sustainable production by the rural poor. *1992. Centre for Development Cooperation Services; Free University, Amsterdam. 110p. FSRC #1975.*
Provides guidance on design and implementation of soil and water conservation on rainfed agricultural land of small scale farmers. Examines land degradation, design issues, and strategies.

Study of the reasons for success or failure of soil conservation projects. *1991. Hudson, Norman W. 65p. FSRC #3017.*
Reports on lessons learned in the planning and implementation of soil conservation programs.

Log frame indicator for soil and water conservation. *1996. REST-Ethiopia. 10p. FSRC #6615.*
Logical framework matrix of indicators for soil and water conservation program.

Dryland farming in Africa. *1993. Rowland, J.R. 336p. FSRC #4127.*
Addresses the following issues: agricultural development in dryland Africa, the dryland farming environment, drought and crop adaptation, dryland farming principles, traditional farming systems, crop production, soil and water conservation, and weed and pest control.

Vetiver grass: A thin green line against erosion. *1993. National Research Council. 171p. FSRC #3794.*

Reviews research on vetiver grass, a tropical grass that can help combat erosion. Includes recommendations.

Towards sustainability: Soil and water research priorities for developing countries. *1991. National Research Council. 65p. FSRC #3792.*
Examines soil and water research priorities that would contribute to sustainable agricultural development. Identifies critical research priorities and methods to support an integrated research strategy.

Perspectives on soil erosion in Africa: Whose problem? *1989. Fones-Sundell, Melinda; International Institute for Environment and Development. 14p. FSRC #2527.*
Evaluates soil erosion problem in Africa and the perspectives of farmers, governments, and donors.

Looking after our land: Soil and water conservation in dryland Africa. *1991. Critchley, Will. 84p. FSRC #2121.*
Outlines lessons learned for soil and water conservation approaches in sub-Saharan Africa. Based on case studies, provides information on successful results.

C Environmental monitoring

Water and sanitation guide (draft). *May 1997. Baer, Franklin C. IMPACT. 37p.*
Indicators guide for monitoring water and sanitation programs. Discusses importance of environmental health indicators; health benefits of improved water and sanitation; possible water and sanitation indicators; calculation, definitions, sources, and issues surrounding indicators; and the use of the indicators in reporting activities.

Towards sustainable development: Environmental indicators. *1998. OECD. 129p. FSRC #6773.*
Presents major indicators as well as selected socioeconomic and sectoral indicators with environmental significance. Highlights links among environmental indicators, environmental performance, and sustainable development.

Environmental indicators for agriculture. *1997. OECD. 62p. FSRC #6162.*
Describes OECD's attempt "to meet the demand for data on agri-environmental linkages". Outlines policy and analytical framework. Examines indicator choice and criteria and environmental issues.

Environmental monitoring, evaluation, and mitigation plans: Review of the experiences in four African countries. *1994. Hecht, Joy E.; Institute for International Research; Environmental and Natural Resources Policy and Training (EPAT) Project. 60p. FSRC #6831.*
Provides analytical overview of the environmental monitoring, evaluation and mitigation plans (EMEMPs) with which the relationship between development activities and the environment is tracked.

Rapid rural appraisal methodology applied to project planning and implementation in natural resource management. *1991. Molnar, Augusta. NAPA Bulletin 10. 12p. FSRC #3698.*
Examines Rapid Rural Appraisal (RRA) methods applied to natural resource management project planning and implementation. Provides background information on RRA and discusses interviews and controversial issues.

Changing views on change: Participatory approaches to monitoring the environment. *July 1998. Abbot, Joanne and Irene Guijt. SARL discussion paper no. 2. IIED. 96p.*
Reviews participatory approaches to monitoring environmental change. Draws on experiences of project in Brazil that aims to develop a participatory monitoring program to assess the social and environmental impacts of their efforts to develop more sustainable agricultural practices.

Community forestry: Participatory assessment, monitoring and evaluation. *1989. Davis-Case, DArcy; FAO. 150p. FSRC #2188.*
Describes participatory assessment, monitoring, and evaluation (PAME) concept applied to community forestry projects.

Agricultural statistics for environmental monitoring and policy. *Parris, Kevin; Directorate for Food, Agriculture and Fisheries/OECD. 15p. FSRC #6900.*
Discusses the challenges which confront agricultural statisticians, economists, and policy analysts concerned with environmental monitoring and policy analysis. Explains how the OECD has addressed these challenges and describes the overall policy context of OECD work on agriculture and the environment.

Long-term environmental monitoring system: IFFD Program, CARE Bangladesh. *September 1996. Rahman, M. Mokhlesur; Sachindra Halder. 55p.*
Reports on consultancy to develop simple environmental monitoring system guidelines for road improvement programs. Discusses methodology; important environmental components (IECs) for capture fisheries, agriculture, and settlements; operational issues; implementation plan for monitoring team; and personnel and resources requirements.

C ***Environmental policy***

Agriculture and the environment: Issues and policies. *1998. OECD. 37p. FSRC #6769.*
Analyzes ways in which governments might promote market solutions and design and implement policies to achieve environmentally, economically, and socially sustainable agriculture at minimal resource cost to the economy and with least trade distortion.

Full house: Reassessing the Earth's population carrying capacity. *1994. Brown, Lester; Kane, Hal.*

223p. FSRC #1080.
Discusses food insecurity and environmental degradation in the ocean, rangeland, agriculture, and water resources. Proposes strategies to address the food/population issue.

WFP and the environment: Issues and priorities. *September 1998. World Food Programme.19p*.
Reports on meeting of the Executive Board, Third Regular Session, Rome, 19-22 October 1998. Summarizes policy and operational issues faced by WFP when integrating environmental concerns in its operations.

Paying the piper: Subsidies, politics, and the environment. *December 1996. Roodman, David Malin. Worldwatch Paper 133. Worldwatch Institute. 80p.*
Presents argument for subsidy reform to improve environmental and economic health and progress.

Rising sun, gathering winds: Policies to stabilize the climate and strengthen economies. *November 1997. Flavin, Christopher, Seth Dunn. Worldwatch Paper 138. Worldwatch Institute. 84p.*
Compares and analyzes climate policies of ten industrial nations and draw lessons learned for future policies in industrial and developing countries.

Gender and the environment: The challenge of cross-cutting issues in development policy planning. *1992. Levy, Caren. 15p. FSRC #3402.*
Presents a framework for integrating gender and the environment into development planning. Discusses the links between gender and the environment, challenges, social issues, access to and control of natural resources, and the impact of resource use.

Environmental change in refugee-affected areas of the Third World: The role of policy and research. *1994. Black, Richard. 9p. FSRC #1775.*
Reviews the current nature of policy responses to environmental change in refugee assistance programs. Points out the lack of effective policy measures to identify and combat environmental degradation.

Investing in the future: Harnessing private capital flows for environmentally sustainable development. *February 1998. French, Hilary F. Worldwatch Paper 139. Worldwatch Institute. 68p.*
Discusses how private capital shapes environmental trends in developing countries and strategies to help mitigate environmental damage and focus international investment capital on sustainable development activities.

Policy taxonomy and analysis of policies affecting natural resources and the environment. *1992. Agricultural Policy Analysis Project, Phase II; USAID. 217p FSRC #6328.*
Examines range of policies to be considered in addressing resource issues. Discusses forest management policies, agricultural and livestock policies, land tenure and colonization, protected and reserved areas, wildlife protection and trade, coastal zone management, water policy and watershed management, environmental

management policies, macroeconomic policies, and population.

Win-win approaches to development and the environment: Environmental trusts and endowments. *1996. USAID; Center for Development and Evaluation. 2p. FSRC#6974.*
Overview of how environmental trusts/USAID funding mechanisms may be used in environmental projects.

Draft legislation for the creation of a national environmental endowment fund in Madagascar. *1994. Cantin, Egide; Environmental and Natural Resources Policy and Training (EPAT) Project; Winrock International Environmental Alliance (WIEA). 43p. FSRC#6983.*
EPAT's study for USAID on the establishment of endowment funds to be used for environmental initiatives. Reviews the status of Madagascar's legal and regulatory framework in establishment of Madagascar's National Environmental Endowment Fund (NEEF).

Analysis of ten African natural resource management practices. *1992. USDA/Forestry Service; Erdmann, Thomas K. 109p. FSRC #6358.*
Examines ten natural resource management practices or technologies that have been used in Africa. Analyzes them within the context of the USAID Africa Bureau's natural resources management analytical framework.

