

PARTICIPANTS' SOURCEBOOK: LIFE-OF-PROJECT ENVIRONMENTAL COMPLIANCE AND ENVIRONMENTALLY SOUND DESIGN AND MANAGEMENT

An Africa Regional Training Workshop for USAID Staff

Toubacouta, SENEGAL
24 – 28 February, 2014

Host:
USAID/ Senegal

Sponsor:
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The Cadmus Group, Inc., prime contractor (www.cadmusgroup.com).
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Acknowledgement:

Cover photo: Ashley Fox. Fishermen in Mbour, Senegal

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AGENDA (version date: 10 February, 2014)

Life-of-Project Environmental Compliance and Environmentally Sound Design and Management

An Africa Regional Training Workshop for USAID Staff

Keur Saloum Lodge ■ Toubacouta, SENEGAL
24 – 28 February, 2014

Training Objective:

The overall goal of the workshop is to strengthen environmentally sound design and management of USAID-funded activities in Africa by assuring that participants have the motivation, knowledge and skills necessary to: (1) achieve environmental compliance over life-of-project; and (2) otherwise integrate environmental considerations in activity design and management to improve overall project acceptance and sustainability.

Key Activities:

- Day 1 Overview of ESDM and skill-building in Environmental Impact Assessment (EIA).
- Day 2 Explain USAID Environmental Procedures and compliance documentation; prepare for Day 3 site visits.
- Day 3 Complete site visits and begin small-group synthesis of findings and recommendations.
- Day 4 Complement core training content with special topics related to USAID-funded activities in Africa.
- Day 5 Synthesize workshop proceedings and skill-building; consider professional and organizational next steps.

Day/Time	Module	Objective/Content Summary
Sun 23 Feb.	ARRIVAL.	
6:00 -	Welcome Reception/Dinner	
Mon 24 Feb.	MOTIVATION, CORE SKILLS, OVERVIEW OF USAID ENV. COMPLIANCE PROCEDURES OVER LIFE-OF PROJECT	
8:00 – 9:00 a.m.	Participant Registration	
9:00 – 9:15 a.m.	Welcome and Opening Statements	
9:15 – 9:45 a.m.	Session 1: Workshop Objectives, Logistics and Participant Introductions	Articulate workshop plans, objectives, goals, and participants' introductions and expectations. Review the agenda and logistics.
9:45 – 10:45 a.m.	Session 2: Environmentally Sound Design & Management (ESDM) as a Foundation for Environmental Compliance <i>Part A: "The Story of Zaragosa" (15-minute video)</i> <i>Part B: Presentation followed by participant examples and brief discussion</i>	Achieve a common understanding of "environment." Understand linkage between ESDM and project success, consider examples from Senegal. With illustrations by example, understand the need to systematically address environmental considerations in design and implementation of development activities—even in activities not primarily focused on infrastructure.
10:45 – 11:00 a.m.	Break	

Day/Time	Module	Objective/Content Summary
11:00 a.m. – Noon	Session 3: Fundamental Skills of Environmental Impact Assessment (EIA) <i>Technical presentation and dialogue</i>	USAID’s Environmental Procedures are a specific implementation of the general EIA process. Understanding USAID’s procedures requires understanding the general EIA process. Define key terms—baseline, impact, activity—and learn essential classroom theory for baseline characterization, impact identification & mitigation design and how they apply in the EIA framework. We also establish how the EIA process is a framework for achieving ESDM.
Noon – 12:30 p.m.	Session 4a: EIA Field Exercise: Practicing Core EIA Skills <i>Part A: Briefing</i>	Practice observation skills needed to characterize the baseline situation and identify impacts/issues of concern
12:30 – 1:30 p.m.	Lunch	
1:30 – 3:00 p.m. (including return)	Session 4b: EIA Field Exercise: Practicing Core EIA Skills <i>Part B: Field Visits</i>	Synthesize field observations and prioritize impacts/issues of concern; discuss possible approaches for limiting adverse effects on the environment.
3:00 – 4:00 p.m. (coffee break taken at leisure)	Session 4c: EIA Field Exercise: Practicing Core EIA Skills <i>Part C: Group Work & Plenary Synthesis</i>	Synthesize field observations and prioritize impacts/issues of concern; discuss possible approaches for limiting adverse effects on the environment.
4:00 – 5:00 p.m.	Session 5: Environmental Impact Assessment and “USAID Environmental Procedures”: the Initial Environmental Examination (IEE) and Beyond <i>Technical presentation and dialogue</i>	Review USAID’s implementation of the EIA process and the preparation of project environmental compliance documents; understand how these documents establish environmental management criteria for USAID-funded activities.
Tues 25 Feb.	ENVIRONMENTAL COMPLIANCE DURING PROJECT IMPLEMENTATION	
8:30 – 9:00 a.m.	Day 1 review & Day 2 prospectus	
9:00 – 9:30 a.m.	Session 6: Principles of Environmental Monitoring <i>Technical presentation and dialogue</i>	Review key aspects of monitoring to ensure that project environmental compliance requirements are met and potential adverse impacts effectively mitigated; highlight the selection of clear and cost-effective monitoring indicators.
9:30 – 10:30 a.m.	Session 7: The Environmental Mitigation and Monitoring Plan (EMMP) <i>Technical presentation and dialogue</i>	Understand the EMMP concept and formats: Who develops them. Their role in “operationalizing” key elements of USAID Environmental Procedures and establishing and maintaining project environmental compliance. Introduce key guidance: <i>EMMP Factsheet</i> .
10:30 – 10:45	Break	
10:45 – Noon	Session 8: Effective IEEs <i>Small-group exercise</i>	Initial Environmental Examinations (IEEs) are USAID’s version of the <i>preliminary assessment</i> and the most common type of Reg. 216 documentation. We learn the characteristics of effective IEEs by critiquing draft IEEs based on our field visits.
Noon – 12:30 p.m.	Session 9: Reg. 216 Beyond the IEE <i>Technical presentation and dialogue</i>	Understand how USAID Environmental Procedures apply in situations where activities present the potential for significant adverse impacts. Discuss the process and expertise needed to prepare an Environmental Assessment (EA).

Day/Time	Module	Objective/Content Summary
12:30 – 1:30 p.m.	Lunch	
1:30 – 2:00 p.m.	Session 10: Analysis of Alternatives <i>Technical presentation and dialogue</i>	Discuss the process of identifying, characterizing and assessing alternative courses of action as part of the USAID EA process.
2:00 – 3:00 p.m.	Session 11: Cumulative Impact Assessment <i>Technical presentation and dialogue</i>	Building on core EIA skills, this session will introduce finer-grained methodologies for evaluating and quantifying complex, inter-related environmental management scenarios.
3:30 – 4:00 p.m.	Session 12: Programming for Global Climate Change (GCC) <i>Technical presentation and dialogue</i>	Discuss Agency and Africa Regional approaches to climate change adaptation and the types of activities that will support this objective. Understand the underlying elements of ESDM and environmental compliance in USAID's GCC programming.
4:00 – 4:15 p.m.	Break	
4:15 – 4:30 p.m.	Session 13a: Field-based Environmental Assessment Exercise <i>Part A: Site & Exercise Briefing</i>	Over this extended session, we will work in small groups to develop an environmental management approach in response to project scenarios based on the field visits we will undertake at the beginning of Day 3.
4:30 – 5:00 p.m. (groups may work later if desired)	Session 13b: Field-based Environmental Assessment Exercise <i>Part B: Group Preparation</i>	Groups view briefing materials and discuss overall approach/strategy for assessing potential impacts and formulating a management response.
Wed 26 Feb.	FIELD VISITS AND DEVELOPMENT of ENVIRONMENTAL MANAGEMENT STRATEGY	
8:00 a.m. – 1 p.m. (includes return)	Session 13c: Field-based Environmental Assessment Exercise <i>Part C: Field Visits</i> <i>Sites include:</i> <ul style="list-style-type: none"> • <i>Protected Area Co-Management</i> • <i>Ecotourism/Game Preserve</i> • <i>Lowland Ag. Production (including water control infrastructure)</i> • <i>Commercial fish landing and processing</i> 	Small groups complete site visits near Toubacouta to assess activities underway, determine the nature and extent of potential adverse impacts, and propose a course of action that conforms to USAID Environmental Procedures, as well as the principles of ESDM.
Return – 2:00	Lunch & Freshen up	
2:00 – 5:00 p.m. (coffee break taken at leisure)	Session 13d: Field-based Environmental Assessment Exercise <i>Part D: Prepare assessment/management plan/ documents; develop presentation (Group work)</i>	<p>Small groups will synthesize findings and observations from the field visits with classroom presentations and discussions, including role of ESDM in development strategies, requirements of Reg. 216 and the purpose of IEEs, EMMPs and EAs.</p> <p>Each group will prepare a brief document for presentation to the larger group with rationale and discussion of the group's findings and recommended approach.</p> <p>One small group may be asked to present its findings/ recommendations before the end of the day.</p>

Day/Time	Module	Objective/Content Summary
Thurs 27 Feb. WRAPPING UP CORE ENVIRONMENTAL COMPLIANCE & SPECIAL TOPICS		
9:00 – 9:15 a.m.	Day 3 review & Day 4 prospectus	
9:15 – 10:45 a.m.	Session 13e: Field-based Environmental Assessment Exercise <i>Part E: EMMP Presentations</i>	Working groups present their document/findings and recommendations in approx. 15-minute presentations with feedback from facilitators.
10:45 – 11:00 a.m.	Break	
11:00 – 11:30 a.m.	Session 14: IP Environmental Compliance Reporting <i>Presentation & Q&A</i>	For A/CORs to fulfill their responsibilities, IPs must report on environmental compliance. Understand the basic necessary content of this reporting.
11:30 a.m. – Noon	Session 15: Roles, Responsibilities & Resources	Review Environmental Compliance roles and responsibilities, with reference to ADS requirements. Introduce the key resources available to support environmental compliance and ESDM.
Noon – 12:30 p.m. (Choose 1)	Session 16a: Social Impact Assessment and Gender <i>Special Topic Technical Presentation</i>	Understand the unique requirements and approach needed to integrate assessment of social and gender issues in an environmental management scenario.
	Session 16b: Medical Waste Management <i>Special Topic Technical Presentation</i>	Review the environmental compliance implications of USAID’s health-related programing and discuss Best Management Practices (BMPs) for medical waste management. Address issues related to pharmaceutical supply and reverse logistics.
12:30 – 1:30 p.m.	Lunch	
1:30 – 2:30 p.m. (Choose 1)	Session 17a: USAID Environmental ‘Due Diligence’ of Leveraged Investments <i>Special Topic Technical Presentation</i>	Discuss how USAID can approach—and meet—environmental compliance criteria in the context of indirect relationships, such as those often characterizing G2G, DCA, and MDB activities.
	Session 17b: Environmental Compliance of Energy and Construction Activities <i>Special Topic Technical Presentation</i>	Review the environmental compliance and management challenges associated with USAID-funded energy and construction activities, including large-scale initiatives such as Power Africa.
2:30 – 3:00 p.m.	Session 18: “Parking Lot” Session	Address unresolved questions with reference to the issues and questions “parking lot” created over the course of the workshop.
3:00 – 5:00 p.m. (coffee break taken at leisure)	Session 19: Charting a Collective Way Forward	Small groups will be formed to explore challenges and opportunities in environmental compliance and ESDM at the individual and group levels. Using a team-building approach, groups will prioritize REA and BEO support needs and identify issues of concern and/or additional training/capacity building requirements.

Day/Time	Module	Objective/Content Summary
Fri 28 Feb.	BRINGING TRAINING TO REALITY	
ATTN: PLEASE arrive at opening session ready for departure from Toubacouta		
8:30 – 8:45 a.m.	Day 4 review & Day 5 prospectus	
8:45 – 10:30 a.m.	Session 19: Charting a Collective Way Forward (cont'd)	See above.
10:30 – 10:45 a.m.	Session 20: Evaluations	
10:45 – 11:00 a.m.	Certificates and Closing	
11:00-12:00	Lunch	
12:00	Departure (Buses to Dakar)	

Session 1.

Workshop Objectives and Logistics; Participant Introductions

Summary

This session briefs the workshop and its agenda, introduces us to each other, and establishes expectations. Specific elements of the session are:

- Overview of course objectives, learning approach, agenda and materials
- Participant and facilitator introductions
- Solicit expectations
- Address logistical considerations
- Create a “Parking Lot”

This workshop will provide intensive training in: (1) compliance with USAID’s environmental procedures over life-of-project, and (2) in the objectives of these procedures: environmentally sound design and management (ESDM) of USAID-funded activities.

Overall Goal: The overall goal of the workshop is to strengthen environmentally sound design and management of USAID-funded activities throughout Africa by assuring that participants have the *motivation, knowledge and skills necessary to* (1) achieve environmental compliance over life-of-project, and (2) otherwise integrate environmental considerations in activity design and management to improve overall project acceptance and sustainability.

Approach to Learning: The workshop is intended to be highly participatory and field-based:

- Skills and processes briefed in the presentations will be built and practiced in hands-on exercises conducted in small working groups.
- The key, integrative exercises in EIA skill-building and LOP compliance are built around two field visit components.
- *Even presentation-centered sessions are intended to be interactive.* Please ask questions and—as importantly—share and discuss your own experiences and perspectives relevant to the topic at hand.

***Everyone’s active participation is encouraged and
needed to make this workshop a success!***

Teamwork Principles: Working groups are where we will practice and apply the key skills and ideas of the workshop. Working groups provide the opportunity for detailed discussions, and for learning from experiences and views of fellow development professionals. Working groups are also emphasized because environmental compliance and environmentally sound design and management are intrinsically team efforts.

Successful working groups require effective teamwork. Here are teamwork principles to consider:

Twelve Essentials of Teamwork

VALUING DIVERSITY	COMFORTABLE ATMOSPHERE	ACTIVE PARTICIPATION OF ALL MEMBERS	SHARED GOALS AND OBJECTIVES
BALANCED APPROACH TO PROCESS AND CONTENT	WHAT EFFECTIVE TEAMS NEED		EFFECTIVE COMMUNICATION
SHARED LEADERSHIP			CONSTRUCTIVE CONFLICT MANAGEMENT
ACTION ACCOUNTABILITY RESPONSIBILITY	MUTUAL TRUST	CRITICAL ANALYSIS AND PROBLEM-SOLVING	A PREFERENCE FOR CONSENSUS

(Adapted from Rees, "How to lead work teams in facilitation skills")

Session 2.

Environmentally Sound Design & Management (ESDM) as a Foundation for Environmental Compliance

Technical presentation and dialogue

Summary

This session will explain ESDM and illustrate its vital role in achieving and maintaining environmental compliance over the full project lifecycle. In order to establish this important relationship, we will:

- Develop a common understanding of the term “environment”
- Highlight some of the “big picture” environmental trends affecting human health and livelihoods in West and sub-Saharan Africa, including Global Climate Change, and show that much of USAID’s portfolio in the region is a direct response to—or directly affected by—these trends
- By example, demonstrate that “environment” and “development” are concepts further linked by the need to be:
 - AWARE of the potential adverse impacts of development activities on ecosystems, environmental resources and environmental quality; and the need to
 - PROACTIVELY seek to limit these adverse impacts, particularly where they affect health and livelihoods

This is **Environmentally Sound Design & Management (ESDM)**!

- Consider specific examples from Senegal of the linkage between ESDM and successful project outcomes

This session will also highlight the most common root causes of ESDM failures or lapses and set out the basic rules or principles for achieving ESDM.

While the session will introduce the concept and practice of environmental compliance, specific USAID regulations and requirements will be addressed in finer detail in Session 5.

Objectives

- Achieve a common understanding of “environment”
- Understand Environmentally Sound Design & Management as a necessary and explicit objective for effective development
- Establish the basic principles for achieving ESDM

Environmentally Sound Design & Management: a Foundation for Environmental Compliance

GEMS Environmental Compliance-ESDM Training Series
Senegal, February, 2014

Environment – the Big Picture

What is Environment?

- Webster's defines it as "The totality of circumstances surrounding an organism or group of organisms, especially:
 - The complex of **physical, chemical, and biotic factors** (e.g. climate, soil, and living things) that affect and influence the growth, development, and survival of an organism or an ecological community
 - The complex of **social and cultural conditions** affecting the nature of an individual or community.

❖ USAID's environmental procedures are concerned with the "natural and physical environment," but in practice social and cultural issues are often not separable

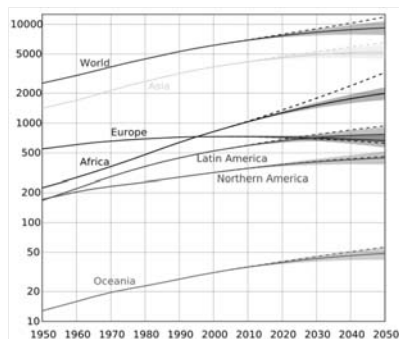
What are some "big-picture" environmental trends affecting human health and livelihoods in West Africa?
Are they important in Senegal?

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1. Population growth

UN Population estimates:*

	2015	2050	% change
World**	7.28 bn	9.31 bn	+28%
Africa**	1.15 bn	2.19 bn	+90%
W. Africa**	349 mn	814 mn	+133%
Senegal	15 mn	33 mn	+120%
Less-Developed Regions**	6.03 bn	7.99 bn	+32.5%
LDCs	931 mn	1.73 bn	+86%



* All data: "medium variant" projection.
UN Population Division (http://esa.un.org/wpp/unpp/panel_population.htm)

**includes Senegal

Increasing
Population in
Senegal

LEADS
TO

Increased demands for water, land, fish & timber, energy, infrastructure & social services. Increased waste production.

3

2. Urbanization

UN Population estimates:*

	Urban pop as % of total		% change in total urban population
	2015	2050	
World**	53.9%	67.2%	+59.2%
Africa**	41.1%	57.7%	+169%
W. Africa**	46.7%	60%	+200%
Senegal	40%	53.3%	+193%
Less-Developed Regions**	48.7%	64.1%	+74.5%
LDCs	30.3%	49.8%	+205%



Urban population will grow more than 2X as fast as rural population for the foreseeable future

* UN Population Division
(http://esa.un.org/unpd/wup/unup/index_panel1.html)

**includes Senegal

Most urban growth in the next 35 years in developing countries

LEADS
TO

Increased urban environmental health hazards (given poor municipal sanitation, waste management capacity).

4

Global change + population growth = INCREASED WATER STRESS
 Greatest impacts on poor, subsistence agriculture.

AREAS OF PHYSICAL AND ECONOMIC WATER SCARCITY



5

Environment and development are not separable

- ❖ Much of USAID's portfolio in the region is already a direct response to or directly affected by these environmental trends
- ❖ But good development does not simply respond to external environmental challenges. Good development ...
 - is **AWARE** of its **potential adverse impacts on ecosystems, environmental resources and environmental quality** and
 - **PROACTIVELY** seeks to **limit** these adverse impacts, particularly **where they affect health and livelihoods**

Why? To avoid MISTAKES. . .

6

Why are “environmental mistakes” made?

Sometimes obvious (previous examples).

But often difficult to foresee, predict

Often rooted in a few common design problems



Failure to plan for the effects of increased scale

Designing for average conditions

Ignoring economic-environmental linkages

Failure to understand system complexity

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Common root causes #1

! Failure to plan for the effects of increased scale

Or, failure to plan for success!



The environmental effects of a small-scale animal husbandry project may be minor

BUT if the project is successful, and many more individuals begin to hold larger numbers of animals, serious problems may arise. . .

Health hazards from animal waste. . .
 Fodder shortages (may lead to overgrazing and erosion and/or land conflicts)

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Common root causes #2

Global change will affect both average conditions & expected variability

! Designing for average conditions, not expected variability



This schoolhouse is being rebuilt in makeshift fashion with plank walls and a split-bamboo roof.

Why? Strong winds ripped the aluminum sheet roofing off the "permanent" structure and toppled the landcrete walls.

In this area, one or two storms every 5 years typically have winds of this strength.

Other "average conditions" to be careful of: Rainfall, tides, water tables. . . What else?

9

Common root causes #3

! Ignoring economic-environmental linkages

Another failure to plan for success!

Household consumption depends on income.

Success in raising income in a community may increase

- demand for building materials (brick & timber)
- the number of livestock,
- demand for water
- generation of waste, including disposable packaging

All can have significant adverse environmental impacts!



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Common Root Cause #4: Failure to understand system complexity



Today ~3000 Bangladeshis die each year of -induced cancer; 2 mn live with chronic poisoning



Photo: UNESCO-IHE

Ponds excavated for fill to build-up ground level in villages for flood protection

Ponds provided a source of organic carbon which settles to bottom of pond, seeps underground and is metabolized by microbes

Created conditions for mass arsenic poisoning when villages switched from surface water to "cleaner" tube wells.

creates chemical conditions that cause naturally occurring arsenic to dissolve out of the sediments and soils and move into groundwater

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How can we avoid these environmental mistakes (and maximize environmental benefits)?

?

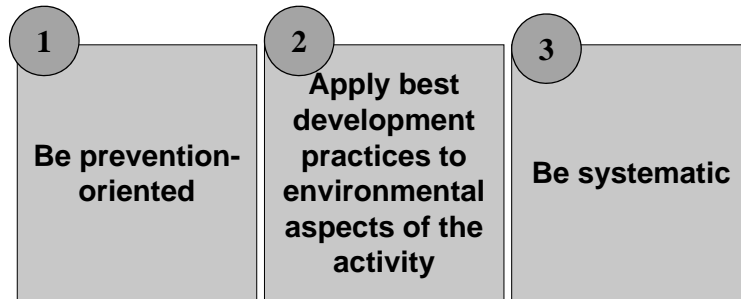
In short, how can we achieve . . .

Environmentally Sound Design & Management (ESDM)?

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How do we achieve ESDM?

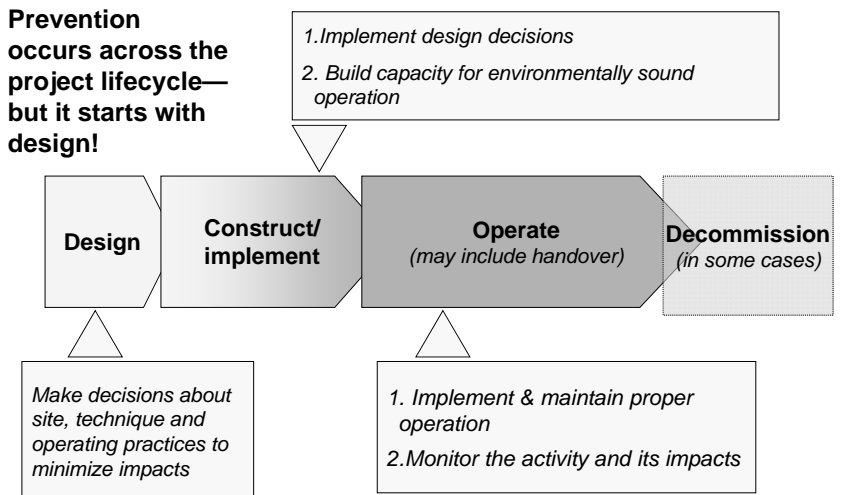
3 basic rules:



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1 Be prevention-oriented

Prevention occurs across the project lifecycle—but it starts with design!



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ESDM is prevention-oriented

- ❖ Prevention starts with DESIGN
- ❖ DESIGN starts with the choice of means.
- ❖ Environmental impacts are 1 factor considered

Objective

Improve agricultural productivity

Possible means

How do we choose?



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2 Apply best practices

Apply general best development practices. . .

A technically sound design

To build beneficiary capacity & stakeholder commitment

To design for the local social & policy context

To adjust what we do as results come in

. . .to environmental aspects of the activity

AND design for climate change

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BP #1: Technically sound design

Environmental application:

The design must be appropriate for local environmental conditionstaking into account likely climate change.

... Rainfall, temperature, soils, flood, drought and earthquake potential, the built environment. . .

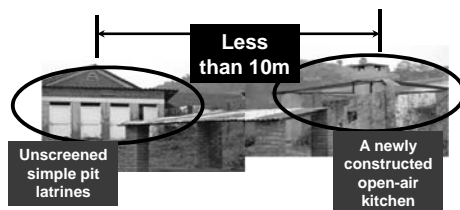
For example. . .



Appropriate choice of crops or trees?



Appropriate choice of siting?



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BP #2: Design for the policy and social context

Environmental applications:

Compliance

with national and local environmental laws and policies

Language, literacy

Environmental management measures must be matched to capabilities

NRM and land tenure

Activities utilizing land and other natural resources must be compatible with local NRM and land tenure

land and resource rights are often gender-specific

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BP #3: Build stakeholder commitment & capacity

Environmental application:

! Proper maintenance and operation are critical to controlling environmental impacts.

Local beneficiaries need to be trained and committed to:

- environmentally sound operation.
- maintain the equipment/ structure



Who will maintain it?
Who will operate it?

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... and involve the local community

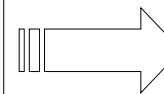
Ethics require it (environmental justice)



Local residents must live with the environmental impacts of activities!

LOCAL KNOWLEDGE is critical

- How often does the river flood?
- How often are crops rotated?
- Is there a land tenure problem?
- What do people value and need?



LISTEN to the community

TALK to both men and women



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BP #4: Adjust what we do as results come in

Practice Adaptive management –
adjusting implementation of
our activity based on results
from the field

If our activity has unintended
environmental consequences,
we need to **DO SOMETHING**
ABOUT IT!

Communities are often
essential to monitoring
results from the field

**Adaptive environmental
management requires:**

- A project budget that funds environmental monitoring
- The flexibility to adapt the project in response to unanticipated adverse impacts
- Adjusting implementation of our project based on the experiences of others

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BP #5: Design for Climate Change

Already mentioned:
Climate change will affect future baseline
conditions—projects must be designed to be
ROBUST to these conditions

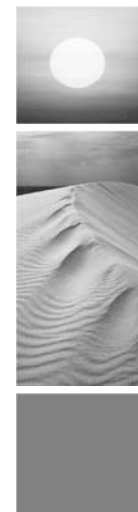
**BUT IN
ADDITION**

**USAID
Policy!**

While individual projects are rarely
significant contributors to GCC...

...climate change is driven by the
sum of many small actions.

So even small-scale projects should
seek to reduce GHG
emissions/increase sequestration/
reduce climate vulnerability in the
local area in a manner consistent
with their development objectives.



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Best Practice: Design for Climate Change

Example actions in small-scale projects:

reduce GHG
emissions

- Use alternative energy (PV, windmill water pumping, etc)
- Improve thermal performance in building design
- Buy carbon offsets for int'l travel.

reduce climate
vulnerability in
the local area

- Prioritize water efficiency to reduce a project's contribution to the area's future water stress

increase
sequestration

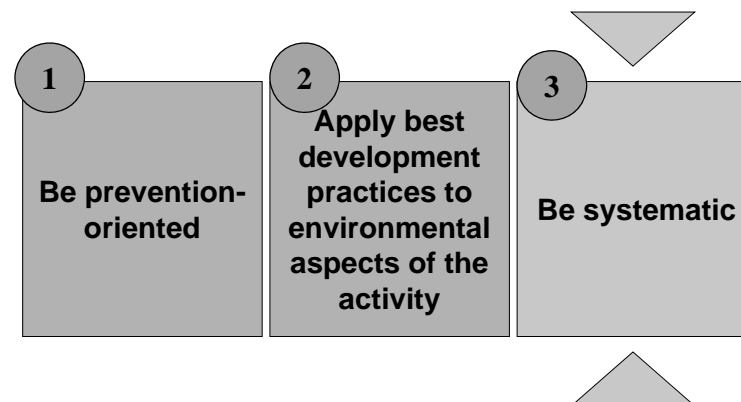
- Tree-planting.
- Land management (sustainable grazing, cropping)



Soil carbon measurement by hand in Senegal

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Now, rule 3 for achieving ESDM. . .



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Take a systematic look at:

- the possible adverse environmental impacts of an activity
- ways to reduce these impacts.

The best way to be systematic:

Environmental Impact Assessment (EIA)!

Session 3.

Fundamental Skills of Environmental Impact Assessment (EIA)

Technical presentation and dialogue

Summary

This session will define Environmental Impact Assessment (EIA) as a formal process for identifying the *likely effects* of activities/projects on the environment, and on human health and welfare; and the *means and measures to effectively mitigate* these impacts.

Fundamental skills of the EIA process will also be introduced and explained, including:

- 1) characterizing the **baseline situation**;
- 2) identifying (and evaluating) the potential adverse **impacts** of planned development activities (issues of concern); and
- 3) developing a **mitigation** strategy to address these impacts.

The session will further illustrate how the EIA process aligns with ESDM and establish that this process is the internationally accepted standard framework for achieving ESDM in project-based development. The linkage between EIA and USAID Environmental Procedures will also be established.

Discussion of Fundamental EIA Skills

This session addresses the essential EIA skills of baseline characterization, impact identification and mitigation design. (A fourth “core” skill—monitoring—is addressed in a subsequent session). These skills will be put to practice in the workshop’s field-based activities.

Baseline Characterization & Identifying Impacts of Concern

This portion of the session explains the basic, logical process behind baseline characterization and identifying impacts (or issues) of concern. An example from a real and typical small-scale irrigation project will illustrate why the fundamental EIA skills of baseline characterization and issue identification are directly relevant to effective mitigation and achieving ESDM.

Depending on the size, complexity and context of the activity, sophisticated environmental models and other tools *can* be required to evaluate impacts in the context of a comprehensive EIA study. But for most small-scale activities and preliminary assessments (or USAID-mandated IEEs), the simple, logical process described here—supported by good judgment and the information contained in the *Sector Environmental Guidelines* or similar resources—is sufficient.

Mitigation Design

The purpose of the EIA process is not simply to identify and assess potential environmental impacts, but to change project design and implementation so that these impacts are *mitigated*—that is, avoided, reduced or offset.

As such, mitigation is a critical part of ESDM and the EIA process. Monitoring (addressed in a subsequent session) is its essential complement, required to verify whether the mitigation measures are sufficient, effective—and actually implemented.

This portion of the session:

- Defines mitigation
- Provides examples of basic mitigation approaches
- Explains the principles behind good mitigation design and practice

Objectives

- Achieve a basic understanding of the EIA process and how it is implemented
- Become familiar with core EIA skills and the technical approach to EIA activities
- Promote the EIA framework as the internationally accepted standard process for achieving ESDM in project-based development
- Establish EIA as the basis of USAID Environmental Procedures

Key Resources

- “IV.1: Topic Briefing—Introduction to EIA” in the *Environmental Guidelines for Small Scale Activities*. (USAID/AFR/SD; available at www.encapafrica.org/egssaa.htm) is a general resource for core EIA skills.
- The individual sector chapters of the *Sector Environmental Guidelines* are a key resource for: (1) identification of potential adverse environmental impacts; and (2) design of specific mitigation and monitoring measures.

Fundamental Skills of Environmental Impact Assessment (EIA)

GEMS Environmental Compliance-ESDM Training Series
Senegal, February, 2014

Session Objectives:

- Define Environmental Impact Assessment (EIA)
- Explain the EIA process
- Develop fundamental EIA skills; learn basic approach
- Illustrate EIA framework as the internationally accepted standard process for achieving ESDM
- Establish EIA as the basis of USAID Environmental Procedures

2

EIA

Environmental Impact Assessment is



A formal process for identifying:

- likely effects of activities or projects on the environment, and on human health and welfare.
- means and measures to mitigate & monitor these impacts.

3

What is an activity?

The EIA process examines the impacts of **activities**.



An activity is:

A desired accomplishment or output.

A project or program may consist of many activities.

Accomplishing an activity requires a set of **actions**

ACTIVITY:
increase sorghum production

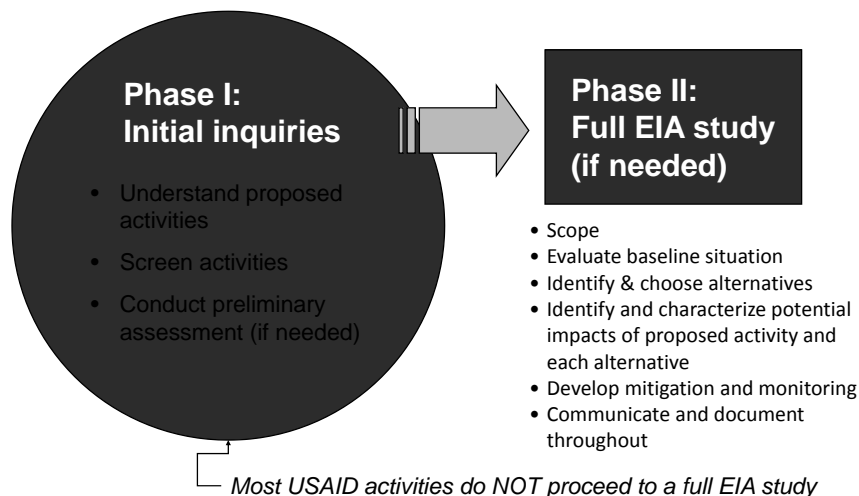
ACTIONS:

- Provide inputs (seeds, fertilizer, pesticides)
- Design and construct irrigation infrastructure
- Increased access to finance, lending
- Road rehabilitation
- Capacity building and technical assistance

What are some of your activities?

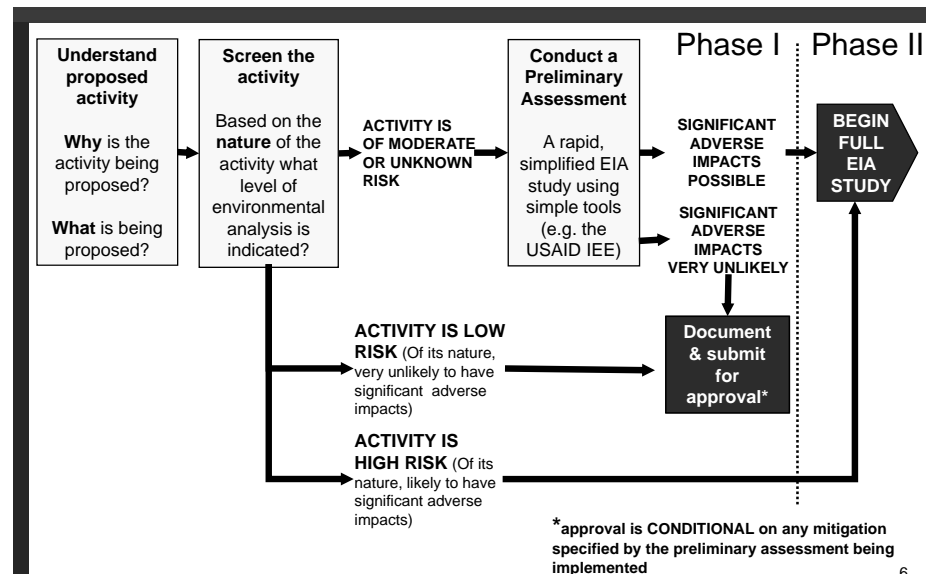
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The EIA process



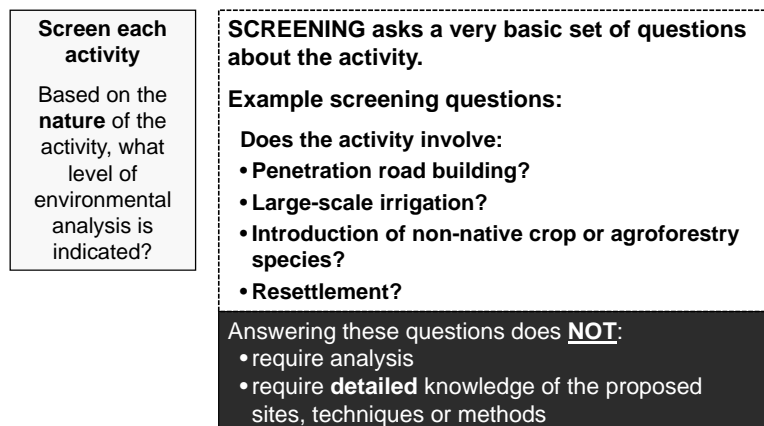
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Phase I of the EIA process



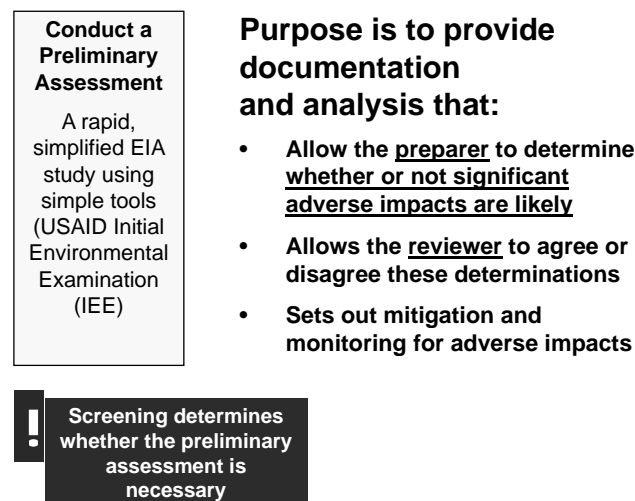
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Phase I: Screen the activity



7

Phase I: Preliminary Assessment



8

Phase I: Preliminary Assessment

Typical Preliminary Assessment outline

1. Background (Development objective, list of activities)
2. Description of the baseline situation
3. Evaluation of potential environmental impacts
4. Mitigation & Monitoring
5. Recommended Findings

For each activity it covers, a preliminary assessment has 3 possible findings:

The activity is . . .

- **very unlikely** to have significant adverse impacts.
- **unlikely** to have significant adverse impacts with **specified mitigation and monitoring**,
- **likely** to have significant adverse impacts (full EIA study is required)

9

When to Proceed

! We only proceed to Phase II of the EIA process

IF

Phase I indicates that a **FULL EIA STUDY** is required

10

Phase II: Full EIA Study

The full EIA study has very similar objectives and structure to a preliminary assessment.

However, the full EIA study differs in important ways:



A formal **scoping process** precedes the study to **identify issues to be addressed**

Analysis of environmental impacts is much **more detailed**

Alternatives* must be formally defined. The **impacts of each alternative must be identified & evaluated, and the results compared**

Public participation is required

A **professional EIA team** is usually required

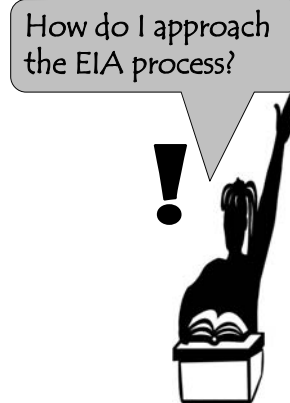
**includes the project as proposed, the no-action alternative, and at least one other real alternative*

11

Fundamental EIA Skills

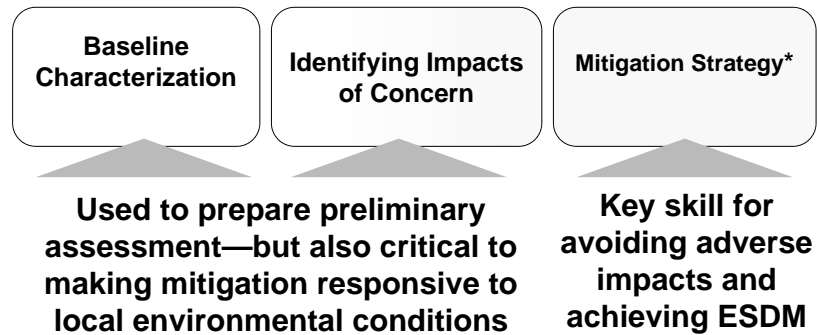
There are “core” skills that are central to environmental impact assessment:

- Baseline characterization
- The identification of potential adverse impacts (or impacts of concern)
- Developing a mitigation strategy



12

Fundamental EIA Skills



* Monitoring is the essential complement to mitigation; it is required to verify whether the mitigation measures are sufficient, effective—and actually implemented. Monitoring is addressed in a subsequent session.

13

Characterizing the baseline situation. . .

The **environmental components** of interest are those:

- likely to be affected by your activity
- upon which your activity depends for its success

Water?	<i>Quantity, quality, reliability, accessibility</i>
Soils?	<i>Erosion, crop productivity, fallow periods, salinity, nutrient concentrations</i>
Fauna?	<i>Populations, habitat</i>
Env Health?	<i>Disease vectors, pathogens</i>
Flora?	<i>Composition and density of natural vegetation, productivity, key species</i>
Special ecosystems?	<i>Key species</i>

14

Where do I obtain information on the baseline situation?

1. YOUR ORGANIZATION:

- **TALK** to staff who know the project, and know the sites.
- **OBTAIN** project documents and information

2. DIRECT OBSERVATION:

- **Go to the site(s)!** Look up publicly available satellite imagery before you go.

3. UTILIZE OTHER LOCAL TALENT & KNOWLEDGE:

- communities, government, counterparts

? Aren't we forgetting something?

What about reports by donor organizations and international agencies? What about government statistics? GIS databases?

All these sources can be useful (and sometimes necessary)

But good local information is the most important input

15

Identifying impacts of concern

What is an impact?

The impact of an activity is the change from the **baseline situation** caused by the activity.

! To measure an impact, you must know what the baseline situation is.

The **baseline situation** is the existing environmental situation or condition in the absence of the activity.

Important:
Baseline situation is not just a “snapshot in time”

16

Types of impacts & their attributes

The EIA process is concerned with **all types of impacts** and may describe them in a number of ways

- Intensity
- Direction
- Spatial extent
- Duration
- Frequency
- Reversibility
- Probability

- Direct & indirect impacts
- Short-term & long-term impacts
- Adverse & beneficial impacts
- Cumulative impacts

But all impacts are NOT treated equally.

17

Focus!

! ESSENTIAL to focus on the most significant impacts

You definitely do not have time and resources to analyze and discuss in detail less important ones.

18

Impact evaluation process: THEORY

- 1 Understand** the activities being proposed
- 2 Research** the potential adverse impacts typical of these activities & know **how** they arise
- 3 Based** on the potential impacts, **identify** which elements of the baseline situation are important
- 4 Characterize** these elements of the baseline

5

Given:

1. the baseline conditions,
2. the project concept/design, and
3. How the adverse impacts arise,

decide which impacts are of concern

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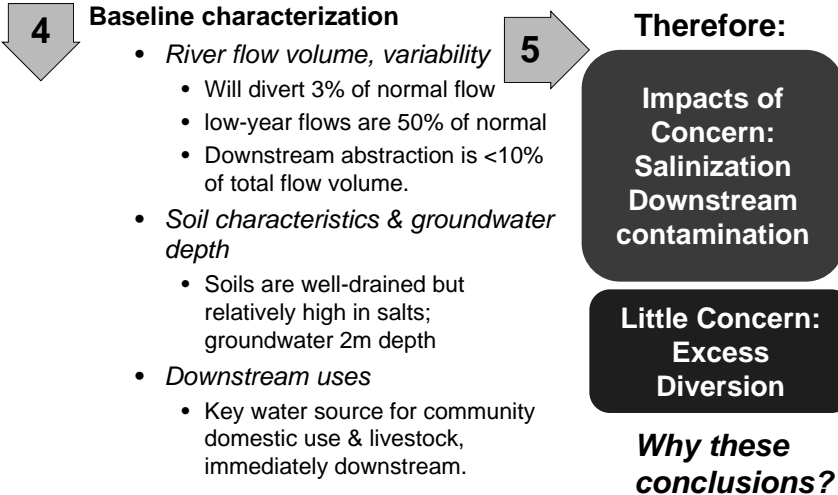
Impact evaluation process: EXAMPLE

- 1 Proposed intervention: irrigation scheme**
(wing dam diversion type ■ water-intensive crops ■ high fertilizer use, unlined canals & open-channel irrigation)
- 2 Key potential impacts:**
 - Excessive diversion of water
 - Salinization of soils
 - Contamination of groundwater & downstream surface water
- 3 Key elements of baseline:**
 - River flow volume, variability
 - Soil & water characteristics & groundwater depth
 - Downstream uses



20

Impact evaluation: EXAMPLE



21

Mitigation Design

A critical part of the EIA process—and of ESDM

Mitigation is. . .

The implementation of measures designed to eliminate, reduce or offset the undesirable effects of a proposed action on the environment.

22

How does mitigation reduce adverse impacts?

Type of mitigation measure	How it works	Examples
Prevention and control measures	Fully or partially prevent an impact/reduce a risk by: <ul style="list-style-type: none"> ▪ <i>Changing means or technique</i> ▪ <i>Changing or adding design elements</i> ▪ <i>Changing the site</i> ▪ <i>Specifying operating practices</i> 	PREVENT contamination of wells, by SITING wells a safe distance from pollution sources Add wastewater treatment system to the DESIGN of a coffee-washing station and train in proper OPERATIONS
Compensatory measures	Offset adverse impacts impacts in one area with improvements elsewhere	Plant trees in a new location to COMPENSATE for clearing a construction site
Remediation measures	Repair or restore the environment after damage is done	Re-grade and replant a borrow pit after construction is finished

... and sometimes you may need to redesign the project to modify or eliminate problem components

23

Must EVERY impact be mitigated?