Mainstreaming the environment: The World Bank Group and the environment since the Rio Earth Summit, Fiscal 1995. *1995. World Bank. 301p.*
Reports on World Bank activities associated with the follow-up to the UN Conference on Environment and Development in Rio de Janeiro. Outlines financial and technical assistance for environment programs and describes World Bank environmental analytical, research, and policy work.

Poverty, population and environmental degradation in China. *June 1997. Rozelle, Scott; Huang, Jikun; Zhang, Linxiu. Food Policy (vol. 22, no. 3). 12p.*
Analyzes the relationship between population, poverty, and the environment in China. Assesses environmental degradation (water pollution, deforestation, grassland destruction, soil erosion, and salinization) in China and the nation’s environmental policies.

Statement of Barbara J. Bramble on behalf of the National Wildlife Federation and the Sierra Club before the Committee on Foreign Affairs. *1994. 6p. FSRC #962.*
Argues that foreign assistance is in the U.S. national interest as a means of fostering economically, socially, and ecologically sustainable development. Stresses the importance of sustainable development goal.

Introductory guide to the Earth Summit. *1991. 44p. FSRC #437.*
Provides background information for citizen groups and individuals interested in the 1992 Earth Summit. Presents historical background of the summit as well as outline of summit issues.

Why does poverty persist in regions of high biodiversity?: A case for indigenous property right

system. *1991. Gupta, Anil K. 21p. FSRC #2817.*
Discusses biodiversity and poverty, examining such issues as compensation of local communities for preserving diversity and property rights concerning genetic resources.

Tree products in agroecosystems: Economic and policy issues. *1991. Arnold, J.E.M.; International Institute for Environment and Development. 21p. FSRC #1623.*
Reviews trends in the use of forest products and examines the role of common property resources as a source of these products. Discusses impact of national policies and interventions on these sectors.

UNHCR and the environment: Priorities for 1998. *20p.*
Outlines UNHCR's Environment Programme objectives.

Natural resources use and conservation in Zambia. *1993. World Bank; USDA; Mabbs-Zeno, Carl C. 57p. FSRC #6496.*
Findings of study conducted to assess natural resource issues in Zambia. Presents environmental action plan and policy suggestions.

Plan for supporting natural resource management in sub-Saharan Africa: Regional environmental strategy for the Africa Bureau. *1992. USAID. [126]p. FSRC #4755.*
Outlines USAID efforts to improve natural resources management.

Natural resource prices, export policies and deforestation: The case of Sudan. *1991. Larson, Bruce A.; Bromley, Daniel W. 8p. FSRC #3350.*
Examines how domestic policies on colonial and independent policies in Sudan contributed to deforestation and downfall of international gum arabic trade.

Need for proper resource management in Africa. *1991. Resource management in developing countries: Africa's ecological and economic problems. James, Valentine U. 16p. FSRC #3141.*
Discusses policy changes needed on the part of Africa nations, developed countries, and international trade organizations for the natural resources management effort.

Towards sustainability: A plan for collaborative research on agriculture and natural resource management. *1991. National Research Council. 145p. FSRC #3791.*
Develops agriculture and natural resource management strategies. Presents need for sustainable agriculture and natural resource management collaborative research support program, systems-based research, and interdisciplinary research. Discusses grant program approach.

Environmental policy paper. *1990. African Development Bank; African Development Fund. 56p. FSRC #1525.*
Examines the environmental issues facing Africa, presents African Development Bank environmental policies,

and outlines assessment procedures.

Management of common property natural resources: Some conceptual and operational fallacies. *1989. Bromley, Daniel W.; Cernea, Michael M.; World Bank Discussion Paper No. 57. 66p. FSRC #6255.*
Explores property and resource management issues; project strategies and resource management; and presents an agenda for action to build rural managerial capacity.

Sustainable development: Economics and environment in the Third World. *1990. Pearce, David; Barbier, Edward; Markandya, Anil. 217p. FSRC #1455.*
Discusses the economic and environmental implications of sustainable development. Presents case studies including Indonesia, Sudan, Nepal, Botswana, and Amazonia.

Environmentally sustainable economic development: Building on Brundtland. *1991. Goodland, Robert; Daly, Herman; Serafy, Salah El; Von Droste, Bernd; UNESCO. 100p. FSRC #6060.*
Collection of articles concerning the impact of lifestyle, technology, and population factors on environmental sustainability.

Caring for the Earth: Strategy for sustainable living, Summary. *1991. World Conversation Union; United Nations Environment Programme; World Wide Fund for Nature. 24p. FSRC #6147.*
Presents strategies for sustainable environmental policies and actions.

Environment and development in Africa: Selected case studies. *1991. Blackwell, Jonathan M.; Goodwillie, Roger N.; Webb, Richard; World Bank. 127p. FSRC #1782.*
Examines linkages between the environment and development. Discusses agricultural development in Zambia, case studies in Tanzania and Sudan, and draws lessons to be learned.

Resources. *1990, 1991. Resources for the Future. 20p. FSRC #6732.*
Issues include articles on compensation of losers when cost-effective environmental policies are adopted; inadequacy of scientific and economic data in pesticide benefits analyses; 1990 Farm Bill; comparison of environmental regulation in the OECD countries; sustainable development; and environmental interests in agricultural policy.

Politics of ecological degradation and famine: State of development in Ethiopia. *1992. Kebbede, Girma. 47p. FSRC #3211.*
Examines the links between ecological degradation, recurring famines, and the social and political structure in Ethiopia.

Issues facing national environmental action plans in Africa: Report from a Club of Dublin workshop, Mauritius, June 17-19, 1991. *World Bank. 77p. FSRC #6351.*
Reports on findings of workshop formed to exchange information on National Environmental Action Plans

(NEAPs) experience. Discusses the need for solid economic analysis and sound environmental information. Also examines environmental institutions, public participation, and the decision to establish a consultative group of experts.

Decentralization and local autonomy: Conditions for achieving sustainable natural resource management. *1992. Associates in Rural Development. [300]p. FSRC #1637.*
Analyzes institutions involved in funding management, and maintenance functions and suggests ways in which these institutions can improve to enhance natural resource management.

C ***Forestry/trees***

Cost-effectiveness analysis in food-aided forestry. *1990. Nembot, Timothy Fomete; North Carolina State University. 61p. FSRC #103.*
Master's thesis, North Carolina State University. Examines the applicability of cost-effectiveness analysis in food-aided forestry programs. Discusses projects in Ethiopia, Mali, and Haiti. Covers project planning; monitoring and evaluation of projects; and valuation of trees, land, and workers.

Environmental guidelines: Forestry in refugee situations. *May 1998. UNHCR. 65p.*
Focuses on forestry issues in refugee programs. Includes the following sections: background information; role of forest-related activities within refugee programs; and monitoring and evaluation activities.

Forestry projects for refugees and displaced persons: Guidelines for project managers. *1996. Lind, Linda L.; Peniston, Brian J. 50p. FSRC #5775.*
Manual designed for managers of forestry and natural resource projects for refugees and displaced persons. Includes background information on refugees and displaced persons, policy principles, forestry guidelines, and suggested references. Stresses the importance of local participation by refugees and displaced persons in forestry projects.

People's dependency on forests for food security. *1995. International Rural Development Centre; Swedish University of Agricultural Sciences; Antonsson-Ogle, Britta. 4p. FSRC #5182.*
Analyzes the direct and indirect role that forests play in the livelihood of rural families. Includes case studies in Bolivia, Tanzania, Thailand, and Vietnam.

Forest-dependent livelihoods: Links between forestry and food security. *1995. Dembner, S. 6p. FSRC #5183.*
Discusses dependence on tree and forest resources and access to these resources. Includes case studies from Tanzania, Thailand, and Vietnam.

Forestry and food security: Proceedings of a seminar held in Hanoi and Phu Ninh, December 5-8,

1994. *1995. Vietnam Ministry of Forestry; International Rural Development Centre; Forests, Trees and People Programme; Ogle, Britta; Chu Chu, Ha. 56p. FSRC #5179.*
Seminar that reports on findings from pilot studies conducted in Bolivia, Tanzania, Thailand, and Vietnam to examine the reliance on forest and tree products for food security.

Sharing forest management: Key factors, best practice and ways forward. *1996. Overseas Development Administration. 25p. FSRC #6861.*
Describes findings from ODA's review of participatory forest management activities.

Forestry and food security. *1990. Food and Agriculture Organization. [7]p. FSRC #5620.*
Brochure on forestry and food security. Discusses roles of trees in timber, food, income, medicine, fuel/energy, and fodder sectors.

Dependency on forests and trees for food security pilot study: Nanguruwe and Mbambakofi villages, Mtwara region, Tanzania. *1994. Missano, H.; Tanzania Food and Nutrition Centre; Swedish University of Agricultural Science; Forests, Trees and People; Food and Agriculture Organization. 48p. FSRC #5177.*
Reports on field survey on dependency on forests and trees for food security in two villages in Tanzania. Draws comparisons between the findings from the two villages and makes suggestions.

Dependency on forest and tree products for food security: Case study of a forest area in northeast Thailand. *1994. Saowakontha, Sastri; Swedish University of Agricultural Sciences; Forests, Trees and People; FAO. Kunarattanapruk, Kiatirat. 103p. FSRC #5178.*
Examines the implications of the closing of a forest area on villagers who depend on the forest and tree products for food security. Compares the effect on villagers living near the forest versus those living further away. Identifies the most vulnerable groups. Tests methods to collect information for forestry sector policy and other uses.

Dependency on forest and tree products for food security: Pilot study in Yen Huong Commune, Ham Yen District, Tuyen Quang Province, North Vietnam. *1994. Thi Yen, Nguyen; Quang Duc, Nguyen; Forests, Trees and People; Swedish University of Agricultural Sciences; FAO. 56p. FSRC #5176.*
Findings of study conducted to get information on the relationship between forest products and household food security, the dependency of local farmers on the forest for food security, and their vulnerability to change in availability of this resource.

Taking a stand: Cultivating a new relationship with the world's forests. *April 1998. Abramovitz, Janet N. Worldwatch Paper 140. Worldwatch Institute. 84p.*
Presents steps to preserve world's forests as well as provide economic benefits, including such activities as waste reduction on production and consumption ends, and tax and subsidy policies.

Household food security and forestry: An analysis of socio-economic issues. *1991. Falconer, J.; Arnold, J.E.M.; FAO. 147p. FSRC #2420.*
Examines socioeconomic aspects of the role of forestry in food security, with focus on quality of life issues.

Integrating sustainability into agroforestry projects: Workshop framework for NGO program managers. *1993. Environmental and Natural Resources Policy and Training Project; White, T. Anderson; University of Minnesota. 39p. FSRC #6153.*
Reports on workshop concerning the integration of sustainability into forestry projects. Discusses assessment of context for sustainable rural development, local needs and capabilities to achieve sustained development, and field office support for local action.

Gender and environment: Lessons from social forestry and natural resource management - Sourcebook. *1992. Warren, Sarah T.; Aga Khan Foundation Canada; Winrock Institute for Agricultural Development; Yale School of Forestry and Environmental Studies; Faculty of Environmental Studies. 98p. FSRC #5518.*
Presents background material on gender, environment, and natural resources. Includes case studies, exercises, and bibliography of resources.

Community forestry: Ten years in review. *1992. Arnold, J.E.M. 32p. FSRC #1622.*
Overview of forestry activities and assessment of constraints and opportunities for strengthening participation in forestry activities.

Community forestry: Participatory assessment, monitoring and evaluation. *1989. Davis-Case, DArcy; FAO. 150p. FSRC #2188.*
Describes participatory assessment, monitoring, and evaluation (PAME) concept applied to community forestry projects.

Trees as savings and security for the rural poor. *1993. Chambers, Robert; Leach, Melissa; Conroy, Czech; International Institute for Environment and Development. 15p. FSRC #1995.*
Examines the role of trees as savings and security for many of the rural poor. States that trees and tree products can be used by rural poor as a source of cash to meet contingency needs such as seasonal shortage, disasters, or family-social obligations.

If a tree falls: A VSO guide to raising and planting trees in Kenya. *Carter, Mike. 24p. FSRC #1955.*
Guide to VSO staff for establishing small tree nurseries. Information on seeds, choosing trees, planning a nursery, raising seedlings, nursery management, planting, and establishing trees without a nursery.

Socioeconomic attributes of trees and tree planting practices. *1991. Raintree, John B. FAO. 115p. FSRC #4028.*

Studies socioeconomic issues surrounding tree species selection. Develops framework for choices on tree species.

Agroforestry in Africa: A survey of project experience. *1990. Kerkhof, Paul. FSRC #3235.*
Compares agroforestry projects and techniques. Covers design and implementation, rural afforestation, soil conservation and agroforestry, and soil erosion and agroforestry.

Women's indigenous knowledge of forest management in Orissa. *1994. Mishra, Smita. 3p. FSRC #3678.*
Explores the indigenous knowledge of women in two tribal communities in Orissa, India. Examines how women cope with a declining resource base and the power structures (gender relations) that prevent them from participating in decision-making process.

Community forestry: Herders decision-making in natural resources management in arid and semi-arid Africa. *1990. Niamir, Maryam. FAO. 126p. FSRC #3821.*
Reports on use and management of natural resources - particularly forests, water, and wildlife - in the arid and semi-arid regions of Africa. Covers local knowledge/systems of natural resource management and policy implications of social forestry development in arid and semi-arid lands.

Agroforestry in Sub-Saharan Africa: A farmer's perspective. *1989. Cook, Cynthia; Grut, Mikael. 94p. FSRC #2096.*
Examines agroforestry practices in sub-Saharan Africa from farmer's perspective. Discusses design and implementation issues for agroforestry projects.

Tree products in agroecosystems: Economic and policy issues. *1991. Arnold, J.E.M.; International Institute for Environment and Development. 21p. FSRC #1623.*
Reviews the trends in the use of forest products and examines the role of common property resources as a source of these products. Discusses impact of national policies and interventions on these sectors.

Forestry and food security. *1989. FAO/SIDA; United Nations; Forest, Trees and People Programme. 128p. FSRC #5173.*
Examines the linkages between forestry and food security. Provides conclusions and recommendations based on a series of papers.

C ***Water resources management***

Dividing the waters: Food security, ecosystem health and the new politics of scarcity. *1996. Postel, Sandra; Worldwatch. 76p. FSRC #6224.*
Examines the problem of water scarcity. Emphasizes political ramifications and environmental

consequences. Recommends water marketing and price changes.

Sustaining the soil: Indigenous soil and water conservation in Africa. *1996. Reij, Chris; Scoones, Ian; Toulmin, Camilla. 260p. FSRC #6737.*
Compilation of chapters on the following issues: soil and water conservation in Africa; local knowledge of water harvesting; expansion of water harvesting; traditional planting; and rehabilitation of degraded land.

Regional workshop on environmental security for Central America and the Caribbean with emphasis on water and sanitation, hillside agriculture and rural road construction. *1998. Solberg, Scott; Walter, Ed; CARE/Honduras; USAID; CRS/Guatemala. 26p. FSRC#6990.*
Summary of workshop held in Honduras in May 1998. Objectives included: improvement in the environmental soundness of food security projects; assist Title II-funded NGOs in complying with USAID Environmental Regulation 216; provide participants with information, tools and training to incorporate environmental design considerations into projects and activities.

Sustaining water: Population and the future of renewable water supplies. *1993. Engelman, Robert; LeRoy, Pamela; Population Action International. 56p. FSRC #5378.*
Discusses the relationship between per capita national water availability/use and economic, social, and health risks in countries with insufficient fresh water.

Last oasis: Facing water scarcity. *1992. Postel, Sandra. The Worldwatch Environmental Alert Series. Worldwatch Institute. 239p.*
Examines the ecological, economic, and political limits of water. Evaluates technologies and methodologies available to help conserve water.

Water and sanitation guide (draft). *May 1997. Baer, Franklin C. IMPACT. 37p.*
Indicators guide for monitoring water and sanitation programs. Discusses importance of environmental health indicators in process; health benefits of improved water and sanitation; possible water and sanitation indicators; calculation, definitions, sources, and issues surrounding indicators; and using the indicators in reporting activities.

Soil and water conservation in Sub-Saharan Africa: Towards sustainable production by the rural poor. *1992. Centre for Development Cooperation Services; Free University, Amsterdam. 110p. FSRC #1975.*
Provides guidance on design and implementation of soil and water conservation on rainfed agricultural land of small scale farmers. Examines land degradation, design issues, and strategies.

Towards sustainability: Soil and water research priorities for developing countries. *1991. National Research Council. 65p. FSRC #3792.*
Explores soil and water research priorities that would contribute to sustainable agricultural development.

Identifies critical research priorities and methods to support an integrated research strategy.

Planning for sustainable watershed management: Environmental and institutional assessments: Proceedings of an interdisciplinary workshop, June 26-27, 1990. *Potter, Christopher S. 109p. FSRC #3991.*
Proceedings from workshop on environmental and institutional assessment for watershed management programs. Identifies socioeconomic, institutional, and biophysical information requirements.