Mitigation specified in Phase I or Phase II of EIA process must be implemented

Environmental management criteria often require judgment in designing specific mitigations. Apply the following principle:

Prioritize!

Potentially serious impacts/issues

These must ALWAYS be mitigated to the point that the impact is non-significant

Easily mitigated impacts

Then, there may be other impacts for which mitigation is easy and low-cost

24

Prevention is best



Where possible, **PREVENT** impacts by changes to site or technique.

CONTROL of impacts with Operation & Maintenance (O&M) practices is more difficult to monitor, sustain.

25

Three rules for Environmentally Sound Design & Management (ESDM)

1

Be prevention-oriented

2

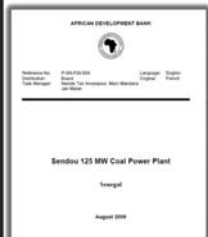
Apply best development practices to environmental aspects of the activity

3

Be systematic

Properly implemented, the EIA process makes them a reality.

Environmental Impact Assessment: a universal requirement



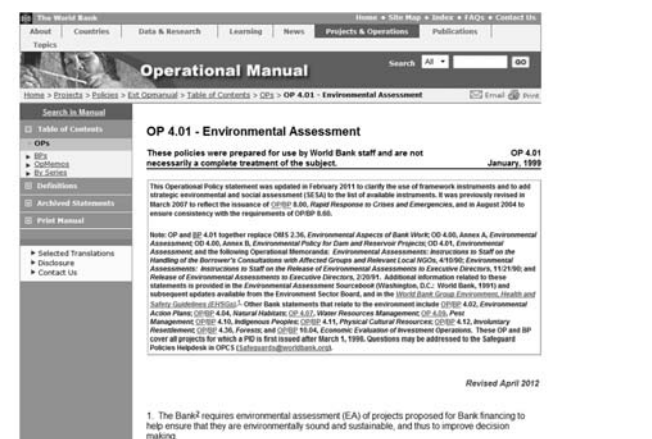
- From its beginnings in the 1970 US National Environmental Policy Act. . .
- EIA now extends beyond government works to
 - Infrastructure and economic development projects funded by the private sector & donors*
 - Analysis of policies, not just projects*



- In many developing countries, EIA is the core of national environmental regulation
- Most countries & almost all donors **(including USAID)** now have EIA requirements

27

Environmental Impact Assessment: The World Bank



"The Bank requires environmental assessment (EA) of projects proposed for Bank financing to help ensure that they are environmentally sound and sustainable, and thus to improve decision making."

28



Summary

- EIA is an established process that promotes sustainable environmental management and successful development outcomes.
- Core skills are needed to implement the EIA process and to help achieve ESDM; these are:
 - Baseline characterization
 - Identifying impacts of concern
 - Mitigation design
- EIA enables ESDM-focused development, and is the basis for USAID Environmental Procedures

Session 4.

Environmental Impact Assessment (EIA) Field Exercise: Practicing Core EIA Skills

Field Exercise Followed by Small-Group Work

Summary

This session provides participants with an interactive learning experience through a short excursion to sites at/near the workshop venue. Participants observe local environmental conditions to develop core EIA skills, such as baseline characterization and identification of potential impacts of concern. Through facilitator-led observation and discussion, participants are prepared for the more extensive field visits later in the week.

Session 4a: Briefing (approx. 30 minutes)

During this pre-field work component, participants will receive instructions on the methodology and objectives of the field exercise. This classroom preparation will enable participants to understand general baseline conditions of the site(s) to be assessed, as well as the types of activities proposed for implementation. Small groups will also be formed during this period.

Scenario and Instructions

- Listen carefully to the EIA scenario(s) presented by the facilitator(s).
- Observe any notes or additional instructions for your small group.

Session 4b: Field Visits (approx. 90 minutes)

As part of their respective small groups, participants will embark on the field component as briefed by the facilitator(s). This field-based activity will enable participants to practice observation skills needed to characterize the baseline situation and identify impacts and issues of concern.

Scenario and Instructions

- Observe and discuss key elements of baseline conditions and identify potential environmental impacts of the proposed activities on your assigned area.
- Participants should consider socio-economic dimensions of the proposed activity, as well as potential impacts on the physical environment. Feel free to query stakeholders, as appropriate.
- Take note and photos.

Session 4c: Group Work & Plenary Synthesis (approx. 60 minutes)

This session is aimed at strengthening participants' knowledge of baseline analysis and the identification of environmental impacts as informed by the field visits. During this component, participants will work with their small groups to synthesize field observations and prioritize impacts/issues of concern that were observed during their time in the field. Small groups will also discuss possible approaches for limiting potential adverse environmental impacts.

Scenario and Instructions

Using the observations and information collected during the field visit, each small group will:

- **Review and characterize** the most relevant elements of the baseline situation, including ongoing environmental management efforts and measures (if any); and
- On this basis, decide which of the **potential adverse impacts** and other potential “ESDM failures” are real and present serious concerns.

Working groups should record their findings. Facilitators will serve as resources throughout the process. Note that:

- This session is intended to practice basic observation and impact identification skills—not to practice development of Reg. 216 environmental documentation.
- For those who already know these terms, working group outputs are **not** expected to be in the form of an IEE outline or phrased in terms of “recommended determinations.”

Session 5.

Environmental Impact Assessment and USAID Environmental Procedures: the Initial Environmental Examination (IEE) and Beyond

Technical presentation and dialogue

Important note:

Note that in this workshop, the term “USAID Environmental Procedures” does not refer only to 22CFR 216 (Reg. 216), but collectively to Reg. 216, relevant FAA requirements, and to the mandatory procedures and directives contained in the USAID-internal ADS.

Summary

The preceding workshop sessions have:

- Described ESDM as a key objective for the ethical and effective practice of development
- Explained the EIA process and the fundamental skills of baseline characterization, impact identification, and mitigation design
- Highlighted EIA as the framework for achieving ESDM in project-based development activities, and as the basis for USAID Environmental Procedures
- Provided an opportunity to test and apply fundamental EIA skills in a field-based exercise

USAID is *required by both court settlement and US law* to utilize an EIA-based process to “fully take into account” environmental sustainability in the design and implementation of its development programs. USAID Environmental Procedures represent the Agency’s unique implementation of the EIA process, and seek to assure that USAID-funded projects effectively identify and mitigate potential adverse environmental impacts. USAID Environmental Procedures also lay out an environmental compliance regime in which the Agency and Implementing Partners fulfill various environment-related requirements over the life of project.

Specifically, USAID Environmental Procedures dictate a process that must be applied to all activities **before** implementation. The output of this EIA process, defined by 22CFR216 (“Reg. 216”), is USAID-approved Reg. 216 environmental compliance documentation. This documentation includes:

- Requests for Categorical Exclusion (RCE)
- Initial Environmental Examinations (IEEs)—the USAID version of a preliminary assessment
- Environmental Assessments (EAs) and Programmatic Environmental Assessments (PEAs)

Most IEEs and all EAs/PEAs specify environmental management conditions, which are essentially mitigative measures. These measures—“IEE/EA conditions”—must be implemented and monitored over the life of the activity (or life of project, LOP). While implementation is the responsibility of the IP, USAID C/AORs are required to actively manage and monitor compliance with IEE/EA conditions. This process is the cornerstone of project environmental compliance. This session will introduce —*but not go*

into detail regarding—the steps comprising this process and who is responsible for them: MEOs, CORs/AORs, Activity Managers, IPs, etc.

Although the pre-implementation, or “upstream compliance” aspect of USAID Environmental Procedures is well articulated via Reg. 216, specific requirements for the implementation of IEE/EA conditions and associated reporting—“downstream compliance”—are based primarily on Agency best practice, and vary somewhat by region. To strengthen downstream environmental compliance in Africa, IEEs and award documents are increasingly requiring IPs to develop, submit and implement environmental mitigation and monitoring plans (EMMPs) for their projects. The EMMP is a systematic vehicle to implement IEE and EA conditions.

More about Reg. 216 (22 CFR 216)

Reg. 216 is a US federal regulation that sets out USAID’s mandatory pre-obligation/ pre-implementation EIA process. The Regulation applies to all USAID programs or activities, including non-project assistance *and* substantive amendments or extensions to ongoing activities. No “irreversible commitment of resources” can occur to implement an activity unless the activity is covered by appropriate, approved Reg. 216 documentation.

When IEEs are approved with mitigation and monitoring conditions attached to one or more activities, those conditions become a required part of project design/implementation. (EAs always have such conditions.)

Across USAID programs, **Reg. 216 documentation is developed both by Mission staff and Partners**, depending on the situation. Title II Cooperating Sponsors, for example, are required to develop IEEs as part of their MYAPs, and other partners are often asked to develop Reg. 216 documentation for new project components. Reg. 216 documentation covering multiple projects at the sector program level is developed by Mission staff or 3rd-party contractors.

Reg. 216 is the best-known portion of USAID Environmental Procedures. However, Reg. 216 simply defines the pre-implementation EIA process. Unless the IEE and EA conditions that result from this process are actually implemented, (1) the activity is out of compliance; (2) the Reg. 216 process is largely meaningless; and (3) the objective of the environmental procedures (ESDM) is not achieved.

For this reason, the ADS requires C/AORs to REMEDY or HALT activities where IEE/EA conditions are not being implemented, or which are otherwise out of compliance.

Objectives

- Understand the legal mandate of USAID Environmental Procedures, including 22CFR216 (“Reg. 216”).
- Link application of the EIA-based Environmental Procedures to the goals of ESDM and broader USAID development efforts.
- Gain familiarity with the environmental compliance requirements established by USAID Environmental Procedures, including IEEs and related documentation.
- Illustrate how the USAID IEE and related environmental compliance documents determine project environmental management requirements.

Key resource

- The *Environmental Procedures Briefing for Mission Staff* is a succinct summary of LOP environmental compliance. This training draws heavily from the *Briefing*. It is included in this Sourcebook and available at www.encapafrica.org/meoEntry.htm.

EIA and USAID Environmental Procedures: the Initial Environmental Examination and Beyond

GEMS Environmental Compliance-ESDM Training Series
Senegal, February, 2014

Session Objectives:

- Review background and principles of Environmental Impact Assessment (EIA)
- Review EIA process and fundamental skills:
 - *Baseline characterization*
 - *Identifying impacts of concern*
 - *Developing a mitigation strategy*
- Explain USAID implementation of the EIA process
- Understand preparation of USAID environmental compliance documentation

2

USAID Environmental Procedures

- Specifies an Agency-wide approach to environmental management of USAID-funded activities.
- “Environmental Procedures” Encompass:
 - 22 CFR 216 (“Reg. 216”)
 - Foreign Assistance Act (FAA) Sections 117, 118 & 119.
 - USAID-internal Automated Directives System (ADS)
 - Regional Best Practices

! “USAID Environmental Procedures” refers generally to all relevant laws, Agency guidance, and prevailing best practices.

3

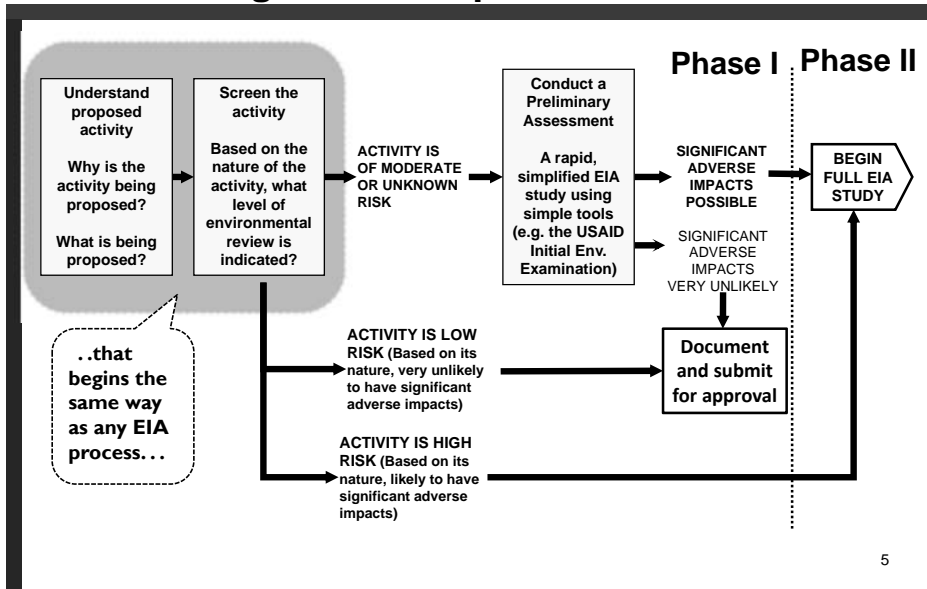
Applying the EIA process

- The USAID approach to EIA is established in Reg. 216
- Reg. 216 defines a pre-implementation EIA process
- This process applies to:
 - *All USAID programs or activities, (including non-project assistance.)*
 - *New activities*
 - *Substantive amendments or extensions to ongoing activities*

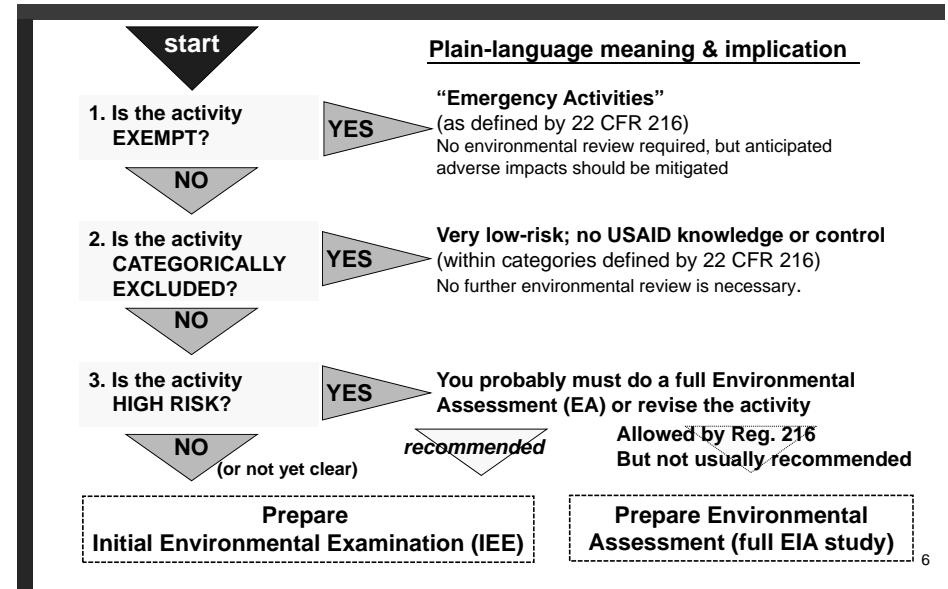
! Reg. 216 (22 CFR 216) is a US FEDERAL REGULATION. Compliance is mandatory.

4

Reg. 216 = USAID's implementation of general EIA process. . .

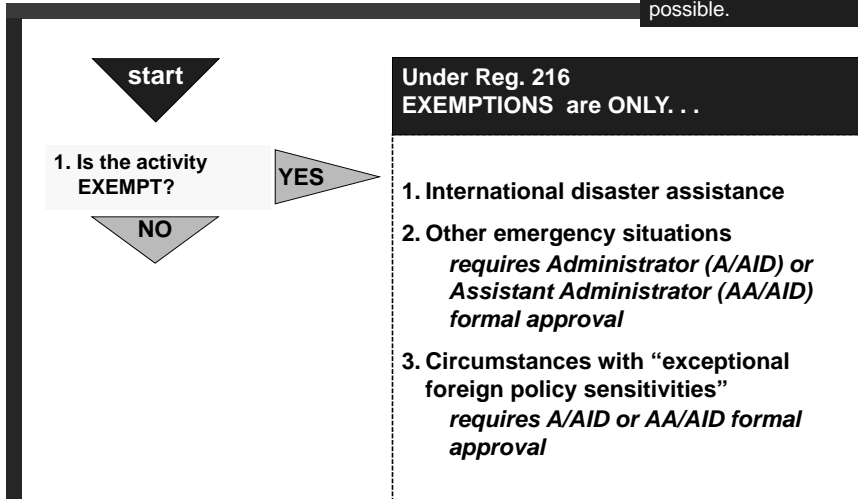


The USAID screening process

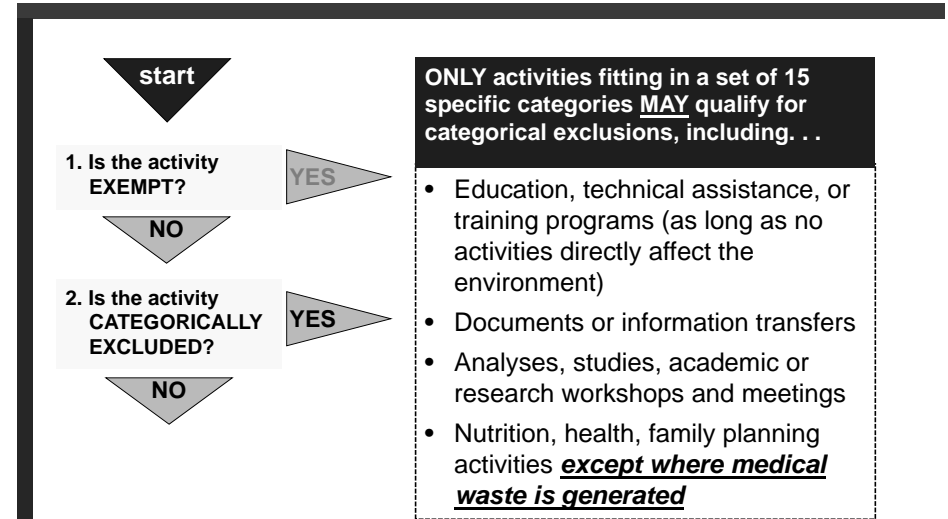


Screening under 22 CFR 216: Exemptions

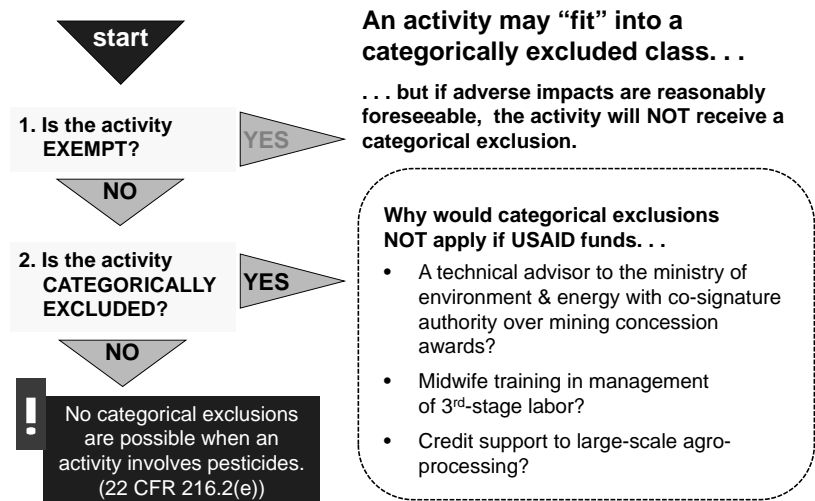
! "Exempt" activities often have significant adverse impacts. Mitigate these impacts where possible.



Screening under 22 CFR 216: Categorical Exclusions



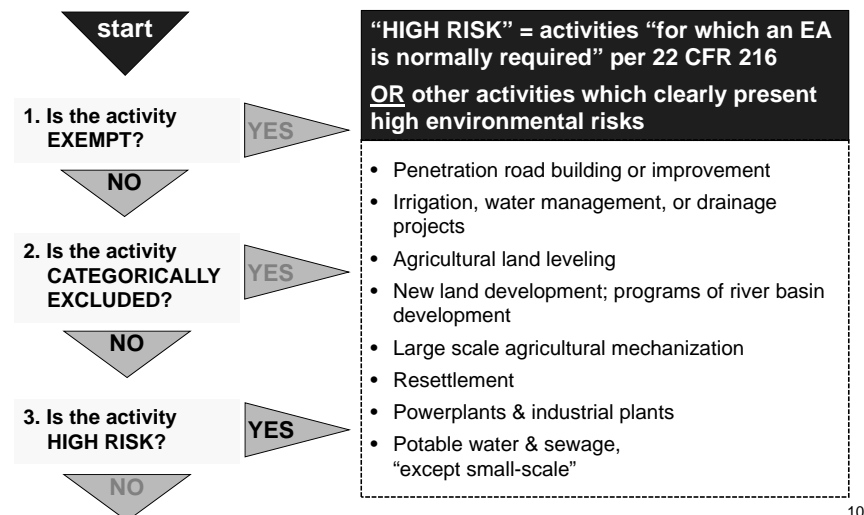
Categorical Exclusions: LIMITATIONS



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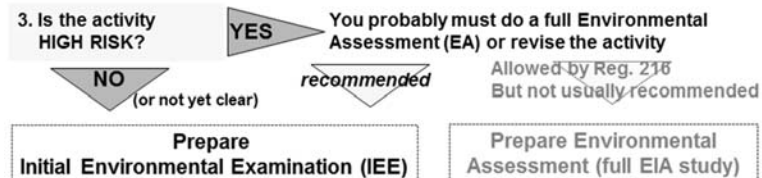
Screening under 22CFR216

“High Risk” (EA Likely Required)



10

What if my activity is “high risk”?



Can proceed directly to an EA (USAID’s full EIA study)

But unless the activity is **VERY** clearly “high risk”, do an IEE (USAID’s preliminary assessment) instead

WHY a preliminary assessment?

An IEE will:

- Allow you to determine if impacts can be easily controlled below a significant level—if so, an EA is not necessary
- Gather information needed to jump-start the EA process

11

What is clearly “high risk”?

EA DEFINITELY REQUIRED	NOT CLEAR—proceed to IEE
New 500Ha irrigation scheme	Rehabilitation of 50Ha irrigation scheme
Major expansion of a 100MW thermal power plant & construction of new transmission lines	Mini-hydro installations of 500 kw total
Widening 30km of a 2-lane road to 6-lane tollway thru an urban area	Rehabilitation of multiple short segments of rural feeder road
Sections 118 & 119 of the Foreign Assistance Act REQUIRE an EA for .	
Activities involving procurement or use of logging equipment	
Activities with the potential to significantly degrade national parks or similar protected areas or introduce exotic plants or animals into such areas	

12

Once each activity has been screened...