Evaluations of water interventions in Bolivia. *1994. Environmental Health Project; USAID; Powell, Clydette; Larrea, Oscar; Vargas, Veronica. 99p. FSRC #6098.*
Assesses the impact of water and sanitation projects in Bolivia.

Looking after our land: Soil and water conservation in dryland Africa. *1991. Critchley, Will. 84p. FSRC #2121.*
Outlines lessons learned for soil and water conservation approaches in sub-Saharan Africa. Based on case studies, provides information on successful results.

Water resource interventions and famine mitigation. *1991. Tabor, Joseph Anthony. Famine mitigation: Proceedings of workshops held in Tucson, Arizona, May 20-23, 1991 and Berkeley Springs, West Virginia, July 31-August 2, 1991. 10p. FSRC #4488.*
Examines water management techniques that can help stabilize and rehabilitate drought areas. Analyzes domestic and livestock water, water conservation for crops, and other water resource interventions.

A strategy for water resources management. *1988. Danish International Development Agency. 61p. FSRC #2169.*
Strategy paper for plan of action for integration of environmental considerations into Danish development assistance. Focuses on environmental issues related to the use of water resources. Discusses trends affecting water resources, identifies legal and administrative issues, and provides strategies.

New era of water resources management from "dry" to "wet" water savings. *1994. Seckler, David; International Irrigation Management Institute. 25p. FSRC #5368.*
Discusses policy and program implications of developments in water resources field. Examines the inefficiency of existing irrigation and other water-using systems and stresses needs for improved water development programs.

Review of pollution in the African aquatic environment. *1994. FAO. 118p. FSRC #5706.*
Reports on findings of working group on pollution and fisheries. Presents recommendations for aquatic pollution control. Examines environmental quality standards and risk assessment methodologies.

Technical and managerial aspects of environmental and health impact assessment of water resource

development projects: Ethiopian experience. *1991. Tsegaye, Fekade; Ethiopian Valleys Development Studies Authority. 13p. FSRC #5724.*
Reviews the environmental and health consequences of water resources development projects, and assesses current impact assessment and environmental management practices in Ethiopia. Includes recommendations.

Unique model in potable water programs (Modelo unico proyectos de agua potable): Education in sanitation and environment in rural areas. *Institute de Fomento Municipal Programs "Agua Fuente de Paz" 75p.*
Report prepared by Government of Guatemala outlining a multidisciplinary approach to modernize and improve the sanitation and potable water sector, via a coordinating activity called El Comité Permanente de Coordinación de Agua Potable y Saneamiento (COPECAS). Document is in Spanish language.

Log frame indicator for soil and water conservation. *1996. REST-Ethiopia. 10p. FSRC #6615.*
Logical framework matrix for indicators for soil and water conservation program.

Watershed management field manual: Slope treatment measures and practices. *1988. FAO. 144p. FSRC #2594.*
Manual that provides guidance on land preparation for afforestation and cultivation on sloping land affected by water erosion.

Integrated Wetland System (IWS) for wastewater treatment and recycling for the poorer parts of the world with ample sunshine: Basic manual. *January 1995. Ghosh, Dhrubajyoti. 99p.*
Outlines design, operation and maintenance, and sustainability issues of IWS projects.

C Health/sanitation and the environment

World resources 1998-99: A guide to the global environment. Environmental change and human health. *1998. World Resources Institute, UNEP, UNDP, World Bank. 369p.*
Focuses on the following issues: environmental change and human health, global environmental trends, and sustainable development. Includes data tables.

Infecting ourselves: How environmental and social disruptions trigger disease. *April 1996. Platt, Anne E. Worldwatch Paper 129. Worldwatch Institute. 79p.*
Examines the link between environmental/social factors and the spread of disease. In addition to the need to address cuts in basic health services, poor development planning, and overcrowding, argues that policies to reduce ecologically disruptive development, ensure clean water, and reduce fossil fuel consumption are necessary to help stop the spread of infectious disease.

Regional workshop on environmental security for Central America and the Caribbean with emphasis on water and sanitation, hillside agriculture and rural road construction. *1998. Solberg, Scott; Walter, Ed; CARE/Honduras; USAID; CRS/Guatemala. 26p. FSRC#6990.*
Summary of workshop held in Honduras in May 1998. Objectives included: improvement in the environmental soundness of food security projects; assist Title II-funded NGOs in complying with USAID Environmental Regulation 216; provide participants with information, tools and training to incorporate environmental design considerations into projects and activities.

Down to earth: Community perspectives on health, development and the environment. *1995. Bradford, Bonnie; Gwynne, Margaret A. 194p. FSRC #6216.*
Discusses health, environment, and development problems around the world. Recommends the use an integrated approach which is responsive to local needs. Emphasizes human development over economic development.

Water and sanitation guide (draft). *May 1997. Baer, Franklin C. IMPACT. 37p.*
Indicators guide for monitoring water and sanitation programs. Discusses importance of environmental health indicators in process; health benefits of improved water and sanitation; possible water and sanitation indicators; calculation, definitions, sources, and issues surrounding indicators; and using the indicators in reporting activities.

Unique model in potable water programs (Modelo unico proyectos de agua potable): Education in sanitation and environment in rural areas. *Institute de Fomento Municipal Programs "Agua Fuente de Paz" 75p.*
Report prepared by Government of Guatemala outlining a multidisciplinary approach to modernize and improve the sanitation and potable water sector, via a coordinating activity called El Comité Permanente de Coordinación de Agua Potable y Saneamiento (COPECAS). Document is in Spanish language.

Urban environmental sanitation project: Baseline study 1995. *Yanguela, Argelia Tejada; CARE Dominicana. 250p. FSRC #5267.*
Baseline study to gain understanding of future project areas and to develop series of impact indices for urban environmental and sanitation project in Santo Domingo.

Evaluations of water interventions in Bolivia. *1994. Environmental Health Project; USAID; Powell, Clydette; Larrea, Oscar; Vargas, Veronica. 99p. FSRC #6098.*
Examines the impact of water and sanitation projects in Bolivia.

Technical and managerial aspects of environmental and health impact assessment of water resource development projects: Ethiopian experience. *1991. Tsegaye, Fekade; Ethiopian Valleys Development Studies Authority. 13p. FSRC #5724.*
Reviews the environmental and health consequences of water resources development projects, and

assesses current impact and environmental management practices in Ethiopia. Includes recommendations.

Disposal and destruction of syringes and needles in Viet Nam and the Philippines. *1998. WHO. Expanded Programme on Immunization, Global Programme for Vaccines and Immunization.*

Vital to health? Understanding your choices--a guide for senior decision makers. *1998. Children's Vaccine Programme, Office of Health and Nutrition.*

C War/conflict and the environment

Saving phytogenic resources in times of war and immediate post-war period: Report of Huambo workshop. *1995. International Committee of the Red Cross. 10p. FSRC #6649.*
Reports on workshop on the conservation of phytogenetic resources and preservation of biodiversity in war and post-war situations.

War and the environment. Chapter 7, The WWF Environment Handbook. *1990. 171p. FSRC #5851.*
Discusses both the diminishing health of the environment and its effect on increasing the potential for conflict, as well as the amplified impact effect of modern technology.

Relationship between armed conflict and environmental degradation in Africa. *1989. Cervenka, Zdenek; Ornas, A.H.; Salih, M.A.M. Ecology and politics: Environmental stress and security in Africa. 11p. FSRC #1980.*
Examines the environmental impact of armed conflicts in Africa in 1988 in such nations as Angola, Mozambique, Burundi, Somalia, Ethiopia, and Sudan. Discusses the relationship between armed conflicts and environmental degradation.

C Indigenous knowledge, local practices, participation

Participatory research and the race to save the planet: Questions, critique and lessons from the field. *1994. Rocheleau, Dianne E. 21p. FSRC #4110.*
Discusses participatory research as a means to address sustainable development issues.

Gender, environment, and development in Kenya: Grassroots perspective. *1995. Thomas-Slayter, Barbara; Rocheleau, Dianne. 247p. FSRC #5185.*
Examines actions of women and community institutions in response to the resource environment.

Changing views on change: Participatory approaches to monitoring the environment. *July 1998. Abbot, Joanne and Irene Guijt. SARL discussion paper no. 2. IIED. 96p.*

Reviews participatory approaches to monitoring environmental change. Draws on experiences of project in Brazil that aims to develop a participatory monitoring program to assess the social and environmental impacts of their efforts to develop more sustainable agricultural practices.