Activity*	Exempt	CatEx	IEE Req'd	EA Req'd
1. Small clinic rehabilitation			X	
2. Borehole Installations			X	
3. Training in patient record-keeping		X		
4. Construct provincial medical waste disposal facility				X

*Use a table like this. It helps.

13

Develop your 22 CFR 216 documentation. . .

. . .as determined by the outcome of your screening process

Overall screening results	22 CFR 216 documentation required
All activities are exempt	Statement of Justification
All activities categorically excluded	Categorical Exclusion Request + FACESHEET
All activities require an IEE	IEE covering all activities + FACESHEET
Some activities are categorically excluded, some require an IEE	An IEE that: <ul style="list-style-type: none"> Covers activities for which an IEE is required AND Justifies the categorical exclusions + FACESHEET
High-risk activities	<ul style="list-style-type: none"> Initiate scoping and preparation of an EA



CATEGORICAL EXCLUSION REQUEST
Very simple; 1-2 pages. Describes the activities. Cites 22 CFR 216 to justify the catex.

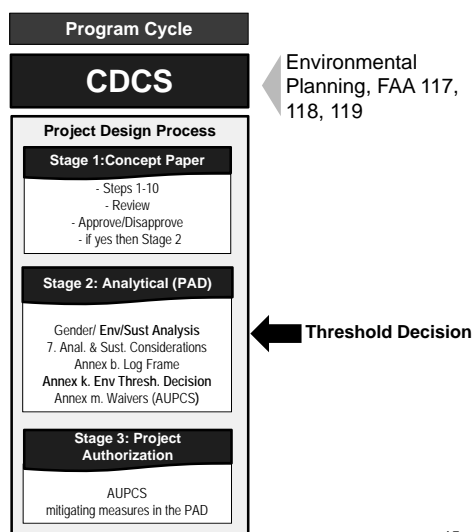


Initial Environmental Examination (USAID's preliminary assessment)

14

Timing of 22 CFR 216 documentation. . .

USAID's project design process requires approved Reg. 216 documentation as annex to the Project Appraisal Document



15

The IEE: USAID's preliminary assessment

Basic IEE outline

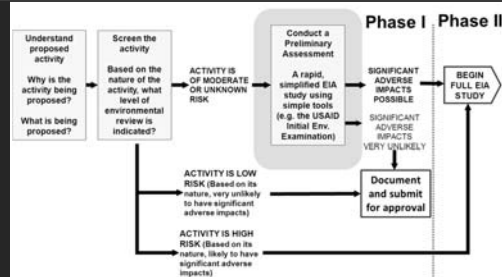
- 1. Background & Activity Description**
 - Purpose & Scope of IEE
 - Background
 - Description of activities
- 2. Country & Environmental information**
 - Locations affected
 - National environmental policies and procedures
- 3. Evaluation of potential environmental impacts**
- 4. Recommended threshold decisions and mitigation actions**
 - Recommended threshold decisions and conditions
 - Mitigation, monitoring & evaluation

What does it look like?

The IEE is very similar to preliminary assessments required by other donors and governments.

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Purpose of IEE



Provides documentation and analysis that:

- Allows the **preparer** to determine whether or not significant adverse impacts are likely
- Allows the **reviewer** to agree or disagree with the preparer's **determinations**
- Sets out mitigation and monitoring for adverse impacts

17

What determinations result from an IEE?

For **each** activity addressed, the IEE makes one of 4 recommendations regarding its possible impacts:

If the IEE analysis finds...	The IEE recommends a...	Implications (if IEE is approved)
No significant adverse environmental impacts	NEGATIVE DETERMINATION	No conditions. Go ahead.
With specified mitigation and monitoring, no significant environmental impacts	NEGATIVE DETERMINATION WITH CONDITIONS	Specified mitigation and monitoring must be implemented
Significant adverse environmental impacts are possible	POSITIVE DETERMINATION	Do full EA or redesign activity. Conditions imposed by the EA must be implemented.
Not enough information to evaluate impacts	DEFERRAL	You cannot implement the activity until the IEE is amended
PLUS, the IEE will address any CATEGORICAL EXCLUSIONS carried over from the screening process.		

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Reg. 216 documentation & approval

IMPORTANCE:

No activities may be implemented without APPROVED Reg. 216 environmental documentation in hand.

APPROVED = Mission Director (or Washington equivalent) & Bureau Environmental Officer (BEO) signatures

BEO concurrence *not* automatic or guaranteed

Dialogue is sometimes required

Who signs?

Clearances:

- COR/AOR or Team leader
- Mission Environmental Officer (for Missions)
- Regional Environmental Advisor (depending on mission)
- Mission Director or Washington equivalent*

Concurrence

- Bureau Environmental Officer*

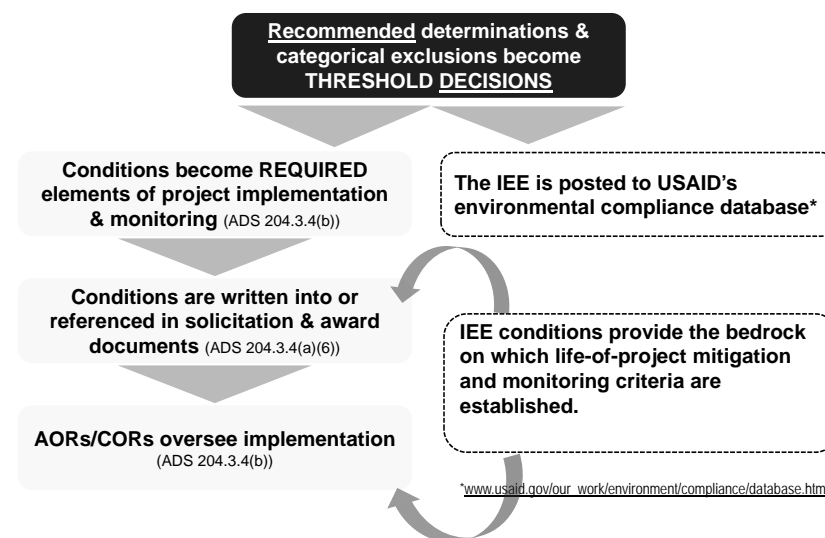
Approval

- General Counsel (rarely)

*required by Reg 216

19

When the IEE is duly approved...



*www.usaid.gov/our_work/environment/compliance/database.html

20

What if I need to do an Environmental Assessment*?

- First step: a formal scoping process (22 CFR 216.3(a)(4))
- Scoping Statement must be approved by Mission Director, Bureau Environmental Officer.
- Informs the SOW for the Environmental Assessment itself.
- EAs are far more detailed than IEEs. They must address alternatives to the proposed activities. Public consultations are required.



**If a proposed action may affect the US environment or the global commons, an EIS is required, not an EA. (EIS = Environmental Impact Statement, per the US National Environmental Policy Act (NEPA)). This is RARE. (22 CFR 216.7.)*

21

What about host-country EIA procedures?

- Most host countries have domestic EIA requirements;
- USAID projects must also comply with these requirements;
- So, during screening, also screen against host country categories.
- If a host-country preliminary assessment or full EIA is required, the objective is to create **one document that satisfies both systems.**

22

Summary

- Reg. 216 establishes the pre-implementation USAID environmental review process
- This reflects the general EIA methodology
- It begins with a systematic screening and decision-making process with more detailed review, if needed
- USAID documentation and approval processes are clear and mandatory
- Reg. 216 documents define project environmental management criteria, most frequently as IEE conditions

23

Session 6.

Principles of Environmental Monitoring

Technical presentation and dialogue

Summary

Definition—Environmental monitoring is both:

- A. Systematic observation of key environmental conditions.
- B. Systematic verification of the implementation of mitigation measures.

Environmental monitoring is a necessary complement to mitigation. Its purpose is to tell us clearly and cost-effectively if mitigation is sufficient and effective. Throughout this session, we will see that environmental monitoring must be highly targeted.

A. **Observing environmental conditions.** The environmental conditions observed are those:

- That correspond to impacts and mitigation measures. For example, a key potential impact of an irrigation project is groundwater contamination. Therefore, **ground-water quality** is monitored.
- Upon which the project depends for its success. For example, a water supply project depends on clean source water. Therefore, **source water quality** is monitored.

We observe and measure environmental conditions by using **environmental indicators**, which are signals of or proxies for the stock and quality of key environmental resources, or of environmental health and ecosystem function.

Indicators can require complex equipment to measure (e.g., testing water for pesticide residues), but they can also be very simple—and often for small-scale activities simple indicators are best. (For example, groundwater levels can be measured in a shallow well using a rope and bucket.)

A key principle of monitoring is choosing the simplest indicator that meets your needs.

To distinguish the impacts of your activity from other factors, thought needs to go into the times and places that indicators are measured.

For example, consider an agricultural processing facility that draws water from a stream. The facility has potential to adversely impact surface water quality. A good monitoring approach would:

- Take water samples from the stream at the intake point and downstream from the seepage pits.
- Take samples from these different locations at the same time.
- Take samples during both high and low flow periods during the processing season.

B. **Verifying Implementation of Mitigation Measures.** We can verify (and quantify!) implementation of mitigation measures in two ways: via paper reports and via field inspection. In each case, we use **mitigation implementation indicators**. For example, monitoring of medical waste management in a clinics activity could ask the beneficiary clinics to attach their waste management plan. A field inspection would spot-check that key elements of the plan were being implemented.

Good environmental monitoring is targeted and takes the simplest effective approach. It usually requires a combination of environmental conditions indicators and mitigation implementation indicators.

Objective

Establish the objective of environmental monitoring (determining clearly and cost-effectively if mitigation is sufficient and effective); brief the two types of environmental monitoring indicators and achieve a common understanding of the principles of environmental monitoring design.

Key resource

- The *Environmental Guidelines for Small-Scale Activities* is a key resource for design of mitigation and monitoring measures.

Principles of Environmental Monitoring

GEMS Environmental Compliance-ESDM Training Series
Senegal, February, 2014

Definition of monitoring

Environmental monitoring is BOTH. . .

- ✓ 1. Systematic observation of key environmental conditions
- ✓ 2. Systematic verification of mitigation measure implementation

Purpose:
to tell you clearly and cost-effectively if mitigation is sufficient and effective

Env. Monitoring should be a normal part of project M&E.

2

Monitoring environmental conditions

1. Systematic observation of key environmental conditions

= Environmental conditions that:

Example: an irrigation project may contaminate groundwater. **Ground-water quality** is monitored.

- ❖ correspond to impacts & mitigation measures
- ❖ Upon which the project depends for its success

Example: A water supply project depends on clean source water. **Source water quality** is monitored.

3

Monitoring environmental conditions

1. Systematic observation of key environmental conditions

Means that environmental indicators are chosen and assessed systematically.



For example. . .

indicators are

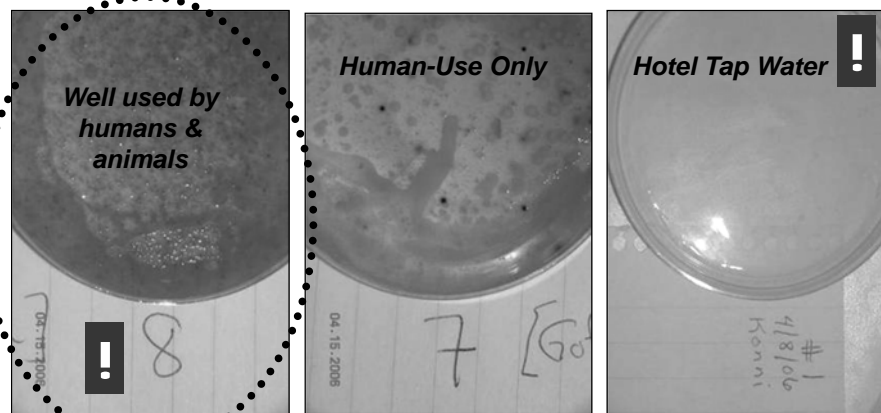
Signals of or proxies for

- Environmental health
- Ecosystem function

4

Example Indicator: coliform contamination

Water quality tests with simple, inexpensive test kit . . .



Purple Color = Fecal Coliforms
Pink Color = Non-Fecal Coliforms

5

Examples of indicators

Environmental components that may be adversely affected by small-scale activities

Water Quantity, quality, reliability, accessibility

Env Health Disease vectors, pathogens

Soils Erosion, crop productivity, fallow periods, salinity, nutrient concentrations

Flora Composition and density of natural vegetation, productivity, key species

Fauna Populations, habitat

Special ecosystems Key species

indicators

6

Environmental Indicators: sometimes complicated, often simple

- ❖ Environmental Indicators may require laboratory analysis or specialized equipment & techniques
 - Testing water for pesticide residues
 - Automatic cameras on game paths for wildlife census
 - Etc.

❖ But indicators are often VERY SIMPLE. . .

❖ **! especially for small-scale activities**

Simple indicators can be more useful and appropriate than more complicated ones!

For example. . .

7

Examples of simple environmental indicators

Erosion measurement.



Topsoil loss from slopes upstream in the watershed **(top)** is assessed with a visual turbidity monitor **(bottom)**.

Surface sewage contamination



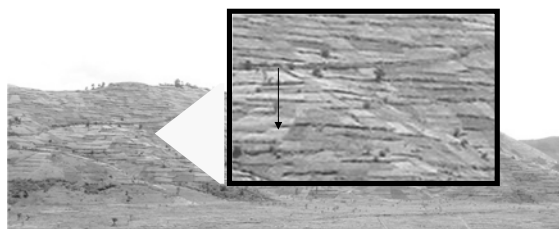
Visual inspection behind the latrine **(top)** reveals a leaking septic tank **(bottom)**.



What are the limitations of this indicator?

8

Examples of simple environmental indicators



Soil depletion.
Visual inspections show fertility gradients within terraces. (Dark green cover indicates healthy soil; yellow cover indicates depletion)

Groundwater levels

Are measured at shallow wells with a rope and bucket.



! Choose the simplest indicator that meets your needs!

9

Assessing environmental indicators systematically

❖ Monitoring often requires **SYSTEMATIC** measurement of indicators to distinguish the impacts of the activity from other factors

This requires decisions about:

- 1 Location of measurement
- 2 Timing & frequency of measurement
- and often . . .
- 3 Other factors

For example

10

Assessing environmental indicators systematically

Example: Water quality impacts of agric. processing

1 Location
Water samples should be taken at the intake, and downstream of seepage pits.

2 Timing & frequency
Samples at different locations should be taken at the same time. Samples should be taken at **high & low flow** during the processing season

3 What else?

Water intake



Processing facility

Seepage pit

Downstream

11

Assessing environmental indicators systematically

Measuring water quality impacts from a point source of pollution (the previous example) is fairly straightforward

Often monitoring can be more complicated.
Some common monitoring strategies:

Monitor the actual project, plus a similar non-project area (a "control")

Monitor at multiple stations/sampling locations

Do research to obtain good baseline data

All are intended to help distinguish impacts from **NORMAL VARIABILITY** and other factors

12

Monitoring: Part 2

2. Systematic verification of mitigation measure implementation

=

Verifying whether or not the mitigation measures specified by the EMMP have been implemented. This includes quantifying mitigation: how many staff trained? How many trees planted?

This will often not show whether the measures are effective. This is the role of environmental indicators.

There are two basic ways to get the information required: paper reports & field inspection

For example

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Ways to quantify implementation of mitigation

Mitigation measure is:
"Clinic staff shall be trained to and shall at all times segregate and properly incinerate infectious waste."

Desk assessment:
Clinics are asked to report:

Percentage of staff trained?
Spot inspections of waste disposal locations carried out?
The result of these inspections?

Mitigation implementation indicators



Field inspection. . . shows waste is segregated at point A, but not incinerated at point B.



14

Good environmental monitoring. . .

. . . tell you clearly and cost-effectively if mitigation is sufficient and effective

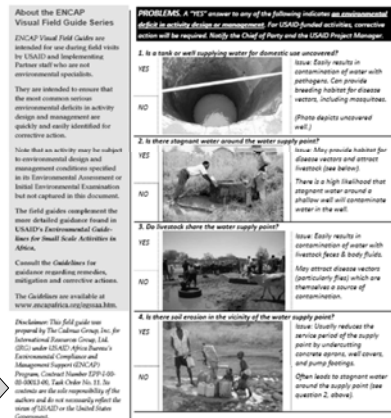
- ❖ Do no more than needed. Prioritize the most serious impacts & issues
- ❖ Usually requires a combination of:
 - Environmental conditions indicators
 - Mitigation implementation indicators

Example:
ENCAP visual field guides



Version: 1 December 2009
download at www.encapvisualfieldguides.org/usaidsolutions.htm
comments and corrections to encap@visualfieldguides.org

ENCAP Visual Field Guide: WATER SUPPLY
for quick identification of serious environmental concerns in small-scale water supply activities



10001

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Making Mitigation & Monitoring effective

For mitigation and monitoring to be effective, it must be:

Realistic.
M&M must be achievable within time, resources & capabilities.

Targeted.
Mitigation measures & indicators must correspond to impacts.

Funded.
Funding for M&M must be adequate over the life of the activity

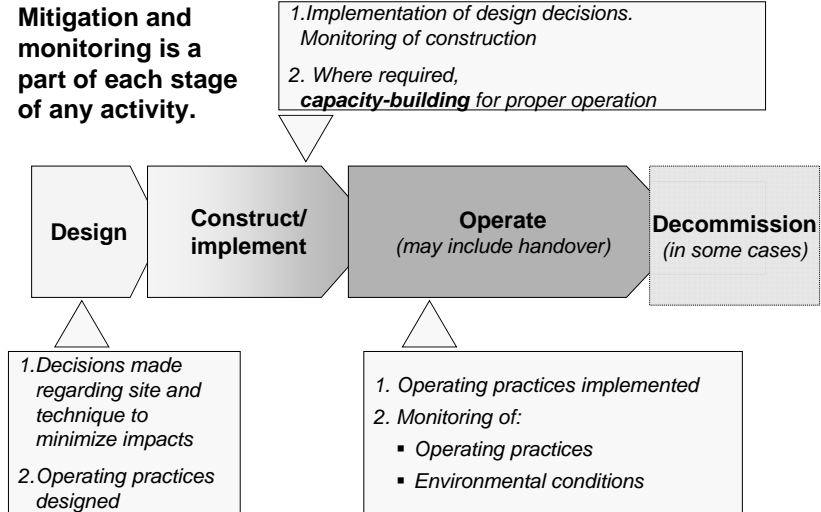
Considered early.
Preventive mitigation is usually cheapest and most effective. Prevention must be built in at the design stage.

Considered early.
If M&M budgets are not programmed at the design stage, they are almost always inadequate!

16

Mitigation & monitoring in the project lifecycle

Mitigation and monitoring is a part of each stage of any activity.



Session 7.

The Environmental Mitigation and Monitoring Plan (EMMP)

Technical presentation and dialogue

Summary

Environmental Mitigation and Monitoring Plans (EMMPs) provide a framework for specifying and organizing mitigation and monitoring, and assuring that it responds systematically to IEE/EA conditions. In its most basic form, the EMMP is a simple table that sets out:

- ALL the mitigation measures being implemented in response to IEE/EA conditions;
- The monitoring that will determine whether the mitigation is sufficient and effective; and
- Who is responsible for both mitigation and monitoring.

EMMPs may also include **budgeting** information for mitigation and monitoring and a **monitoring log** section where monitoring results can be recorded. We illustrate the EMMP concept at the end of the session with an extended example.

Note that EMMPs are also known as EMPs (Environmental Management Plans), EMPRs (Environmental Mitigation Plan and Report), and similar acronyms.

EMMP is the most widely used term. EMMP formats likewise vary. IEEs or awards sometimes specify an EMMP format, but more often the IP has flexibility in designing/adopting/adapting a format that meets the needs of the particular project. The formats discussed in this training are the most common and are acceptable in most contexts.

USAID Environmental Procedures require that environmental mitigation required by IEEs and EAs is implemented and monitored, but do not require EMMPs *per se*. However, most new IEEs do require that EMMPs be developed and implemented. This requirement can be operationalized either as technical direction from the COR/AOR, or as a provision of new contracts and agreements.

Title II Cooperating Sponsors are required to develop EMMPs by the Agency's MYAP guidance.

EMMPs are being required because a key lesson learned from 40 years of EIA experience worldwide is that it is almost impossible to systematically carry out the mitigation measures that result from the EIA process unless an EMMP exists, and is incorporated into a project's workplan and budget.

Environmental Compliance Language (ECL)

For new awards and significant modifications to existing awards, USAID Missions and Bureaus are increasingly requiring EMMPs in the language of award instruments. This is part of a broader trend within USAID to use "best practice" environmental compliance language in solicitations and awards.

This language goes beyond the minimum requirement established by the ADS that mitigation measures be incorporated into “implementation instruments.” It requires that:

1. a complete EMMP be developed;
2. workplans and budgets integrate the EMMP; and
3. project reporting tracks EMMP implementation.

The source of this “best practice language” is the **Environmental Compliance: Language for Use in Solicitations and Awards** (ECL) tool. This tool is a non-mandatory part of the ADS, and combines step-by-step guidance and “boilerplate” language. The BEOs and REAs strongly encourage its use.

EMMP Submission and Approval

EMMPs should be approved by the COR/AOR; sometimes there is additional review by the MEO or REA. COR/AORs should require that EMMPs are submitted together with the project’s workplan or PMP.

Title II Partners sometimes submit them as part of the IEE, itself a part of the MYAP package.

Objectives

- Brief the EMMP concept.
- Establish that EMMPs are critical to effective and systematic implementation of IEE/EA conditions.
- Explain the mechanisms by which USAID is requiring IPs to develop and implement EMMPs.

Key resources

- Simple EMMP template (included following session presentation)
- EMMP Template with Monitoring Log and Budget (included following session presentation)
- EMMP Factsheet (included following session presentation)
- Environmental Compliance: Language for Use in Solicitation and Awards (ADS 204 Help Document) (included following session presentation)

Environmental Mitigation & Monitoring Plans (EMMPs)

GEMS Environmental Compliance-ESDM Training Series
Senegal, February, 2014

Session Objectives

- Understand the USAID requirement for ongoing mitigation and monitoring of environmental impacts
- Learn how to “operationalize” IEE and EA conditions as part of project implementation
- Discuss adapting IEE/EA conditions in response to specific field activities and environments
- Review format and preparation of the Environmental Mitigation and Monitoring Plan (EMMP) via case study

2

Congratulations...

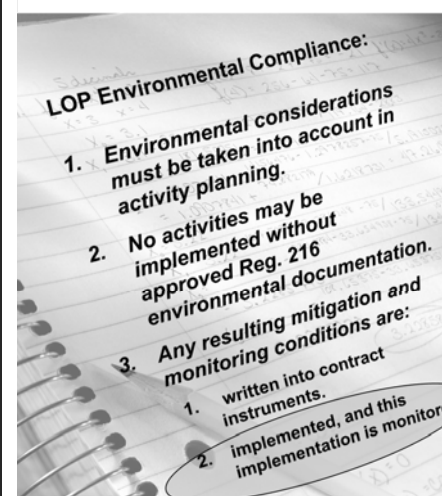
✓ **We are all experts in EIA and USAID Environmental Procedures!**

❖ **Now, we must apply our knowledge of impact assessment and mitigation in a real project setting**

- *IEEs (and EAs) are useless unless the conditions—environmental management criteria—they establish are implemented!*
- **USAID Environmental Procedures therefore require implementation**

3

USAID requirements are specific



USAID is required to implement and monitor IEE/EA conditions.

What does the ADS say?

Team Leaders and Activity Managers or COR/AORs must actively manage and monitor compliance with any IEE/EA conditions, modifying or ending activities not in compliance. (ADS 202.3.6 , 204.3.4 and 303.2.f)

4

Implementation of IEE/EA conditions

Practically, implementation & monitoring of mit. & mon. conditions requires that:

1. USAID communicates applicable IEE/EA conditions to the IP*
2. A Complete **Environmental Mitigation and Monitoring Plan (EMMP)** exists
3. Project workplans and budgets integrate the **EMMP**
4. Project reporting tracks implementation of the **EMMP**

**Except Title II partners, who write their own IEEs.*

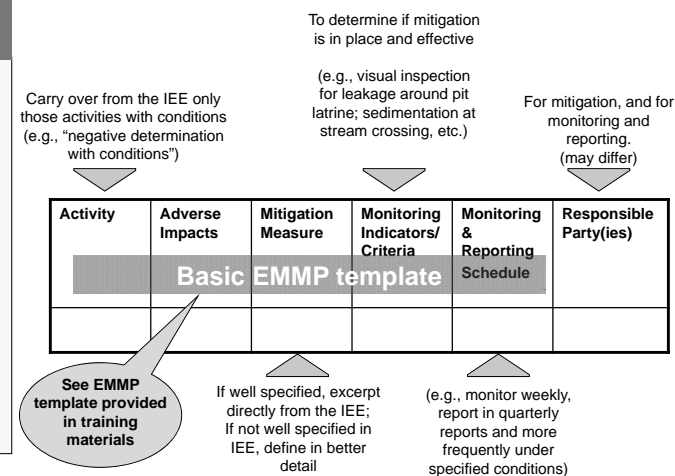
EMMPs are critical.
What are they?

5

The EMMP: a simple tool

An EMMP sets out:

- ALL the mitigation measures required by the IEE or EA
- Indicators or criteria for monitoring their implementation & effectiveness
- who is responsible for mitigation and monitoring



6

The EMMP: a flexible tool

More sophisticated EMMP formats can include:

1. Budgeting information
 - How much will a mitigation or monitoring measure cost?
 - What is the LOE involved?
2. A Monitoring Log section
 - Where mitigation implementation information or monitoring results are recorded
3. Other Suggestions?

We will review an EMMP format with these features

7

An effective EMMP is specific + realistic

❖ The EMMP must specify practical mitigation measures

❖ The EMMP often "translates" IEE conditions that are written in very general terms

❖ Implementing these conditions requires first translating them into specific mitigation actions

How do we do this?

For example, WASH-related IEE conditions might state:

"wells shall be sited to minimize the possibility of contamination."

Or even more generally:

"wells shall be sited consistent with good practices."



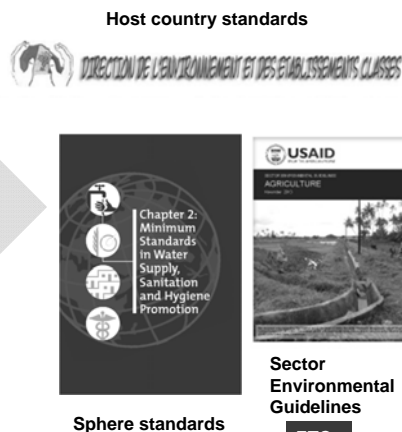
8

EMMPs build on standards & best practice

Determining specific mitigation actions starts with review of appropriate standards or best practice guidance

For our well example:

- ❖ Identify and adopt siting criteria from relevant resources
- ❖ The specific mitigation action/measure in the EMMP is:
 - “Compliance with project well-siting criteria”
 - Attach siting criteria to EMMP; make checklist for use by field teams and Monitoring & Evaluation (M&E) staff



9

Best practice guidance: well siting criteria



MINIMUM distances from potential sources of contamination for well siting:

- ❖ 45m from a preparation or storage area for agrochemicals, fuels, or industrial chemicals
- ❖ 25m from cesspools, leaching pits, and dry wells
- ❖ 15m from a buried sewer, septic tank, subsurface disposal field, grave animal or poultry yard or building, latrine pit, or other contaminants that may drain into the soil
- ❖ More than 45m from a septic tank leach field

Let's discuss another example:

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Health services capacity & policy



IEE stipulates that:

“Capacity building and policy development support to public health delivery and management systems must involve all feasible efforts to assure that these systems:

- address and support proper waste management (including handling, labeling, treatment, storage, transport and disposal of medical waste);
- address and support the capacity of medical facilities for waste management;
- prioritize environmental health considerations.”

To “translate” these IEE conditions, the EMMP will need to:

- identify an appropriate waste management standard; *and*
- specify what is realistic, given that the project will not have direct control over these systems

11

How are EMMPs being required?

Three mechanisms:

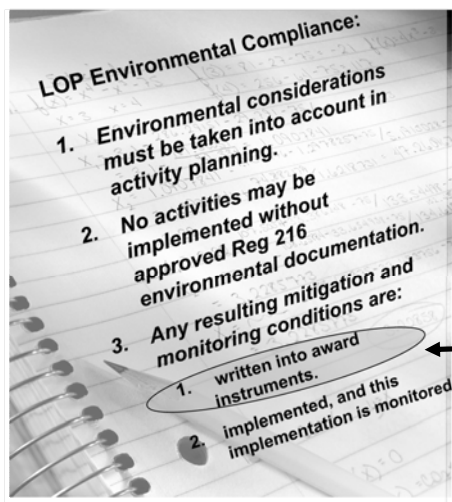
1. Technical direction from COR or AOR
2. Required by contract/agreement
3. Required by MYAP guidance (Title II only)

More about this...

! A key “lesson learned” from 40 years of world-wide EIA experience ... implementation of environmental conditions requires EMMPs that are incorporated in workplans and budgets

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USAID requirements are specific: Part II



USAID is required to write IEE/EA conditions into awards.

What does the ADS say?

ADS requires "incorporating... mitigative measures identified in IEEs [and] EAs into implementation instruments for programs, projects, activities or amendments."

(204.3.4.a.6; also 303.3.6.3e)

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Current best practice exceeds requirement

USAID is increasingly using best-practice environmental compliance language that goes beyond the ADS minimum

New awards and significant modifications are requiring that:

1. The partner verifies current and planned activities annually against the scope of the RCE/IEE/EA
2. The **necessary mechanisms and budget** for partner implementation of IEE/EA conditions are in place

And new solicitations require that

Proposals address qualifications and proposed approaches to compliance/ ESDM for environmentally complex activities.

To assure that projects do not "creep" out of compliance as activities are modified and added to over their life

Specifically:

1. Complete EMMP exists/is developed
2. Workplans and budgets integrate the EMMP
3. Project reporting tracks EMMP implementation

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Source of best-practice language

(almost new)

Environmental Compliance: Language for Use in Solicitations and Awards

Environmental Compliance: Language for Use in Solicitations and Awards (ECL)

- ✓ An ADS "Additional Help" document
- ✓ Easy step-by-step guidance and "boilerplate" language
- ✓ For RFAs/ RFPs/ agreements/ grants/ contracts
- ✓ Optional ... but its use being strongly encouraged

Hardcopy in your training materials.

Also available from www.usaid.gov/policy/ads/200/204sac.pdf

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ECL promotes compliance + ESDM, and ...

Benefits both Mission Staff & partners:

USAID Mission Staff

Assures that environmental monitoring and reporting is integrated into **routine activity monitoring and reporting**; reduces the cost and effort of USAID verification/oversight.

Avoids the effort, costs and loss of good will that come from imposing "corrective compliance" measures after implementation has started.

Implementing Partners

Provides clarity regarding environmental compliance responsibilities

Prevents "unfunded mandates"—requirements to implement mitigation and monitoring after activity has commenced and without additional budget.

! Missions and centrally funded programs are increasingly using the ECL. Partners should expect that future solicitations and awards will incorporate ECL-based environmental compliance language.

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How are EMMPs approved?

- ❖ EMMP must be approved by the project COR or AOR
- ❖ EMMP is usually submitted and approved with the project workplan or PMP
- ❖ EMMP may also be submitted with the project IEE (typical for Title II partner MYAP IEEs)
- ❖ Sometimes additional review by the MEO or REA



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EMMP example: Irrigation Rehabilitation

PROJECT BRIEFING:

System reconstructed in early 1980s

Abstracts water from high-level river source and irrigates 140 Ha (2 parcels; valley & hillside lands)

One dam is made of brush, straw, soil, and stone

Other dam is made of stone and soil

Water source is low in salts; risk of soil salinization is minimal



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EMMP example: Irrigation Rehabilitation

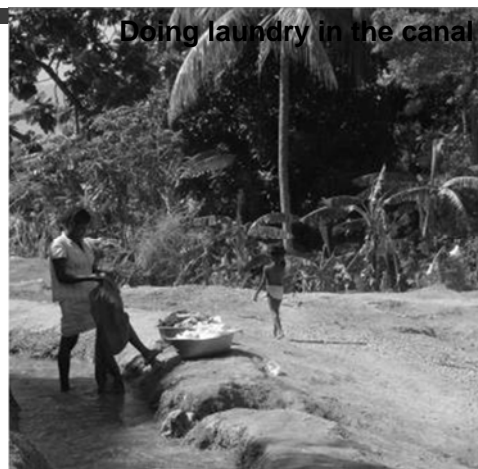
PROJECT BRIEFING:

Existing canals used for many purposes: irrigation, bathing, drinking water, laundry. . .

At end of the dry season, not enough water for all plots

During heavy rains, canals fill with sediment from hillside erosion—result: not enough water for all plots

No adjacent wetland nor critical wildlife habitat



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EMMP example: Irrigation Rehabilitation

PROJECT BRIEFING:

Canals are hand made and carry open water from upstream

Roads are in poor condition—difficult to get crops out

System maintenance committee is not functional

Allocation: land registration to receive irrigation water was done in early 1980s; no new plots can be registered (but theft from the system is possible)



! There are many baseline issues that are not impacts of the rehabilitation, but should be addressed in the EMMP

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EMMP example: Irrigation Rehabilitation

Excerpt of Impacts/Baseline Issues and Mitigations

Sub-activity or component	Description of Adverse Impact/Baseline Issue	Mitigation Measures	#
Dam & primary canals re-construction /replacement & subsequent operation	Flooding of irrigated areas/ damage to system during high-flow events	Design so that excess of water won't damage systems (excess flow diversion, removable dam etc....)	1
	Soil erosion from hillsides and secondary/tertiary canals	Install & properly operate flow regulation structures for secondary canals	2
		Protect upper slope with fruit trees (mangoes, citrus, avocado) and native forest trees	3
	Water losses (from evaporation and leaching but also from canal blockage from dirt, debris etc....)	Line primary canals with concrete	4
		Train water committee on heavy rain after-maintenance	5
	Health issue (drinking irrigation water because it appears cleaner)	Community education on water quality/use/management Water committee to enforce use restrictions	6
	Water contamination from animals, construction	Provide separate water points for construction washing stations and animal watering	7
Road rehabilitation: bridges & drainage works	Increased Deforestation (due to increased ease of access)	-Existing water committee reinforcement -Land Registration	8
	Increased sedimentation from enhanced road drainage	Work with local officials to control deforestation Sedimentation control (silt screen and hay bails- local weeds)	9 10

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And finally. . .the EMMP itself



(Uses a Title II format that includes a monitoring results log.)

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EMMP example: Irrigation Rehabilitation

Excerpt of EMMP and Monitoring Log

Mitigation Measure	Responsible Party	Monitoring Scheme			Est. Cost	Monitoring Log		
		Indicators	Data source/ Method	How Often		Date	Result	Follow-up
2. Install & properly operate canal-level flow regulation structures	Project agricultural technician	<ul style="list-style-type: none"> • # of doors and other flow-control structures installed • % of Ha. under flow control • % of secondary & tertiary canals showing significant erosion damage after each growing season 	Reports Field visit	Quarterly				
3. Protect upper slope with fruit (mangoes, citrus, avocado) and forest trees	Project agricultural technician	<ul style="list-style-type: none"> • # of trees planted and survived • % of at-risk upper slope land protected • total m3 of sediment removed from canals over each rainy season. 	Reports Field visit Comparison with baseline information	Quarterly /Annual				
4. Line primary canals with concrete	Engineering Contractor	<ul style="list-style-type: none"> • % of primary canals lined with concrete. • # of additional hectares irrigated 	Reports Field visit Comparison with baseline information	Quarterly				

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ENCAP FACTSHEET

ENVIRONMENTAL MITIGATION & MONITORING PLANS (EMMPs)

CONTENTS

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I. INTRODUCTION

Environmental Mitigation and Monitoring Plans (EMMPs) are now required for most USAID-funded projects in Africa.

Specifically, EMMPs are required when the Reg. 216 documentation governing the project is either an IEE or an EA that imposes conditions on at least one project activity. (See box at right if these terms are unfamiliar.)

Responsibility for developing the EMMP usually lies with the implementing partner (IP), though it may be assigned to the C/AOTR. In either case, the responsible party can develop the EMMP directly, or engage a consultant. (The C/AOTR could also seek assistance from the Mission Environmental Officer (MEO).)

This factsheet describes the EMMP concept and its role in life-of-project environmental compliance for USAID-funded activities. It provides practical guidance and examples to inform EMMP development. It is intended for IPs, A/COTRs, MEOs, Monitoring and Evaluation

(M&E) Officers, and consultants who may be engaged to develop EMMPs for USAID projects in Africa.

2. WHAT IS AN EMMP?

An **EMMP** is a document that sets out:

1. **Mitigation actions.** The EMMP specifies the actions that will be taken to satisfy the IEE or EA conditions.
2. **Monitoring actions.** The EMMP sets out the indicators or criteria that will be used to monitor (1) whether the mitigation actions have been implemented, and (2) whether they are effective and sufficient.
3. **Responsibility and schedule for mitigation, monitoring, and reporting.** The EMMP specifies the parties responsible for these actions and the schedule for these tasks.

USAID's Environmental Procedures

USAID's mandatory environmental procedures apply to all USAID-funded and USAID-managed activities. They consist of 22 CFR 216 ("Reg. 216") and related mandatory provisions of USAID's Automated Directives System (ADS)—especially, but not only, ADS 201.3.12.2.b and 204).

In summary, these procedures mandate (1) a pre-implementation environmental impact assessment (EIA) process, and (2) implementing and reporting on any environmental conditions (required mitigation measures) that result from this review.

The pre-implementation environmental review is documented in a Request for Categorical Exclusion (RCE), Initial Environmental Examination (IEE) or an Environmental Assessment (EA). Each of these Reg. 216 documents must be approved by both the Mission Director and Bureau Environmental Officer (BEO). Most IEEs and all EAs impose conditions on some or all of the activities they cover.

For more information see ENCAP's [USAID Environmental Procedures Briefing for Mission Staff](#).

EMMPs may also include a log of monitoring results and budget estimates for mitigation and monitoring activities.

EMMPs may also be called *Mitigation and Monitoring Plans* and *Environmental Management Plans*.

3. WHY EMMPs?

EMMPs provide a basis for systematic implementation of IEE and EA conditions: In addition to establishing responsibilities and schedules, EMMPs are a vehicle for translating IEE conditions (which are often very general) into specific, implementable, verifiable actions. For example:

An IEE for a water and sanitation project may require that wells and latrines be sited “consistent with good practices.”

The EMMP would specify the site-specific standards that the project must follow, e.g., wells must be located at least 50 meters from any pesticide or chemical store, and 25m from any cesspool, leaching pit, septic field, latrines, poultry yards, or livestock watering point..

EMMPs also provide a framework for environmental compliance reporting. (See section 5)

Without EMMPs, experience shows that IEE and EA conditions will not be implemented systematically, if at all. This defeats the purpose of the pre-implementation EIA process as documented by the IEE or EA, increasing the probability that well-intentioned activities will result in needless adverse impacts on beneficiaries, communities, environmental resources and ecosystems.

For USAID activities, failure to implement IEE or EA conditions puts the activity in non-compliance. The AOTR or COTR is REQUIRED to compel compliance or end the activity.

4. HOW ARE EMMPs REQUIRED?

EMMPs are not specifically required by Reg. 216 or the ADS. However, they ARE required by (1) contract and award language, (2) the IEE and/or (3) A/COTR technical direction:

- Increasingly, contracts and awards specifically require that an EMMP be developed and implemented. (This is part of a broader trend within USAID to use “best practice” environmental compliance language in solicitations and awards.)
- Most recent and all new sector-level IEEs (e.g. an IEE covering a Mission’s health or economic growth portfolio) require that an EMMP will be developed for each individual project.
- For new project-level IEEs, the BEO will typically require that an EMMP be submitted as part of the

IEE. If not, the IEE will require that the EMMP be submitted with the project workplan or performance management plan (PMP).

- For projects conducted under older IEEs, A/COTRs can issue technical direction requiring EMMPs.

In addition, Title II Cooperating Sponsors are required to develop IEEs by the Agency’s MYAP guidance and these IEEs must include an EMMP.

5. EMMP FORMATS

EMMPs are usually in table form. Critical elements of a **basic EMMP** are captured in the illustrative format below. For detail, see examples in the Annex to this Factsheet.

EMMP for Project XXX

Person Responsible for Overseeing EMMP:
[name, contact information]

Activity 1: [name of activity] [briefly describe activity & summarize potential adverse environmental impacts]			
IEE or EA Condition (reproduced or summarized from the IEE or EA)	Mitigation Specific actions to be taken to comply with the condition. (if an IEE or EA condition is already specific to the project/ activity and implementation actions self-evident, this “translation step” can be omitted)	Monitoring How will the project verify that mitigation is being implemented and is both effective and sufficient?	Timing and Responsible Parties Who is responsible for mitigation, monitoring, reporting? Timing/frequency of these actions

[add rows for additional conditions]
[repeat table for additional activities]

If an EMMP will contain cost information, a separate column can be added. An example of an EMMP with a monitoring log, where monitoring results can be recorded, is included in the Annex.

More advanced EMMP formats can serve as both a detailed monitoring log and a management/field guide to implementing mitigation. EMMP example #3 (Small Facilities Construction) in the Annex is an example of such an “advanced format.” Such advanced formats are not required, but in some circumstances they can make it easier for project management and field supervisors to oversee and implement mitigation.

6. STEPS IN EMMP DEVELOPMENT

EMMP development consists of 5 basic steps.

1. Review the governing IEE or EA to understand the conditions that apply to your project.
2. Translate IEE or EA conditions into specific mitigation actions.
3. Specify monitoring measures.
4. Specify timelines and responsible parties.
5. Determine who will have overall responsibility for EMMP implementation/environmental compliance.

Each is addressed below.

1. Review the governing IEE or EA to understand the conditions that apply to your project.

If the IEE governing your project is sector-level, the IEE usually describes activities in a high-level, general way without matching or “mapping” them to particular projects.

For example, your project might be working with agro-processors to improve product quality. In the IEE, this might be described as a “value chain strengthening” activity.

In this case, your first step in EMMP development is to match the activities in the project SOW to the general activity descriptions in the IEE, and on that basis determine which IEE conditions apply to your project activities

Even if you are developing a project-specific IEE with annexed EMMP as a package for submission (see Section 9), re-read the IEE conditions you have developed before beginning development of the EMMP.

2. Translate IEE conditions into specific mitigation actions.

(see resources for mitigation and monitoring design, at end.)

If an IEE condition is well-specified, the necessary actions to implement the condition may be self evident. However, often IEE/EA conditions are very general and they must be “translated” into well-specified, implementable, and verifiable mitigation actions.

This translation is a key purpose of the EMMP, and a key step in developing one.

Implementation, monitoring, and reporting on IEE conditions will be easier if mitigation measures are as specific as possible.

Factors to consider in **translating conditions to actions** include:

- the specifics of the site or sites
- the extent of project control

Site specifics. IEE conditions are often written without knowledge of the specific project site. You need to determine *how* and *whether* the conditions apply given the specifics of your site.

For example, an IEE might impose the following conditions on construction activities:

- a. *No construction permitted in protected areas or relatively undisturbed ecosystem areas.*
- b. *Construction & facilities operation may not result in significant adverse impacts on ecosystem services*

If your proposed site is in a peri-urban area already undergoing and zoned for development, condition (a) poses little concern.

But what if a seasonal stream draining several square kilometers traverses your site? In that case, a major “ecosystem service” provided by your site is drainage. So to comply with the IEE, your design must assure that there is no reduction in stream capacity or alteration to local drainage patterns.

Extent of Project Control. Often IEE conditions are phrased as “to the greatest extent practicable,” or “to the degree feasible the project shall. . .”

This language is used to accommodate different levels of control over on-the-ground activities.

For example, the IEE for an agricultural project may require that an IP “assure availability, and require use and maintenance of appropriate personal protective equipment specified by the pesticide label to the greatest degree feasible.”

What is “feasible” will depend on the level of project control over on-the-ground crop protection activities. For example:

- On a project-run demonstration farm, that control is essentially complete.
- By contrast, if a project is providing training to strengthen government extension services, the project has full control over content of the training, limited control over the recommendations made by Extension Agents, and no control over the farmers’ actions. (However, other components of the project may provide closer control over farmer’s actions).

The EMMP examples in the Annex illustrate this issue.

Retaining General Language in an EMMP. In some cases, it may not be possible to fully specify mitigation

actions in an EMMP, and the EMMP may include language such as “if feasible,” “as practicable,” or “as necessary.”

For example, the EMMP for a health activity might read:

In all plans, strategies, and other relevant documents, the need for environmentally sound collection, management, and disposal of healthcare waste, will be incorporated, as appropriate; and a budget for implementation must be included.

However, if such language is used, the need for specificity does not disappear. It is simply transferred to the person responsible for overseeing EMMP implementation. In the above case, this party would review documents and report on inclusion of healthcare waste management in these documents—and on instances where the issue was not incorporated, and why.

3. Specify Monitoring Measures.

(see resources for mitigation and monitoring design, at end.)