Enabling sustainable community development: Associated event of the second annual conference on environmentally sustainable development held at the World Bank, Washington, D.C. September 22-23, 1994. *Serageldin, Ismail; Cohen, Michael A.; Leitmann, Josef; World Bank. 48p. FSRC #1468.*
Papers from a World Bank meeting on the necessity of enlisting local community participation in development projects to ensure sustainability. Discusses strategies, lessons learned, and theories for community based development.

Women's indigenous knowledge of forest management in Orissa. *1994. Mishra, Smita. 3p. FSRC #3678.*
Explores the indigenous knowledge of women in two indigenous tribal communities in Orissa, India. Examines how women cope with a declining resource base and the power structures (gender relations) that prevent them from participating in decision-making process.

Sharing forest management: Key factors, best practice and ways forward. *1996. Overseas Development Administration. 25p. FSRC #6861.*
Describes findings from ODA's review of participatory forest management activities.

Participation in the irrigation sector. *Environment Department Dissemination Notes. June 1995, No. 16. 4p.*
Discusses farmer participation in the design and management of irrigation systems.

Indigenous views of land and the environment. *1993. World Bank; Davis, Shelton H. 91p. FSRC #5229.*
Compilation of reports on indigenous peoples' views of land and the environment among selected groups in Ecuador, Kenya, and the Philippines. Explores their views, how laws and policies have impacted these views, and needed changes in these policies to more accurately reflect indigenous views.

Indigenous cultural and biological diversity: Overlapping value of Latin American ecoregions. *1995. Wilcox, Bruce A.; Duin, Kristin N. 5p. FSRC #4994.*
Examines biological utility and cultural diversity, utility rank values for ecosystems, and indicator measures for biological utility, biodiversity, and cultural diversity.

Indigenous natural-resource management systems for sustainable agricultural development: A global perspective. *Rajasekaran, B.; Warren, D.M.; Babu, S.C. 24p. FSRC #4029.*
Identifies consequences of the disappearance of indigenous knowledge systems concerning natural resource management and develops model that takes these indigenous practices into account.

Garden cultivation, conservation and household strategies in Zimbabwe. *1991. Bell, Morag; Hotchkiss,*

Patricia. 2p. FSRC #1726.
Examines how households cope with unreliable rainfall and manage their land and water resources. Focuses on a wetland environment in Zimbabwe. Identifies regional in garden cultivation practices.

Shifting cultivators: Local technical knowledge and natural resource management in the humid tropics. *1991. Warner, Katherine; FAO. 80p. FSRC #4920.*
Discusses local knowledge used by swidden/fallow farmers for natural resource management purposes and lessons learned from these practices.

Integrated management of agricultural watersheds: Land tenure and indigenous knowledge of soil and crop management. *1991. Taylor-Powell, Ellen. 30p. FSRC #4508.*
Reports on findings of an on-farm survey on land tenure and land management. Assesses land tenure and documents indigenous knowledge of soil and crop management, farmer perceptions of agricultural problems and solutions.

Agroforestry in Sub-Saharan Africa: A farmer's perspective. *1989. Cook, Cynthia; Grut, Mikael. 94p. FSRC #2096.*
Examines agroforestry practices in sub-Saharan Africa from farmer's perspective. Discusses design and implementation issues for agroforestry projects.

Community forestry: Participatory assessment, monitoring and evaluation. *1989. Davis-Case, DArcy; FAO. 150p. FSRC #2188.*
Describes participatory assessment, monitoring, and evaluation (PAME) concept applied to community forestry projects.

Community forestry: Ten years in review. *1992. Arnold, J.E.M. 32p. FSRC #1622.*
Overview of forestry activities and assessment of constraints and opportunities for strengthening participation in forestry activities.

Community forestry: Herders decision-making in natural resources management in arid and semi-arid Africa. *1990. Niamir, Maryam. FAO. 126p. FSRC #3821.*
Reports on use and management of natural resources - particularly forests, water, and wildlife - in the arid and semi-arid regions of Africa. Covers local knowledge and systems of natural resource management and policy implications of social forestry development in arid and semi-arid lands.

Rapid rural appraisal methodology applied to project planning and implementation in natural resource management. *1991. Molnar, Augusta. NAPA Bulletin 10. 12p. FSRC #3698.*
Chapter that evaluates Rapid Rural Appraisal methods applied to natural resource management project planning and implementation. Provides background information on RRA and discusses interviews and controversial issues.

Constraints to environmental rehabilitation through peoples' participation in Northern Ethiopian highlands. *1990. Stahl, Michael. UN research Institute for Social Development Discussion Paper 13. 21p. FSRC #4396.*
Reports on the environmental problems in northern Ethiopian highlands and interventions that have been implemented to stop the environmental degradation. Examines local participation in the programs.

Using indigenous knowledge, remote sensing, and geographic information systems for sustainable development. *Tabor, Joseph Anthony; Hutchinson, Charles, F.; University of Arizona. 10p. FSRC #4489.*
Outlines a natural resources information collection, interpretation, and management technique that combines indigenous knowledge classification systems, remote sensing and satellite navigation, and geographic information systems.

C ***Energy and the environment***

Environmental guidelines: Domestic energy in refugee situations. *May 1998. UNHCR. 48p.*
Outlines guidelines for preventative planning to reduce overall costs and minimize environmental damage associated with domestic energy supply for refugees.

Energy strategy for refugee-affected areas of Kagera and Kigoma areas, Tanzania. *June 1997. Owen, Matthew; Ivan Ruzicka; Environment Unit, UNHCR; European Commission. 180p.*
Study conducted to develop strategy to response to deforestation associated with refugee settlements. Presents findings of energy study and solar cooking assessment as well as policy implications.

Experience of UNHCR and its partners with solar cookers in refugee camps. October 1996. Umlas, Elizabeth. *Office of the Senior Coordinator on Environmental Affairs, UNHCR. 17p.*
Examines advantages and disadvantages of solar cooking in refugee situations. Presents recommendations concerning the use of solar cookers in refugee camps.

Wastewood as a source of woodfuel: The case of Malawi and its relevance to Sub-Saharan Africa. *1991. Teplitz-Sembitzky, W. Natural Resources Forum (February 1991). 6p. FSRC #4520.*
Explains practice in Malawi whereby wasted wood from pine plantations is converted into charcoal that is sold to household and industrial users. Points out that similar efforts in other nations could help stabilize local and regional imbalances.

Harnessing the sun for rural Africa. *1994. Bryant, Elizabeth. 2p. FSRC #1883.*
Discusses solar energy as an alternative to fuelwood.

The agricultural link: How environmental deterioration could disrupt economic progress. *August 1997. Brown, Lester R. Worldwatch Paper 136. Worldwatch Institute. 73p.*

Examines agriculture, energy, and population policy options that can help secure future food supplies.

C *Gender and the environment*

Changing places? Women, resource management and migration in the Sahel: Case studies from Senegal, Burkina Faso, Mali and Sudan. *1995. David, Rosalind; Niang, Oumoul Khayri; Meyers, Mary; SOS Sahel; Economic and Social Research Council. 169p. FSRC #5170.*
Examines the influence of male out-migration on natural resource management in the Sahel region; socioeconomic and demographic factors of desertification in the Sahel; women's knowledge and participation in improving soil fertility; women's survival strategies in reaction to male out-migration.

Gender, environment, and development in Kenya: Grassroots perspective. *1995. Thomas-Slayter, Barbara; Rocheleau, Dianne. 247p. FSRC #5185.*
Examines actions of women and community institutions in response to the resource environment.

Women's indigenous knowledge of forest management in Orissa. *1994. Mishra, Smita. 3p. FSRC #3678.*
Explores the indigenous knowledge of women in two indigenous tribal communities in Orissa, India. Examines how women cope with a declining resource base and the power structures (gender relations) that prevent them from participating in decision-making process.

Gender and environment: Lessons from social forestry and natural resource management - Sourcebook. *1992. Warren, Sarah T.; Aga Khan Foundation Canada; Winrock Institute for Agricultural Development; Yale School of Forestry and Environmental Studies; Faculty of Environmental Studies. 98p. FSRC #5518.*
Presents background material on gender, environment, and natural resources. Includes case studies, exercises, and bibliography of resources.

Women and the environment. *1991. Rodda, Annabel. 180p. FSRC #4116.*
Examines the interaction between women and the environment. Discusses the role women can play as actors in environmental change. Includes glossary and resource guide.

Women's indigenous knowledge of water management in Sri Lanka. *1994. Ulluwishewa, Rohana. 2p. FSRC #4604.*
Evaluates the water management strategies practiced by women, and highlights their contribution to ecological sustainability.

Gender and the environment: The challenge of cross-cutting issues in development policy planning. *1992. Levy, Caren. 15p. FSRC #3402.*

Presents a framework for integrating gender and the environment into development planning. Discusses the links between gender and the environment, challenges, social issues, access to and control of natural resources, and the impact of resource use.

Gender, ecology and the science of survival: Stories and lessons from Kenya. *1991. Rocheleau, Dianne E. 7p. FSRC #4108.*
Notes the current resurgence of ethnoscience research, and states the case including gendered knowledge and skills, supported by a brief review of relevant cultural ecology and ecofeminist field studies.

C ***Livestock and the environment***

Environmental guidelines: Livestock in refugee situations. *May 1998. UNHCR. 37p.*
Presents guidelines on livestock issues in refugees operations. Includes background information as well as sections on positive and negative impacts of livestock on the environment in refugee situations. Discusses prevention and mitigation of negative impacts.

Livestock management and overgrazing among pastoralists. *Livingstone, Ian. 8p. FSRC #3424.*
Examines physical process of range degradation. Assesses common property problem theory and contends that more attention should be focused on difference between average rainfall years and drought and post-drought period in which degradation occurs.

When livestock are good for the environment: Benefit-sharing of environmental goods and services. *1996. Mearns, Robin; Institute of Development Studies. 28p. FSRC #6864.*
Focusing principally on pastoral grazing systems and integrated crop-livestock systems, the paper examines the positive environmental externalities associated with livestock production. Addresses policy options to enhance sharing of environmental benefits between multiple users of the environment including livestock producers.

Livestock, nutrient cycling and sustainable agriculture in the West African Sahel. *1993. Powell, J.M.; Williams, T.O.; International Institute for Environment and Development. 15p. FSRC #3995.*
Discusses nutrient cycling by livestock in West African Sahel and its role in sustaining agricultural productivity. Examines relationship between ruminant livestock and soil productivity.

Taking stock: Animal farming and the environment. *1991. Durning, Alan B.; Brough, Holly. 62p. FSRC #2316.*
Provides an overview of the global problems imposed by increased animal production and meat production, such as environmental degradation and health problems.

Where animals save the land. *1990. Bingham, Sam. World Monitor (September 1990). 6p. FSRC #1772.*

Article concerning a wildlife biologist's theory that increasing herds of domestic livestock can help restore overgrazed and desertified land.

C *Climate change*

Rising sun, gathering winds: Policies to stabilize the climate and strengthen economies. *November 1997. Flavin, Christopher, Seth Dunn. Worldwatch Paper 138. Worldwatch Institute. 84p.*
Compares and analyzes climate policies of ten industrial nations and draws lessons learned for future policies in industrial and developing countries.

Climate change and vulnerable societies: Case studies in Zimbabwe, Kenya, Senegal, and Chile. *1992. Downing, Thomas E. 16p. FSRC #2282.*
Reports on assessment of vulnerable societies and regions in the context of climate change.

Global warming and regional environmental change: Winners and losers in Africa. *1992. Working Papers in African Studies. Glantz, Michael H. 31p. FSRC #2733.*
Discusses the impact of greenhouse gas-induced global warming on Sub-Saharan Africa. Examines potential impact on temperatures, rainfall, sea level, and marine fisheries.

C *Infrastructure and the environment*

Environmental guidelines for selected infrastructure projects. *1988. Environment Unit, Asian Development Bank. 130p.*
Asian Development Bank environmental guidelines for various types of infrastructure projects. Covers EIA methodology and conducting of Initial Environmental Examination (IEE).

Regional workshop on environmental security for Central America and the Caribbean with emphasis on water and sanitation, hillside agriculture and rural road construction. *1998. Solberg, Scott; Walter, Ed; CARE/Honduras; USAID; CRS/Guatemala. 26p. FSRC#6990.*
Summary of workshop held in Honduras in May 1998. Objectives included: improvement in the environmental soundness of food security projects; assist Title II-funded NGOs in complying with USAID Environmental Regulation 216; provide participants with information, tools and training to incorporate environmental design considerations into projects and activities.

Roads and the environment: A handbook. *1997. World Bank; Tsunokawa, Koji; Hoban, Christopher. 225p. FSRC #6791.*
Provides a description of practical methods for the design and execution of effective environmental assessments for those involved in road projects (from planning to construction to maintenance).

Manual of road construction and improvement on rural highways with manual labor. *CARE/Honduras, USAID, Secretary of Governance and Justice Government of Honduras. 60p.*
Handbook on construction of roads that have low traffic volumes, with guidance on road maintenance. Provides overview of the necessity in Honduras to form a basic roads extension network in areas of low production and transit volumes. CARE's PODER program (Proyecto de Oportunidades de Desarrollo y Empleo Rural), contributes to this objective by constructing new roads and improving existing roads, using Title II resources in a Food for Work activity. Document is in Spanish language.

Long-term environmental monitoring system: IFFD Program, CARE Bangladesh. *September 1996. Rahman, M. Mokhlesur; Sachindra Halder. 55p.*
Reports on consultancy to develop simple environmental monitoring system guidelines for road improvement programs. Discusses methodology; important environmental components (IECs) for capture fisheries, agriculture, and settlements; operational issues; implementation plan for monitoring team; and personnel and resources requirements.

C ***Management of natural resource management/environment projects***

USAID, NGOs, and natural resource management in Africa: Proceedings of a workshop. *1993. USDA. 15p. FSRC #840.*
Reports on workshop on USAID and NGO effectiveness in natural resource management activities in Africa. Identifies successful interventions and presents recommendations.

Economic appraisal of environmental projects and policies: Practical guide. *1995. Economic Development Institute of the World Bank; Overseas Development Institute. 172p. FSRC #6214.*
Manual for environment decision makers. Introduces environmental valuation methods and economic theory in the environment.

Dryland management and the USAID response in Africa: Combating desertification through development. *1993. Thomas, Stryk; Gaudet, John. 28p. FSRC #4534.*
Overview of Africa Bureau antidesertification and dryland management activities.

Regional workshop on environmental security for Central America and the Caribbean with emphasis on water and sanitation, hillside agriculture and rural road construction. *1998. Solberg, Scott; Walter, Ed; CARE/Honduras; USAID; CRS/Guatemala. 26p. FSRC#6990.*
Summary of workshop held in Honduras in May 1998. Objectives included: improvement in the environmental soundness of food security projects; assist Title II-funded NGOs in complying with USAID Environmental Regulation 216; provide participants with information, tools and training to incorporate environmental design considerations into projects and activities.

Projects on food security - environment linkages and agrobiodiversity: France, Kenya, and Ethiopia, April 2-10, 1997. *Thrupp, Ann. 6p. FSRC #6821.*
Reports on trip to East Africa to meet with people and organizations involved in food security-environment and agrobiodiversity initiatives, to plan specific project activities, including planning for a stakeholder workshop and establishing collaboration with partners.

Urban environmental sanitation project: Baseline study 1995. *Yanguela, Argelia Tejada; CARE Dominicana. 250p. FSRC #5267.*
Baseline study to gain better understanding of future project areas and to develop series of impact indices for urban environmental and sanitation project in Santo Domingo.

Environmental assessment: CARE Title II food security program, Program in environmental security and sustainable development for the most vulnerable in Honduras, 1996-2000. Proyecto de Oportunidades de Desarrollo y Empleo Rural (PODER). *October 1997. Myton, Becky: Medina, Carlos; Perez, Dora Elisa; Borjas, Gerado; Ochoa, Marcos; Reyes, Dagoberto; Solberg, Scott; CARE/Honduras. 100p.*
Environmental evaluation for CARE Honduras' PODER (Project for opportunities in development and rural employment). Evaluation recommends that the road improvement and construction activity component will require further mitigation measures to ensure that there is no significant adverse impact to the environment. Outlines mitigation actions and includes directives for an environmental survey in the program area. Document is in Spanish language.

Mainstreaming the environment: The World Bank Group and the environment since the Rio Earth Summit, Fiscal 1995. *1995. World Bank. 301p.*
Reports on World Bank activities associated with the follow-up to the UN Conference on Environment and Development in Rio de Janeiro. Outlines financial and technical assistance for environment programs and describes World Bank environmental analytical, research, and policy work.

NGO perspective on food security and the environment: Acord in the Sahel and Horn of Africa. *1991. Roche, C. IDS Bulletin (vol. 22, no. 3, 1991). 3p. FSRC #4107.*
Examines three case studies and discusses relation between poverty, food insecurity, and environmental degradation and the role of NGOs in addressing these issues.