The EMMP should specify monitoring that will ascertain BOTH:

- (1) whether mitigation was implemented.
- (2) whether mitigation was sufficient and effective.

For example: To safeguard water quality, a water and sanitation IEE might require that water points be sited well away from sources of contamination and that livestock be physically excluded from the water points.

A visual inspection would show whether the mitigation was implemented. But showing that the mitigation was *sufficient* and the water safe to drink would require water quality testing.

The ENCAP training presentation “Principles of Environmental Monitoring” provides an introduction to environmental monitoring design. Examples of monitoring measures are found in the Annex to this factsheet.

Environmental compliance monitoring should be integrated into project M&E. See section 6.5, below & section 10, implementing EMMPs.

4. Specify timelines and responsible parties

EMMPs not only specify the mitigation and monitoring actions themselves, but who is responsible for them, and on what timeline or schedule.

This is not always possible for the EMMP preparer to do—s/he may be a consultant or specialist without detailed knowledge of project management and staffing. In this case, specifying timelines and responsible parties can be handed off to the individual responsible for

overseeing EMMP implementation. (See immediately below).

5. Determine who is responsible for overseeing EMMP implementation/environmental compliance.

Once the EMMP is drafted, the COP or responsible senior project manager must review it and determine who will be assigned responsibility for overseeing EMMP implementation.

Overseeing EMMP implementation means having overall responsibility for verifying that mitigation measures are being implemented and for other aspects of monitoring, as well as *reporting* (see Section 8 below). Note that while one individual is typically responsible for oversight, individual mitigation and monitoring actions must be integrated into the implementation of core project activities and M&E. As such, they will be carried out by a number of project staff.

If mitigation and monitoring are complex or extensive, a project may hire a dedicated environmental compliance manager. This would often be appropriate, for example, for road rehabilitation projects—which tend to involve complex, technical mitigation and monitoring—and for agricultural projects involving pesticides or encroachment issues.

If the EMMP is fairly simple, responsibility for overseeing EMMP implementation can be assigned to the M & E Specialist, or a training or technical specialist.

Regardless, EMMP implementation oversight must be included in the job description of the individual who is assigned this responsibility.

7. PITFALLS TO AVOID

Good EMMPs avoid a set of common pitfalls. They do NOT:

- **Use unclear, ambiguous, non-actionable and/or non-verifiable mitigation measures.** For example, Good EMMPs do NOT include mitigation measures that simply state “good practices will be implemented per Chapter X of the *Environmental Guidelines for Small-Scale Activities in Africa* (EGSSAA). They DO specify which practices and which guidance from the EGSSAA will be implemented.
- **Include “extra” mitigation.** All mitigation measures must respond to a specific IEE or EA condition.
- **Use language like “as feasible,” “as appropriate,” etc.** unless doing so is absolutely unavoidable. (See discussion of “retaining general language in an EMMP” at the top of this page.)

8. EMMPs & ENVIRONMENTAL COMPLIANCE REPORTING

To enable C/AOTRs to fulfill their mandated responsibility to “actively manage and monitor” compliance with IEE/EA conditions, IP quarterly or semi-annual progress reports must provide an auditable record of environmental compliance—and especially of implementation of IEE/EA conditions. EMMPs provide the framework for this “environmental compliance reporting.”

Sometimes the governing IEE or the C/AOTR specifies compliance reporting requirements and formats. If so, these requirements must be met.

If the reporting requirements are not specified, follow the guidance in the table below:

Situation	Environmental Compliance Reporting Content and Format
EMMP is fairly simple & contains a monitoring log section	Update EMMP with most recent monitoring data & annex to quarterly or semi-annual progress report.
EMMP is fairly simple but does not contain a monitoring log section	Consider adding a monitoring log to the EMMP and proceed as above. OR: Develop a simple table-based reporting format that lists activities, planned mitigation, and mitigation status/issues encountered.
EMMP is longer and more complex	Provide a text summary of EMMP implementation and issues encountered and resolved. Maintain a full monitoring log on file and provide to USAID upon request.

Environmental Compliance and Project Core Performance Indicators

For new projects, Africa Bureau best practice is that at least one core project performance indicator should be “environmentalized”—that is measure the extent to which core project activities are being executed with attention to environmental soundness and compliance.

For example, in a water point provision project, the IP might use the indicator “number of protected water points established with zero fecal coliform after 6 months” rather than “number of water points established.”

In a road rehabilitation project, the IP might use the indicator “km or road rehabilitated under environmentally sound practices” rather than “km of road rehabilitated.”

It is NOT necessary or appropriate to “environmentalize” every core indicator, or to capture every mitigation measure in core project reporting.

9. EMMP REVIEW AND APPROVAL

For project-specific IEEs (including IEE Amendments and Amendments with PERSUAPs), the EMMP will usually be developed with and submitted as an annex to the IEE. In this case, the EMMP is reviewed and approved as a part of the IEE. (Note that IEEs receive final clearance with the signature of the BEO.)

Otherwise, the EMMP will be developed together with the project workplan, budget, and performance management plan (PMP). In this case, the EMMP will be submitted together with the workplan and/or PMP to the C/AOTR, who is responsible for reviewing and approving it.

The C/AOTR may involve the MEO in this review, especially for environmentally sensitive activities. The IEE/EA will sometimes specify that the REA must review and approve the EMMP as well.

10. IMPLEMENTING EMMPs

Experience shows that systematic EMMP implementation requires:

- **Establishing accountability.** As noted in section 5.5, oversight responsibility for EMMP implementation must be assigned to an appropriate, qualified project staff member, and this responsibility must be part of their job description.
- **Workplan integration.** Where the EMMP requires discrete actions, these must be entered into the project workplan. Examples of discrete actions include, e.g. “train staff and partners in environmental compliance,” “develop a PERSUAP,” “undertake pollution prevention/cleaner production assessments,” etc.

By contrast, some mitigations do not result in separate workplan actions *per se*. For example, an EMMP could require that “all plans, strategies, and other relevant documents address environmentally sound collection, management, and disposal of healthcare waste.”

Environmental compliance monitoring should be a workplan item.

- **Budget integration.** Workplan items must be reflected in the project budget. However, even EMMP requirements that do *not* result in discrete actions can have cost implications. Continuing the example above, a consultant or home office technical support might be needed to assure that a plan or strategy properly addresses “environmentally sound collection, management, and disposal of healthcare waste.”

The best way to make sure that cost implications of the EMMP are captured is to develop mitigation and monitoring cost estimates as part of EMMP development.

If this is not possible, budget notes should be developed for mitigation items that have cost implications, and these notes passed on to the budgeting team.

- **Management commitment & staff awareness.** Project management must communicate to all staff and partners its commitment to environmental compliance as a means to strengthen development outcomes.

All staff should be aware in general terms of the core environmental conditions that apply to the project, and of the existence of the project EMMP.

II. ENCAP RESOURCES FOR MITIGATION AND MONITORING DESIGN

Per the table below, ENCAP has developed a set of resources to support mitigation and monitoring design.

Topic	Recommended Resource
Mitigation and Monitoring Principles	<p><i>Principles of Environmental Mitigation</i></p> <p><i>Principles of Environmental Monitoring</i></p> <p>ENCAP training presentations; convey key principles with multiple visual examples. Include slide notes</p> <p>www.encapafrika.org/meoentry.htm (access via mitigation & monitoring topic)</p>
Sectoral mitigation and monitoring guidance	<p><i>Environmental Guidelines for Small-Scale Activities in Africa. (EGSSAA)</i></p> <p>Covers more than 20 common development sectors, and provides mitigation and monitoring guidance in table format.</p> <p>On-line annotated bibliographies provide links to detailed resources.</p> <p>www.encapafrika.org/egssaa.htm</p>
Field Monitoring for non-specialists	<p><i>ENCAP Visual Field Guides</i></p> <p>A supplement to the EGSSAA, these photo-based field guides allow non-specialists to quickly identify key, common environmental management deficits in small-scale activities in the following sectors:</p> <p>Water supply, sanitation, health care (waste), and roads.</p> <p>www.encapafrika.org/egssaa.htm#Guides</p>

ACRONYMS

ADS	Automated Directives System
A/COTR	AOTR and/or COTR
AOTR	Agreement Officer's Technical Representative
AFR/SD	USAID Bureau for Africa, Office of Sustainable Development
BEO	Bureau Environmental Officer
CFR	Code of (US) Federal Regulations
COP	Chief of Party
COTR	Contract Officer's Technical Representative
EA	Environmental Assessment
EGSSAA	USAID <i>Environmental Guidelines for Small-Scale Activities in Africa</i>
ENCAP	Environmental Compliance and Management Support for Africa (AFR/SD project)
EMMP	Environmental Mitigation and Monitoring Plan
IEE	Initial Environmental Examination
IP	Implementing Partner
M&E	Monitoring and Evaluation
MEO	Mission Environmental Officer
PERSUAP	Pesticide Evaluation Report & Safer Use Action Plan
PMP	Performance Management Plan
REA	Regional Environmental Advisor
USAID	United States Agency for International Development

ANNEX: EMMP EXAMPLES

This annex contains 3 EMMP examples for typical activities and IEE conditions in the health, agriculture, and construction sectors. The examples are real, though project names and some details have been changed for the purpose of this factsheet:

1. “The Health Improvement Program “ (THIP)
2. “Agricultural Services Project” (ASP)
3. “Small Facilities Construction Project” (SFC)

The first two examples use the general EMMP format presented in section 5. In each of these examples, a monitoring log column could be added to the far right of each table. The 3rd example is an alternate EMMP format.

Note that the examples are for a few REPRESENTATIVE ACTIVITIES within projects of this type. Most projects would have more activities, and the EMMPs would therefore be longer.

EXAMPLE 1: THE HEALTH IMPROVEMENT PROGRAM (THIP)

THIP Activity 1: Prepare strategies and action plans to increase the import and internal distribution of pharmaceuticals Potential Environmental Impact: Strategies and action plans could indirectly result in larger and more widely distributed in-country stocks of pharmaceuticals. These may expire prior to being distributed and/or used, and will need to be disposed of. Unsafe disposal could affect aquatic and terrestrial resources and human health.			
IEE Condition	Specific mitigation actions to implement the condition	Person responsible for implementing mitigation Timing	How implementation will be verified (monitoring indicator) Responsible party & Timing
Contractor shall provide advice for safe storage and disposal of expired pharmaceuticals.	In all strategies and action plans for which THIP provides assistance, include measures for: <ol style="list-style-type: none"> a) storage in accordance with labels; b) disposal of expired and unused pharmaceuticals; and c) a budget to implement these safeguards. 	<i>Responsible Party:</i> THIP Policy Technical Advisors <i>Timing:</i> During preparation phase of all strategies and action plans	Review of all strategies and action plans to ensure they include information about safe disposal of pharmaceuticals and a budget <i>Responsible Party:</i> THIP Policy Director <i>Timing:</i> During preparation of drafts and final documents

THIP Activity 2: Procure pharmaceuticals from US companies. Potential Environmental Impact: Procurement of pharmaceuticals could generate unused/expired drugs that if not disposed of safely, could affect aquatic and terrestrial resources and human health.			
IEE Condition	Specific mitigation actions to implement the condition	Person responsible for implementing mitigation Timing	How implementation will be verified (monitoring indicator) Responsible party & Timing
Contractor shall provide advice for safe storage and disposal of expired pharmaceuticals.	Advise at MOH and district levels on the storage of the product according to the information provided on the manufacturer's Materials Safety Data Sheet (MSDS)	<i>Responsible Party:</i> THIP Policy Technical Advisors <i>Timing:</i> When meeting with appropriate MOH & district staff	Check storage practices are in compliance with MSDS <i>Responsible Party:</i> THIP M & E Advisor <i>Timing:</i> Semi-annually
	Train MOH and local level health practitioners and management staff on aspects of medicine supply chain management, including estimating demand, distribution constraints, and storage issues of time and temperature.	<i>Responsible Party:</i> THIP Training Advisor <i>Timing:</i> Two times/year	1) Training is implemented: M & E Advisor; monitor semi-annually; 2) Supply chain has improved (constraints/bottlenecks have decreased) THIP Policy Advisor; monitor annually

THIP Activity 3:**Train healthcare workers on use of new medical procedures.**

Potential Environmental Impact: As an indirect result of training, healthcare waste (HCW) will be generated. If not collected and disposed of safely, aquatic and terrestrial resources and human health could be adversely affected

IEE Condition	Specific mitigation actions to implement the condition	Person responsible for implementing mitigation Timing	How implementation will be verified (monitoring indicator) Responsible party & Timing
Training of healthcare workers should include best practices in disposal of HCW as described in the EGGSAA Healthcare Waste chapter:	<p>Training courses should incorporate the following items, which should be included in all training on implementing new medical procedures:</p> <ul style="list-style-type: none"> How to Prepare an HCW Plan Developing a Waste Segregation System Minimize, Reuse, Recycling Procedures Incorporating Good Hygiene Practices 	<p><i>Responsible Party:</i> Training Advisor</p> <p><i>Timing:</i> When course material is being developed; when training is delivered</p>	<p>Course material includes these topics; when course material is developed; M & E Advisor</p> <p>Trainings include these topics; when trainings are delivered; M & E Advisor</p>

EXAMPLE 2: AGRICULTURAL SERVICES PROJECT (ASP)**ASP Activity 1:****Training Ministry of Agriculture extension officers to provide sound crop production advice to ASP-supported farmers**

Potential Environmental Impact: MOA extension officers could provide advice to farmers which results in expansion of agricultural land into natural areas; or that results in the unsafe use of pesticides.

IEE Condition	Specific mitigation actions to implement the condition	Person responsible for implementing mitigation Timing	How implementation will be verified (monitoring indicator) Responsible party & Timing
Training shall not result in direct or indirect effects on the environment.	Training of MOA extension officers shall incorporate conservation agriculture; information on ecosystem services; and measures to minimize impacts to natural ecosystems.	<p><i>Responsible Party:</i> ASP Crop Production Specialist</p> <p><i>Timing:</i> Curriculum Development; During trainings</p>	<p>Review of curricula; attend various trainings</p> <p><i>Responsible Party:</i> ASP Training Officer</p> <p><i>Timing:</i> At time curricula are being developed; when trainings are provided</p>
Trainings shall not recommend pesticides without first preparing a PERSUAP that is approved by the Bureau Environmental Officer.	<p>Note: these mitigation measures are from the PERSUAP approved by the BEO on [xxx date]:</p> <ol style="list-style-type: none"> 1) Only PERSUAP-approved pesticides shall be included in training for extension officers. 2) Trainings shall include safeguards for health and safety of workers, and measures to protect the environment (Annexes A and B of the PERSUAP). 3) Trainings shall include monitoring the efficacy of pesticides as described in Annex C of the PERSUAP. 	<p>ASP Crop Production Specialist</p> <p>During trainings</p>	<p>Review of curricula; attend various trainings</p> <p><i>Responsible Party:</i> ASP Training Officer</p> <p><i>Timing:</i> At time curricula are being developed; when trainings are provided</p>

EXAMPLE 3: SMALL FACILITIES CONSTRUCTION PROJECT (SFC)

NOTE: This example uses an alternate EMMP format. In this case, a project-specific IEE existed with highly specific conditions regarding siting, design requirements, and construction management practices for the small facilities (training centers, community centers) to be constructed by the project. These conditions were translated into table form (below), and for each condition a *compliance process* was specified. This EMMP format serves both as a detailed monitoring log and a management tool and guide to implementing mitigation.

IEE Condition 1: Siting Requirements for New Construction

Compliance process. At the time of initial site selection, SFC must answer the questions below for each proposed site. If a proposed site meets one of the below-listed criteria, the site must be changed OR an Africa Bureau Environmental Review Form (www.encapfrica.org/documents/AFR-EnvReviewForm-20Dec2010.doc) must be completed and approved by USAID prior to the start of construction. SFC must then implement the environmental conditions specified by the ERF.

Note: completed ERFs include an EMMP. SFC will maintain the ERF EMMPs as an annex to this project EMMP and report on their implementation to USAID.

Compliance record. The table below documents the compliance process. Note: all table entries must be dated & initialed.

Proposed Site	GPS Coordinates	Is/Does the site... Within 30m of a permanent or seasonal stream or water body?	Have existing settlement /inhabitants?	Have an average slope in excess of 5%?	Heavily forested?	If yes to any question, indicate ERF status or note site change; add additional row for new site.
Village A						
Village B						
(add sites as necessary)						

IEE Condition 2: Design Requirements for Small Facilities

Compliance process: (1) Design elements specified by the IEE will be incorporated into the final technical/contract specification that governs the general contractor's work. SFC will verify this for each mandated design element. (2) SFC will verify via field inspection that the final works meet these specifications, requiring remedy or otherwise resolving any non-compliant elements.

Compliance record. The table below lists all design elements mandated by the IEE and serves to document compliance status.

Required Design Elements—Training and Community Centers															
<p>A. Latrine/septic tank design prevents in-and-out access for insects or other disease vectors from the pit or holding tank.</p> <p>B. Latrines are accompanied by handwash stations.</p> <p>C. All sources of gray water (kitchen sinks and handwash stations) discharge to either (1) a seepage pit or sump at least 15m from any source of groundwater or surface water tapped for domestic use, or (2) to an impermeable pump-out tank.</p> <p>D. Latrines or the terminus of any septic leach field must be at least 30m from any source of shallow groundwater or surface water tapped for domestic use, OR discharge to an impermeable pump-out tank.</p> <p>E. Siting, grading and/or drainage structures prevent runoff from the compound from creating standing water on the compound or adjacent land during the rainy season (instances of generalized flooding excepted.)</p> <p>F. Septic pump-out point, if any, shall feature a concrete apron and drain with return to the septic tank.</p> <p>G. Concrete aprons with berms or gutters/sumps shall be placed under generators, fuel storage, and fuel pump-in point (if different) sufficient in each case to capture at least a 20 liter spill.</p>															
Site	Incorporated in Final Technical Specifications? (Y/N; reference to list above)							Built as-specified? (confirmed by field inspection) (Y/N; reference to list above)							Notes (issues and resolution)
	A	B	C	D	E	F	G	A	B	C	D	E	F	G	

Basic EMMP Template

(To use, fill in text in **green highlight**. Delete explanatory comments in **yellow highlight**.)

EMMP for Project **XXX**

Person Responsible for Overseeing EMMP:

[name, contact information]

Activity I: [name of activity] [briefly describe activity & summarize potential adverse environmental impacts—from IEE]			
IEE or EA Condition (reproduced from the IEE or EA)	Mitigation Specific actions to be taken to comply with the condition. (if an IEE or EA condition is already specific to the project/ activity and implementation actions self-evident, this “translation step” can be omitted) A single IEE/EA condition may require multiple action to implement—add rows as necessary	Monitoring How will the project verify that the mitigation action is being implemented and is both effective and sufficient?	Timing and Responsible Parties Who is responsible for mitigation, monitoring, reporting? Timing/frequency of these actions

[add rows for additional conditions]

[repeat table for additional activities]



Environmental Compliance: Language for Use in Solicitations and Awards

An Additional Help for ADS Chapter 204

Revision Date: 05/19/2008
Responsible Office: EGAT
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Environmental Compliance: Language for Use in Solicitations and Awards

ABOUT THIS LANGUAGE

The following recommended language is for use by Cognizant Technical Officers (CTOs), Activity Managers, Contracting Officers (COs), Mission Environmental Officers (MEOs), Program Officers, Bureau Environmental Officers (BEOs), and other USAID staff involved in solicitations, awards, and activity design and management.

Its purpose is to ensure adequate time is provided for environmental review and that environmental factors and mitigative measures identified in approved environmental impact assessment documentation are incorporated in the design and approval of each program and activity before the Operating Unit, Team, Activity Manager or CTO makes an irreversible commitment of resources for the program or activity. It also is intended to help improve application of USAID's environmental procedures (22 CFR 216 or Regulation 216¹) to create more sustainable and successful implementation of activities, projects and programs.

- By explicitly enumerating the environmental compliance responsibilities of project implementers, use of this recommended language can help ensure that environmental compliance requirements stemming from the Regulation 216 process are fully integrated into project designs, workplans, and implementation of activities.
- Use of the language also alerts USAID staff and implementing partners early on to the need for a budget to implement environmental compliance measures and to the importance of providing sufficient Regulation 216 technical capacity to implement, monitor, and report on environmental compliance. Doing so is intended to ensure that compliance is maintained throughout design and implementation—over the entire life of a project or program.
- Further, the language contributes to mainstreaming of environmental concerns by integrating environmental compliance into USAID's typical project design and implementation processes.

The language can be used in any type of procurement instrument (contracts, cooperative agreements, grants, etc.). Although not explicitly required by ADS 305 for Host Country Contracts, this language also can be used for Host Country solicitations and in Implementation Letters and is especially appropriate when contracting for construction services and technical or professional services.

For greatest benefit, Technical Teams and other USAID staff should review and discuss the recommended language during project design, and modify it, as may be necessary, so it is well-integrated with the program description. Together the CTO, CO, and MEO should identify where and which language to insert based on the type of solicitation and award. For activities that are designed and managed out of AID/Washington (in Pillar or Regional Bureaus), the BEO would serve a similar technical role as the MEO does at the Mission level. The MEO, REA, BEO, or other trained staff may be able to provide staff training or guidance, if necessary, on use of the language in solicitations and contracting documents.

¹ Full text of 22 CFR 216 can be found at http://www.usaid.gov/our_work/environment/compliance/reg216.pdf

HOW TO ASSEMBLE COMPLIANCE LANGUAGE

To assemble the compliance language for a particular solicitation or award, the following table should be used as guidance. Multiple situations can apply to a single procurement; if this is the case, use all indicated language. You may need to revise and/or renumber the language depending on which elements you select and where you place them in the award or solicitation. **[Bracketed text]** in the model language indicates that you must select the appropriate option or provide other input.

When the situation is that. . .	Use these environmental compliance language paragraphs from the Model Language. . .
Approved Regulation 216 documentation ² exists and it contains. . . Categorical Exclusions and Negative Determinations only	1a through 1c 4a through 4c
at least one Negative Determination with conditions	1a through 1c 2 4a through 4c 5a through 5d 8a through 8d (optional: to be used when project will involve environmental compliance expertise; collaborate with MEO, or BEO for projects originating out of AID/W, for guidance, as needed)
at least one Positive Determination	1a through 1c 3 4a through 4c 5a through 5d 8a through 8d
The contractor/recipient will be required to prepare Regulation 216 documentation (an EA or IEE)	1a through 1c 4a through 4c 5a through 5d 6a through 6c 8a through 8d 2 If there is also an existing IEE that contains a Negative Determination with conditions 3 If there is also an existing IEE that contains a Positive Determination

² Note: “Approved Regulation 216 documentation” refers to a Request for Categorical Exclusion (RCE), Initial Environmental Examination (IEE), or Environmental Assessment (EA) duly signed by the Bureau Environmental Officer (BEO).

<p>The project includes a sub-grant fund</p>	<p>To any of the above language/situations that apply, add:</p> <p>7a and 7b</p> <p>8a through 8d</p> <p>(Paragraphs 7 and 8 are optional, based on the nature of the grant fund and potential environmental impacts; coordinate with MEO or BEO for projects originating out of AID/W for guidance, as needed)</p>
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MODEL LANGUAGE

1. Insert paragraphs 1a, 1b, and 1c in all solicitations and resulting awards:

- In RFAs, insert in the Program Description or in the RFA's instructions regarding Technical Application Format
- In RFPs, insert in the appropriate section, often the "Special Contract Requirements"

- 1a) The Foreign Assistance Act of 1961, as amended, Section 117 requires that the impact of USAID's activities on the environment be considered and that USAID include environmental sustainability as a central consideration in designing and carrying out its development programs. This mandate is codified in Federal Regulations (22 CFR 216) and in USAID's Automated Directives System (ADS) Parts 201.5.10g and 204 (<http://www.usaid.gov/policy/ads/200/>), which, in part, require that the potential environmental impacts of USAID-financed activities are identified prior to a final decision to proceed and that appropriate environmental safeguards are adopted for all activities. *[Offeror/respondent/contractor/recipient]* environmental compliance obligations under these regulations and procedures are specified in the following paragraphs of this *[RFP/RFA/contract/grant/cooperative agreement]*.
- 1b) In addition, the contractor/recipient must comply with host country environmental regulations unless otherwise directed in writing by USAID. In case of conflict between host country and USAID regulations, the latter shall govern.
- 1c) No activity funded under this *[contract/grant/CA]* will be implemented unless an environmental threshold determination, as defined by 22 CFR 216, has been reached for that activity, as documented in a Request for Categorical Exclusion (RCE), Initial Environmental Examination (IEE), or Environmental Assessment (EA) duly signed by the Bureau Environmental Officer (BEO). (Hereinafter, such documents are described as "approved Regulation 216 environmental documentation.")

2. If the approved Regulation 216 documentation includes any Negative Determinations with conditions, insert 2.

This language stipulates that the activity(ies) must be implemented in compliance with the conditions specified in the Negative Determination.

- 2) An Initial Environmental Examination (IEE) *[(insert IEE # and download reference here, if available)]* has been approved for *[the Program(s)/Project]* funding this *[RFA/RFP/contract/grant/cooperative agreement (CA)]*. The IEE covers activities expected to be implemented under this *[contract/grant/CA]*. USAID has determined that a **Negative Determination with conditions** applies to one or more of the proposed activities. This indicates that if these activities are implemented subject to the specified conditions, they are expected to have no significant adverse effect on the environment. The *[offeror/applicant/contractor/recipient]* shall be responsible for implementing all IEE conditions pertaining to activities to be funded under this *[solicitation/award]*.

3. If the approved Regulation 216 documentation includes a Positive Determination, insert 3.

This language specifies that an approved Environmental Assessment (EA) must exist prior to implementation of the activity(ies), and that the activity(ies) must be implemented in compliance with the conditions in the approved EA.

3) An Initial Environmental Examination (IEE) has been approved for the [Program or project funding] this [RFA/RFP/contract/agreement] and for activities to be undertaken herein [(insert IEE # and download reference here, if available)]. The IEE contains a **Positive Determination** for the following proposed activities: [(specify)]. This indicates that these activities have the potential for significant adverse effects on the environment. Accordingly, the [contractor/recipient] is required to [comply with the terms of*/prepare and submit**] an Environmental Assessment (EA) addressing the environmental concerns raised by these activities. No activity identified under this Positive Determination can proceed until Scoping as described in §216.3(a)(4) and an EA as described in §216.6 are completed and approved by USAID (Note that the completed Scoping Statement is normally submitted by the MEO to the BEO when the project originates in a Mission. The Statement may be circulated outside the Agency by the BEO with a request for written comments within 30 days and approved by the BEO subsequently. Approval of the Scoping Statement must be provided by the BEO before the EA can be initiated.)

[*]If an EA already exists, and the contractor/recipient will not be required to prepare the EA, but will be required to comply with the terms of an existing EA.

[**]If contractor/recipient must prepare and submit an EA, also insert 6a through 6c.

Note: If the contractor is to prepare an EA, then this should be specified in the RFP/RFA instructions. The final negotiation of the EA will be incorporated into the award. Paragraphs 8a through d will always apply when the approved environmental documentation includes a Positive Determination, whether the contractor/recipient is preparing the EA or simply required to comply with an existing EA.

4. Insert for all solicitations and awards

The language requires that the contractor/recipient must ensure all activities, over the life of the project, are included in the approved Regulation 216 documentation.

- 4a) As part of its initial Work Plan, and all Annual Work Plans thereafter, the [contractor/recipient], in collaboration with the USAID Cognizant Technical Officer and Mission Environmental Officer or Bureau Environmental Officer, as appropriate, shall review all ongoing and planned activities under this [contract/grant/CA] to determine if they are within the scope of the approved Regulation 216 environmental documentation.
- 4b) If the [contractor/recipient] plans any new activities outside the scope of the approved Regulation 216 environmental documentation, it shall prepare an amendment to the documentation for USAID review and approval. No such new activities shall be undertaken prior to receiving written USAID approval of environmental documentation amendments.
- 4c) Any ongoing activities found to be outside the scope of the approved Regulation 216 environmental documentation shall be halted until an amendment to the documentation is submitted and written approval is received from USAID.

5. If the approved Regulation 216 documentation contains one or more Negative Determinations with conditions and/or an EA, insert 5a through 5d. (These paragraphs should also always be used when the contractor/recipient is writing an IEE or EA.)

The language requires the contractor/recipient to integrate mitigation measures and monitoring into project work plans.

- 5 When the approved Regulation 216 documentation is (1) an IEE that contains one or more Negative Determinations with conditions and/or (2) an EA, the [contractor/recipient] shall:
- 5a) Unless the approved Regulation 216 documentation contains a complete environmental mitigation and monitoring plan (EMMP) or a project mitigation and monitoring (M&M) plan, the [contractor/recipient] shall prepare an EMMP or M&M Plan describing how the [contractor/recipient] will, in specific terms, implement all IEE and/or EA conditions that apply to proposed project activities within the scope of the award. The EMMP or M&M Plan shall include monitoring the implementation of the conditions and their effectiveness.
 - 5b) Integrate a completed EMMP or M&M Plan into the initial work plan.
 - 5c) Integrate an EMMP or M&M Plan into subsequent Annual Work Plans, making any necessary adjustments to activity implementation in order to minimize adverse impacts to the environment.

6. For solicitations, if the Proposal Instructions specifies that the [contractor/recipient] will be required to prepare Regulation 216 documentation (IEE or EA) for some or all activities, insert 6a through 6c.

- 6a) Cost and technical proposals must reflect IEE or EA preparation costs and approaches.
- 6b) [Contractor/recipient] will be expected to comply with all conditions specified in the approved IEE and/or EA.
- 6c) If an IEE, as developed by the [contractor/recipient] and approved by USAID, includes a Positive Determination for one or more activities, the contractor/recipient will be required to develop and submit an EA addressing these activities.

Note: In this case, always insert paragraphs 8a through 8d, as well.

7. For solicitations and awards when sub-grants are contemplated, and the IEE gives a Negative Determination with conditions that specifies use of a screening tool for sub-grants, insert 7a and 7b.

- 7a) A provision for sub-grants is included under this award; therefore, the [contractor/recipient] will be required to use an Environmental Review Form (ERF) or Environmental Review (ER) checklist using impact assessment tools to screen grant proposals to ensure the funded proposals will result in no adverse environmental impact, to develop mitigation measures, as necessary, and to specify monitoring and reporting. Use of the ERF or ER checklist is called for when the nature of the grant proposals to be funded is not well enough known to make an informed decision about their potential environmental impacts, yet due to the type and extent of activities to be funded, any adverse impacts are expected to be easily mitigated. Implementation of sub-grant activities cannot go forward until the ERF or ER checklist is completed and approved by USAID. [Contractor/Recipient] is responsible for ensuring that mitigation measures specified by the ERF or ER checklist process are implemented.

7b) The [contractor/recipient] will be responsible for periodic reporting to the USAID Cognizant Technical Officer, as specified in the Schedule/Program Description of this solicitation/award.

8. For solicitations ONLY: Insert 8a through 8d when:

- the approved Regulation 216 documentation is a Positive Determination or an EA; or
- when the contractor/recipient will be expected to prepare Regulation 216 documentation; or
- when there is a sub-grant fund that requires use of an Environmental Review Form or Environmental Review checklist; and/or
- when there is a Negative Determination with conditions that will require environmental compliance expertise to prepare and/or implement an EMMP or M&M Plan, as determined in collaboration with the MEO or BEO for projects originating out of AID/W.

- 8a) USAID anticipates that environmental compliance and achieving optimal development outcomes for the proposed activities will require environmental management expertise. Respondents to the [RFA/RFP] should therefore include as part of their [application/proposal] their approach to achieving **environmental compliance and management**, to include:
- 8b) The respondent's approach to developing and implementing an [IEE or EA or environmental review process for a grant fund and/or an EMMP or M&M Plan].
- 8c) The respondent's approach to providing necessary environmental management expertise, including examples of past experience of environmental management of similar activities.
- 8d) The respondent's illustrative budget for implementing the environmental compliance activities. For the purposes of this solicitation, [offerors/applicants] should reflect illustrative costs for environmental compliance implementation and monitoring in their cost proposal.

Session 8.

Effective IEEs

Small-group exercise

Summary

The Initial Environmental Examination (IEE) is used to assess the potential adverse impact(s) of virtually all USAID activities of moderate or unknown environmental risk. Even when dealing with patently high-risk activities such as penetration road building, resettlement, etc. the IEE is frequently used to better understand the scale of potential impacts and to frame an overall approach to the Environmental Assessment (EA) (as opposed to skipping the IEE in favor of the full EA). The IEE is therefore central to USAID's implementation of Reg. 216 and can 'make or break' the successful integration of environmentally sound design and management.

Like any assessment that relies on technical expertise, professional judgment and cohesive writing, not all IEEs are created equal: some are better than others. An important skill of USAID staff and partners charged with environmental compliance/ESDM-related duties is understanding where and how an IEE may be lacking in (1) its analysis and characterization of the proposed activity/activities and potential adverse impacts, and (2) articulation of a recommended determination and any associated conditions. A good IEE does not need to be long or overly rigorous, but it should be clear and accurate, presenting a realistic picture of the issues at play with reasonable conclusions on overall risk and any mitigating actions.

This session will provide an opportunity for participants to review and discuss illustrative IEE excerpts related to yesterday's field visits. While not drawn from *actual* IEEs, the excerpts will highlight typical attributes—positive and negative—for consideration in a small-group format. This critique will help participants understand how best to approach the process of reviewing and approving or applying an IEE in a real project context. Such critical review skills are strengthened by participants' first-hand field experience or knowledge of proposed activities (hence the preceding site visit).

The first portion of this session will be used to explain the exercise and methodology—this will take only a few minutes. The majority of our time will be used to review and discuss the IEE content in small-group format, with each group offering a brief report-out of its key observations/findings.

Objective

Develop critical IEE review skills; learn to identify common mistakes or weaknesses with regard to the analysis and characterization of proposed activities and potential adverse impacts, and the articulation of recommended determinations and associated conditions.

Session 11.

Cumulative Impact Assessment

Technical presentation and dialogue

Summary

USAID has established mandatory environmental procedures to limit adverse impacts of Agency activities on ecosystems, environmental resources, and environmental quality. Through adoption of an EIA methodology, USAID environmental procedures promote ESDM and better development outcomes. While the impact(s) of any given USAID activity may be small in absolute terms, numerous activities occurring in a single region or environment may have significant cumulative impacts. Thus, §216.6(d) requires the assessment of the environmental effects of both individual actions and their cumulative environmental impacts in a given country or geographic area.

Cumulative impact (per CEQ 40 CFR § 1508.7) is defined as:

the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Cumulative impact assessment is an essential part of the environmental assessment process. This session will develop an understanding of cumulative impact assessment and how it is applied to USAID-funded activities. It will focus on developing skills to identify when and how to evaluate cumulative impacts via a presentation of the fundamentals and interactive examples.

Objectives

Achieve a common understanding of the basic elements of cumulative impact assessment

- (1) Understand what cumulative impact assessment is and how it differs from direct and indirect impacts.
- (2) Understand the legislative background of cumulative impact assessment.
- (3) Work through identification of potential cumulative impacts via interactive examples of real-world projects.

Session 12.

Programming for Global Climate Change (GCC)

Technical presentation and dialogue

Summary

Global Climate Change (GCC) is expected to have very significant impacts in Africa (and in USAID's other operational regions), with disproportionate impacts on the most vulnerable. USAID is increasingly designing and implementing projects and programs whose primary objective is GCC-related:

- adaptation programming to help communities and countries build resilience to climate change impacts;
- clean energy programming to support low emission economic growth; and
- sustainable landscapes programming focused on conserving forests and reducing deforestation (to reduce emissions).

But beyond programming centered on GCC objectives, robustness to GCC has become a key dimension of environmentally sound design and management (ESDM) for almost all projects and activities.

For example, as discussed previously in this workshop: are the crop varieties to be promoted by a project appropriate given likely changes in precipitation? Are structure siting and designs appropriate given likely changes in storm frequency/intensity and flood probabilities?

Assuring that *all* designs are robust to anticipated GCC-driven changes in local environmental conditions is one way in which USAID programming should support the concept of *resilience* and *adaptation* to GCC.

USAID-funded activities rarely have significant effects ON climate change in the sense of being significant contributors to global GHG emissions. However, climate change is driven by the sum of many small actions. So even small-scale projects should, while operating within their development objectives, implement feasible *emissions mitigation*. That is, means and measures to reduce their direct or indirect GHG emissions and/or increase sequestration.

Objective

Understand the basic concepts of GCC adaptation and GHG mitigation in design of typical sectoral activities being implemented in Senegal, West Africa, and across the Regional portfolio.

Session 14.

IP Environmental Compliance Reporting

Technical presentation and dialogue

Summary

CORs and AORs are required by ADS 204 to monitor and evaluate on an ongoing basis whether the environmental mitigation required by the governing IEE(s)/EA is being implemented and is effective.

In other words, COR and AOR oversight responsibilities extend to environmental compliance, just as they do to other elements of project implementation. Practically, this requires that IPs not only systematically comply with IEE/EA conditions by developing and implementing EMMPs, but that they *report* to USAID on this implementation.

Regional best practice for IP environmental compliance reporting consists of two elements:

1. Project reporting should provide an auditable record of environmental compliance.

Generally, IPs' quarterly or semi-annual reports should contain a separate environmental compliance section. The section must provide sufficient information on the status of EMMP implementation for USAID to effectively fulfill its oversight and performance monitoring role.

If the EMMP contains a "monitoring log" section, then the EMMP itself—updated with current monitoring results—can simply be appended to the report.

For larger projects, or those with complicated EMMPs, a text summary/short analysis of EMMP implementation is needed. This should highlight key mitigation activities underway in the reporting period, any significant issues encountered, and corrective actions/adjustments made.

Any specific reporting requirements imposed by the IEE or EA must also be satisfied.

2. One or more key project performance indicator(s)—“project results framework”—should reflect overall environmental soundness/environmental compliance.

In other words, the most critical elements of environmental soundness/compliance should be integrated, or “mainstreamed” into the project results framework. For example:

- *In a water point provision project*, the IP might use the indicator “number of protected water points established with zero fecal coliform after six (6) months” rather than simply “number of water points established.”
- *In a road rehabilitation project*, the IP might use the indicator “km of road rehabilitated under environmentally sound practices” rather than simply “km of road rehabilitated.”

In both cases, the “environmentalized indicator” demonstrates that core project activities are being executed with attention to environmental soundness/compliance. However, it is NOT expected or appropriate to “environmentalize” every key indicator, or to capture every mitigation measure.

(This best practice applies to new awards; where EMMPs are developed *after* the PMP is established, it may not be possible to change key performance indicators.)

Missions should not rely on IP progress reports alone to track environmental compliance. Field visits at minimum should include a quick check for significant environmental design/management problems (for certain activities, the Visual Field Guides [VFGs] may be used). For environmentally complex activities, specific field visits should be made to verify EMMP implementation.

In summary, IP and USAID environmental compliance roles and responsibilities are as follows:

Project stage	Implementing Partner	USAID
Workplan & PMP Development	Develops EMMP Integrates EMMP into budget and workplan Determines environmental compliance reporting	Review and approval of: 1. the EMMP (for responsiveness to IEE/EA conditions and sufficiency of monitoring); 2. The budget/workplan (to verify that EMMP implementation is planned and funded); and 3. The reporting framework to assure that environmental reporting requirements are met.
Implementation	Implementation of EMMP Reporting on EMMP implementation	Ongoing review of partner progress reports to monitor EMMP implementation Field visits —at a minimum, all visits should integrate a quick check for significant environmental design/management problems. For environmentally sensitive activities, specific visits should be made to verify EMMP implementation.

Objectives

Achieve a common understanding of the two basic elements of IP environmental compliance reporting:

- (1) providing USAID with an auditable record of IP environmental compliance; and
- (2) "mainstreaming" critical elements of environmental soundness/compliance into one or more core program performance indicators.

IP Environmental Compliance Reporting

GEMS Environmental Compliance-ESDM Training Series
Senegal, February, 2014

Session Objectives:

- Understand USAID criteria for environmental compliance reporting
- Review role of EMMP in the reporting process
- Discuss “mainstreaming” of project environmental performance for reporting purposes
- Learn how to “environmentalize” key project indicators

2

The EMMP is in place ... now what?



Now that EMMP is being implemented, USAID needs to know.

1. *Project reporting must provide an auditable record of environmental compliance.*
2. *One or more key project performance indicator(s) (project results framework) should reflect overall environmental soundness/ environmental compliance.*

What does the ADS say?

Team Leaders and Activity Managers or C/AORs must actively manage and monitor compliance with any IEE/EA conditions, modifying or ending activities not in compliance.
(ADS 202.3.6 , 204.3.4 and 303.2.f)

Let's look at #1 first:

3

Preparing “an auditable record” of compliance

Environmental compliance reporting can be integrated as part of ‘regular’ project reporting

- ❖ Quarterly or semi-annual project reports should contain a **separate section addressing environmental compliance.**
- ❖ The section must provide **sufficient information on the status of EMMP implementation for USAID to effectively fulfill its oversight and performance monitoring role.**

Any specific reporting requirements contained in the IEE must also be addressed

Title II CSs must submit an Annual Environmental Compliance Status Report

4

Use EMMP to streamline reporting

If the EMMP contains a “monitoring record” section, attach the EMMP—updated with current monitoring results—to the report.

Design requirement	Incorporated in final technical specifications		Built-as specified? (confirmed by field inspec.)			Notes (Issues & resolution)
	Date Confirmed	Initials	Y/N	Date of inspection	Initials	
GRADING, SEPTIC & DRAINAGE. If construction results in substantially increased slope of any land within 10m of the stream, that slope must be protected with berms, plantings, etc.)						
Site grading and drainage shall be designed and constructed to prevent accumulation of standing water						
Aprons must be installed and drainage provided at water supply point(s)—no standing water allowed.						
No direct gray or brown-water discharge to stream is allowed. All drainage with the exception of storm runoff and water point drainage must be channeled to the septic system.						
If septic tank design is a pump-out tank without leach field, assure impermeable tank construction or min 30m separation between tank and stream and nearest shallow well.						

Excerpt of EMMP with monitoring record for medium-scale construction project.

5

EMMP monitoring log can simplify reporting

If the EMMP contains a “monitoring record” section, simply attach the EMMP to the quarterly or semi-annual reporting document.

Mitigation Measure	Responsible Party	Monitoring Scheme			Est. Cost	Monitoring Log		
		Indicators	Data source/ Method	How Often		Date	Result	Follow-up
3. Install & properly operate canal-level flow regulation structures	Project agricultural technician	• # of doors and other flow-control structures installed • % of Ha. under flow control • % of secondary & tertiary canals showing significant erosion damage after each growing season	Reports Field visit	Quarterly				
4. Protect upper slope with fruit (mangoes, citrus, avocado) and forest trees	Project agricultural technician	# of trees planted and survived • % of at-risk upper slope land protected • total m3 of sediment removed from canals over each rainy season.	Reports Field visit Comparison with baseline information	Quarterly /Annual				

The irrigation rehabilitation EMMP from the session on EMMPs

6

Complex EMMPs require detailed reporting

Larger projects, or those with complicated EMMPs may require more detailed reporting to create an auditable record.

- ❖ A text summary or short analysis of EMMP implementation is needed:
 - Highlight key mitigation activities underway in the reporting period;
 - Any significant issues encountered; and
 - Corrective actions/adjustments made.
- ❖ Stand-alone Environmental Compliance reports may also be warranted (e.g., quarterly or semi-annual).



Now on to requirement #2:

7

“Mainstreaming” environmental performance

Environmental issues can be integrated, or “mainstreamed” into the project results framework for reporting purposes.

This does **NOT** mean that:

- Every mitigation measure must be captured in core indicators
- Every core program indicator must be “environmentalized”

This **IS** to say that **overall**, project success must be partly measured on the most critical elements of environmental soundness/ compliance

What is Reporting Requirement #2 again? ...

“One or more key project performance indicator(s) (project results framework) should reflect overall environmental soundness & compliance.”

This applies to new awards.

Where EMMPs are developed after the PMP is established, it may not be possible to change key program indicators.

8

Bringing env. issues into results framework

EXAMPLE: Water Point Provision

Key Program Indicators:

- Protected* water points established
- # beneficiaries receiving water from protected water points
- % of water points with no fecal coliforms per 100 ml
- % of water points established that are clean after 6 months

*Protected = fenced against livestock, drained

This intervention will NOT show good performance. . .



9

Bringing env. issues into results framework

EXAMPLE: Food for Peace

How much firewood does a typical Food for Peace (FFP) program use?

~1 kg firewood/person/day x 70,000
beneficiaries x 365 d
~30,000 MT of firewood/yr

Mitigation:

Improved cook stoves and cooking practices

Added to key program indicators :

- Amount of fuel saved by improved practices
- Amount of time saved by improved practices

NOT just number of stoves distributed

Fuel Wood & Deforestation



10

“Environmentalizing” project indicators

EXAMPLE: Road rehabilitation

Typical Indicator:

- Km of road rehabilitated

Strengthened, “Environmentalized” indicator:

- Km of road rehabilitated under environmentally sound practices.*

*provide definition of environmentally sound practices from EMMP



11

USAID review of environmental reporting



Who reviews EMMPs & environmental compliance reporting inside USAID?
Will environmental compliance checks be part of Mission M&E?