Evaluation of environmental rehabilitation projects in Midre Kebd, Gimbo, Limu-Seku, and Ginager. *1994. Tato, Kebede; Gurmu, Deribe; Soil Conservation and Forestry Consultants. 45p. FSRC #6469.*
Reports on finding of evaluation of environmental rehabilitation projects in Ethiopia. Presents recommendations.

Agroforestry in Africa: A survey of project experience. *1990. Kerkhof, Paul. FSRC #3235.*
Compares agroforestry projects and techniques. Covers design and implementation, rural afforestation, soil conservation and agroforestry, soil erosion and agroforestry.

Community forestry: Ten years in review. *1992. Arnold, J.E.M. 32p. FSRC #1622.*
Overview of forestry activities and assessment of constraints and opportunities for strengthening participation in forestry activities.

Seeking success: Where and how to look for success factors in UAID/NGO natural resource management projects in Africa. *1993. Otto, Jonathan; USDA Forest Service. 12p. FSRC #3895.*
Discusses how an NGO can assess the experiences of other projects to enhance their own natural resource management projects. Includes sections on possible success factors, selecting projects for examination, project document review, and next steps.

Non-governmental organizations and natural resource management in Africa: A literature review. 1992. USDA. 69p. FSRC #839.
Reviews literature regarding NGO natural resource management experience in Africa. Provides abstracts of the literature.

Programmatic environmental assessment of USAID/Bangladesh Integrated Food for Development program. *1991. USAID/Dhaka; Tropical Research and Development; KBN Engineering and Applied Science Inc. 102p. FSRC #6330.*
Environmental assessment (prepared by outside consultants) of CARE Food for Work program in Bangladesh.

Long-term environmental monitoring system: IFFD Program, CARE Bangladesh. *September 1996. Rahman, M. Mokhlesur; Sachindra Halder. 55p.*
Reports on consultancy to develop simple environmental monitoring system guidelines for road improvement programs. Discusses methodology; important environmental components (IECs) for capture fisheries, agriculture, and settlements; operational issues; implementation plan for monitoring team; and personnel and resources requirements.

Study of the reasons for success or failure of soil conservation projects. *1991. Hudson, Norman W. 65p. FSRC #3017.*
Findings of study on the lessons learned in the planning and implementation of soil conservation programs.

Refugee Environmental Education Pilot Project in Kenya (REEPP-Kenya): Project report. *April 1997. Muigai, Kibe; Office of the Senior Coordinator on Environmental Affairs. UNHCR. 78p.*
Reports on the REEPP project's objectives, impacts, and lessons learned. The REEPP project aimed to strengthen educational and environmental initiatives to reduce environmental impact of refugee operations.

Project Indonesia. *1995. WFP. 10p. FSRC #1290.*
Describes a project aimed to increase the incomes of farmers dependent on upland, rainfed agriculture while protecting threatened natural resources through soil and water conservation measures.

Non-governmental organizations in natural resources management in Africa's pastoral sector: Where do we go from here? *1993. Brown, Michael. 76p. FSRC #1864.*
Synthesizes work by the PVO-NGO/NRMS Project that studied the impact of NGO programming on natural resources management in Africa's pastoral sector. Discusses recommendations for the future.

Knowledge and Effective Policies for Environmental Management (KEPEM). *1996. Associates in Rural Development, Inc. 115p. FSRC#6970.*
Reports on KEPEM Project in Madagascar, whose purpose is to create a policy and institutional framework of incentives and revenue generation to encourage sustainable natural resource management.

USAID - Panama project paper, Natural resources management. *1994. USAID. 23p. FSRC #6980.*
Supplement to the Panama Natural Resources Management Project. Describes proposed modifications made to the third component of the project; specifically, the creation of an endowment.

Project Syria 2746: Assistance to fruit-tree planting in the green belt. *1995. WFP. 20p. FSRC #1392.*
Appraisal of a development project that uses food aid to tide farmers over the first few years of fruit-tree cultivation.

Network approach to enhanced environmental management. *1991. Carley, Michael; Smith, Michaela; Varadarajan, S. 8p. FSRC #1935.*
Describes program to enhance environmental management capability. Discusses need for clearly-defined problem and aspects of solutions.

C ***Technology and the environment***

Using remote sensing data to monitor land cover changes near Afghan refugee camps in northern Pakistan. *1998. Lodhi, Mahtab A.; Echavarria, Fermando R.; Keithley, Chris. 6p. FSRC #6834.*
Examines the utility of satellite data to quantify the degree and extent of refugee related forest elimination in the Siran Valley.

Agriculture, technological change and the environment in Latin America: A 2020 perspective. *1995. Trigo, Eduardo J.; International Food Policy Research Institute. 19p. FSRC #5220.*
Explores the role of technology in addressing rural poverty and environmental degradation. Argues that improved technology can help to bring about the agricultural intensification needed to alleviate poverty and reduce environmental deterioration. Stresses the need for new institutional models to develop and

disseminate technologies.

Environment-population technology growth nexus Micro-level African perspective. *1990. Tshibka, Tshikala; International Food Policy Research Institute. 18p. FSRC #6651.*
Calls for the use of mineral and organic fertilizers, high yielding seed varieties, and the development of anti-erosion and other structures, increased education to enhance farmland conservation and reduce pressure on marginal lands.

Development of a GIS system in UNHCR for environmental, emergency, logistic and planning purposes. *1995. Bouchardy, Jean Yves; UNHCR. 86p.*
Presents a description of the UNHCR environmental database and its role in refugee activities.

Using indigenous knowledge, remote sensing, and geographic information systems for sustainable development. *Tabor, Joseph Anthony; Hutchinson, Charles, F.; University of Arizona. 10p. FSRC #4489.*
Outlines a natural resources information collection, interpretation, and management technique that combines indigenous knowledge classification systems, remote sensing and satellite navigation, and geographic information systems.

C ***Pest control methods and the environment***

Regional workshop on environmental security for Central America and the Caribbean with emphasis on water and sanitation, hillside agriculture and rural road construction. *1998. Solberg, Scott; Walter, Ed; CARE/Honduras; USAID; CRS/Guatemala. 26p. FSRC#6990.*
Summary of workshop held in Honduras in May 1998. Objectives included: improvement in the environmental soundness of food security projects; assist Title II-funded NGOs in complying with USAID Environmental Regulation 216; provide participants with information, tools and training to incorporate environmental design considerations into projects and activities. Includes the following:

- **Pests, pesticides and environmental impact**. *May 1998. Hruska, Allan, Zamorano. 75p.*
- **Part I, Integrated Pest Management for vegetables: A manual for extensionists**. *Scholaen, Susan (ed.); Zeiss, Micheal. 15p. (Chapter 2 only)*. Overview of principles of Imtegrated Pest Management (IPM) in Spanish language.
- **Part II, From safe use to sustainable crop protection: Lessons learned from CARE Nicaragua's Integrated Pest Management project**. Overview of the experience of the CARE Nicaragua Pesticides project. Chronicles evolution of project from a pesticide to Integrated Pest Management focus. Appendices include several resource lists of pesticide classifications (in both English and Spanish languages) and an Internet directory for useful pesticide and IPM web addresses.

Growing food security: Challenging the link between pesticides and access to food. *1996. Pesticides Trust; Pesticides Action Network. 98p. FSRC #5504.*
Collection of readings on the economic, political, and environmental issues surrounding pesticide use and high input agriculture.

Initial Environmental Examination (IEE) – Draft, Gambella food security food initiative. *April 1998. Africare/Ethiopia. 19 p.*
Draft of IEE examination including a draft Pesticide Evaluation Report (PER).

Pesticide Evaluation Report (PER): Food Security Training and Outreach Services Initiative. *OIC International (OICI), Northern Region (NR) of Ghana, West Africa. 4 p.* Attachment to OICI's FY 1999 IEE report as part of the DAP submission. The report proposes the use of *Actellic*, a pesticide registered for the use by the ESEPA. Provides information to evaluate the economic, social, and environmental risks and benefits of the planned pesticide use.

Assessment of agricultural pest status and available control methods in the Guinea Natural Resources Management Project. *July 1994. Chemonics International, USAID/Conakry. 20 p.*
Non-Title II IEE to the Guinea Natural Resource Management Project (GNRMP) with an evaluation of pesticide use in the activity.

Review of environmental concerns in A.I.D. programs for locust and grasshopper control in Africa. *1991. Louis Berger International; USAID. 71p. FSRC #3445.*
Reports on USAID activities to apply environmental safeguards on pesticide use programs. Provides overview of environmental issues and outlines recommendations for future USAID activities.