As with all other aspects of the project, the COR or AOR is the primary reviewer.

But the MEO and M&E function may also be involved.

USAID environmental compliance oversight

1. Prior review/approval of partner-developed: → EMMP → ensure responsive to IEE/EA conditions → Project budgets and workplans → ensure EMMP implementation planned and funded → Project Reporting Framework → ensure environmental compliance reporting requirements are met	Primary responsibility for ensuring IP compliance lies with COR/AOR. MEO will also review/clear where activities are environmentally sensitive and/or IEE/EA conditions are complex.
2. Ongoing review of partner progress reports to monitor EMMP implementation	MEO on distribution list for IP's quarterly/semi-annual project reports.
3. Field visits: → at a minimum, <u>all visits</u> integrate a quick check for significant env. design/management problems → For environmentally sensitive activities, specific visit(s) to audit against EMMP	Most field visits are by COR/AOR or M&E Officer. MEO should visit the most environmentally sensitive activities (REA may assist).

Session 15.

Roles, Responsibilities & Resources

Technical presentation and dialogue

Summary

This session brings together information that has been introduced throughout the workshop, in addition to addressing some new topics. *All concern the processes, roles and responsibilities for environmental compliance in missions and operating units.*

Key topics are:

- How environmental compliance is mainstreamed (integrated throughout) Agency operations by the Automated Directives System (ADS).
- The roles and responsibilities of USAID staff and IPs with respect to the environmental compliance of USAID projects.
- The importance of incorporating best-practice Environmental Compliance Language (ECL) in solicitations and awards and the benefits of using the ECL tool for this purpose.
- Resources available to support environmental compliance and environmentally sound design and management.

IP and USAID environmental compliance roles and responsibilities post-award are summarized in the following table:

Project stage	Implementing Partner	USAID
Workplan & PMP Development	Develops EMMP Integrates EMMP into budget and workplan Determines environmental compliance reporting	Review and approval of: 1. the EMMP (for responsiveness to IEE/EA conditions and sufficiency of monitoring); 2. the budget/workplan (to verify that EMMP implementation is planned and funded); and 3. the reporting framework to assure that environmental reporting requirements are met.
Implementation	Implementation of EMMP Reporting on EMMP implementation	Ongoing review of partner progress reports to monitor EMMP implementation Field visits —at a minimum, all visits should integrate a quick check for significant environmental design/management problems. For environmentally sensitive activities, specific visits should be made to verify EMMP implementation.

Objective

Understand environmental compliance roles and responsibilities of USAID staff and IPs and the tools and resources available to facilitate environmental compliance.

Environmental Compliance: Roles, Responsibilities & Resources

GEMS Environmental Compliance-ESDM Training Series
Senegal, February, 2014

Environmental Compliance & the Automated Directives System (ADS)

- **USAID's Automated Directives System (ADS) sets out mandatory procedures, roles & responsibilities for:**
 - "Upstream compliance:"
Design & 22 CFR 216 process
 - "Downstream compliance:"
implementing IEE & EA conditions



2

Environmental Compliance & the ADS

ADS 204 ("Environmental Procedures") is the core ADS reference. But environmental compliance is mainstreamed throughout the ADS.

Overarching requirement:
Operating units must have systems in place for environmental compliance over life of project & must make sufficient resources available for this purpose

(202.3.6; 204.3.4)

Compliance Requirement	Responsible Parties	ADS Reference	
Environmental considerations in activity planning	Team Leaders, Activity Managers	201.3.8.3.a 201.3.15.3.b 204.3.3	
No activity implemented without approved Reg. 216 environmental documentation	COR/AOR/ Activity Manager	201.3.1.1 204.3.1 204.3.3.b 303.2.f	
IEE & EA conditions incorporated into procurement instruments	COR/AOR/ Activity Manager; Agreement Officer	204.3.4.a.6 303.3.6.3e 303.3.13	
IEE & EA conditions are implemented, and implementation is monitored & adjusted as necessary	COR/AOR	202.3.6; 204.3.4 303.2.f	
Environmental compliance documentation is maintained	PO, COR/AOR, Team Leader, MEO	202.3.4.6	3

A Note About Record Keeping

- **Approved 22 CFR 216 documents are kept in two places**
 - in official project files maintained by **C/AOR**
 - in official BEO files
- **22 CFR 216.10 makes all of these available to the public**
 - **Agency-wide searchable database** of all Reg. 216 doc's approved since 2000:
<http://gemini.info.usaid.gov/egat/envcomp/>
- **Annual reporting is required**



4

Mission Environmental Officer (MEO)

- Quality Assurance/Quality Control reviewer for Reg. 216 docs
- Clears Reg. 216 docs before they go to Mission Director
- Mission compliance advisor and coordinator; assists in compliance monitoring
- Mission point of contact to Regional Environmental Advisor and Bureau Environmental Officer
- Dr. Oumou K. LY

5

Regional Environmental Advisor (REA)

- Based in regional Missions
- Environmental compliance technical assistance to Missions
- Provides quality assurance and quality control of Reg. 216 documentation before it goes to the Bureau Environmental Officer
- Mr. Camilien J. W. Saint-Cyr
- Mr. Abdourahmane Ndiaye

6

Bureau Environmental Officer (BEO)

- Based in Washington, D.C.
- Oversees environmental compliance in their Bureau
- Primary decision maker on 22 CFR 216 threshold decisions for activities under the purview of their Bureau.
- Mr. Brian HIRSCH

7

Sector Teams & Mission Management

CORs/AORs and Activity Managers.

Assure Reg. 216 documentation in place. Assure IEE/EA conditions and compliance requirements incorporated into procurement instruments. Monitor compliance with IEE/EA conditions and modify or end activities not in compliance.

Team Leaders

Oversee CORs/AORs. Assure that their teams have environmental compliance system in place.

Mission Director

Ultimately responsible for environmental compliance. Mandatory clearance on all Reg. 216 environmental documentation.

Primary Responsibility for Environmental Compliance

! The MEO is a member of every sector team (ADS 204.3.5)

8

Agency Environmental Coordinator, Office of the General Counsel

Agency Environmental Coordinator (AEC)

Oversees 22 CFR 216 implementation and interprets Reg. 216 in new situations.

Concurs in AA's appointments of BEOs.

Decides appeals to BEO decisions (rare). Presents appeals of AEC decisions to CEQ (rare) Coordinates EIS process for USAID (rare)

Regional Legal Advisors (RLAs)

Provide legal advice on environmental compliance to field staff. Some regions require RLA clearance on Reg. 216 documents.

Assistant General Counsels (AGCs)

Provide legal advice to BEOs and RLAs on environmental compliance in their regions.



BEOs and AEC take legal advice into account but are responsible for decision-making in interpreting 22 CFR 216

9

Reg. 216 docs: Who writes? Who clears?

Who writes?

- AOR/COR responsible for assuring Reg. 216 documentation is in place.*
- Can engage a consultant/contractor to develop—Environmental Assessments almost always developed by third-party consultants.
- USAID is responsible for contents/determinations **NO MATTER WHO DEVELOPS IT!**

Go to the field before you write

Who clears?

- COR/AOR, Activity Manager or Team Leader
- MEO (for Mission)
- REA (depending on Mission/regional policy)
- Mission Director** or **Washington equivalent** clears
- Bureau Environmental Officer** concurs. Responsibility/authority cannot be delegated.

**Required by
Reg. 216**

10

Who is responsible?

USAID

Assures Reg. 216 documentation in place. Establishes/approves environmental mitigation and monitoring conditions. Verifies compliance.

In the Mission

Fundamental responsibility & accountability:

- Sector Team Leader
- Activity Managers & COR/AORs
- ultimately with the Mission Director

MEO: quality and completeness reviewer for Reg. 216 documentation; compliance advisor and coordinator; assists in compliance monitoring.

11

Implementing Partners

ALWAYS: Implement mitigation and monitoring conditions that apply to their project activities and report to USAID.

ALWAYS responsible for design of detailed Environmental Mitigation and Monitoring Plan (EMMP) in response to mitigation and monitoring conditions established by the Reg. 216 documentation.

SOMETIMES develop Reg. 216 documentation (IEEs, EAs)* for new project components; develop sub-project Environmental Review Reports (ERRs) (for sub-grants/sub-projects).

*Title II CSs develop IEEs as part of their MYAPs.

Environmental Compliance Verification/Oversight by USAID

1. Prior Review/Approval of partner-developed

→ EMMP→

ensure responsive to IEE/EA conditions

→ Budgets and workplans→

ensure EMMP implementation planned & funded

→ Project Reporting Framework→

ensure environmental compliance reporting requirements are met

Primary responsibility for ensuring compliance lies with C/AOR.

MEO will also review/clear where activities are env. sensitive and/or IEE/EA conditions are complex.

2. Ongoing review of partner progress reports to monitor EMMP implementation

MEO on distribution list for IP's quarterly/semi-annual project reports.

3. Field visits:

→ at a minimum, all visits integrate a quick check for significant env. design/management problems

→ For environmentally sensitive activities, specific visit(s) to audit against EMMP.

Most field visits are by C/AOR or M&E Officer

MEO should visit the most environmentally sensitive activities (REA may assist)

12

Environmental Compliance & Procurement Instruments

ADS Requires. . .

"Incorporating environmental factors and mitigative measures identified in IEEs, EAs, and EISs, as appropriate, in the design and the implementation instruments for programs, projects, activities or amendments."

(204.3.4(a)(6))

- **Critical to IP compliance with IEE/EA conditions**
- **BUT: historically, problems in implementation:**
 - Many USAID procurement instruments have NOT adequately addressed environmental compliance
 - Lack of guidance required A/CORs, COs to repeatedly "re-invent the wheel"
 - Partners/contractors fail to budget for environmental requirements

The solution. . .

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Environmental Compliance: Language for Use in Solicitations and Awards (ECL)



Environmental Compliance: Language for Use in Solicitations and Awards
An Additional Help for ADS Chapter 204

Revision Date: 05/19/2008
Responsible Office: EGAT
File Name: 204sec_051908

Step-by-step guidance and boilerplate language

- For RFAs, RFPs, agreements, grants, contracts
- Optional, not required
- ADS Help Document
- Approved by General Counsel

Available from:

<http://www.usaid.gov/ads/policy/200/204>

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The ECL Document Generates:

Best-practice solicitation language

Requiring that: Proposals address **qualifications and proposed approaches to compliance/ ESDM** for environmentally complex activities.

Best-practice award language

Requiring that: IP verifies current and planned activities annually against the scope of the RCE/IEE/EA.

The **necessary mechanisms and budget** for IP implementation of IEE/EA conditions are in place.

To assure that projects do not "creep" out of compliance as activities are modified and added over their life.

Specifically:

1. Complete **EMMP** exists or is developed.
2. Workplans & budgets integrate the EMMP
3. Project reporting tracks EMMP implementation

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The ECL Strengthens ESDM and ...

Provides cost and efficiency benefits to Mission Staff and Implementing Partners

USAID Staff

Avoids the effort, costs and loss of good will that come from imposing "corrective compliance" measures on IPs after implementation has started.

Reduces USAID cost and effort of environmental compliance verification/oversight by assuring that IPs integrate environmental compliance reporting into routine project performance reporting.

Implementing Partners

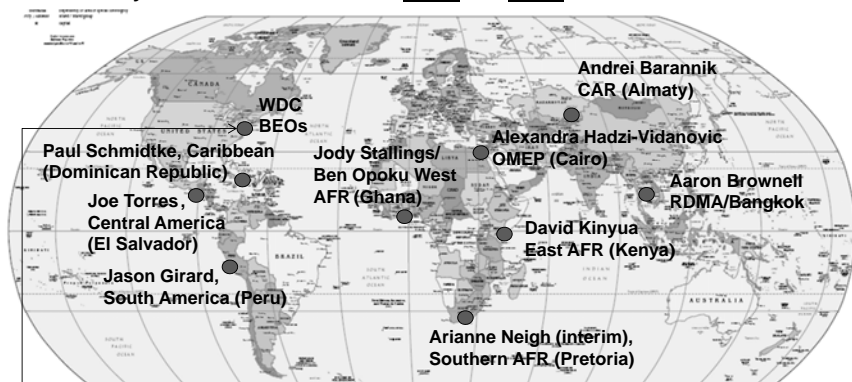
Provides certainty regarding environmental compliance responsibilities

Prevents "unfunded mandates"—USAID requirements to implement mitigation and monitoring after implementation has started and without additional budget.

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Who Can Help?

MEOs in every bilateral Mission AND the BEOs and REAs:



AFR: Brian Hirsch, Asia & ME: John O. Wilson, BFS: Ron Greenberg (acting); DCHA: Erika Clesceri
E&E: Will Gibson (acting), E3: Teresa Bernhard, GH: Rachel Dagovitz, LAC: Victor Bullen, M/ODP:
Dennis Durbin, OAPA: Gordon Weynand

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References & Useful Information



- USAID Environmental Compliance & Related Links
http://www.usaid.gov/our_work/environment/compliance
- 22 CFR 216
http://www.usaid.gov/our_work/environment/compliance/22cfr216
- ADS Series 200 (with link to Chapter 204 & ECL)
www.usaid.gov/policy/ads/200/
- IEE Assistant
(help in preparing Reg. 216 documentation),
Sector Environmental Guidelines
+ many other resources
www.usaidgems.org



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IMPLEMENTING MECHANISM FACTSHEET

GLOBAL ENVIRONMENTAL MANAGEMENT SUPPORT (GEMS II)

CONTENTS

1. GEMS Overview
2. Implementers
3. Period of Performance
4. Scope of Services
5. Accessing GEMS Services
6. Pricing
7. Award Details
8. Contacts

1. GEMS OVERVIEW

GEMS II is a global program implemented under a USAID E3 Bureau contract which provides on-demand environmental compliance, management, and sound design support to USAID's Environmental Officers, individual agency operating units and their projects and programs.

Subject to available ceiling, GEMS services are available to any bureau or operating unit that elects to incrementally fund the contract.

2. IMPLEMENTERS

GEMS was awarded in late September 2013 to **The Cadmus Group, Inc.** under the GSA Multiple Award Schedules (MAS) program.

The core team consists of Cadmus (prime contractor), Sun Mountain International and The Cloudburst Group, who together provide the primary USAID environmental compliance/environmentally sound design and management expertise. Other core team members are Eurasia Environmental Associates, Neptune and Company, Mott MacDonald, World Education and Battelle Memorial Institute.

A number of on-call local partners may be engaged depending on the location of programmed activities.

3. PERIOD OF PERFORMANCE

30 September 2013–29 September 2018.

4. SCOPE OF SERVICES

A broad range of environmental compliance, management, and sound design support services are available under GEMS, including but not limited to:

- A. TRAINING.** Planning, design and delivery of general and sector-specific training in environmental compliance and environmentally sound design and management; development of training curricula and materials; and development and delivery of online/distance learning on these topics.
- B. GUIDANCE, TOOLS AND SYSTEMS.** Development and review of environmental compliance/best practice guidance for individual projects or sector programs. Development of software/IT and other tools and systems to support environmental compliance, management and M&E from mission portfolio to project level.
- C. 22 CFR 216 DOCUMENTATION.** Development and review of documentation prepared under USAID Environmental Procedures (22 CFR 216), including Initial Environmental Examinations (IEEs), scoping statements, and Environmental Assessments (EAs) and Programmatic Environmental Assessments (PEAs), including health, gender and social impacts analyses.
- D. EMMPs/EMPRs.** Development and review of Environmental Mitigation and Monitoring Plans (EMMPs) and Environmental Mitigation Plans and Reports (EMPRs) and TA to support to field implementation of such plans.
- E. COMPLIANCE ASSESSMENTS, FIELD MONITORING AND EVALUATION.** Environmental compliance assessments, from mission

portfolio to project and site-level. Field monitoring and evaluation of environmental compliance/management.

F. ENVIRONMENTAL MANAGEMENT IN DISASTER ASSISTANCE. Support to environmental management of disaster assistance, including rapid environmental assessments (REAs).

G. BEO, REA AND MEO SUPPORT & BACKSTOPPING. Screening and quality control of submitted 22 CFR 216 documentation and advice/TA for IPs and USAID staff developing this documentation.

H. OTHER ENVIRONMENTAL ANALYSES. Scoping, development and review of FAA 118/119 analyses, climate vulnerability assessments, health and social impact assessments, among others.

I. HOST COUNTRY ENVIRONMENTAL MANAGEMENT CAPACITY. Capacity-building of host country environmental management systems and professionals.

J. KNOWLEDGE MANAGEMENT, LEARNING & COMMUNICATIONS. Web-based and hardcopy dissemination of environmental management guidance, strategic and high-impact environmental communications, environmental management community-of-practice development and support.

5. ACCESSING GEMS SERVICES

Bureau Environmental Officers (BEOs) from participating Bureaus serve as Activity Managers for GEMS activities within their region/sector. In this capacity, they are “gatekeepers” for the GEMS work plan, in consultation with the COTR.

Operating units interested in accessing GEMS services, whether funded by the participating Bureaus or with their own buy-in funds, should first contact the relevant BEO/Activity Manager. See contact list at right.

The Activity Manager will work with the requesting operating unit and the prime contractor to reach an agreed scope of work, staffing, scheduling and budget.

6. PRICING

GEMS II is a time and materials (T&M) contract. Categorical, fully burdened T&M labor rates are set by the award based on Cadmus’ and Cloudburst’s GSA price schedules. Travel, logistics and materials costs are treated on a reimbursable basis. Please request the GEMS II pricing and ordering guide for more information.

7. AWARD & GLAAS DETAILS

Award #	AID-OAA-M-13-00018
Issued under	GSA Multiple Award Schedule (Cadmus GSA Multiple Award Schedule Contract No.: GS-10F-0105J)
Period of Performance	30 Sept 2013–29 Sept 2018 No option years.
Ceiling	\$37.87mn (5-years)
Lead Requisition	Contact COR for most current code
Group Requisition	Contact COR for most current code

8. CONTACTS

Contract Officer	Kevin Sampson ksampson@usaid.gov
Contract Specialist	Marcus Barnes mbarnes@usaid.gov

COR	Teresa Bernhard, E3 tbernhard@usaid.gov
Deputy COR	Brian Hirsch, AFR bhirsch@usaid.gov

Bureau Activity Managers (Bureau Environmental Officers)	
AFR	Brian Hirsch bhirsch@usaid.gov
Asia/Middle East	John Wilson jwilson@usaid.gov
LAC	Victor Bullen vbullen@usaid.gov
DCHA	Erika Clesceri eclesceri@usaid.gov
E3	Teresa Bernhard tbernhard@usaid.gov
EE	Will Gibson wgibson@usaid.gov
GH	Rachel Dagovitz rdagovitz@usaid.gov

Chief of Party (Program Manager)	Mark Stoughton The Cadmus Group, Inc. Mark.Stoughton@cadmusgroup.com
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USAID Environmental Compliance and Environmentally Sound Design & Management Resources online: www.usaidgems.org.

Session 18.

Resolving the “Parking Lot”: Final General Q&A Session

Facilitated Discussion

Summary

Through the technical presentations, group work and discussions we have identified a number of “parking lot” items—questions and issues that could not be easily addressed at the time they arose, but which are important to answer and resolve before the end of the workshop.

As we prepare to conclude the workshop, we will use this session to discuss—and hopefully resolve—these parking lot issues in a facilitated discussion that draws on assembled expertise of USAID environmental staff, the consultant trainers, and participants.

Objective

Conclude the “core technical skills and knowledge” portion of the workshop by resolving parking lot issues.

Key Resource

- List of “parking lot” issues compiled during the workshop.

Workshop Evaluation

Life-of-Project Environmental Compliance and Environmentally Sound Design and Management

An Africa Regional Training Workshop for USAID Staff

Toubacouta, Senegal ■ February 2014

Your frank and honest feedback will help strengthen future trainings and help prioritize ESDM and environmental compliance support to USAID Programs and Missions in Africa and globally. Thank-you for your time!

Learning approach

For each issue, please check or circle the assessment you most agree with

Issue	Assessment					Comments
Balance of time in classroom to time in field	Much more time in field needed	A bit more time in field needed	About right	A bit more time in classroom needed	Much more time in classroom needed	
In the classroom, balance of presentations to exercises, group work & discussions	Much more emphasis on presentations needed	A bit more emphasis on presentations needed	About right	A bit more emphasis on exercises/ discussions needed	Much more emphasis on exercises/ discussions needed	
Technical level & pace	Much too heavy	A little too heavy	About right	A bit too light	Much too light	
Opportunities for peer exchange & learning	Needed to hear and learn much more directly from facilitators	Needed to hear and learn more directly from facilitators	About right	Some more opportunities for peer learning/ exchange are needed	Many more opportunities for peer learning/exchange are needed	

Highest/Lowest-rated sessions

Please identify the 1 or 2 sessions that you rate most highly (for content, usefulness, approach or for other reasons). Please also identify the 1 or 2 sessions that you found least engaging/useful/relevant. Please briefly indicate the reasons for your choice. (You may wish to refer to the agenda to refresh your memory.)

Session	Comment (Please explain why you made this choice.)
HIGH-RATED	
HIGH-RATED	
LOW-RATED	
LOW-RATED	

Overall evaluations

Please check the assessment you most agree with.

Issue	Assessment					Comments
	Very poor	Poor	Acceptable	Good	Excellent	
Technical quality (Program & Content)						
Facilitation						
Logistics						
Venue						
Field visits						

Impact

Please circle the characterization you most agree with.

Question	Characterization			Comments
Baseline Knowledge In light of what you have learned in this workshop, how would you rate your understanding of ESDM and USAID's Environmental Procedures BEFORE this workshop?	Had poor or limited understanding	Understood the basics, lacked some details	Had a strong and detailed understanding	
Empowerment To what extent has this workshop increased your <u>knowledge and capabilities</u> to address environmental compliance requirements in the context of your job function/professional responsibilities?	Not at all	Moderately	Strongly	
Motivation To what extent has this workshop increased your <u>motivation</u> to <i>proactively</i> address environmental compliance and ESDM in the context of your job function/professional responsibilities?	Not at all	Moderately	Strongly	

Key topics not covered

Were there any topics of key importance to you that were not covered/given very limited attention?	
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Support needs

Are there particular environmental compliance/ESDM support needs or resources that you require?	
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Additional comments welcome on any topic.