Designing integrated pest management for sustainable and productive futures. *1991. Pimbert, Michel P.; International Institute for Environment and Development. 21p. FSRC #3972.*
Discusses different IPM approaches and intensifies methods that reflect goals of sustainable and equitable production systems. Presents recommendations for changes in IPM science and extension and institutional and policy reforms.

Towards sustainability: An addendum on integrated pest management as a component of sustainability research. *1992. National Research Council. 35p. FSRC #3793.*
Outlines technical, institutional, socioeconomic, educational, and policy constraints to IPM in developing countries. Presents suggestions of how USAID can help overcome these obstacles and provides recommendations to improve IPM programs.

C ***Other environmental issues***

USGS arsenic appraisal mission in Bangladesh U. S. geological survey. *1998. Whitney, John W.; U.S. Geological Survey. 40p. FSRC#6991.*
Report and overheads from a July 1998 workshop hosted by the Environmental Protection Agency. Information states that many districts in Bangladesh contain wells which are contaminated with arsenic. Includes photographs, charts, statistics, and recommendations.

Proyecto Altura Terminologia empleada en las actividades de manejo y provechamiento forestal en las microcuencas altoandinas del Peru. *1997. CARE Peru; USAID; PRONAMACHCS. 40p. FSRC #6940.*
Dictionary of terms used in conjunction with forestry/environmental activities in Peru under the aegis of CARE, USAID, and Ministry of Agriculture.

Disasters and the environment. *1993. Wilches-Chaux, Gustavo; Intertect Training Services. 51p. FSRC #1316.*
Training module looks at disasters from an environmental point of view. Examines how environmental degradation of the earth's ecosystems increases a society's vulnerability to disaster and how disasters alter the environment. Promotes environmental awareness to gear development efforts towards mitigation and prevention of disasters.

Disasters and the environment: Trainer's guide. *1993. Disaster Management Training Programme. 69p. FSRC #1317.*
Training guide that accompanies the Disasters and Environment module (FSRC #1316).

Ethics and spiritual values: Promoting environmentally sustainable development. *An associated event of the third annual World Bank Conference on Environmentally Sustainable Development. 1996. World Bank; Center for Respect for Life and Environment; World Bank Spiritual Unfoldment Society. 55p. FSRC #5689.*
Discusses relationship between values and sustainable development. Examines the following topics: ethical economics; values in agriculture and energy, urban infrastructure and development, business and finance; values and political will; and ethics and spiritual values.

In addition these resources, the FSRC collection includes the following periodicals that address a wide range of environmental issues:

- **Forest, Trees, and People Newsletter**
- **World Watch**
- **Environment bulletin: Newsletter of the World Bank environment community**
- **EnviroNet: Newsletter of the project in development and the environment**
- **ILEIA Newsletter for low external input and sustainable agriculture**

On order:

Environmental guidelines for selected industrial and power development projects. *1990. Asian Development Bank. 154 p.*

Environmental guidelines for selected infrastructure projects. *1990. Asian Development Bank. 128 p.*

Environmental assessment guidelines for international development co-operation in the agriculture sector. *1991. Australian International Development Assistance Bureau. 26p.*

Directions for the prevention of the consequences from the development of water resources. *1992. Birley, M. Series #3. WHO; FAO; UNEP; UNCHS.*

Health and environmental impact assessment: an integrated approach. *1998. British Medical Association.*

A basic guide to understanding the environmental impacts of rural roads on the wetlands of Bangladesh. *1994. S. Nakashima and M.H. Khan; K. Martens (ed.). CARE Bangladesh.*

Environmental management field handbook for rural road improvement projects. *1998. M.H. Khan & K. Fitzcharles; CARE Bangladesh; USAID.*

Environmental screening of NGO development projects. *1995. Canadian Council for International Cooperation (CCIC).*

How to prepare environmental assessments of pesticide use in aid agricultural projects. *1991. CCIC; Consortium for International Crop Protection.*

CARE IEE documents: *Bolivia (1998), Ethiopia (1998), Guatemala (1998), Peru (1997), Haiti (1998), Honduras (1997), India (1998), Mozambique (1998), Kenya (1997), Madagascar (1998), Nicaragua (1998).*

CIDA handbook on environmental assessment of Non-governmental organizations and institutions programs and projects. *1997. Canadian International Development Agency (CIDA).*

Environmental impact assessment: Index of useful internet web sites. *April 1998. CIDA.*

Environment assessment manual for community development projects. *1996. CIDA.*

Policy for environmental sustainability. *1992. CIDA.*

Independent development trust environmental manual. *1996. ODA. LG Mouchel and Partners. Addresses environmental topics for small-scale activities., e.g. construction impacts, biodiversity, landscape, water quality, etc. Very good use of sketches, diagrams and photos.*

Taller regional para america central de seguridad alimenmtaria; con enfasis en proyectos de agua y

saneamieno, agricultura de laderas y construccion de caminos rurales. *1998. Jicaro Galan. CRS; CARE.*

Environmental assessment for sustainable development. *1994. Ministry of Foreign Affairs, DANIDA.*

Environmental impact assessment of irrigation and drainage projects. *1995. Dougherty, T.C. and A.W. Hall. FAO Irrigation and Drainage Paper 53. ODA; FAO. 74 p.*

Status of chemicals in special review. *1998. Environmental Protection Agency.*

Environmental handbook, Documentation on monitoring and evaluating environmental impacts. Volume I: Introduction, cross-sectoral planning, infrastructure. *1995. German Federal Ministry for Economic Cooperation and Development (BMZ). 736 p.*

Ecological monitoring: A vital need for integrated conservation and development programs in the tropics. *1994. Kremen, C., A.M. Merenlender, and D.D. Murphy. Conservation Biology, vol. 8. 11p.*

Rapid urban environmental assessment, Lessons from the cities in the developing world, Volume 2: Tools and outputs. *1994. Leitmann, J. World Bank.*

Measures of success: Designing, managing and monitoring conservation and development projects. *1998. Margoluis, R.; N. Salafsky. Island Press, 163p.*

ICID checklist to identify environmental effects of irrigation, drainage and flood control projects. *1993. Mock and Bolton.*

Environmental impact assessment of development aid projects, Initial environmental assessment (Volumes 1-14 and Check Lists for initial screening of projects). *1995, 1994, 1993. Norwegian Agency for Development Co-operation.*

Agriculture, pesticides and the environment: Policy options. *1997. OECD. 264 pages*

Promotion of environmental management for disease vector control through agricultural extension programmes. *1995. Panel of Experts on Environmental Management for Vector Control; WHO; FAO; UNEP; UNCHS.*

Directions for the cost-efficacy analysis in anti-vector control. *1993. Phillips, M. A. Mills and C. Dye. Series #3. WHO; FAO; UNEP; UNCHS.*

Agro-ecosystems and bio-diversity. *1998. Power, A.G. Smithsonian Institution.*

A directory of impact assessment guidelines. *1995. Roe, D., Dalal-Clayton, B. and R. Hughes. IIED. 184p.*

The practice of strategic environmental assessment. *1996. Therivel, R. and M.R. Partidario. 224 p.*

Directions for the introduction of sanitary protection measures in irrigation projects through inter-sectoral co-operation; with special preference to vector transmitted diseases. *1991. Tiffen, M. Series #1. WHO; FAO; UNEP; UNCHS.*

Environmental impact assessment: Guidelines for industrial development. *1990. United Nations Economic and Social Commission for Asia and the Pacific (ESCAP). 62p.*

Environmental impact assessment: Guidelines for transport development. *1990. ESCAP. 99p.*

Environmental impact assessment: Guidelines for water resources development. *1990. ESCAP. 119p.*

Our planet, our health: Report of the WHO commission on health and environment. *1992. World Health Organisation (WHO).*

Health and environment in sustainable development: Five years after the Earth Summit. *1997. WHO.*

Healthcare waste management: A WHO handbook for the safe handling, treatment and disposal of wastes (draft). *1997. WHO.*

World directory of country environmental studies. *World Resources Institute.*

Environmental guidelines for PVOs and NGOs: Potable water and sanitation projects. *1992. Wyatt, A., W. Hogrewe, and E. Brantly.*

Resolving the DDT dilemma: Protecting biodiversity and human health. *1998. World Wildlife Fund.*

For more specific information concerning the publications listed in this bibliography or to request copies of the materials listed, please contact:

Jessica Graef
Technical Information Specialist
Food Security Resource Center
300 I Street, NE, Suite 212
Washington, DC 20002
202-544-6972 (phone), 202-544-7065 (fax)
jgraef@foodaid.org